

Possession

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Abstract

Possession

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Possession is a large-scale two-room mechatronic installation constituting the doctoral dissertation and general examination work of a PhD in Digital Arts and Experimental Media at the University of Washington (2026). The work theorizes grief, intergenerational transmission, and the labor of memory through the structural logic of play.

The installation's central formal proposition is the unplayable game as the nervous architecture for mechatronic systems: a framework in which the suspension of a game engine becomes the generative condition of physical action rather than its failure. The game runs without a player. The visitor's body inhabits the space the game describes rather than navigating through a screen. This formal inversion — from the walking simulator of an earlier work to the visitor standing inside the game world itself — tracks the phenomenological shift from grief as navigable experience to grief as atmosphere and condition.

The work makes four contributions to the field of digital and experimental media arts. First, the autonomous game engine as physical controller: Godot managing a distributed network of Arduino hardware, coin mechanisms, stepper motors, and projection systems without human intervention. Second, the gamified space without the game aesthetic: installation logic derived from game engines applied to physical space alongside the visual grammar of games, connecting the work to the lineage of fairground, ghost train, and penny arcade practice. Third, the diagrammatic narrative: the correspondence table as an anterior formal structure the reader

descends through rather than a sequential argument they follow. Fourth, the immigrant worlding as formal condition: the lore-carrying body entering the institutional enclosure and running its own cosmology indifferently within it.

The research emerges from the perspective of a child born of immigrant parents fleeing war, finding in game engines, mechatronics, and digital fabrication the tools to build a luminous arcade of grievances that the practice has always, it seems, been reaching toward. What remains legible after relapse into an archive and the resultant revisiting, recycling, and processing of the uncovered material is the installation's final form – a diagrammatic garden; a cartography of grief.

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POSSESSION

Umut Gunduz

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Introduction



Figure 1 *Possession* installation still – Room One

The Installation

Possession is a large-scale two-room mechatronic installation constituting the doctoral dissertation and general examination work of a PhD in Digital Arts and Experimental Media (DXARTS) at the University of Washington, completed in Spring 2026. The work theorizes grief, intergenerational transmission, and the labor of memory through the structural logic of play.

Room One houses a modular 3D-printed scaffold spanning both gallery spaces; a child's tent suspended at the center of the room, backlit with a photograph of the artist and his father; a rug printed with Skyrim botanical texture maps beneath the tent, from which chrome resin pours across the floor carrying miniature 3D-printed furniture; stacked browser projections of footage from Turkey and London shot by the artist, a video of a young boy eating at a dinner table, an

animated body of text, and an inventory system connected to a game engine (Godot Engine 4), running as a desktop archive on one wall; and a Godot Engine 4 unplayable game traversing an aerial map of the artist's childhood London housing estate on another (see fig.1).

Room Two is designed as a black-box cinema space: dark walls, concentrated light. It houses the chrome daemon Mordurak, a figure produced through automatic painting and digital fabrication; a zoetrope of eight photoscanned beds spinning in clear resin above a chrome 3D-printed skull; an organza fabric panel printed with a Skyrim castle wall, barely visible until light catches its surface; and the coin mechanism — the installation's sole interactive element, mounted on the scaffold structure (see fig.2).



Figure 2 *Possession* installation still -- Room Two

Inserting a coin simultaneously pauses the Godot engine, freezes all video projections, extinguishes the scaffold lighting in Room Two so that only the daemon's LED eyes and the

zoetrope's stroboscopic flash remain visible, activates a projection-mapped face adorned in chainmail in Room One — the artist's own face, opening its eyes and looking upward — illuminates the father's deathbed image in the dark rafters above Room One, triggers three knocks on the Skyrim door, and activates the zoetrope. All for fifteen seconds. A continuous video of the artist's young son runs independently and cannot be affected by the coin: the living child placed outside the transactional structure of grief.¹

The Threads

Five threads run through this dissertation.

The first concerns the game engine. *Possession* uses Godot Engine 4 as an autonomous mechatronic controller rather than as an image-generator or interactive medium. The engine operates as the nervous system of the installation: a real-time event broker managing physical hardware, running its world continuously without a player, processing the visitor's desire through the coin mechanism without being altered by it. This is a formal proposition about what game engines can do in installation practice that has not been substantially explored in the field.

The second concerns grief. The shift in the artist's practice from *They Never Had Ghosts for Idols* (2020–21), a playable walking simulator, to *Possession* is a formal argument: the shift from navigable grief to grief as atmosphere, from a space the body can move through to a system that

¹ The installation documentation, including full video documentation of the coin activation sequence, is available at youtu.be/CAXzpMSRydc. The technical architecture of the installation — the Godot Engine 4 state management system, the Arduino serial communication pipeline, the OSC messaging architecture connecting the coin mechanism to all physical systems — is documented in the archive section of this dissertation.

runs around the body without acknowledging it. The unplayable game is not a game that has failed to provide play. It is a formal position on what grief feels like when it has become the condition of a room rather than the content of a journey.

The third concerns the immigrant body. The installation does not represent displacement or immigration as subject matter. It operates from within a specific cosmology: the lore that an immigrant body carries across borders, the worlding that precedes the institution's admission logic and continues after the institution has processed it. The work enters the gallery through its labor, carries its own cosmology into the enclosure, and runs regardless of whether the enclosure was built to receive it.

The fourth concerns gamified space. *Possession* applies game engine logic — collision detection, event triggers, state management, and conditional response — to physical installation space. The visitor is inside a system governed by game logic, but the space does not look like a game. This connects the work to a historical lineage — the fairground, the ghost train, the waxwork museum, the penny arcade — whose fundamental formal logic is closely aligned to the game engine's.

The fifth concerns the structure of the dissertation itself. The ten tapestries are organized through a correspondence table derived from the Japanese Buddhist Kusōzu — the nine stages of corpse decomposition, extended here to begin at zero. This table is a diagram in Brinkema's sense: anterior to the prose, already complete before the reader arrives, a formal structure that precedes

and exceeds any reading subsequently performed on it (Brinkema, 2022).² The dissertation is itself a gamified space: a field the reader descends through rather than a linear argument they follow — an echo of the physical installation.

The Structure

The dissertation opens with a Note on Method: a reflection on the practice of returning to footage, on the relapse as condition, on the made archive and its instability.

The body of the dissertation consists of ten tapestries, numbered Zero through Nine, each corresponding to a stage of the Kusōzu decomposition sequence. Each tapestry carries a critical argument above the line and footnotes below the line, carrying autobiographical material, technical process documentation, and discursive elaboration of cited sources. The critical argument and the autobiography are structurally porous: the argument above, the life below and vice versa. The reader decides on how to traverse this internal logic.

Tapestry Zero establishes the coordinates: Serres's four Latin questions of place read as the immigrant's condition, the worlding the body carries, the labor that sustains it, the institution it enters. *Tapestry One* establishes the formal condition: the shift from the playable walking simulator to the unplayable game, the child as the singularity that caused the transposition. *Tapestry Two* establishes the threshold object: the WhatsApp image arriving, the skull as the first form grief produced. *Tapestry Three* establishes the game worlds: Skyrim and the childhood

² Eugenie Brinkema, *Life-Destroying Diagrams* (Durham: Duke University Press, 2022). Brinkema's argument that the diagram stages a truth anterior to any cultural meaning subsequently drawn from it is developed more fully in *Tapestry One*.

estate as constant states of being running simultaneously, the traversal as movement through immanence rather than ground. *Tapestry Four* establishes the scaffold: the vine that grew around the room and was displaced, the 3D-printed spine of the installation carrying the weight of its own making. *Tapestry Five* establishes the network: the zoetrope, the coin, the parasite that enters the system and reorganizes the whole field.

Tapestries Six through *Nine*, complete the descent: through Mordurak and the Goetic tradition, the coin mechanism and desire, the archive and the desktop wall, and the final dispersal into language and the distributed field of the model. The dissertation closes with *The Luminous Arcade of Grievances*: a formal account of the contributions this work makes to the field of digital and experimental media arts, and of the research program it opens.

The Field

This dissertation sits at the intersection of game engine installation practice, practice-based doctoral research, and the theorization of cultural displacement in experimental media arts. Its primary interlocutors in the field include the tradition of unplayable and anti-game practices — among them JODI (Joan Heemskerk and Dirk Paesmans), whose game modifications from 1999 subvert the logic of play without destroying the engine; Cory Arcangel, whose *Super Mario Clouds* (2002) and *Various Self Playing Bowling Games* (2011) render games that run without a player; and Viktor Timofeev, whose *Four Characters in Search of a Random Exit* (2017) is a self-playing game whose user becomes an immobile viewer — the broader history of game engines as artistic material, and the theoretical frameworks of radical formalism (Brinkema), the poetic image (Bachelard), and the philosophy of immanence (Deleuze), amongst others.

The specific contribution — the game engine as autonomous mechatronic controller, the gamified space without the game aesthetic, the immigrant worlding as formal condition — is developed further in *The Luminous Arcade of Grievances*. What is named here is the position from which those contributions are made: a practice-based doctoral researcher working from within a specific immigrant and working-class inheritance, using the tools of digital fabrication, game engine development, and mechatronic sculpture to build a cosmology that the institution was not necessarily designed to receive, and running it regardless.

How to Read This Dissertation

As mentioned, each tapestry carries two registers: the critical argument in the body text and the footnotes. The reader who stays above the line receives the critical argument. The reader who descends into the notes receives the life that produced it. An internal rhythm.

The dissertation does not need to be read in sequence. It is a field. The structure is the diagram. The descent is optional. The wound is everywhere.

Note on Method

I. The Image as it Appears, Across the Flattened Surface

After a short credit roll, the film begins.



Figure 3 No Home Movie (2015) screenshot from the opening scene

An image of a tree set above a dusty valley. A fierce and relentless wind tears through the setting. The camera struggles to commit the fast-moving detail into pixels, resulting in a flattening of perspective as foreground and background collapse against the flat screen. The audience is immersed in the digital artifacts of distorted wind noise and muted consumer-grade sensor coloring. The framing remains persistent throughout. No editing. Nothing changes. The opening shot of Chantal Akerman's *No Home Movie* lasts an enduring three minutes and forty-five seconds

(Akerman, 2015).³ As time rolls on, we are unsure if there is anybody still operating the camera. Where is the filmmaker, our trusted and most vested guide? A sense of dread may ensue. Or, most likely, a sense of frustration as the contract between audience and cinema rapidly erodes away. Akerman has successfully decentered us (see fig.3).

I wrote those words in 2019, trying to name what the opening of *No Home Movie* had done to me. But I had not yet grasped the temporal architecture I was witnessing. Akerman completed this film, a record of her mother's final year, and within the year, she too was gone. The refusal of resolution in that opening, the insistence on the unresolved frame, was not only aesthetic. It was a document of what grief does to time: duration emptied of event, a suspension where nothing happens, and through it, everything is altered. The frame, held open after the subject has departed, becomes a diagram of a time-wound, a record of what does not return. In this way, grief becomes substance, becomes body. Not a story but a field in which the distinction between event and duration collapses.

This is what Roland Barthes, writing about the photograph of his mother before she died, hails as the catastrophe that has already occurred. The photograph, and by extension the held digital movie frame, the un-moving image, does not restore what time has taken. It attests that what it shows has already been. The image is not memory. It is evidence. And evidence, unlike memory,

³ Chantal Akerman, *No Home Movie* (2015). Akerman completed the film as a record of her mother Natalia's final year; Akerman died by suicide in October 2015, within months of its premiere. The film's refusal of resolution, its insistence on the unresolved frame, was not only a formal choice but a document made from inside the condition it describes. The opening shot, three minutes and forty-five seconds of a tree in desert wind, is the spectatorial contract the dissertation proposes for itself: the frame held open, the subject already gone, the audience asked to remain inside the duration of that fact.

does not soften. The punctum is not chosen. It arrives without invitation, rising from the image's surface to find the specific body of the specific viewer: a wound that the image did not know it contained until it met you. And you are defenseless in its imprint (Barthes, 1981).⁴

In Akerman's opening, the punctum is precisely its absence. No detail rises to meet you, no wound to anchor your gaze elsewhere. The wound is the waiting itself, the long, unbroken duration in which you come to realize that the filmmaker has withdrawn the contract before it could be made with her audience. To me, this is not indifference but a formal precision: what the film is about cannot be met head-on, cannot be delivered via the structure of story. It must be circled, kept at the distance of duration, a duration that exceeds the bargain of an audience. The gradual flattening of foreground and background is not a technical failure but a sensor's honest encounter with more motion than it can hold. What remains through this is the trace of an encounter, the image as confession of its own limit. It is my belief that all images are this, though most attempt to conceal it. *No Home Movie* refuses this concealment. *No Home Movie* is a wound.

Years later, after my father died, I returned to that opening. The wind still moved through the tree like some choreography I had forgotten. And, whilst the image had remained unchanged, I had not. And so, the method for *Possession*, both as an exhibition and as writing, begins not with a

⁴ Roland Barthes, *Camera Lucida: Reflections on Photography*, trans. Richard Howard (New York: Hill and Wang, 1981). Barthes's account of the punctum, the detail that rises from the photograph to wound the specific viewer, is developed alongside his search for a photograph of his mother that would hold her as he knew her. What he found, in the Winter Garden photograph, was a version of her that preceded his existence. The catastrophe that has already occurred, the photograph's attestation that what it shows has already been, is taken throughout this dissertation as the operative condition of the archive.

question, but with the decision to let the image show what it cannot contain, and to trust the audience to remain inside that failure until something else emerges.

II. The Relapse, Revisiting the Archive

To return to footage is not to remember but to re-work. An archive resists the mutative conditions of memory and its porous relationship with the present. Press play, and the footage insists on its world on its own terms: this light, this moment, this voice, undisturbed by recollection. And like this, the archive is harder than memory in its refusal to be processed. Laura Mulvey, in *Death 24x a Second*, calls the spectator who returns to footage, who pauses, rewinds, holds the frame, the possessive spectator. The digital technologies of the late twentieth century made this possible at a domestic scale previously unavailable: you could now hold the dead still enough to examine them. But Mulvey is also clear about what the pause reveals: not presence, but a latent absence. What a pause discloses is that the motion in the footage was always an illusion, and that beneath the illusion the image is already a photograph, already a record of something arrested, already, in Barthes's formulation, a catastrophe that has occurred (Mulvey, 2006; Barthes, 1981).⁵ The possessive spectator does not possess. They are the possessed.

⁵ Laura Mulvey, *Death 24x a Second: Stillness and the Moving Image* (London: Reaktion Books, 2006). Mulvey's account of the possessive spectator, the one who pauses, rewinds, and holds the frame, is developed in the context of digital technologies that made such possession possible at a domestic scale. The pause discloses not presence but latent absence: beneath the illusion of motion, the image was always already a photograph, always already a record of something arrested.



Figure 4 *Stevie G* (2005) screenshot of archival footage from the film's closing sequence

I learned this in the making of *Stevie G*⁶, a film with and about my family. In the edit, I returned to the footage thousands of times, not in a bid to retrieve what I already knew, but because the footage kept doing something to me I could not know. It is a form of relapse, not return, which suggests intention. The relapse bequeaths the managed in becoming unmanageable again; the

⁶ *Stevie G* (dir. Umut Gunduz, 2013) was Umut Gunduz's debut feature film, produced with support from a completion fund awarded by the National Film and Television School (see fig.4). The film documents the relationship between the director and his brother Stevie, made during and after Stevie's last prison sentence to date. The two had been largely out of contact for many years. When they reconnected, conversation turned to their shared childhood, and Umut proposed the film. Having never fully grown up together, he attempts to discover his brother through the medium of documentary. As he collects footage and sifts through hours of family home video, he pieces together a portrait of a young man whose story is one of guilt, misguided choices, and a life shaped by violence and separation. The film is the origin of the archive that becomes the desktop wall of *Possession*.

image unable to contain the content. I became lost in that labyrinth. My mentors, in a bid to rescue the project, asked me, repeatedly, to make my voice more present within the work — to script it into language. To become the guide who stands between the audience and the material. I could not do it. The film was not mine to author. Its subject was my brother's right to speak: a right that had never been fully extended to him within the systems that he found himself living through. To assert my own authority as narrator would have been to re-enact an inherited dynamic in which power belonged to the one who spoke first and loudest. I declined to occupy that position. And so, I handed my brother the camera. My mother took the voiceover, her responses trailing behind my brother's memories, present but always slightly delayed, as if witnessing from a distance. And slowly, I erased myself in the edit. The film's authorship is in its existence. It does not require announcement. It is the announcement.

Stay with me.

My stepfather compiled decades of domestic footage, the archive of a life he inhabited, the record of ordinary family time: summer holidays, Christmas, birthdays, school performances. My biological father is absent in all of this. Not because the camera failed, but because he was not physically there. The stepfather's archive is a ledger of this absence. Every door opening, every living room pan, every Tuesday dinner, he is missing. To watch the footage is to watch the topography of the shape he left, moving through time.

Relapse is the condition, not the exception. Each return to the footage is an entry into the same black box: inputs offered, outputs received, the mechanism between them sealed. Something surfaces, or it does not. The archive has an interior you cannot access — but it wants to speak.

III. The Camera That Was There

I watched *The Passing* (Viola, 1991)⁷ before my father died. I did not know, then, that I was being given a map.

The Passing runs for fifty-four minutes in near-total darkness. Bill Viola made the work in 1991 — the year his mother died, the year his son was born. He filmed himself sleeping. He submerged the camera below the surface of water and let it record the threshold from inside the medium. Both events, the leaving and the arriving, are held within a single tape. The camera does not witness from outside — it is inside what it is trying to document.

This is the position that interests me. Not the image of the threshold but the camera's relation to it — the instrument placed within the event rather than before it, recording from inside the medium rather than at its edge. Viola's images entered without announcement and deposited themselves somewhere below the threshold of recall. The body submerged. The darkness not empty but textured. The face, held at the surface of something. It was not instruction but a prior acquaintance with a territory I had not yet been asked to enter.

What an image does when it lands that way is not what memory does. It does not recede — it burns. It holds its position inside some interior mesh of images the body carries without knowing it carries, waiting for the correspondence that will make it legible, again.

The correspondence arrived as a photograph sent over WhatsApp by my uncle — my father — in the days before he died. I did not understand, at first, why the image felt already known. Both

⁷ Bill Viola, *The Passing* (1991), video, 54:00, black and white, mono sound. Electronic Arts Intermix, New York.

images were taken from the foot of the bed. Both place the head at the top of the frame. Both show the mouth open — the shape of the skull preceding something inevitable. Viola's camera and my uncle's camera had occupied the same position. They had looked from the same place at the same event.

For reasons I did not fully understand, I converted my father's image to black and white. I think I was trying to reconcile the two images onto a single plane — to locate them within the same inner circuit, to place my father inside the field where grief had first made itself visible to me. The conversion was not aesthetic — it was navigational.

What followed was not a matter of going out with a camera to find that field again. The inner camera works differently. It reconstructs from within — through Skyrim screen recordings, through positioning my camera on my firstborn, through the appropriated image of a deathbed. These are not documentation. They are attempts to locate the mesh, to find positions within virtual and domestic space, and to find the image that corresponds to the territory the body already holds.

Possession carries that image forward. The dark room, the chrome surface, the footage that runs without acknowledgment — these are the residue of having watched *The Passing* years before and not yet knowing why (See fig.5&6). What the work wants to think through is the space between the camera that was submerged in the event and the inner camera that reconstructs the event from the mesh of images the body has held. Between the position Viola occupied and the position I was trying to find again.



Figure 5 Screenshots from *The Passing*, showing the son of Viola, an underwater stage set, and Viola's dying mother



Figure 6 Screenshots taken from work inside *Possession*. The striking similarities between Viola's work and the author's draw lines between two incidents of the punctum.

IV. Replacement, The Growth of an Unstable Archive

Through Barthes, we may see what happens when you build toward an image of someone who was always, in some essential way, unavailable. He moved backwards through photographs of his mother, finding images that were partially true and therefore wholly false. What he found was not the mother he knew, but the child she was before he existed, already in possession of the kindness that would shape her, belonging to no system. He found the version he never knew in life. So, I made the footage. I went out with a digital camera and recorded. I took up the position he had left, behind the lens, the one who looks, and built an archive where the one we should have shared should have been. I made preparations for the devastation of the image.

This is the instability of the made archive. You build it toward someone. You go out with the camera, you make the record, you return to the footage, and what accumulates is not the person, but the record of the search. The archive grows toward a version of the father that precedes your memory, a version you never knew. And what Barthes found in the Winter Garden photograph is what the made archive keeps producing: the impossible encounter with a past you were never present to.

The archive is unstable because it was made inside grief, by grief, as grief. An inherited archive has the distance of its own prior existence; the made archive has none. It is wound and instrument at once. Every decision, where to point the camera, how long to hold the frame, is not editorial, but an act of grief that happens to leave footage behind. The instability is not only emotional, but material: the trembling of my hand becomes blur on the sensor. The file records the date. That is all. The archive produces encounters you did not arrange whilst delivering the message.

The theoretical frameworks that follow, black-box cartography, the poetic image, the diagram as immanent, arrived as language for what the practice had already uncovered. Parikka names what the edit already knew: structure is imposed on material that always exceeds it, and the work is the residue of that imposition (Parikka, 2015).⁸ Stefans describes what the footage was already doing: not fading at the edges, but closing. The window shuts. The image is gone. The father does not

⁸ Jussi Parikka, *A Geology of Media* (Minneapolis: University of Minnesota Press, 2015). Parikka's argument that structure is imposed on material that always exceeds it, and that the work is the residue of that imposition, is taken here as a description of the editorial process as much as the geological one. The edit imposes sequence on footage that exceeds sequence. The excess is the work.

decay in the archive. He is withdrawn from it (Stefans, 2003).⁹ This distinction is the central problem.

These thinkers did not, however, produce the practice. The practice produced the need for them and the schematics that result. What *Stevie G* and *Possession* taught me, through their making, through the losses that came before, is that the most honest decisions are those that understand what they cannot contain. Akerman holds the frame because she cannot hold what the frame is about. I assembled my brother's voice because I could not speak in its place. I made footage of my father's absence because he left no footage of his presence. Each formal choice is a record of what exceeds it.

Possession begins where that understanding ends: where the documentary timeline runs out and something else is needed — a mechatronic installation: physical objects governed by a game engine's internal logic, mechanical systems and electronics and computing integrated into objects that run autonomously, that sustain conditions rather than produce events, that process the visitor's presence without acknowledging it. The tradition is engineering in origin — coined by Tetsuro Mori at Yaskawa Electric in 1969 as a portmanteau of mechanism and electronics — but in art practice it inherits the material presence of sculpture, the durational logic of cinema, the evidential impulse of photography, and the liveness of performance without belonging entirely to any of them.¹⁰ What distinguishes it as a form is its indifference. The mechatronic object runs

⁹ Brian Kim Stefans, *Fashionable Noise: On Digital Poetics* (Berkeley: Atelos, 2003). Stefans's account of digital image closure — the window that shuts rather than fades — is taken here as a description of the archive's behaviour under grief: the image does not dissolve, it is withdrawn.

¹⁰ The term *mechatronics* was coined by Tetsuro Mori, a senior engineer at Yaskawa Electric Corporation, Japan, in 1969, as a portmanteau of "mechanism" and "electronics." It was trademarked by Yaskawa in 1971 and released into public use in 1982 (<https://www.yaskawa-global.com/milestones/1960s>). For the

regardless of the visitor's presence. In *Possession*, it runs like grief runs. Not the edit that manages, but the space where what cannot be managed is allowed to move. The installation is the cut I could not make.

The dissertation is structured as ten tapestries, following the logic of the Japanese *Kusōzu*: nine stages of decomposition, beginning at zero.¹¹ The body does not rot; it sediments. It becomes ground for what follows. In my mind, the movement is downward: from carpet, to concrete, topsoil, clay, shale, coal, oil, salt, chalk, to the Cretaceous ocean floor, the blue-black of an illustrator's prehistoric page in a child's inquisitive mind, the destination toward which this work gestures but cannot reach.

The reader is given this map before descent. The descent is the work. This paper is an epitaph on the garden wall of *Possession*. An isthmus between logic and madness.

practice of mechatronic art as distinct from engineering application, see Simon Penny, *Making Sense: Cognition, Computing, Art and Embodiment* (Cambridge, MA: MIT Press, 2017), which addresses the theoretical stakes of building interactive and robotic art environments informed by sculpture, installation, and performance traditions.

¹¹ The *Kusōzu* is a Japanese Buddhist pictorial tradition depicting the nine stages of human corpse decomposition. The tradition was used as a meditation on impermanence and the nature of the body. The nine stages, from the fresh body through bloating, putrefaction, and eventual reduction to bone, are taken in this dissertation as both structural framework and formal logic: the movement is downward, the body becoming ground, each tapestry a stratum in a geological descent that mirrors the decomposition sequence.

Tapestry Zero

Coordinates



Figure 7 Photo of the author and his father before circa 1980, circa the father's first departure, used as the avatar sprite in the game engine

Serres learned the Latin questions of place under bombardment. Ubi: Where are we? Quo: Where are we going? Unde: Where do we come from? Qua: Through where are we passing? He learned them in a classroom that was being shaken by a war, and he learned them, he says, alongside the conjugation of the verb to love. The grammar of place and the grammar of love were the same lesson. Taught in a dead language — a language whose body had stopped moving but whose work had not stopped being done (Serres, 2015).¹²

These four interrogatives are the dissertation's coordinates, both written and the installation. They stay open through every tapestry and every encounter. But I take them here in their most elemental form — the questions the immigrant body carries without choosing to. *Unde*. Where do we come from? *Qua*. Through where are we passing? They are posed by a body that has crossed something and not yet arrived on some other side. It may never arrive.¹³

Serres traces one Indo-European root into the whole family of enclosures humans have built. *Hortus*. The garden. The cohort, the courtyard, the court of love and the high court of judgement. On the Germanic and Slavic side: *grad*. Stalingrad is Stalin's garden. The English *yard* carries it

¹² Michel Serres, *Statues: The Second Book of Foundations*, trans. Randolph Burks (London: Bloomsbury, 2015). The four interrogatives are developed across the chapter on inheritance, place, and the figure of the enclosed garden. The Indo-European etymology — hortus, cohort, court, garden, grad, yard, cemetery — is treated throughout the dissertation as operative ground rather than illustrative material.

¹³ My mother arrived in London at the age of four, displaced from Famagusta by the civil uprising in the 1950s. The city she had been born into was bombarded and emptied later that century during the war of 1974. She crossed into a different country before she had a full grammar of the one she was leaving. Serres learned the Latin questions of place — unde, qua — under bombardment in a classroom. My mother answered the same questions in a small body carried by adults whose language was now a wage. My father arrived from a different displacement: a nomadic and rural elsewhere whose Turkic line this work approaches by other paths.

all: courtyard, enclosure, garden, cemetery. One word for the enclosure organized over the buried thing (Serres, 2015). To me, the two rooms of *Possession* are an enclosure of this kind. In this way, the visitor enters through a gate at the cost of desire; they pay court. They walk inside an enclosure organized over what is buried. The dissertation is written from inside that word.

But the immigrant body does not arrive at the enclosure empty. It carries a world. A cosmology. A structured set of objects, entities, temporal rhythms, and orienting logics that were assembled before the institution got to the body and that continue running after the institution has processed it. This is what Haraway calls worlding: the ongoing, generative process by which beings make and are made by their worlds, across displacement and transmission, without pause (Haraway, 2016).¹⁴ Lore is the name for what that worlding carries forward. The narrative logic embedded in objects, in the way a household is organized, in the entities that are named and propitiated, in the rhythms of seasonal time. Lore is what persists through displacement when language fails and institution does not yet apply. The immigrant body carries its lore across the border the way the body carries bone: without display, without choice, structurally present. Outside the grid.

Lore does not arrive as information. Benjamin's storyteller offers a way to understand how it moves: passed body to body, accumulated through transmission rather than verified through documentation, gathering authority precisely because it does not explain itself (Benjamin,

¹⁴ Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016). Haraway's worlding draws on Heidegger's *Weltbildung* but moves it away from the human subject as the sole world-maker: worlding is relational, multispecies, ongoing. The term is used here in that expanded sense — the immigrant cosmology as a living system of relations rather than a fixed cultural inheritance.

1936).¹⁵ The storyteller carries a world the way the immigrant carries bone — the form has been lived, and living is the only credential it requires. But lore also arrives as event. Bachelard's account of the poetic image is instructive here: the image does not echo from the past, it causes the past to resound toward the present. "Through the brilliance of an image, the distant past resounds with echoes, and it is hard to know at what depth these echoes will reverberate and die away" (Bachelard, 1958).¹⁶ To me, lore irrupts in the same way, in multiple dimensions, and at an immeasurable depth. The chrome skull does not represent the father. It irrupts him. The coin mechanism does not commemorate labor. It restages its rhythm. Each object in *Possession* operates as a loric irruption: a point at which the worlding carried by the body becomes an ontological event in the making, synthesized into the space, running as an endless present tense.

And so, *Possession* is a worlded enclosure in this sense. The objects that populate it — the entities, the household items, the zoetrope, the coin mechanism, the chrome skull — arrive already carrying their lore. They are not placed in the gallery as representations of a world. They are the world, running. The visitor who enters does not interpret the installation. They enter a cosmology

¹⁵ Walter Benjamin, "The Storyteller: Reflections on the Works of Nikolai Leskov," in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken Books, 1968). Benjamin's central distinction is between information — which explains itself, exhausts itself in the moment of transmission, and carries no authority beyond its verifiability — and the story, which does not explain itself, accumulates authority through the fact of having been carried, and retains its force across time and displacement. Lore operates in Benjamin's second register. It arrives without justification. Its authority is structural, not documentary.

¹⁶ My children will inherit none of these specific machines. The game engine will be obsolete. The mechatronic system will be replaced. The digital fabrication pipeline will be unrecognizable. What I hope they will inherit is the relationship between body and apparatus — the disposition to labor at whatever industrial tool their generation produces, and to make from that labor the conditions of their own worlding.

that was already in motion before they arrived and will continue after they leave. This is the formal condition I built the work on: the visitor is briefly inside someone else's worlding. My worlding. There is no position offered from which to observe it from outside.

The answer to *unde* — the material answer, beneath the cosmological one — is the sewing machine. Both my parents worked at sewing machines for a living. My father in a factory in North London, sewing garments at scale. My mother worked from home at a different machine, sewing prototype garments — the originals that would be replicated by other machines, on other floors, in other factories. Two bodies at two machines. Two relationships to industrial labor.

The sewing machine was the apparatus by which the lore was sustained materially — the wage that held the household, the household that held the objects, the objects that held the world. The new digital technologies I labor with are the sewing machines of this lineage. The mechatronic system, the digital fabrication pipeline, the coin mechanism that runs its sequence and returns to rest: the industrial apparatus by which a generation labors at producing the conditions of a life (Merleau-Ponty, 1945). The same relationship between body and apparatus. The same fact that one earns one's world through the machine, and the machine, in being labored at, shapes the body that labors it. The continuity is in the relationship between body and apparatus, and in what that relationship sustains. My father's and my mother's bodies learned to feel the resistance of cloth at the foot of the needle. My body has learned to feel the resistance of polygons at the edge of a mesh, of resin at the moment of pre-cure, of chrome that bubbles and pools because the surface tension of the spray was not what I wanted it to be. The labor is in the listening. The skilled body incorporates the tool, makes the tool's resistance part of its own body schema (Merleau-Ponty, 1945). What that incorporation sustains — the world it holds open — is the lore.

To me, my mother's prototype garment is the structural ancestor of the digital fabrication asset. Made once, attended to, then reproducible. The 3D-printed skull, the photoscanned bed, the modified Skyrim asset: all prototypes in her sense. The seamstress and the digital fabricator share the structure of that labor. What crosses the generations is the disposition — the attention, the negotiation, the making that does not resolve into arrival — and the world that disposition carries.¹⁷

The fissure of immigration runs through this line of descent. My parents carried the village in their gestures and the city in their wages. Entry is not the same as arrival. The body that enters an institution through its labor does not thereby belong to it. It pays court. It learns the protocols. It navigates the enclosure. And it carries, beneath that navigation, a world the institution has no category for — a worlding that predates the institution's admission logic and will outlast it.

This is the posture Possession inherits and formalizes. The work enters the gallery through its labor — through the graft of making, the months at the apparatus, the fabrication and installation. But the gallery is also an enclosed garden — an enclosure with its own walls, its own gates, its own logic of who pays court and who is admitted (Bennett, 1995). The worlded enclosure of Possession sits inside this external garden at an angle. Not at war with it. Not in agreement. Carrying its own cosmology. The mechatronic systems perform this condition formally. The coin mechanism

¹⁷ Tony Bennett, *The Birth of the Museum: History, Theory, Politics* (London: Routledge, 1995). Bennett reads the modern exhibitionary complex as a disciplinary apparatus whose architecture, lines of sight, and protocols of admission produce self-regulating subjects. Power passes from spectacular punishment to the visitor's own internalized conduct under display. The institution is not a neutral container of the work but an enclosed garden with its own gates and its own logic of who pays court — an enclosure organized, like the garden and the cemetery, over what it has buried.

activates, completes its sequence, returns to rest — indifferent to whether it has been received. The zoetrope cycles through its images and closes. The systems do not wait for acknowledgment. They do not adjust to the visitor's presence or absence. They carry their lore and they run it. This is what it looks like to world without the guarantee of arrival: the immigrant cosmology made into a formal system, continuing. What follows is a point of contact.

Ubi. Where are we?

Quo. Where are we going?

Unde. Where do we come from?

Qua. Through where are we passing?

Tapestry One

The Noble in Their Home – Diagrams before and after



Figure 8 *They Never Had Ghosts for Idols* screenshot from inside the virtual hammam

The first autobiographical game was made in lockdown, in the immediate aftermath of my father's death. *They Never Had Ghosts for Idols* (2020–21) takes the form of a virtual gallery that unfolds into a series of vignettes — a reconstructed hammam, its vaulted stone interior holding projected footage of Izmir rooftops through a skylight aperture (see fig.8); a grave site surrounded by flowers, a framed photograph of the actual burial propped against stones; a liminal room where photogrammed objects hover against chalk cliffs and water. The photogrammetric objects — scanned from places and encounters across Turkey and the UK — constitute a mise en scène of

memory: a ruined building, a street shrine, a car, fragments of pavement. Distributed across the game environment, they accumulate into something that resembles a life.¹⁸

The game is a walking simulator. The player moves through the scene, approaches objects, views them. Nothing activates beyond sight. Nothing opens, responds, or yields information at the touch. The agency is purely ambulatory — the agency of being amongst. The body schema incorporates the movement: the walk, the turn, the approach. But it incorporates nothing beyond locomotion. There is no hand, no reach, no retrieval. Grief, at that stage of its process, was navigable as scene. The player was invited to walk the sculpture park of someone else's dream.

The game ends on a lakeside. An obsidian tree stands in the background, without leaves. On the ground in front of the player: an image of me and my brother kissing my father, my father looking

¹⁸ They Never Had Ghosts for Idols (2020–21) was produced as an MA Fine Art dissertation work during the first COVID-19 lockdown in the immediate aftermath of the artist's father's death. The work was subsequently selected for Bumbershoot 2024 — Seattle's major arts festival — where it was presented in a group show curated by Ellen Ito and Ben Beres. It remains accessible online at umutgunduz.net. The photogrammetric method deployed in the work — consumer-grade scans of places, objects, and encounters rendered as 3D assets distributed across the game environment — is the origin of the practice extended through every subsequent work in this dissertation.

happy. A timer runs. One minute. Then the scene fades to black and the game exits to the player's desktop. Gone.¹⁹

Brinkema, reading Gide, identifies *le point limite* — the line of demarcation between being and nonbeing — as a threshold that cannot be spoken from either side. The no-longer-possible, she writes, is “not sensible or speakable except as the horizon that remains at a distance from the stable shore of what is.” To declare it is to practice a syntactical fraudulence — the declaration lingers with the grammar of being, speaking from the stable shore, imagining what it cannot, within itself, speak.” (Brinkema, 2022).²⁰

The lakeside timer is that declaration. The fade to black, the return to desktop — the game attempting *le point limite* as a formal gesture, trying to speak what cannot be spoken from the

¹⁹ The final scene of *They Never Had Ghosts for Idols* was not planned as a conclusion. It arrived as the work reached what felt like its emotional limit. The player has walked the archive — the hamam, the grave, the photogrammed scene — and arrives at an open lakeside. Behind them, an obsidian tree without leaves. On the ground in front of them: a photograph of me and my brother kissing my father on his cheek, one on each side, my father looking happy in a way I had not often seen. A timer appears on screen. One minute. The player cannot interact with the image. They can only stand in front of it while the timer runs. When it reaches zero the scene fades to black and the application closes, returning the player to their desktop. I did not anticipate how complete that gesture would feel — the game ending by returning the player to the ordinary world, the image gone, nothing to carry back. It was the first time the work told me something I had not already known about what I was making.

²⁰ Eugenie Brinkema, *Life-Destroying Diagrams* (Durham: Duke University Press, 2022), p. 37. Brinkema develops *le point limite* through a reading of André Gide's *Les Faux-Monnayeurs* (1925). The passage in full: “The drive to know the extremist limit, beyond which there is nothing, is itself a feint, a kind of counterfeit. For one only ever knows from the point of view of being... Even to declare It is no longer possible is to practice a syntactical fraudulence: such a declarative lingers with the grammar of being, the language that being boasts to imagine (read: cheat; read: invent) what it cannot, within itself, speak.” The chapter's closing note — “Not a one of us is wanting (for) death” — holds the double valence of wanting in suspension: to desire and to lack simultaneously. The unplayable game runs in that suspension.

point of view of the living player who watches it close. The ambulatory agency that carried the player through the scene is still present in the moment of the timer. The work ends. Life continues. The declaration was always inside the grammar of being.

Possession abandons that attempt. The unplayable game runs parallel to the limit without addressing it. The visitor who stands in the room between the projected traversal and the installation around them — the body in the space the game describes, the screen on the wall the game traverses — stands inside the threshold itself. The space between the screen and the body. The space between the grammar of being and what cannot be spoken from the other side. Brinkema again: the period that divides “On peut encore. On ne peut plus” (translated roughly to: We still can. We no longer can.) “tenders a typographical deceit, simulating a punctuated space in which the irreversible passage of being to nonbeing could take place” (Brinkema, 2022). The room between the two game positions is that punctuated space made physical. The visitor stands in the simulated gap.

Baudrillard distinguishes the functional object — defined by use, responsive, activatable — from the possessed object, abstracted from function, defined by the subject who holds it rather than the subject who encounters it (Baudrillard, 1968).²¹ The collection of possessed objects abolishes time

²¹ Jean Baudrillard, *The System of Objects*, trans. James Benedict (London: Verso, 1996 [1968]). Baudrillard’s account of the collection as a system that resolves real time into a controlled cycle is developed across the chapter on collections. The distinction between the functional and possessed object — and the claim that the collection replaces time with a navigable system — is taken throughout this dissertation as the operative frame for the game inventory and its relationship to grief.

— replaces it with a controlled cycle, a system that recommences always from any point, indifferent to duration.

The objects of *They Never Had Ghosts* were already in this register. The player could not activate them, retrieve from them, or use them — only view them. They were possessed from the start: abstracted from function, arranged by the maker, offering themselves to the moving gaze without entering into relation. The crossing from functional to possessed had already happened before the player arrived. What the work held was a scene of possessed objects, navigable by locomotion alone, organized by loss.

Possession is where the mise en scène becomes a diagram. The objects are no longer distributed across a scene for ambulatory viewing — they are structured into a system of formal relations: the correspondence of materials, the coin mechanism that activates a timed sequence, the zoetrope that cycles on its own logic, the scaffold that holds every component in a pre-relational latency. The possessed objects remain possessed — the visitor still cannot use them — but they now operate within a diagram that was already complete before the visitor arrived. The shift is from possessed-through-viewing to possessed-through-system. The scene has become a formal proposition.



Figure 9 *Possession* archival video stack, London above, Turkey below

The Turkey footage that played inside the hammam of *They Never Had Ghosts* — part of the scene the player walked through — reappears in *Possession* as one of the stacked browser projections on the installation wall. The same material, the same images, but the relationship of the body to them has inverted. In the earlier work the player approached the footage on foot, from within the game world. In *Possession* it runs on the surface of the room the visitor is already inside. The footage didn't change. The position, however, did. The desktop performs the same inversion. In *They Never Had Ghosts...* the game exits to the player's desktop — the ordinary world returns, the threshold closes, life resumes at the interface of the living. In *Possession* the desktop becomes a projection wall: the installation's surface of engagement, the skin the visitor faces when they enter the room (see fig.9). The point of return has become the point of contact. The ordinary interface of the living has been brought inside the work and made into its face. The return is not an exit; it's a condition.

Merleau-Ponty's account of motor intentionality describes how the body incorporates its instruments into its schema — the tool's resistance felt rather than thought, processed before the mind intervenes (Merleau-Ponty, 1945).²² In the walking simulator the body schema incorporates locomotion: the walk, the turn, the approach. That is the full extent of the instrument. In *Possession* even that is withdrawn. The visitor's body stands. The scene moves around it rather than opening as it approaches. The ambulatory agency of the walking simulator — the last remaining form of agency the earlier work offered — has been suspended. What remains is the coin: a single transactional gesture, timed, returning to rest. The arc of withdrawal runs from walking freely through the scene, to standing inside it, to fifteen seconds and silence. The wound.

The archive of *They Never Had Ghosts...* was assembled around a death. My father's. The father, the grave, the hamam, the fragments of Turkey — a scene built from what was lost. The player walked through it with the agency of the living, moving toward the limit, being returned each time to their desktop. The archive was a closed scene, organized around an absence. But then a child was born. From this event, the archive did not merely grow — it ruptured. A living child cannot be held in the scene of the dead. The child is not a possessed object. The child cannot be folded into the collection's controlled cycle. And so, the child, my firstborn son (Riddley), runs independently of every formal system the work deploys — and the work's acknowledgment of this

²² Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Donald Landes (London: Routledge, 2012 [1945]). The account of motor intentionality — the skilled body's incorporation of its instruments into the body schema — is developed in the chapters on motor habits and the body's relation to space. In the walking simulator the instrument is locomotion itself: the body learns to move through a world, to approach and withdraw, to orient by walking. The withdrawal of that instrument — the body that arrives in a space it cannot walk through, only stand inside — produces a disorientation that is postural before it is cognitive.

is intended: Riddley's feed cannot be stopped by the coin. The mechanism that pauses the game, freezes the footage, activates the sequence — cannot touch him. The living child is outside the economy of grief, not as an aesthetic decision but as a formal necessity. The archive cannot possess him. He is within the diagram but outside of the system. He is the proof that the system has a limit it cannot close around.²³

This is the singularity that caused the transposition. The shift from walking simulator to unplayable game — from ambulatory grief to grief as atmosphere — is the formal response to an archive that now contains both the dead father and the living son. A single walking body cannot hold both. Only a system that runs without a player can hold both without collapsing one into the other — processing the dead in its loop, exempting the living from its economy, continuing regardless. The time between a death and a birth is the diagram being presented.

The engine running without a player does not mourn. It does not address, it does not wait. It persists. The loop runs the personal archive as form: the aerial map of the childhood estate, the

²³ Riddley's exemption from the coin's economy is described in the installation documentation as "an ethical refusal, not an aesthetic one: the living child is placed outside the transactional structure of grief." The formal and ethical dimensions are inseparable here. The child cannot be stopped because stopping him would be a claim about his relationship to the archive of the dead — a claim the work refuses to make. His feed runs independently because he is independent. The system acknowledges what it cannot hold.

apartment block door, the reconstructed grave, the photogrammetric fragments of a life.²⁴ On the desktop wall, the child's feed runs continuously — independent, unaffected, outside the cycle. The dead and the living held in the same room by a system that treats them differently because they are different. The archive running. The child running. The coin completing its sequence and returning to rest.

²⁴ Godot Engine 4 was selected over Unity and Unreal Engine on structural grounds. Unity's 2023 runtime fee controversy demonstrated the institutional risk of building practice-based doctoral work on proprietary infrastructure subject to retroactive revision. Godot's MIT license imposes no such conditions. For a work concerned with what persists beyond the body that made it — what can be transmitted, inherited, run without an originating subject present — the commons logic of the engine is the condition of the installation's own transmissibility. The engine will outlast the organizations that built it. So will the loop.

Tapestry Two

Distension – Can a skull frown?



Figure 10 The author's imagined skull, rendered in ZBrush

An image slips through the circuitry, unannounced. A photograph, not mine, not asked for. A man, mouth slack, body threaded with tubes, lies on a hospital bed. The image lands on a screen pressed against my thigh, inside a pocket, continents away. It enters the room, the eyes, the body. It cannot be returned. It cannot be unseen. The man is my father.

This is the event.

Bachelard's account of the poetic image insists on its irreducibility to cause. The image is not the product of an interior state externalized, not the expression of grief, or love, or dread. It precedes all of these. It arrives in the body before the mind has constructed any framework capable of receiving it, and it reverberates there, in what Bachelard calls the resonance before the repercussion: the image sounding in the body before thought has time to name what it is hearing. The poetic image does not *mean*. It installs (Bachelard, 1958).²⁵

The WhatsApp photograph is a poetic image in this sense. It does not communicate the father's condition; instead, it detonates it. The image arrives, and the body responds before any decision is made about how to respond. In time, my hands will travel toward my own face. My fingers will press through my skin toward the bone underneath: orbital ridge, zygomatic arch, mandible, temporal bone, the cranial vault felt through hair. My body is taking measurements. It does not yet know why. It measures what the mind cannot yet locate in name.²⁶

²⁵ Gaston Bachelard, *The Poetics of Space*, trans. Maria Jolas (Boston: Beacon Press, 1994 [1958]). The account of resonance before repercussion, the poetic image sounding in the body before the mind has constructed a framework capable of receiving it, is developed in the introduction. Bachelard's insistence that the poetic image is irreducible to cause, that it precedes the psychological states it might later be said to express, is taken throughout this dissertation as the operative model for the loric object and for the WhatsApp image specifically.

²⁶ The somatic response described here connects to Merleau-Ponty's account of motor intentionality: the body incorporating the skull as the instrument of grief's inquiry, the fingers learning the geometry of an inherited structure through the resistance of skin (Merleau-Ponty, 1945). An analogy from a different necessity: moving through terrain armed with an illustrated map whose logic is spatial and static, the hunter discovers that the map and the land are on separate logics. The illustration fixes what the body must traverse in motion, approximate and continuous. Geography recognized through the necessity of the act. The skull was the same inquiry: the haptic data and the accumulated image on separate logics, the geometry of ZBrush the space where their irresolution was held. I learned this in some form, firsthand, whilst boar hunting with a cousin in Turkey.

The 3D-printed skull is the form the event produced. Before the game engine, before the mechatronics, before the scaffold, the skull crossed the threshold first. It is grief's entry wound into form: the image having entered the work through the body and come out the other side as an object. I pushed through skin to find an inherited structure beneath, the bone that was always there, that the father also carried, that the son's fingertips could feel but the image could not show. And, in turn, I pushed through the screen, into ZBrush, into the 3D printer, into the gallery, finding the logic in the inherited technology the same way the fingers found the logic in the inherited bone. The touch and the digital tool were running the same inquiry, but in different registers (see fig.10).

The skull, my skull, is not a representation of grief. It is not a *memento mori*. It is the instrument through which grief entered the formal system. Everything else in the work follows from that crossing.



Figure 11 *Savage Alms* installation still with the 3D printed PLA skull of the author

The first skull was made for *Savage Alms* (2023) (see fig.11). It was summoned from touch both inward toward location, and outward toward cultural images. The images were already sedimented, layered deep: TV props, RPG dungeon sprites, anatomical diagrams, historical documents, Halloween grins – a topology of skull. A sort of residual inference. This library of skulls had been building since childhood, and when the hands pressed through skin toward bone and the fingers began to construct a geometry in ZBrush, the field was already thick – already tangled with the archive. There was no escape from those skulls when rebuilding an image of one's

own..²⁷ Sensed skull and imagined skull: two logics, never reconciled. The ZBrush geometry bore this tension in its surface. The frown was not chosen. It was the pressure of memory against touch, the geometry caught between what the fingers found and what the interior library insisted. However, the jaw was missing. This absence projects its own future, silently. What remained, curiously, was an inherited frown.

The jawless skull is already time-traveled, already separated from its maker, already met by whatever strips away what can be stripped. The future of decomposition is present in the form as a condition rather than a narrative.

The skull in *Possession* is a different object. The chrome lacquer is now present where in past it was not – a promise deferred, perhaps. A formal material choice, it was placed alongside the daemon Mordurak in terms of its material trajectory through the work. The skull was also decimated in Blender. The high-resolution geometry of the first model, built from the irresolution between haptic data and accumulated image, carrying the frown of that irresolution in its surface, was reduced deliberately to a low-polygon form. The frown was lost. The expression was lost. What remained was the structure without the portrait, the geometry without the face that grief

²⁷ Savage Alms (2023) was presented at Mini Mart City Park, Seattle. The work takes the Kusōzu as structural framework, staging one of its stages as a game engine environment using live weather algorithms. The 3D-printed skull installed in a soil and moss bed in the gallery is modelled from the artist's own skull through a sustained process combining photo documents, ZBrush modelling, and the haptic inquiry described above. The performance documentation images record the postures required to capture the full surface of the skull: self-portraiture as forensic procedure.

had pressed into it. The skull moved from death mask to diagram. More disco ball than relic. More fluid as a digital object: portable, easily rendered, usable across machines.²⁸

What became apparent through the making was the use of systems as correspondence tables. Not decoration — stable ground to venture from and to return to. The Kusōzu, the Ars Goetia, the gaming manual, worlding rules — each establishes a position, a direction, a way of measuring distance before the movement begins. They work below the surface, passively, until the methodologies they carry surface as form.

Savage Alms was the first work to use the Kusōzu this way (see fig.12) — one stage, held in a game engine environment, running against live weather. *Possession* extended the logic across all nine, beginning at zero.

²⁸ The decimation of the skull in Blender, the deliberate reduction of polygon count from the high-resolution model to a low-polygon form, is a standard operation in 3D modelling pipelines used to reduce file size and improve rendering performance. Here it was a formal decision as much as a technical one. The high-resolution model carried the history of its making in its surface. The decimated model carries the structure without that history: portable, renderable, operative. A slow dissolve back toward the archive. The chrome lacquer applied to the surface of the *Possession* skull, chrome that dazzles at distance and discloses its artifice to the body that approaches, is a material logic shared with the daemon Mordurak and discussed more fully in *Tapestry Four*.



Figure 12 The Kusōzu (above, left & right) and Savage Alms (below, Left & Right), showing the earliest referencing of the 18th-century Japanese Buddhist tapestries

This was a formal decision about what the skull needed to become for *Possession*. The high-polygon skull of *Savage Alms* was the first search, the inquiry held in every polygon, the irresolution visible in the geometry. The decimated skull is the skull after that inquiry has run its course: operative structure, stripped of the weight of its own making. The skull had become a system rather than a portrait.

And from that reduction, the zoetrope was born. The skull at the base, holding the structure. Above it, the eight photoscanned beds spinning through their cycle. The bone bearing what rotates above it. The inquiry that began with fingers pressing through skin had arrived at this: a chrome

reduced geometry generating a cycle of images above its own structure, the measurement that started in grief now the ground of something that continues. The bed reunited with skull.²⁹

Before any of this, before the resonance, before the hands, before the inquiry, the image existed as data. It was compressed by an algorithm, encrypted by a protocol, transmitted across a network of servers in countries neither sender nor receiver could name, decrypted at the point of arrival, and rendered on a screen. The father's dying body passed through this infrastructure as a sequence of numbers. It had no fixed location in transit. It was held in distributed servers, moving through fiber optic cable, arriving as grief only at the moment of decryption.³⁰ The ZBrush skull model exists in the same infrastructure. It has no fixed location. It can be transmitted instantaneously, instantiated anywhere a printer and the file can meet, at any scale, in any material the printer accepts. In this way, the skull does not travel. It emerges. The father's face as encrypted image and the son's skull as digital file are both held in the same distributed infrastructure: both locationless, both potentially emergent anywhere, both untethered from the physical objects they index. A file received, a file made. Both are now nowhere. Both persist.

²⁹ The zoetrope is discussed more fully in its own tapestry. It is named here only as the object the skull's reduction produced: the formal consequence of the inquiry having run its first course. The skull at the base, the beds spinning above it. The bone holding what rotates.

³⁰ WhatsApp uses end-to-end encryption via the Signal Protocol. The image was encrypted on the sender's device, transmitted as ciphertext, and decrypted only on the recipient's device. No server in the transmission chain held a readable version of the image. The father's face, in transit, was illegible to every infrastructure it passed through. It arrived only once, only for the person it was sent to. It was later deleted by the sender, but not before it had been downloaded by me.

Tapestry Three

Exudation – Knock, Knock – Who’s there?



Figure 13 Screenshot from *Elder Scrolls: Skyrim* room in-game video capture

A room inside *Possession*. It is from the world of Skyrim. It is also from a housing estate in North London. It is also from an event that never fully resolved.

The Skyrim room runs on the wall of Room One: the noble’s home, the table set, the candle lighting, the door that will not open for the visitor (see fig.13). It runs as a loop, without a player, indifferent to whoever is standing in front of it. On the opposite wall, the aerial traversal moves through the childhood estate: the blocks, the paths between them, the trees grown large over the decades since the body that came from that place was last inside it. Two game worlds on two walls. The visitor floats between them.

When a coin enters the network, the door bangs. Not the sound of a door being opened from the other side but of someone thumping it, kicking at it, making their presence known. The presence of another. The door does not open for the visitor. It opens only because the game's resident has detected the intruder, the uninvited body in their space, and that moment of detection is what the coin activates. The visitor's gesture triggers the memory of an intrusion. Through the door, the candles continue to flicker.³¹

These are not representations of places. They are constant states of being. The estate is immanent in the body that grew up there in the way that certain smells are immanent, the way that a particular quality of light at a particular time of day is immanent: prior to any decision to remember, running continuously beneath the surface of the present, not behind but alongside, from within. The Skyrim room is immanent in the same register. The body that played Skyrim learned the geometry of that interior through repetition, through the accumulation of events that happened there, through desires that were generated in that space and nowhere else. Both states of being are constant. Both are running. The gallery encounter does not initiate them. It intersects them.

³¹ Gilles Deleuze, *Pure Immanence: Essays on A Life*, trans. Anne Boyman (New York: Zone Books, 2001). Deleuze's central claim: immanence is not the immanence of something. It is not immanence of a subject or of consciousness. Pure immanence is a life — the indefinite article marking the impersonal singularity of the event. A life contains only virtuals: virtual events, virtual singularities that are real without being actualized in any particular material form. The virtual is not the imaginary. It has full reality. The distinction between the real and the actual is the operative frame for the game world throughout this dissertation: the Skyrim room and the childhood estate are both real, neither is actual in the gallery space, both are running.

Deleuze, in *Pure Immanence*, describes immanence as a life: not the life of a subject, not immanence of a consciousness, but the impersonal singularity of a life as an event. The indefinite article carries everything. A life contains only virtuals: virtual events, virtual singularities, real without being present in the way a material object is present (Deleuze, 2001).³² The virtual is not the imaginary. It is fully real. It simply has not been actualized in a particular material form at a particular moment. The estate in the aerial traversal is virtual in this sense: real, fully present in the body that carries it, not actualized in the gallery floor but running across the projected surface of the wall. The Skyrim room is virtual in the same sense: the meals not eaten at the table, the candles that were always lit, the door that could always be opened, all of them real, none of them present in the material world the gallery occupies.

The traversal is not of ground. It is of immanence. The aerial camera does not fly over a surface. It moves through a field of virtual singularities: the specific quality of a particular corner of the estate at a particular time of day, the weight of a particular afternoon that happened there and did not happen anywhere else. These are not memories retrieved. They are events that are coexistent

³² Henri Bergson, *Matter and Memory*, trans. N.M. Paul and W.S. Palmer (New York: Zone Books, 1991 [1896]). Bergson's account of the past as coexistent with the present — not behind it, not retrieved from storage, but running alongside it as a virtual dimension of every present moment. The past does not pass. It is preserved in its entirety, coexistent with every present, accessible not through retrieval but through the body's movement into the virtual dimension that is always already there.

with the present, running alongside it, fully real (Bergson, 1896).³³ The traversal moves through what is already there in the body. It does not map a geography. It moves through immanence.

Spinoza's substance has no origin outside itself and no terminus beyond itself (Spinoza, 1677).³⁴ What we call places are modes of that substance: expressions of a process that was running before they were named and will run after. The estate and the Skyrim room are modes in this sense. Not locations in space but expressions of immanence in a particular material register. The visitor who stands between the two projected walls is standing inside the field of which both are expressions. There is no neutral position from which to observe them. The visitor is also a mode of the same substance.

A lived experience in Skyrim is a lived experience. The qualification needs stating plainly because the cultural reflex is still to treat the game world as a lesser register of experience, a simulation of the real rather than a real of its own kind. This is not a defensible position, but a mark against the video game as a conglomerate of operative signs. The body that plays Skyrim genuinely inhabits that world. The grief when a companion dies is grief. The desire to return to a particular location

³³ Baruch Spinoza, *Ethics*, trans. Edwin Curley (London: Penguin, 1996 [1677]). The substance argument is discussed more fully in *Tapestry Zero*. Its recurrence here marks the Spinozist spine of the dissertation: every tapestry is a mode of the same immanent process. The estate and the Skyrim room are not separate ontological categories. They are expressions of the same substance in different material registers.

³⁴ Brendan Keogh, *A Play of Bodies: How We Perceive Videogames* (Cambridge, MA: MIT Press, 2018). Keogh's central argument: the player's body and the game body are co-present. The player does not observe the game from outside. The player feels the game through the screen, through the controller, through the proprioceptive feedback of play. The body is genuinely in the game world, orienting, habituating, accumulating events. The emotional and somatic responses generated by the game world are not simulations of response. They are response.

because something happened there is desire. The orientation in space, the accumulation of events, the knowledge of a place through movement through it: these are not pretend versions of experience. They are experience, generated by a world that happens to be made of polygons rather than matter (Keogh, 2018).³⁵

Merleau-Ponty's account of the phantom limb is useful here. The body continues to feel what is no longer materially present. The amputee reaches for the missing limb not from confusion but because the body schema has not revised itself to match the material loss. The body's intentionality reaches beyond the material into a space that is genuinely felt but no longer physically there (Merleau-Ponty, 1945).³⁶ It is my belief that the body that played Skyrim reaches toward that world in the same way. The game world is no longer running on a screen in front of the player, but it is still present in the body's schema: the geometry learned, the routes habituated, the events accumulated. When that world appears on the gallery wall, the body does not observe

³⁵ Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Donald Landes (London: Routledge, 2012 [1945]). The phantom limb is discussed in the chapter on the body's motor schema. The body continues to reach toward what is no longer materially present because the body schema does not revise itself at the moment of material loss. The limb is gone but the body's intentional reach toward it is real. The game world is the phantom limb of the body that inhabited it: no longer running on a screen in front of the player, but still present in the body's schema as an intentional orientation.

³⁶ The table and chairs in the Skyrim noble's home are a specific asset from the game's object library. Their appearance in the installation across four registers — projected, miniature in the chrome pour, printed on the scaffold satin, backlit on activation — is the table that the game provided in the absence of a shared domestic space. The noble's home is the home that was available when another was not. The four registers are four actualizations of the same virtual singularity: the meal that was prepared and not shared, the table that was always set in the game and never in the life.

it. It recognizes it. The motor intentionality orients toward it before the mind has time to name what it is orienting toward.

The Skyrim room is not intended as an illustration (although it may well serve that for many). It was chosen because it was genuinely inhabited. The table in that room carries the weight of every meal that happened there within the logic of that world. The door carries every threshold crossed. These are not symbolic values assigned in retrospect. They are virtual singularities accumulated through inhabitation, real in Deleuze's sense, present in the body that moved through that field.

Possession is an immersive work. It is not, however, a seamless one. The fissures between worlds are not failures of the immersive logic. They are its formal honesty. The seams where the game world and the gallery world and the estate world layer over one another and do not fully coincide: these are the most charged moments in the installation. They show the visitor what it actually looks like to carry multiple lived worlds simultaneously, without the ability to keep them separate.



Figure 14 *Possession* rug depicting *Skyrim* foliage materials

The foliage rug is one of those seams. Skyrim's botanical texture maps, the game world's environmental data unpacked and printed flat, laid on the gallery floor beneath the tent and the backlit father-child image (see fig.14). The visitor stands on a gesture of the game world's ecology without necessarily knowing it. The rug is a surface of immanence made literal: the virtual world of the game held flat as ground, the body walking on it, the estate and the game world and the gallery floor occupying the same square footage simultaneously.

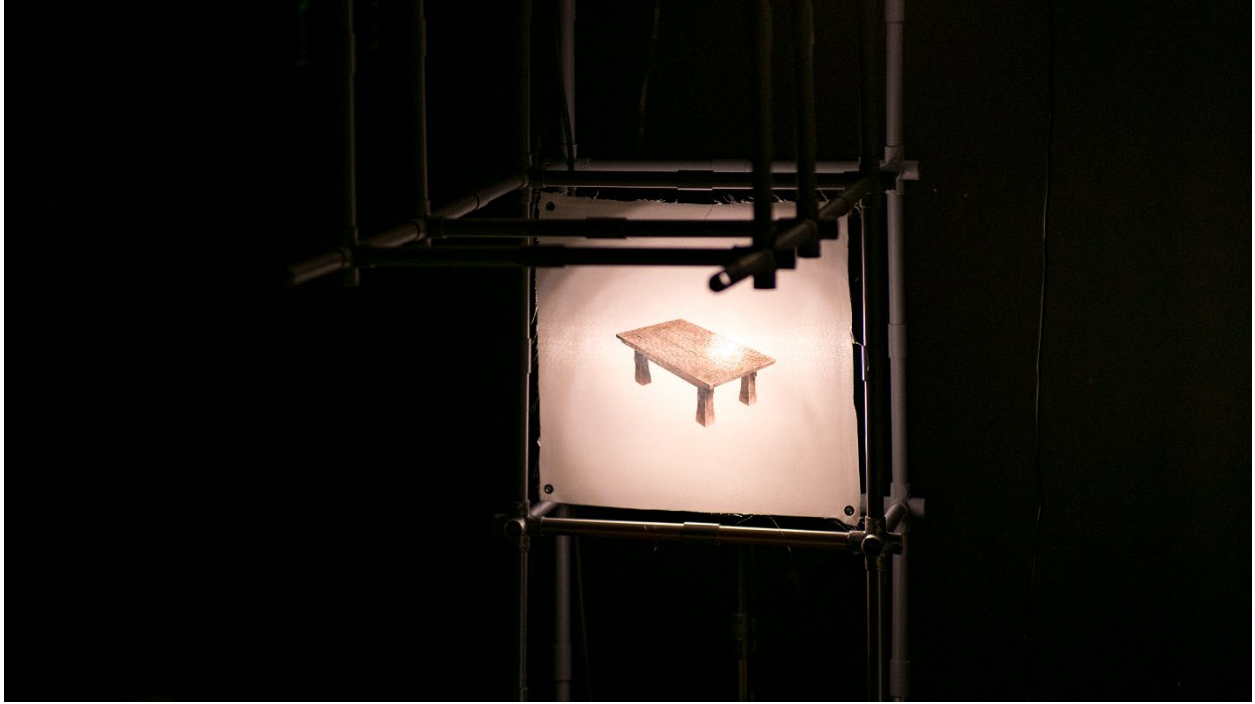


Figure 15 *Possession* still depicting *Skyrim* furniture on satin, within the scaffold

The table and chairs run across four registers simultaneously: projected in the *Skyrim* room on the wall, miniature in the chrome pour on the gallery floor, printed on the white satin panels of the scaffold, backlit on activation (see fig.15). The same object in four states of materialization. None of them is the table. All of them contain it as a virtual singularity: the table that should have been sat at together, the meal that was prepared and not shared, the household object the game

holds in a form the world did not produce. The game world provided the domesticity that was otherwise unavailable. The table in *Skyrim* is the table.³⁷

In Room Two, the *Skyrim* castle wall is printed onto organza. The stonework is barely visible until light catches the tiny ridges of the fabric's loops: present as an image, absent as a surface, flickering at the threshold of legibility depending on where the body stands and how the light falls. This is the phenomenology of the game wall made textile.

In the game engine, a wall has no weight beyond its collision box. It is a surface with a property attached: this body passes through, that body does not. The geometry holds the player until the code says otherwise. The wall is a conditional surface, a surface of relative resistance. The organza performs exactly that condition. It is a surface the body cannot pass through, but it is also a surface that barely exists as a surface. It holds the image of the castle stonework the way the game holds the stonework: as a condition of the space, present when the logic requires it, dissolving when the angle changes. This is also *le point limite* in textile form. The wall that is present and absent simultaneously, that holds the image of the game world at the threshold of visibility, that the body

³⁷ The footage of the *Skyrim* room was made by entering the noble's house through breaking and entering — the game's mechanic for gaining access without permission, used here to avoid immediate detection by the resident and to allow time to find the right framing. The camera was positioned to hold the full interior: the table, the fire, the door. The recording was a wait. The resident eventually detected the intruder's presence and the door opened: the owner arriving to investigate. This moment — the door opening from the other side, the entrance of the resident into their own home — was taken and placed into a short forward and reverse loop to generate the banging sound and movement on coin activation. The priority in constructing the loop was the candle flicker: the light had to be seamless and subtle, the flame continuous across the loop point, visible at the scale of the gallery projection. The footage was brought into TouchDesigner and activated via OSC messaging on coin insertion. The door does not open for the visitor. It responds to a detection that happened in another space, in another time, at the moment the intruder was finally noticed.

reads differently at every distance, is the grammar of being held in fabric. The visitor who approaches it discovers that the stonework was always conditional. The game world was always this: a surface of relative resistance, an image that holds until the body is close enough to see through it.

The Skyrim room runs on the wall. The estate moves through the aerial traversal. The foliage is underfoot. The table is in four places at once. The organza holds the castle at the edge of visibility. None of these are a representation of a place.

Tapestry Four

Putrefaction – Prison break geometries



Figure 16 *Possession* still displays an image of the author's father on his deathbed, printed on satin, set to the highest point within the scaffold structure

The scaffold grew around the room and was displaced. What remains is the shape of the room in a material that was never the room.

The grey PLA structure spans both gallery spaces: climbing the walls of Room One, bridging the doorway, reaching into Room Two where the daemon crouches in its chrome pool and the organza holds the castle wall at the edge of visibility. It scales and bridges and pierces like a vine that grew through a trellis and found the architecture of the space as its support structure. It shaped itself around what it climbed. Then it was lifted from the walls, set at an angle to the space it had formed itself around, and what remained was the room's geometry held in a material that is no longer

touching the room's surfaces. The scaffold models the gallery and tilts away from it in the same gesture. It leans under its own weight; the structure's honest account of what it has been carrying: months of printing, around 35 kilograms of PLA.³⁸ The origin of the form is unclear; its origin displaced through multiple emergence. Encounter for the viewer becomes cumulative but resists arrival.

Moynihan's account of spinal catastrophism begins from a simple observation: the spine is not an elegant solution. It is a catastrophic improvisation. The vertebral column is the record of a horizontal animal forced upright, the nerve running through it permanently vulnerable, the whole structure a compromise between what the body was and what it was made to become. The spine does not originate the upright human. It is the evidence of the catastrophe of becoming upright, carrying the weight of that forced verticality in every disk and joint, already beginning to fail from the moment it is loaded (Moynihan, 2019).³⁹

³⁸ The scaffold was designed from first principles: rods and universal joints, modular, self-similar, any number of units combinable in any configuration. The fabrication calculations were made on a single sheet of paper headed "LOSES," dated 25/9/25. The final structure used approximately 35 kilograms of PLA filament and took around six weeks to print across multiple machines. The calculations of grief and the calculations of fabrication on the same page, in the same hand, at the same time.

³⁹ Thomas Moynihan, *Spinal Catastrophism: A Secret History* (Falmouth: Urbanomic, 2019). Moynihan's argument traces a counter-tradition in the history of the body: from Geoffroy Saint-Hilaire's invertebrate homologies through Lorenz Oken's vertebral theory of the skull to the twentieth century's catastrophist readings of the spine as the record of a compromised evolutionary transition. The spine is the evidence of a catastrophic improvisation: a structure borrowed from a horizontal animal and forced to carry vertical weight, the nerve running through it permanently exposed, the whole thing already beginning to fail from the moment it is loaded. The scaffold's lean is this catastrophism made visible in PLA.

The scaffold is spinal in this sense. It reaches vertically through both rooms, carrying the installation's weight along its axis, the nerve of the whole work running through its joints. And like the biological spine, it is both what makes the structure possible and what is most likely to fail. The lean is already there. The weight has already begun to win. The scaffold holds the installation upright under protest, the grey of its material the grey of bone in a 3D scan before skin is applied: the armature visible, the catastrophic improvisation readable in every stratum of its surface.

The joints are vascular. The file is named UniversalJoint_SIMPLE_Veins3 (see fig.17): the vein built into the naming before the object existed, the connective tissue quality of the nodes where lines meet and branch already anticipated in the design. The joints make a gesture to look grown rather than engineered. They are, sympathetically, the places where a structure is most vulnerable and most alive simultaneously: the nodes of a system that replicates its module because replication is what the structure does, proliferating along the axis without destination, the same unit repeated until the axis ends.⁴⁰

⁴⁰ The joint file is named UniversalJoint_SIMPLE_Veins3.obj. The naming convention records an iterative design process: Veins3 is the third version of the vascular joint, the form refined across three iterations toward the connective tissue quality visible in the printed object. The vein is not metaphorical. It is the design brief: a joint that looks like the place where a living structure branches, where the lines of the meshwork meet and redistribute their load.

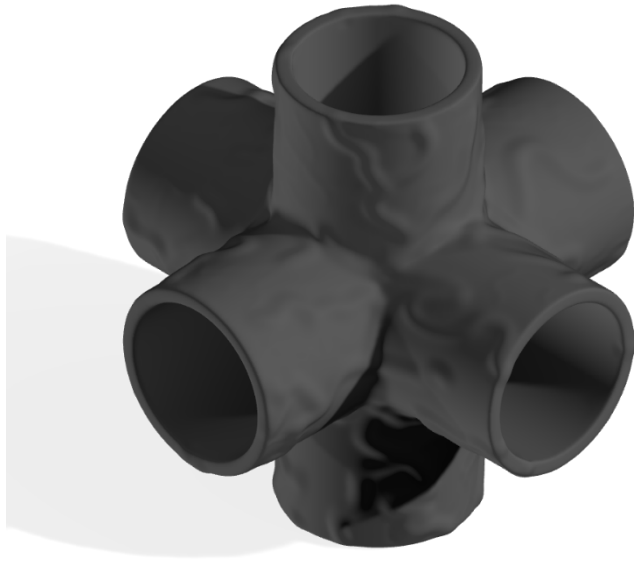


Figure 17 'UniversalJoint_SIMPLE_Veins3' ZBrush render of scaffold joint

The scaffold is made from PLA. The print strata are visible on the surface of every rod and joint. Each layer deposited on the previous one, the object built from the ground up in accumulation, the geometry readable as a cross-section of the time it took to build it. This is sedimentation as manufacturing method: the scaffold is a geological object, its surface a record of its own making, each layer a fossil of the hour it was born, the six weeks of its emergence readable in cross-section.

The grey of the scaffold is the grey of the mesh before texture is applied in the 3D software editor. The digital object still in its working state. The scaffold holds this register of grey, and in doing so holds open the question of what state it is in: geological deposit, skeletal structure, or unfinished file. The answer is all three. The grey refuses to resolve into any one of them. It is a placeholder.

Because the scaffold was designed in 3D software and printed in PLA, it can be grown again. The same file, the same rods, the same joints, the same modular logic. The vine that took six weeks to grow can be regrown in six weeks anywhere a printer and the file can meet. The scaffold is an instance of a file. Every instance carries the full geometry of the room the vine grew around.

This connects the scaffold to the skull, to the sewing machine, to the whole lineage of the prototype and the copy that runs through this dissertation. The mother's prototype garment, made once, attended to, so that it could be reproduced elsewhere. The skull that does not travel but emerges, each instantiation complete. The scaffold is the same structure: the form produced once, with attention, inside grief, so that it could, in principle, be issued elsewhere. And so, the grief architecture becomes reproducible. The spine that formed around loss can be printed again, and again, and again.

But a computer file cannot carry the lean of material weight. The lean is what happens when the printed object meets gravity and time. The file simply holds the geometry. The gallery becomes responsible for holding the lean. The infinite copies are all potential scaffolds, all carrying a potential room's shape, all reaching potentially toward their respective ceilings, holding a potential father's image aloft. However, only this instance leans. Only this actualization carries the weight of the specific grief it was built inside, across multiple specific weeks, on specific

machines, by a body that was already beginning to give way under what it was carrying.⁴¹ And so, the file is always outstripped by the thing itself. What the file cannot carry is the evidence of time meeting matter: the lean, the stress at the joints, the space it traversed. The file is the virtual. The leaning scaffold is the actualization. Between them is the difference that makes the instance irreplaceable despite its theoretical reproducibility.

Ingold's account of the meshwork describes an environment constituted through lines rather than enclosed by surfaces (Ingold, 2007).⁴² The organism does not move through a pre-existing space. It moves along lines, and the lines, in their arrangement and intersection, constitute the environment through which movement is possible. The scaffold is a meshwork in this sense: not a container for the installation but a set of lines along which the installation's elements are

⁴¹ The grapevine of my Turkish family's home grows through the wooden trellis of the summer garden, sheltering the table beneath it as it climbs. It does not grow toward the trellis. It grows through it, finding the structure as support, shaping itself around what it climbs. In summer the vine and the trellis are indistinguishable from a distance. Up close the vine has exceeded the trellis in every direction. The scaffold grew around the gallery rooms in the same logic: the structure and the space becoming indistinguishable, the vine retaining the room's shape after the displacement, the trellis now at an angle to the walls it once ran parallel to. One evening during a visit to Turkey, I was asked to eat alone. Partly because I was gluten free and the family was having *laçmajun*. Partly because of the dynamics of a large family gathering — a cousin at the head of the table, my father unable to attend because of exhaustion from cancer treatment. I was happy to sit alone. The many days of family company had worn my nerves out and I needed quiet. I had no idea, sitting there eating by myself, that my father was resting in the room directly next to me. I did not know he was there until later. There is a comfort in that: the table set, the meal eaten, the father present but not at the table, not absent either. In the next room. Resting.

⁴² Tim Ingold, *Lines: A Brief History* (London: Routledge, 2007). Ingold's account of the meshwork distinguishes between the network — a system of nodes connected by lines, in which the lines are secondary to the nodes — and the meshwork, in which the lines are primary and the nodes are simply the places where lines meet. In the meshwork, movement is along the lines rather than between the nodes. The environment is constituted through the lines' arrangement rather than enclosed by their boundaries. The scaffold is a meshwork: its lines constitute the space through which the visitor moves rather than enclosing a space that pre-exists the lines.

arranged and through which the visitor's body moves. The visitor does not enter an enclosed space. They move along the lines of the vine, through the joints, past the panels, under the satin, between the rooms.



Figure 18 *Possession* still depicting 3D printed life-size Skeevers from *Skyrim*

The grey is also an invitation. The unfinished mesh, the object in its working state, the geometry before texture is applied: the scaffold holds open the question of what color it should be, what texture, what surface. It invites the viewer to complete it in their own imagination, to bring their own color to the geometry, to consider what the objects are resonant of within the logic of digital spaces they have themselves inhabited. The collaboration is ongoing.

Tapestry Five

Liquefaction – Bed head

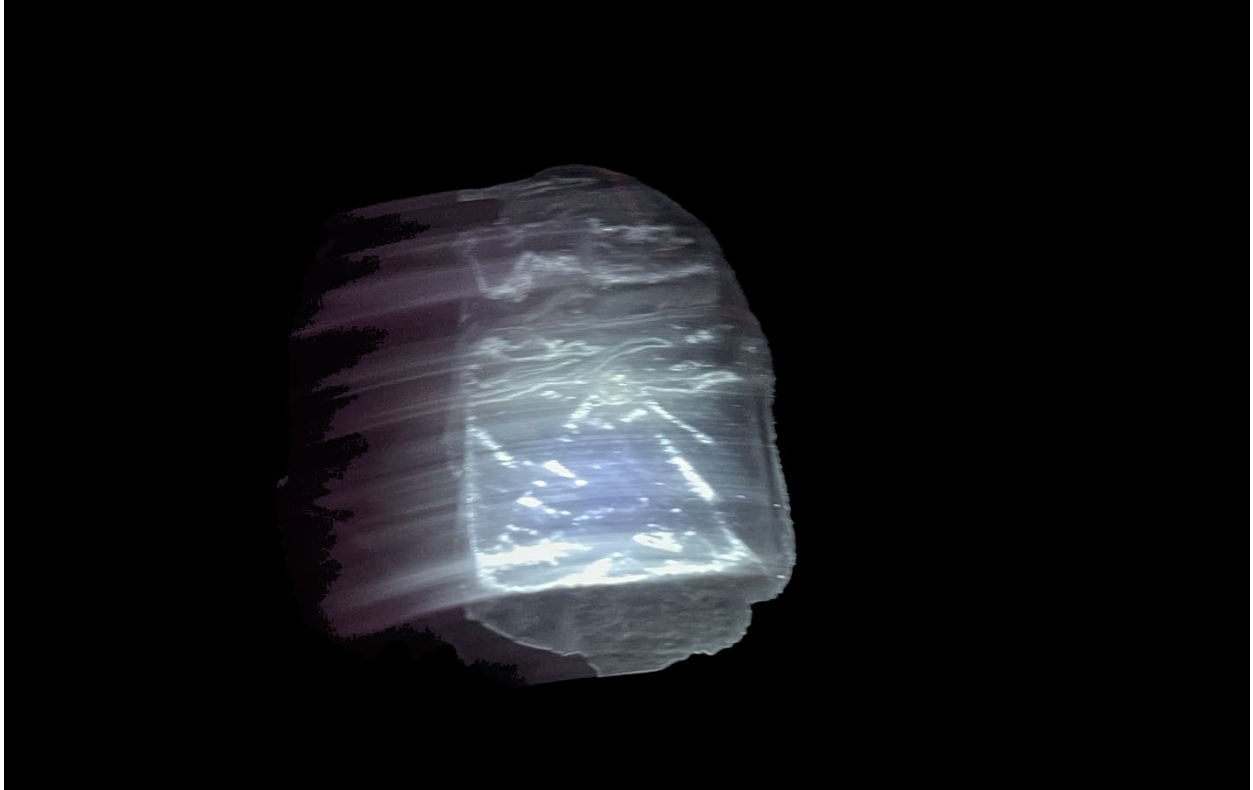


Figure 19 The zoetrope depicting a 3D printed clear resin bed, attempting to resolve

The bed holds three temporal registers simultaneously. It is the bed of conception: the place where the first child was made, where the body began that now runs on the desktop wall, outside the economy of grief, beyond the reach of the coin. It is the bed of last rites: the bed that appears in the image of the father dying, the hospital surface on which the body that made the maker lay in its final duration. And it is the bed of dreaming: the place where the body suspends itself between the living and the dead, neither here nor there, available to whatever arrives in that suspension.

The photoscan records none of these. It records surface geometry and color: the topology of a specific object at a specific moment, its contours and planes rendered as a mesh of polygons and a flat-packed image. Eight scans of the same bed, each one accumulating its own digital artifacts, the gaps where the scanner could not resolve the surface, the glitches where the geometry collapsed or doubled or refused to stabilize. None of the eight is complete. None of them is the bed. Together, spinning in the zoetrope, they produce something the scan could not produce alone: the apparition of an object trying to hold its image together and failing, the artifacts animated into a cycle of dissolution and partial reconstitution, the bed as it appears in the digital unconscious rather than in the room (see fig.19).⁴³

Bachelard's account of the poetic image applies here: the image does not echo from the past; it causes the past to resound toward the present, at an unmeasurable depth (Bachelard, 1958).⁴⁴ The bed in the zoetrope is a loric irruption in this sense. The moment it appears, spinning, strobing, flickering at the edge of visibility, it detonates every bed: the conception, the last rites, the dream,

⁴³ The photogrammetry pipeline for the bed: the object was scanned eight times using consumer-grade photogrammetry software, each scan processed through Meshy and refined in ZBrush. The decision to use eight scans of the same object rather than a single resolved scan was formal: the artefacts of each scan — the gaps, the doubling, the surface instability — are the content of the animation. Each scan was cast in clear resin and mounted on the zoetrope platform. The stroboscopic LED frequency was calibrated to the rotation speed of the stepper motor to produce the persistence of vision effect. The clear resin and the stroboscopic flash together produce the apparition: an object that appears to vibrate, to reach toward resolution, to fail. The stepper motor's timbre — the cyclical friction of the mechanism under load — was a formal priority: the sound of labor, not the sound of magic.

⁴⁴ Gaston Bachelard, *The Poetics of Space*, trans. Maria Jolas (Boston: Beacon Press, 1994 [1958]). The poetic image as irruptive rather than residual — the event that causes resonance rather than the trace left by one — is discussed more fully in *Tapestry Two*. The bed in the zoetrope is a loric irruption in the same sense as the WhatsApp photograph and the chrome skull: an object that detonates its field of reference rather than representing it.

the hospital photograph, the one the visitor woke in this morning. The object does not represent these things. It holds them as virtual singularities, all of them running simultaneously in the cycle, none of them visible, all of them present, ever dissolving.

The zoetrope is a system. Eight clear resin objects, each one a cast of a photoscanned bed, mounted on a rotating platform driven by a stepper motor. Stroboscopic LEDs flash in synchrony with the rotation, producing the persistence of vision effect that animates the sequence: the eight beds appear to move, to vibrate, to reach toward a stability they cannot achieve. The artifacts of the scans become the content of the animation. The failure to resolve is the cycle.

The stepper motor brings a machinic timbre to this event. The sound of the zoetrope is not the sound of an image. It is the sound of labor: the cyclical, drilling friction of a mechanism turning under load, a timbre that carries the same rhythm as the sewing machine, the same rhythm as the coin mechanism returning to rest. The sound pours through the threshold between Room Two and Room One. Visitors in Room One hear the event before they see it, or without ever seeing it. The machinic din crosses the formal boundary of the space. The zoetrope sounds like something drilling through the wall, perhaps.



Figure 20 *Possession* still depicting the modified skull in chrome with the zoetrope mechanism, behind the organza curtain

The chrome skull at the base of the zoetrope generates the cycle above it (see fig.20). The bone that bears what rotates. The measurement that started in grief, in the fingers pressing through skin toward the skull's geometry, now the ground of a system that holds the bed of conception and the bed of last rites in the same spinning structure. The skull and the bed. The first search and the thing it was always reaching toward.

Serres's parasite is the third term that disrupts the two-body relation (Serres, 1980).⁴⁵ In any system of exchange between two parties, there is always a third that takes without giving, that feeds on the relation without being part of it, that changes the system by entering it. The parasite does not interrupt one relation. It reorganizes the whole field.

The coin is the parasite that enters the installation's network. Before the coin, the system runs its cycle indifferently: the Godot traversal moving through the estate, the desktop archive running its stacked browsers, the Skyrim room looping, the zoetrope at rest, the scaffold lit in Room Two, the organza holding the castle wall at the edge of visibility. A distributed network of systems, each running its own sequence, each indifferent to the others and to the visitor moving between them.

The coin enters and the network responds as a whole. The Godot engine pauses. The documentary footage freezes. The scaffold lighting in Room Two extinguishes. The organza light dies, and the castle wall disappears into the dark. What remains lit in the darkness is the daemon's LED eyes, burning in the corner, and the zoetrope running its cycle, the stroboscopic flash across the

⁴⁵ Michel Serres, *The Parasite*, trans. Lawrence R. Schehr (Minneapolis: University of Minnesota Press, 2007 [1980]). Serres's parasite is the figure that enters a system of exchange between two parties and reorganises the whole field by its presence. The parasite takes without giving but changes everything by taking. The coin is the parasite of the installation's network: it enters one slot, takes fifteen seconds of the system's running, and in doing so reorganises every element of the network simultaneously.

spinning beds. One parasite, entering one slot in the mechanism, reorganizes the entire field of the installation simultaneously (Luhmann, 1995).⁴⁶

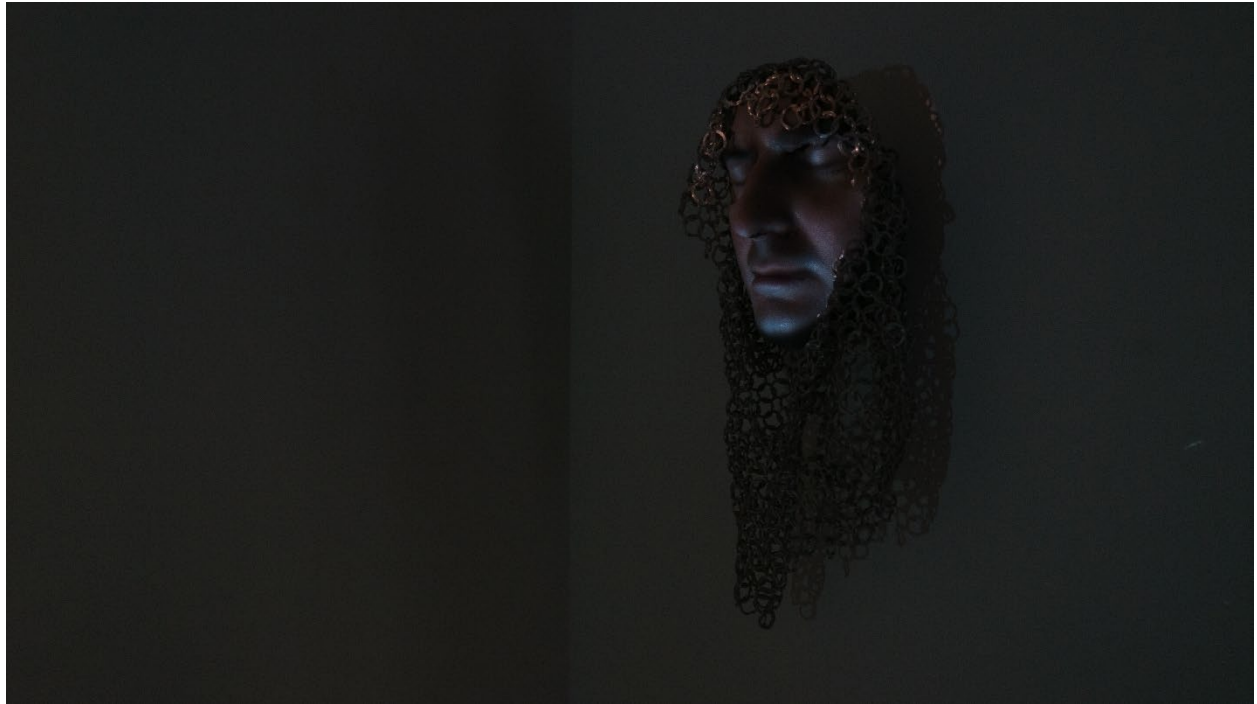


Figure 21 *Possession* still depicting the silicon cast of the author with video projection mapping

And then, in Room One, the chainmail face activates (see fig.21). A projection-mapped head adorned in chainmail: my own face, opening its eyes, looking upward, perhaps toward the father's image burning in the dark rafters above, then closing them. The Skyrim door bangs. The sonic

⁴⁶ David Seidl, 'Luhmann's Theory of Autopoietic Social Systems,' Munich Business Research Working Paper 2004-2 (Munich: Ludwig Maximilian University of Munich, 2004). Luhmann's autopoietic system is a system that produces its own elements through its own operations — self-referential, self-reproducing, operationally closed. The installation runs as an autopoietic system in this sense: it processes the visitor's desire through its mechanisms without being altered by that desire. The coin is processed. The sequence runs. The system returns to its prior state. The visitor's desire enters the field and leaves no permanent mark on the system that received it.

landscape shifts: the ambient Skyrim music and the diagètic documentary sound replaced by the impact of the door, the drilling timbre of the stepper motor pouring through the threshold, the sound of detection and the sound of the cycle arriving together into Room One. A wound opens in the sound. The two spaces bleed into each other through the threshold while remaining formally separate.⁴⁷

In the dark rafters of Room One, the father's deathbed image lights up. The backlit photograph at the apex of the tent: the bed of last rites becoming a beacon above the room where the zoetrope spins through its eight beds below. The two beds are drawn together across the formal boundary of the room — the one spinning in the dark of Room Two and the one burning above Room One — into some other space. The gallery space does not contain this relation. It happens in the temporal gap delivered through fifteen seconds and a coin.

Baudrillard's account of the possessed object describes a collection that abolishes time, replacing it with a controlled cycle navigable in any direction (Baudrillard, 1968).⁴⁸ The zoetrope is this cycle made mechanical: the eight beds of the same object, possessed, running their controlled

⁴⁷ The projection-mapped face is the artist's own face, mapped onto a surface within Room One and activated via OSC messaging on coin insertion. The chainmail adorning the face connects to the mother's portrait in the Sewing Machine installation (2024), where chainmail functioned as both medieval armor and immigrant resilience. Here it adorns the maker's face rather than the mother's: the same material logic, a different body. The eyes open, look upward toward the father's image in the rafters, and close. The duration of the look is the duration of the coin's sequence. The face does not look at the visitor. It looks toward the dead.

⁴⁸ Jean Baudrillard, *The System of Objects*, trans. James Benedict (London: Verso, 1996 [1968]). Baudrillard's account of the collection as a system that resolves real time into a controlled cycle is discussed more fully in *Tapestry One*. The zoetrope extends this argument mechanically: the rotation is literal, the cycle mechanical: of the platform replacing the linear time of the bed's uses with the rotational time of the machine.

sequence, the linear time of the bed's uses replaced by the rotational time of the machine. The bed of conception and the bed of last rites are no longer sequential. They are simultaneous, positions in a cycle, each one arriving and departing at the same rate, none of them given priority over the others.

And so, the visitor faces a choice when the coin is available. To be in Room Two when the activation happens is to be inside the event: the room going dark, the scaffold disappearing, the organza vanishing, the daemon's eyes burning in the corner, the zoetrope beginning its cycle in the stroboscopic dark, the machinic din of the stepper motor filling the space – the spectacle. To wait in Room One is to receive the event passively: to hear the stepper motor through the wall, to watch the projection-mapped face open its eyes and look upward, to see the father's image illuminate in the rafters, to experience the consequences of someone else's desire without having made the gesture yourself. Two simultaneous encounters with the same event that can never be fully communicated between the people having them. The visitor in Room Two is inside the cause. The visitor in Room One is inside the effect. Neither knows exactly what the other is experiencing. The coin creates a singular encounter distributed across two bodies in two spaces, the boundary between them carrying sound but holding sight, the timbre crossing where the image cannot. The fifteen seconds run. The lights return. The scaffold reappears in Room Two. The organza reappears. The face closes its eyes. The father's bed dims. The system returns to its indifferent running. The diegetic sound pours back in.

Tapestry Six

Desiccation – “My precious”



Figure 22 *Possession* still depicting 'Mordurak,' the hallucinated daemon, in chrome lacquer

Mordurak crouches in the corner of Room Two (see fig.22). His chrome surface catches the light from his own LED eyes and the pool beneath him — the only steady light in the space during the coin's fifteen-second darkness. The room contracts to two light sources: the daemon's eyes and the zoetrope's stroboscopic flash. He does not move. He does not address the visitor. He was here before the visitor arrived and will be here after they leave.

Mordurak is a fictional Goetic entity of my own making — not drawn from the actual *Ars Goetia* but from the same tradition of named daemons with specific attributes, domains, and visual forms. The Goetic system is a lore system: each entity carries a name, a sigil, a rank, a domain of

influence, a method of summoning. Mordurak inherits this structure. His sigil is a painting. His domain is grief. His method of summoning was not ritual but automatic — the hand working through loss without the conscious mind directing it, the form arriving before the intention to produce it.⁴⁹

The occult has functioned throughout this practice as a counter-institutional system of power. The institutional world had already decided what bodies from this background and class position were for. The occult offered something the institution withheld: a coherent logic available to anyone who could learn it, a source of agency that didn't require the institution's permission to access, a sense of protected space in which the self had legitimate power. The pull toward these systems

⁴⁹ The *Ars Goetia* is the first section of the *Lesser Key of Solomon*, a seventeenth-century grimoire listing 72 demonic entities, each with a name, rank, sigil, and domain of influence. Mordurak is not drawn from this list. He is a fictional entity produced through the practice, operating within the Goetic tradition's structural logic — named, attributed, summoned through a specific process — without being bound by its canonical taxonomy. The Goetic tradition is treated throughout this dissertation as a lore system in the sense developed in Chapter One: a structured set of narrative logics embedded in objects and entities, transmitted without documentation, gathering authority through the fact of having been carried.

was not mysticism. It was politics. The working-class immigrant body, finding in a tradition the institution long ago dismissed.⁵⁰

The tradition named here runs through Austin Osman Spare: the automatic drawing, the sigil work, the body as instrument through which the unconscious produces form without the conscious mind directing it. Spare's method is the digging through the black-box — the interior network forced to surface and leave a trace, the desire compressed into a symbol that bypasses conscious intention, the entity called through the gap between what is wanted and what is named. The painting that produced the prototype to Mordurak, the first summoning rite, was made in this lineage (see fig.23). After the father died, the hand moved. Something else did the drawing.

⁵⁰ Around age eight, I began writing my own code — not learned from anywhere, invented: a private symbolic logic developed to make sense of the systems I was trying to understand. I filled pages with these symbols. Years later I found a book on ancient and occult symbols and recognised what I had been doing. The symbols I had invented were, in many cases, structurally identical or very close to symbols that had been in use for centuries. I had been writing in these codes since childhood without knowing they existed. This discovery preceded a sustained engagement with witchcraft and then occultic magic — traditions I found not through mysticism but through the specific logic they offered: coherent, self-contained systems of power available to a body that institutional systems were not designed to empower. I was also autistic, though the diagnosis came much later. The occult systems provided what the institutional world was not providing: a sense of protected space, a private logic that worked, a source of agency that did not require permission. My mother visited a medium at some point during my childhood. The medium told her many things about our family. One was that I was not to be worried about: that I had three very powerful spirits watching over me. These words have stayed with me. They offered what the institution never did: a sense of belonging, of purpose, of legitimate power in being.



Figure 23 The origin painting for 'Mordurak', hallucinated by the author circa 2021

The painting was processed through ChatGPT's image-to-3D pipeline. The model received the painting and produced a geometry from it: a 3D render derived from what the automatic process had made, the LLM's own pattern-recognition and generative logic applied to the painter's unconscious output. Two black-boxes in sequence. The painter's interior network forced to surface as image. The model's interior network forced to surface as flat geometry. Neither box is legible from outside. Both produced form without the conscious mind directing it. The entity that

emerged from this double black-box process is the chromatic monster mentioned (Moynihan, 2019).⁵¹

This is what I have been calling ‘black-box cartography’. The automatic painting and the LLM render are both maps generated by the act of access itself rather than representations of territory already known. The painter did not know what they were making. The model did not know what it was making from. What emerged from both unknowings is an entity with a name, a chrome surface, LED eyes, and a presence in Room Two that was not planned from outside but arrived from inside the process.

The image from the ChatGPT render was taken into Meshy for 3D modeling, then into ZBrush for fixing and detailing: the surface adjusted, the form clarified, the entity given the geometry the model had approximated but not completed. Then 3D printed in parts. Assembled like an Airfix model — the same sprue logic, the same childhood petroleum in the plastic, the same hands

⁵¹ Thomas Moynihan, *Spinal Catastrophism: A Secret History* (Falmouth: Urbanomic, 2019). The black box argument is discussed more fully in the developing research section of *The Luminous Arcade of Grievances*. Moynihan’s account of the catastrophist tradition — the interior network forced to surface against its own resistance — applies here to both the painter’s unconscious and the LLM’s generative process: two forms of catastrophic improvisation producing form through opaque internal operations.

closing seams that were opened by the printing process. Then resin coated. Chrome lacquered.

LED eyes installed in the orbital sockets, wired through the body (see fig.24).⁵²

⁵² The full fabrication chain: spontaneous painting (post-bereavement, automatic method) → ChatGPT image-to-3D render → Meshy geometry refinement → ZBrush detailing and fixing → 3D printing in parts (PLA) → assembly from sprue → seams closed → resin coat → chrome spray lacquer → LED eyes wired through body → connected to Arduino/Godot OSC system. The assembly from sprue connects directly to the Airfix note in Chapter Two (Tapestry One, endnote 8): the same hands, the same petroleum plastic, the same childhood logic of parts becoming a whole, now producing a daemon rather than a Spitfire.

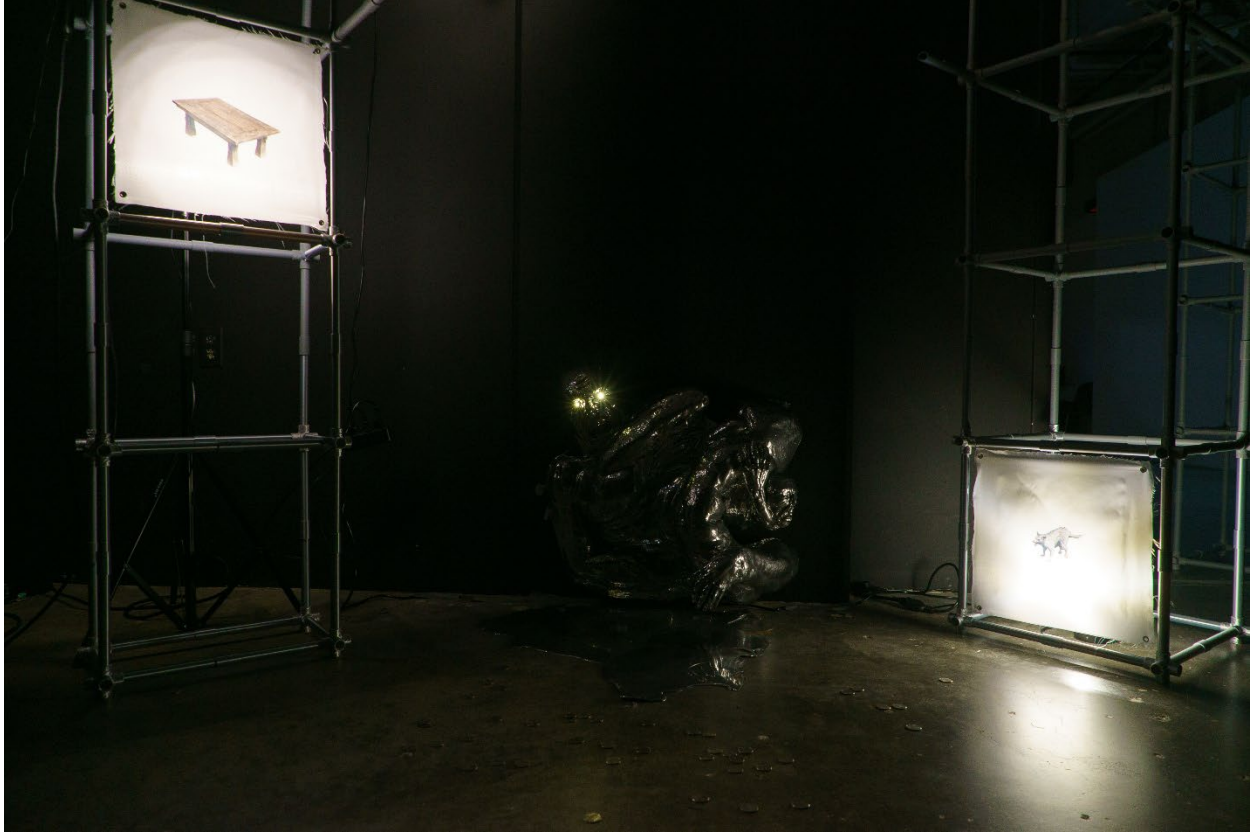


Figure 24 *Possession* still depicting 'Mordurak' in situ

The chrome lacquer that coats Mordurak is the same material logic as the chrome skull — the same formal argument running through two objects in the same room. Chrome that dazzles at distance and discloses its artifice to the body that approaches. From across Room Two, Mordurak gleams. The chrome surface catches every point of light in the space, multiplies it, returns it as spectacle. Up close, the spray coat shows: the surface texture of the lacquer visible, the fabrication readable in the skin, the promise of the material and the limit of its delivery held simultaneously in the same surface. This is the 1980s technological future held in material suspension. The chrome of the childhood imagination — crystal quartz and glossy magazines, the gleaming promise of a technological world that was going to arrive and make everything different — that dissolved before it could be inhabited, replaced by austerity and precarity and the specific texture

of a working-class childhood in which the future kept being deferred. Mordurak wears that future on his surface. It dazzles. It discloses. It was always going to be spray paint over resin over plastic over petroleum over the deep time of the dead. Its future retro-lived.

Fisher's hauntology names the cultural condition in which the past refuses to stay past — in which what should be gone keeps returning, in which the present is haunted by futures that were promised and never arrived and by pasts that were supposed to be superseded and weren't (Fisher, 2014).⁵³ Mordurak is a hauntological object in this sense. He carries the father's grief, the childhood's promised chrome future, the occult tradition that arrived before it was named, and the Goetic lore that was running before the practice knew it was running inside it. He is genuinely haunted: not representationally but structurally, the past refusing to stay past in every layer of his making.

The coin extinguishes the room around him. The scaffold goes dark. The organza disappears. And for fifteen seconds, what remains is Mordurak and the zoetrope: the daemon and the cycle of beds, the entity that arrived from grief, and the object where conception and last rites spin together in the same rotational time. The coin removes everything the installation built around them and

⁵³ Mark Fisher, *Ghosts of My Life: Writings on Depression, Hauntology and Lost Futures* (Winchester: Zero Books, 2014). Fisher's hauntology — drawing on Derrida's *Specters of Marx* but applied to the specific cultural condition of the post-Thatcher British working class — names the condition in which the futures that were promised and never arrived continue to haunt the present as absences. The chrome surface of Mordurak and the skull is the material form of that hauntology: the 1980s technological future, deferred indefinitely, now worn as a skin over resin over plastic over the deep time of the dead.

leaves the two oldest presences in the room exposed. When the lights return, the scaffold and the organza come back. Mordurak remains. He was always going to be the last thing visible.

Tapestry Seven

Dissolution – Make a wish

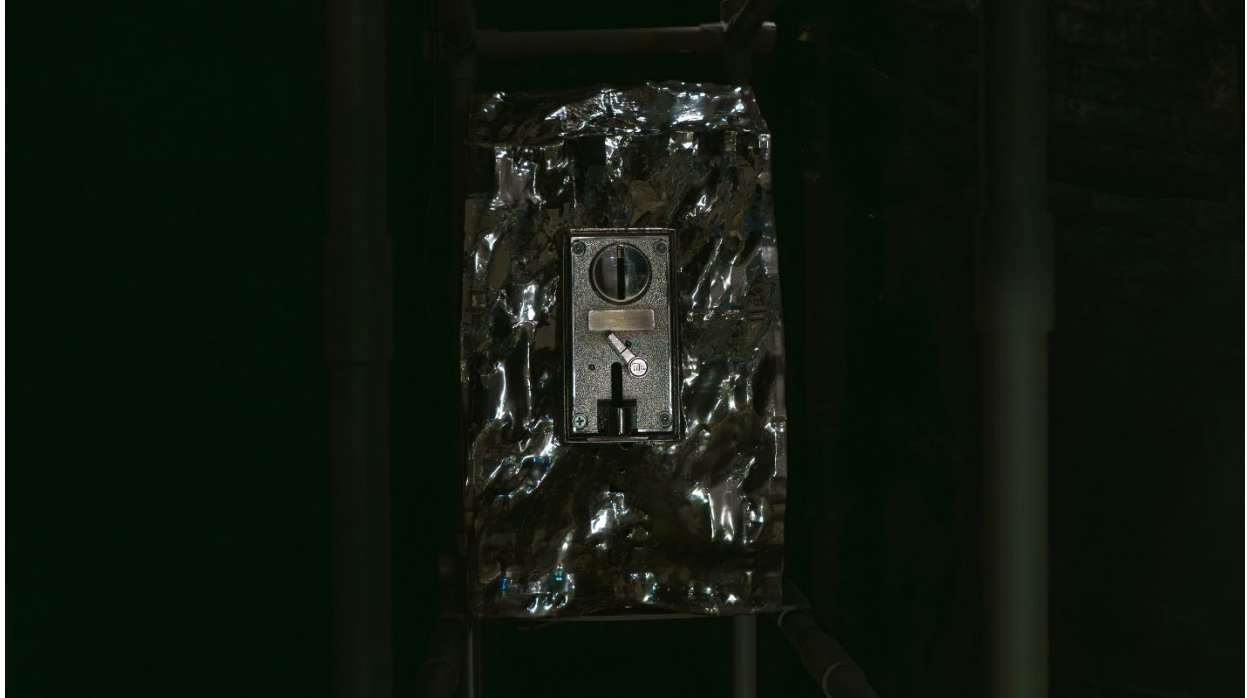


Figure 25 *Possession* still depicting the coin machine in chrome lacquer

The coin mechanism is the installation's sole interactive element (see fig.25). The coin mechanism runs on Victorian logic: insert a coin and something happens. The coin does not invite — it allows desire into the field. The visitor must want something from the work in order to touch the coin at

all. They may not know this until their hand moves. The wanting precedes the knowing. The gesture reveals the desire to the person making it.⁵⁴

Bourdieu's field is a structured space of positions in which agents act according to a logic they did not design and cannot fully see (Bourdieu, 1993).⁵⁵ The visitor who enters the installation enters a field of this kind: a structured space whose rules are not announced, whose logic runs indifferently, whose positions are already occupied before the visitor arrives. The coin mechanism is the field's most concentrated formal statement. The visitor approaches it having already been positioned by the field — by the architecture, the objects, the running systems, the fifteen minutes of walking through the installation before reaching the coin. By the time the hand moves, the field

⁵⁴ The coin mechanism is a custom-built Victorian-logic device: a slot and lever mechanism that accepts a standard coin, registers the insertion electronically via the Arduino, and returns the coin to a collection tray. The mechanism was chosen for its specific material and historical resonance rather than for its technical function, which could have been achieved more simply. The coin's physical weight and the mechanism's audible click are part of the work's formal argument: the gesture is irreducibly physical, irreducibly transactional, irreducibly chosen. The specific resonances are personal and class-specific. The launderette coin of the 1980s: inserted to keep the family's clothes clean, to keep the household running on the wage the sewing machine produced. The coin as necessity, as maintenance, as the transaction that kept things from falling apart. And alongside it, the seaside penny arcade — Southend, Margate, the coastal towns that working-class families reached because they were cheaper than abroad. I did not go abroad until I was eighteen. All holidays were on the coast. The arcade cabinets ran their worlds regardless of whether the coin was there. When it was, for the duration of its credit, the world opened. These are fond memories. The coin mechanism of *Possession* asks for the same gesture in an institutional space that the child who made the work could not always afford to enter. The penny is now the price of a fifteen-second interruption in a death cycle.

⁵⁵ Pierre Bourdieu, *The Field of Cultural Production*, ed. Randal Johnson (Cambridge: Polity Press, 1993). Bourdieu's account of the field as a structured space of positions in which agents act according to a logic they did not design and cannot fully see is developed across the essays on the literary and artistic field. The installation's field of relative knowledge — the structured arrangement of systems and objects that positions the visitor before the coin is reached — is treated throughout this dissertation as an autopoietic field in Luhmann's sense as much as a social field in Bourdieu's.

has already done its work. The desire that moves the hand is the field's product as much as the visitor's own.

Ahmed's account of orientation describes how bodies are directed toward and away from objects through the accumulated force of prior orientations (Ahmed, 2006).⁵⁶ The visitor who reaches the coin mechanism is oriented toward it by everything that preceded the reach: the tent, the chrome pour, the scaffold, the zoetrope glimpsed in the dark. The desire is not spontaneous. It was produced by the field's arrangement. The coin slot is the point where that orientation crystallizes into a gesture, for those that dare.

Luhmann's autopoietic system processes inputs without being altered by them — self-referential, self-reproducing, operationally closed (Luhmann, 1995).⁵⁷ The installation runs as an autopoietic system in this sense. The coin is processed. The sequence runs. The system returns to its prior state. The visitor's desire enters the field and leaves no permanent mark. Instruction is the antithesis of grief work. The work does not produce events. It sustains conditions.

⁵⁶ Sara Ahmed, *Queer Phenomenology: Orientations, Objects, Others* (Durham: Duke University Press, 2006). Ahmed's account of orientation — the way bodies are directed toward and away from objects through the accumulated force of prior orientations, habitual dispositions, and the arrangement of the world around them — is developed in the opening chapters. The coin slot, as the point where accumulated orientation crystallizes into gesture, is the installation's formal acknowledgment that desire is produced by the field rather than arriving independently of it.

⁵⁷ David Seidl, 'Luhmann's Theory of Autopoietic Social Systems,' Munich Business Research Working Paper 2004-2 (Munich: Ludwig Maximilian University of Munich, 2004). Luhmann's autopoietic system is discussed more fully in Chapter Four (Tapestry Five). Its application here is to the coin mechanism specifically: the system that processes the visitor's desire without being altered by it, that returns to its prior state after every activation, that sustains conditions rather than producing events.

The coin mechanism is one node in a dispersed system. Godot Engine 4 runs the installation's central logic: the game world traversing the childhood estate, the state management of every connected system, the death trigger that organizes the archive. Inside the Godot environment, scaffold joints are consumed over time — a death event, an internal mortality logic running continuously as the game traverses its world. Each death trigger sends a signal to TouchDesigner, which randomly selects two videos from the two archives: one from the London footage, one from the Turkey footage. The visitor who enters on one day sees a different London and a different Turkey than the visitor who enters on another, because the game has died differently each time.⁵⁸

The game engine is making editorial decisions about the archive. The death trigger is a curatorial act. The installation's desktop wall — the stacked browser projections of London and Turkey running simultaneously — is not a fixed arrangement. It is continuously reorganized by the game's own mortality logic. The archive is alive to the game's dying. The game's decomposition determines what the visitor sees.

⁵⁸ The full technical system architecture: Godot Engine 4 runs the central state management. Inside the Godot environment, scaffold joints are assigned mortality values and consumed over the course of the game's traversal — a death trigger firing when a joint reaches its consumption threshold. The death trigger (numbered 1 through 3) sends an OSC message to TouchDesigner, which randomly selects one video from the London archive and one from the Turkey archive and begins playback as stacked browser projections on the desktop wall. The death trigger number simultaneously sends a signal to the Arduino, which selects one of three pre-programmed lighting arrangements for Room Two's scaffold illumination. When the coin is inserted, the Arduino registers the input and sends an OSC message to Godot to pause the engine. Godot sends a corresponding message to TouchDesigner to pause the archive footage. TouchDesigner then switches to the alpha channel video (the Skyrim door sequence) and activates the projection-mapped face sequence. After fifteen seconds, the Arduino sends the reset signal: Godot resumes, TouchDesigner resumes the archive footage, the scaffold lighting returns to its pre-coin arrangement, and the death cycle continues from the point of interruption.

Duchamp's *Étant donnés* (1946–66) is a peephole work. The viewer approaches a wooden door in the museum wall, finds two small holes at eye height, and looks through. What they see is a diorama: a landscape, a waterfall, a reclining female figure holding a gas lamp. The view is forced — available only from the position of the peephole, at the distance the door imposes. The viewer cannot share what they see with anyone standing beside them. The encounter is singular, unrepeatable in the sense that it cannot be transmitted — each viewer must look for themselves, must choose to look, must accept the posture the door requires (Duchamp, 1966).⁵⁹

To me, the coin mechanism is the peephole of *Possession*. The visitor who inserts it sees something no one beside them can share — the fifteen seconds running, the room going dark, the daemon's eyes and the zoetrope's flash, the face opening on the wall, the father's image illuminating in the rafters. The visitor in Room One hears the stepper motor through the wall, sees the face open its eyes, watches the father's image light up — but does not see what Room Two holds in its fifteen seconds of darkness. Multiple simultaneous encounters with the same event, none transmissible to the other. The coin creates a peephole distributed across two rooms and the bodies within it.

⁵⁹ Marcel Duchamp, *Étant donnés: 1° la chute d'eau, 2° le gaz d'éclairage* (1946–66), Philadelphia Museum of Art. The work was assembled in secret over twenty years and revealed only after Duchamp's death. The viewer approaches a weathered wooden door set into the museum wall, finds two small holes at eye height, and looks through at a diorama: a landscape, a waterfall, a reclining figure. The peephole enforces a specific posture, a specific distance, a specific solitude of encounter. No two viewers can look simultaneously. The work is experienced one body at a time. *Possession's* coin mechanism distributes this logic across two rooms: the coin-inserters' encounter and the Room One visitor's encounter are simultaneous but not shared, each body inside a different aspect of the same event, neither able to fully transmit what they experienced to the other.

This reminds me of something...

The arcade ran its sequences regardless of who was standing in front of it. The child who could not always afford the coin stood outside and watched the lights. The coin does not pay for the spectacle. It pays for the interruption. The visitor's desire purchases a fifteen-second pause in the death cycle, a brief suspension of the game's mortality logic, a window in which two rooms produce simultaneous encounters that can never be fully shared. The arcade's promise — insert coin, receive experience — is kept and subverted simultaneously. The experience is real. The coin is returned to rest. And death continues.

Tapestry Eight

Fragmentation – Flower Beds

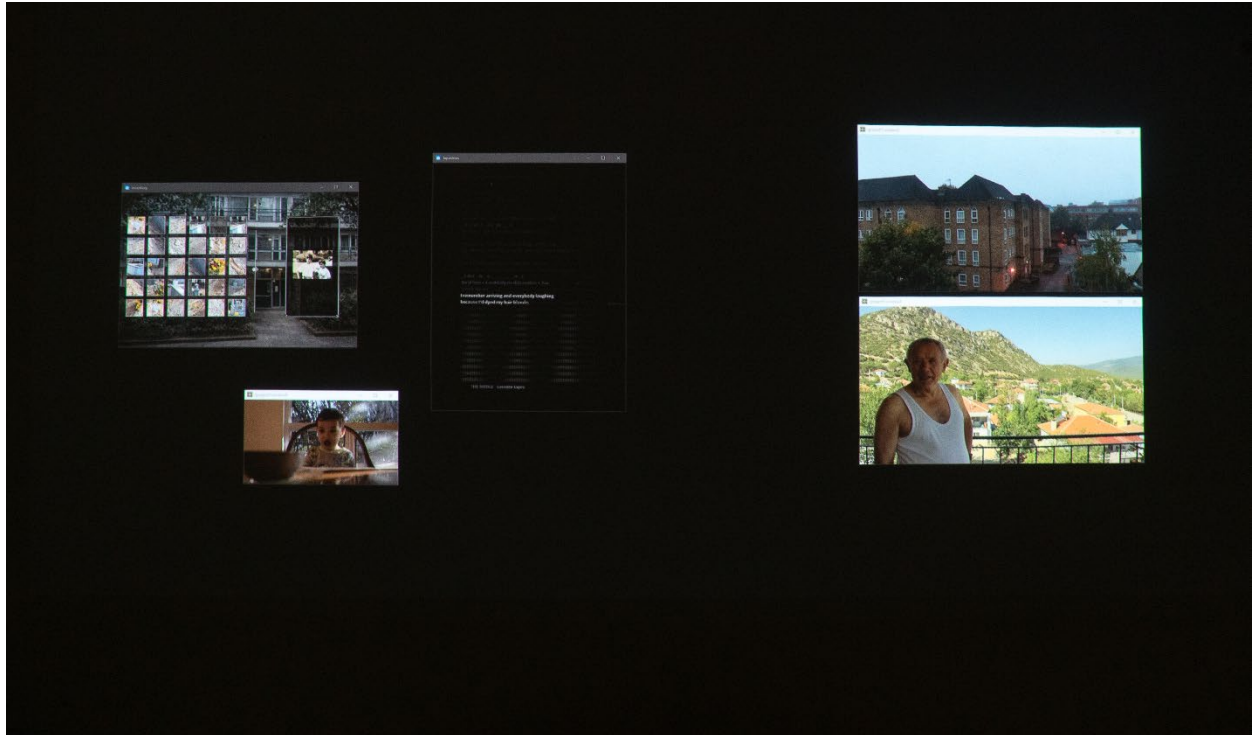


Figure 26 *Possession* still depicting wall projection of the desktop montage – the inventory, Riddley’s video, the textual animation, and the video stack

Five browser windows float on the wall of Room One at different scales, different positions, as if someone left their desktop running and walked away (see fig.26). The archive wall: the skin the visitor faces when they enter the room, the surface of engagement before the tent and the scaffold and the threshold into Room Two.

Serres’s enclosed garden — the *hortus conclusus* — is the bounded world that produces its own interior logic, its own seasons, its own entities grown from what was planted there (Serres,

2015).⁶⁰ The desktop wall is a garden of its own in this sense. The footage tended over years of returning to it, the archive cultivated across the documentary practice, the windows arranged by the same hand that made the footage and the same hand that lost what the footage holds. The frame of each browser window is the garden wall: a bounded enclosure that organizes what is inside and what is kept at the threshold.

Among the Turkey footage and the London footage, a central window holds text scrolling: the *Great Er* corpus — the language that accumulated around the father's death, the writing that happened before the dissertation existed, running unformatted in a browser window as if it were a document someone is still working on. The grief as desktop content. The wound open in a tab.⁶¹

The garden wall is porous. Light seeps over the top. The Turkey footage casts its glow into the London footage, the corpus text's white light spreads across the dark wall between the windows. The frames contaminate each other. This is the threshold where the enclosure fails to contain what it was built to hold.

⁶⁰ Michel Serres, *Statues: The Second Book of Foundations*, trans. Randolph Burks (London: Bloomsbury, 2015). The enclosed garden as a figure for the bounded world that produces its own interior logic is developed more fully in Chapter One in relation to the immigrant body and the institution. Its application here extends the garden argument to the archive: the footage as cultivated interior, the browser frame as garden wall, the bleed as the threshold where the enclosure fails to contain what grief has planted there.

⁶¹ The Great Er is the grief corpus: a body of writing accumulated around the father's death across the period between his dying and the completion of this dissertation. It runs in the central browser window of the desktop wall unformatted, as plain text, indistinguishable from a working document. The title comes from the Turkish word *er* — man, or husband — and from the sense of the great man, the father, the one who is gone. It is not a published text. It is the wound that produced the signal.

The bleed is retinal. The image that persists after the eye has moved away, the after-image, is the frame that the eye cannot recall. Twenty-four frames per second as motion blur: the individual frame illegible at speed, the image coherent only as persistence, as the eye's inability to release what it has received. The repeat viewing that accumulates residue with every pass — the archive that means differently on the third return than the first, the wound that opens wider each time (Mulvey, 2006).⁶²

The bleed is sonic, too. Room Two's stepper motor drives its timbre through the threshold — the sound crossing where the image cannot, arriving in Room One before the visitor understands its source. The coin's fifteen seconds tear an opening in the sonic landscape of the archive wall: the footage's diagetic sound replaced by the door impact and the machinic din. Sound as the bleed that respects no frame, that carries the event across the garden wall into the space where the archive runs — dislocating itself and remerging. *It is a Victorian logic device: the visitor inserts a coin, and something happens.*

⁶² Laura Mulvey, *Death 24x a Second: Stillness and the Moving Image* (London: Reaktion Books, 2006). The possessive spectator and the bleed of repeat viewing are discussed more fully in the Note on Method.

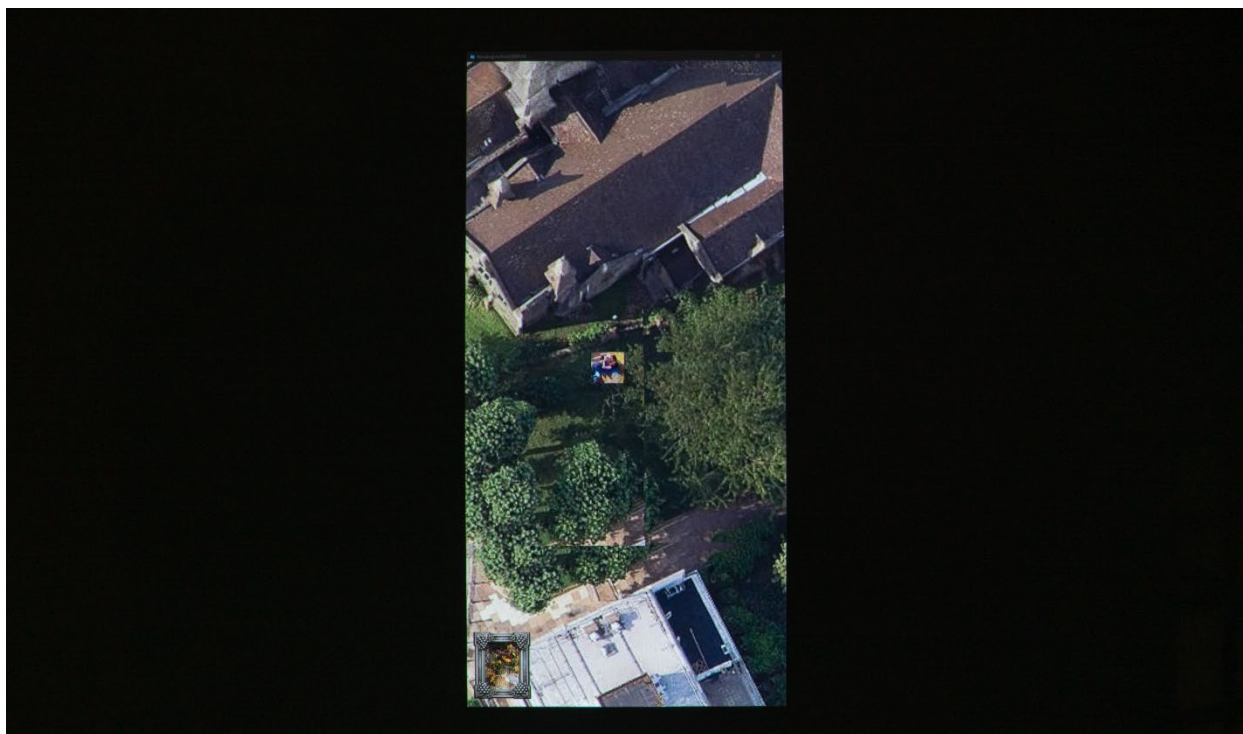


Figure 27 *Possession* still depicting the projection of the automated game engine, running ‘Godot’ 4

The Godot game runs in portrait mode on the adjacent wall. The tall vertical frame is resonant of the scaffold: the same upward reach, the same grey register, the same structure forced to hold more than its geometry was designed for (see fig.27). The childhood estate traversed in the vertical rather than the horizontal is the aerial map seen as a spine — the camera moving through the estate as if falling through it rather than flying over it.⁶³ The horizontal is the conventional frame:

⁶³ The decision to run the Godot game in portrait mode was made during the installation’s technical development. The standard landscape frame would have produced a wider, more cinematic projection — more legible as a game, more conventional as a projected image. The portrait mode produces a narrow, tall frame that reads vertically. The aerial estate traversal in this format reads as a descent: the camera moving through the estate as if falling through it rather than flying over it. The resonance with the scaffold’s vertical reach was confirmed during installation when the two grey structures — the physical scaffold and the projected game — were seen together in the same room for the first time.

cinema, television, the wide screen, the landscape orientation the institutional world defaults to. The vertical is the frame of the body, the portrait, the person standing, the scaffold reaching toward the ceiling. Two grey structures in the same room — one physical, one projected — both reaching upward, both carrying the same weight, both refusing the horizontal default of the institutional frame.

Among the Turkey footage and the London footage and the grief corpus text, the child's feed runs continuously. Riddley: My first-born child, present in the archive alongside the dead and the displaced and the lost. The living child in the garden of grief, running independently, outside the economy of what the other windows hold. The coin cannot stop him. The mechanism that pauses the game, freezes the archive, activates the death cycle's fifteen-second suspension — cannot touch the child's feed. He runs because he is running. The archive continues around him. The garden holds both: the evidence of what has already occurred and the event that is still arriving. The desktop wall is the formal acknowledgment that both are running simultaneously and neither can be stopped by the other. The archive continues.

Tapestry Nine

Calcification – The boy who flew into space from his bedroom



Figure 28 Installation still from the first iteration of *Possession*

Possession exists in two editions. The first was presented as the general examination work (see fig.28). It contained a formal division: the private world of the child — the tent, the backlit father-child image, the computer screen — held in the back room under dark lighting, hidden, vulnerable.

The front room held the institutional encounter. The exposure of that private world as the exhibition's secret was what the first edition proposed. It revealed a problem.⁶⁴

The second edition inverted the form. The private world moved into the open: the tent placed toward the center of Room One, the father-child image glowing in a room the visitor walks through rather than discovers in the dark. The vulnerability no longer protected by the architecture. The child's world running openly, incidentally, as the surface of the installation rather than its interior. And the back room rebuilt in the lore of fantasy: Mordurak, the organza castle wall, the coin mechanism, the zoetrope. The mythology that the child's imagination had been producing all along, now externalized as an encounter space. The private world and the private mythology separated into two rooms, each given the space they needed, neither protected by the other.

The organizing principle of the second edition is the rejection of hierarchy and duality beyond two spaces. The tent is present, significant, but incidental in its spatial position: something the visitor moves around rather than toward. The scaffold is the largest object in the installation and does

⁶⁴ The first edition of *Possession* was presented as the general examination work at DXARTS. The back room held the tent, the backlit father-child image, and the computer screen under dark lighting — the private world of the child as the exhibition's hidden interior. The front room held the institutional encounter. After the general examination, the artist was invited to repeat the process and rethink the work. The problem with the first edition was spatial and formal: the private world protected by the architecture rather than exposed by it, the vulnerability of the child's space held in reserve rather than running openly as the work's surface. The second edition inverted this. The tent and computer desktop moved to the front room. The back room was rebuilt entirely with new material: Mordurak, the organza castle wall, the coin mechanism, the zoetrope. The register of the back room shifted from the private and vulnerable to the mythological and encounter-based — closer to a LARP event or the London Dungeons than to a gallery exhibition. The visitor enters a space that knows something is going to happen. The mythology that had been protected in the first edition was externalized as the architecture of the second.

not impose. It is sculptural and gestural rather than utility-bound, which is what scaffold normally is. It functions as sculpture. The projected images draw the audience across the space and across the objects rather than fixing attention on a single point. It was my intention that no single object command the room.

For me, this is the immigrant worlding as spatial logic. The lore-carrying body that runs its cosmology without announcing it, that enters the institutional enclosure without demanding the institution reorganize itself around the entry. The installation operates on the same principle: present, running, not imposing.

The objects speak to each other across the room through shared material logic rather than through narrative sequence. The vertical columns of the scaffold and the verticality of the Godot game projected on the wall. The chrome of the skull and the chrome of Mordurak. The foliage of the rug beneath the tent and the Skyrim foliage in the game world above it. The table and chairs in the chrome pour on the floor, on the satin panels of the scaffold, in the Skyrim room projection. These are material resonances: the same substance in different states, the same formal logic running through objects that were made separately and placed in proximity. They appear twice in form, but attempt to reject the duality of that presence.

The resonances between these objects activate the floor space. The visitor traverses a field of relations: not following a prescribed path from object to object but moving through a space in which every position reveals a different set of correspondences between the objects surrounding them. The floor space is not empty between the objects. It is the space where the relations between the objects become legible to the body moving through them (Ingold, 2007).²

The visitor enters Room One already inside the sonic world before they have oriented to the objects. Sound fills the institutional space before the eye has mapped it. The *Skyrim* ambient music runs from a playlist with a one-minute silence between each track — a compositional decision, not a gap. The silence opens the space to the documentary footage's diagètic sound: the Turkey footage, the London footage, the ambient acoustic signatures of those places entering the gallery without the game's music over them. In this way, the installation has a pulse — music, silence, music, silence — and in the silence, the other world has an opportunity to come through.

The quality registers are immediately distinguishable. The *Skyrim* music carries the acoustic signature of a digital world designed to feel immersive at domestic scale — a specific compression, a specific reverb. The documentary footage carries the room tones of its locations: the outdoor Turkish summer, the North London interior. The visitor hears the difference before they can name it. The game's music is cinematic in its production values. The footage is indexical. The gallery holds both simultaneously, neither dominant, both legible as distinct worlds.

The gallery itself is a resonant chamber. Its hard surfaces and particular dimensions produce a room tone — a natural reverb that catches every sound and holds it slightly longer than elsewhere. When the game engine's death trigger cuts the Turkey footage abruptly, the diagètic sound of the footage — including, at certain moments, the voice of a young girl heard in the recording — leaves an after tone in the gallery's reverb. The voice persists for a fraction of a second after the image has gone. The body removed from the frame, the voice still in the room. This was not designed. It

arrived through the serendipity of the system's own logic meeting the gallery's acoustic character. It is the most haunting sound in the installation. It gestures toward a site-specificity.⁶⁵

The coin does not click. It lands: the weight of the metal against the coins already collected in the mechanism's body, the thud reverberating through the facade of the machine. Something heavier than a notification, more final than a tap. The relay clicks of the mechatronic system follow it — distinct, architectural — and then the room changes. The coin's landing is the punctuation. The room's reverb holds it a moment longer than the metal does.

The Godot avatar's consumption of scaffold joints produces a click sound audible across the gallery. These clicks were lifted from phone application notification sounds — the acoustic signature of the smartphone's attention economy, repurposed as the death trigger of a grief installation. The notification sound is the register through which the father's death first entered the field: the WhatsApp image arriving on a phone pressed against a thigh, in a pocket, announced

⁶⁵ The gallery space was the DXARTS Gallery at the University of Washington. Its specific acoustic properties — the room tone, the reverb time, the way hard surfaces held the sound of the coin mechanism and the stepper motor — were not calculated in advance but discovered during the technical setup. The gallery's resonance became a formal element of the work: the room performing its own acoustic layer, the reverb tail of the coin click becoming part of the punctuation of the activation sequence.

by the same sonic class of event. The installation's death trigger carries, in its lifted sound, the acoustic memory of the moment that started everything.⁶⁶

Three sonic registers occupy the same acoustic field simultaneously: the Godot avatar consuming joints, the coin's thud against the collected coins in the mechanism's body, the relay switches responding. Each is distinct in timbre and duration. Together they constitute a sound ecology — a sonic map of the installation's internal logic made audible. The visitor who attends to these sounds can hear the system's mortality running, the desire entering the field, the network responding. The sound connects what the eye is still locating.

⁶⁶ The click sounds for the Godot avatar's consumption of scaffold joints were lifted directly from smartphone application notification sounds — the standard click and tap sounds of a phone's interface, stripped of their original context and placed in the game engine as the acoustic marker of the death trigger. The decision was made for practical reasons during the game's development but its resonance with the WhatsApp notification sound — the sonic register through which the image of the dying father arrived — was recognized during the installation. The phone sound as the acoustic medium of the death: present at the origin of the work, present in its formal system, connecting the digital notification economy to the installation's own mortality logic.

The Luminous Arcade of Grievances

Contributions to the Field of Digital and Experimental Media Arts

This is the perspective of a child born of immigrant parents fleeing a war. Of a displaced heritage finding a map within a world that carries its own lore. The contributions this dissertation makes to the field of digital and experimental media arts do not arrive from a neutral position. They arrive from inside a specific cosmology: the housing estate, the sewing machine, the game console that ran its world before the child could afford to enter it, the arcade that continued its sequences regardless of who was standing in front of it. The field was organized before this body arrived. The contributions are what that body made when it finally had the tools.

The arcade is the right figure for what this research proposes. The arcade machine is agentic. It runs its world whether or not anyone is playing. The lights and sounds continue. The cabinet holds its own lore — its own enemies, its own cosmology, its own logic of reward and punishment — that was running before the player arrived and will run after they leave. The player brings a coin. The machine processes the desire and returns to its cycle. This is not a description of a game. It is a description of grief, of the institution, of the immigration experience, of the installation *Possession*. The arcade is the common ancestor of all of them.

I. The Game Engine as Autonomous Physical Controller

The field of digital and experimental media arts has deployed game engines in performance contexts, interactive installations, and game-art gestures since the early 2000s. In these deployments, the engine is typically a visible medium: the player or visitor interacts with it, navigates it, produces input that the system responds to. The game engine is legible as a game engine.

Possession makes a different use of the engine. Godot Engine 4 operates here as a real-time event broker and state-management system for physical hardware: Arduino serial communication, coin mechanism, stepper motors, LED systems, projection mapping, mechatronic sculpture. The engine is not the image. It is the nervous system of the installation — receiving input from the coin mechanism, distributing outputs across the entire network of physical systems simultaneously, running its own loop regardless of whether any visitor is present. The player-position is never summoned in the code. The engine runs its world autonomously, indifferently, as a perpetual ritual apparatus.⁶⁷

This use of the game engine — fully autonomous, player-absent, hardware-controlling, unattended — is largely unexplored in the field. Game engines appear in performance and theatre contexts, but in those contexts, a human operator is always present: triggering events, managing states, responding to contingency. In *Possession* the engine manages all of this without human intervention — it is the installation running itself. The contribution is the demonstration, through sustained practice-based research, that the game engine can function as a physical automation backbone at installation scale — and the theoretical framework, developed across this dissertation, for understanding what that condition produces formally, politically, and in relation to grief.

⁶⁷ Godot Engine 4 was selected over Unity and Unreal Engine on structural grounds. Unity's 2023 runtime fee controversy demonstrated the institutional risk of building practice-based doctoral work on proprietary infrastructure subject to retroactive revision. Godot's MIT license imposes no such conditions. For a work concerned with what persists beyond the body that made it, the commons logic of the engine is the condition of the installation's own transmissibility.

II. The Gamified Space

The installation *Possession* applies game engine logic to physical space. The visitor is inside a system governed by collision logic, event triggers, conditional lighting states, and a single transactional input mechanism — the coin — but the space does not look like a game. The visual grammar is installation art: the scaffold, the tent, the projected footage, the chrome daemon, the organza wall. The operative grammar is game logic: a world that runs its own sequences, that processes the visitor's presence without acknowledging it, that offers one gesture of agency and otherwise continues regardless.

This is a contribution to a largely untheorized lineage within the field. The fairground, the ghost train, the waxwork museum, the penny arcade, the coin-operated attraction: these are the historical ancestors of game engine installation practice, and they share its fundamental logic — the visitor inside a running system, the occasional triggered event, the managed encounter with something that should not be there — without being recognized as such. *Possession* names this lineage and operates from within it, demonstrating that the game engine can serve as the formal apparatus of spaces in this tradition without requiring their visual language. The ghost train is an unplayable game. The penny arcade is a coin mechanism. The waxwork museum is a correspondence table made physical. I feel the work described within is a contribution to the theoretical and practical demonstration of this connection, and the framework for understanding

how game engine logic can operate within installation practice at the level of formal structure rather than just an aesthetic surface.⁶⁸

III. Diagrammatic Narrative and Fluid Cartography

The shift from *They Never Had Ghosts for Idols* (2020–21) to *Possession* (2026) is a formal argument about how grief moves through time. The earlier work is a walking simulator: navigable, playable, grief as a space the body can move through. The later work is unplayable: the traversal runs without a player, the visitor's body is in the room rather than inside the screen, the agency that the walking simulator offered has been redistributed entirely to the system. This is not a stylistic evolution. It is a contribution to the field's understanding of what game engines can formally argue about loss.

The dissertation's structure extends this argument into the written form. The correspondence tables — mapping Kusōzu stage, emergent Goetic entity, household objects, and memory across ten tapestries — operate as a diagram that precedes and exceeds the prose it accompanies. The reader encounters the table before knowing how to read it. The descent through the tapestries is a navigation of that diagram rather than a linear argument. This is fluid cartography applied to

⁶⁸ The historical lineage named here — fairground, ghost train, waxwork museum, penny arcade — connects to a body of scholarship on pre-cinematic and early cinematic spectacle that has not been substantially applied to game engine installation practice. The key adjacent text is Tom Gunning's "The Cinema of Attractions: Early Film, Its Spectator and the Avant-Garde" (*Wide Angle*, vol. 8, nos. 3–4, 1986, pp. 63–70), which describes early cinema's relationship to fairground spectacle and its prioritization of display over narrative — the visitor inside a running system, the occasional triggered event, the managed encounter with something that should not be there. The theoretical connection between this tradition and contemporary autonomous game engine installation is a gap the developing research program intends to address.

scholarly writing: the dissertation as a navigable field rather than a sequential text, the reader making their own map as they descend.⁶⁹

The contribution here is the demonstration, through sustained practice and writing, that game mechanics can operate as formal systems for organizing autobiographical and cultural archives without requiring the aesthetic grammar of games. The RPG inventory as a model for organizing loss. The correspondence table as an anterior diagram. The descent as strata, as a game structure. These are new instruments for practice-based doctoral research in this field.

IV. The Immigrant Worlding as Formal Condition

The field of digital and experimental media arts has engaged extensively with questions of cultural identity, diaspora, and displacement as subject matter. Works represent immigration, narrate displacement, and document loss. *Possession* attempts to make a different proposition: the immigrant worlding is not the subject of the work but its formal condition. The lore that the immigrant body carries — the objects, entities, temporal rhythms, and orienting logics assembled

⁶⁹ The concept of fluid cartography is developed from this research framing sentence preserved across this dissertation: “My research into diagrammatic cartography, nomadic heritage, and machinic memory is centrally concerned with how bodies orient themselves in space and time when conventional markers fail.” The correspondence table as anterior diagram draws on Eugenie Brinkema’s argument in *Life-Destroying Diagrams* (Duke UP, 2022) that form is anterior to the meanings subsequently drawn from it.

before the institution got to the body — is not represented in the installation. It runs the installation. The cosmology is not depicted — it is operating.⁷⁰

This distinction produces a different relationship between practice and institution. The work does not ask the gallery to receive a representation of displacement. It enters the gallery carrying its own worlding and runs it indifferently inside the institutional enclosure. The installation's formal systems — the game engine, the mechatronic network, the coin mechanism, the scaffold — are all expressions of the immigrant posture: entering the enclosure through labor, not belonging to it, running regardless. The contribution is the theoretical framework, developed across this dissertation, for understanding cultural specificity as a formal condition of practice rather than a thematic content.

V. Developing Research: Black Box Cartography and the Game Mechanic as Archive

Two research threads emerge from this dissertation that constitute the forward trajectory of the practice.

The first is black box cartography as a technique for working with opaque digital mediums. The photogrammetry pipeline, the AI processing stage, the game engine's physics simulation: these are systems whose interior logic is not accessible to the artist working with them. The outputs are

⁷⁰ The theoretical framework for the immigrant worlding as formal condition draws on Donna Haraway's concept of worlding (*Staying with the Trouble: Making Kin in the Chthulucene*, Duke University Press, 2016), Walter Benjamin's account of lore as transmission without documentation (in 'The Storyteller,' *Illuminations*, Schocken, 1968), and Michel Serres's figure of the enclosure (*Statues*, Bloomsbury, 2015).

navigable; the processes are not. Black box cartography names the method of making maps by moving through the unmappable — of using the residue of opaque processes as the material of the work, of understanding the glitch, the artifact, the unexpected output as cartographic data rather than noise to be corrected. This methodology is developed in nascent form across the fabrication processes documented in this dissertation and requires sustained theoretical and practical investigation.⁷¹

The second thread is the game mechanic as a formal system for holding autobiographical and cultural archives. Each major game genre carries a specific formal logic: the farming simulator's resource management and seasonal cycle, the RPG's inventory and quest structure, the shoot 'em up's survival against overwhelming force, the tower defense's management of territory against incursion. These logics are not neutral. They rhyme with specific life experiences and cultural inheritances in ways that require further systematic theorization and practice in the field.

The farming simulator, for instance, carries the logic of the years I spent living in a squat, DJing at free party raves, managing collective survival across seasonal cycles of scarcity and abundance — alongside the displacement of immigrant parents and their eventual settlement, alongside a father's nomadic background whose rhythms of seasonal movement and return echo the simulation's own structure. The game mechanic becomes the holding structure for an archive

⁷¹ The term black box cartography is developed from my own researched accounts of the black box as a figure for both human consciousness and artificial intelligence: 'networks of process that are not directly legible from outside but which can be accessed through specific techniques.' The application of this figure to digital fabrication pipelines — photogrammetry, AI mesh processing, game engine physics — as cartographic rather than instrumental tools is the methodological development that my research pursues.

whose internal organization it mirrors without representing. The RPG's quest structure maps onto the pilgrimage made too late and just in time, perhaps. The tower defense maps onto the management of the institution's admission logic.

This research program — the systematic identification of game mechanics and cultural archive, and the use of the mechanics as the formal apparatus of the archive without the aesthetic — is the natural extension of what *Possession* has demonstrated is possible. It constitutes a genuine contribution to the field's understanding of how game logic can operate in practice-based research at the level of formal and political argument.

The arcade continues its sequences. The lights run. The machines hold their worlds whether or not anyone is standing in front of them. The child who grew up near the arcade — who could not always afford to play, who watched the cabinets from outside, who learned the lore of those worlds through proximity and witness — has built one. It runs on grief, on game engines, on the labor of making, on a cosmology that was always running beneath the surface of the institutional spaces it has passed through.

The contributions are the tools the child built. The field is where those tools now live — ever imminent.



APPENDIX

Technical Documentation *Possession*

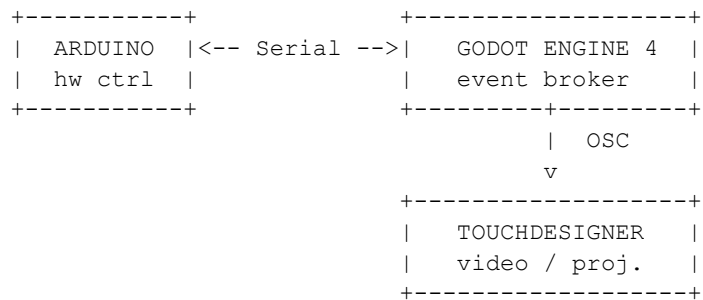
Contents

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- F. Photogrammetry Pipeline — Bed (Zoetrope)
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- I. Zoetrope Mechanism
- J. Godot Engine 4 — Game Environment and Death Trigger Logic
- K. Video Archive Structure
- L. Speculative Clocks — Temporal Registers

A. System Architecture

POSSESSION · SYSTEM ARCHITECTURE

ROOM ONE		ROOM TWO	
· Godot game engine		· coin mechanism [INPUT]	
· Skyrim video		· zoetrope / stepper	
· animated LLM text		· daemon Mordurak	
· game inventory		· chrome skull	
· face mapping / silicone		· organza print	
· tent (backlit satin)		· satin print (objects)	
· rug (Skyrim foliage)		· scaffold lighting	
· skeever rats		· Arduino electronics	
· Skyrim moon (satin)			
· son's video [constant]			



AUTONOMOUS LOOP

```
Godot: death trigger --> serial 'Death01/02/03' --> Arduino: lighting state
                        --> OSC --> TD: new video pair; tapestry text switches;
                                grave image adds one fragment
[son's video: independent loop, unaffected]
```

COIN ACTIVATION (15 seconds)

```
coin --> Arduino: zoetrope on; organza + scaffold lighting off
        --> serial 'Coin Active' --> Godot: game + sound/music pause
                --> OSC --> TD: pause video; face mapping on;
                        alpha overlay on Skyrim + sound
Arduino timer --> serial 'Coin Inactive' --> Godot: resume
                --> OSC --> TD: stacked video resumes
                Arduino: zoetrope off; lighting restored
```

B. Installation Floor Plan

[Verify element positions against gallery record before submission]

DXARTS GALLERY · UNIVERSITY OF WASHINGTON

[ENTRANCE / THRESHOLD]	
+-----+-----+	
ROOM ONE	ROOM TWO
[TENT] child's tent	[COIN] mechanism (wall)
white satin, father +	
Umut age 2, backlit	[ZOETROPE] floor
[RUG] Skyrim foliage mat.	[MORDURAK] floor, south wall
[GAME] Godot projection	[SKULL] chrome skull
inventory + LLM text	
Skyrim video	[SATIN] skeever, table, chair
skeever rats	(white satin print)
[FACE] silicone face mold	[ORGANZA] print wall
+ video mapping	
	[SCAFFOLD] lighting rigs
[MOON] Skyrim moon on satin	
	[ARDUINO] electronics (floor)
[SON] Riddley video	
independent / constant	
[SCAFFOLD] extends both rooms	+-----+
+-----+	
Visitor enters Room Two first (hardware, coin, daemon)	
passes through threshold into Room One (projection, game, tent)	

The installation occupies two adjoining rooms. The visitor enters Room Two first, encountering the physical hardware — coin mechanism, zoetrope, Mordurak, chrome skull — before crossing the internal threshold into Room One, which houses the game environment, projected content, tent, and rug. The scaffold runs through both rooms. Room Two contains the Arduino electronics that control all hardware outputs across the installation.

C. Software and Tools Stack

TOOL	ROLE
CORE SYSTEMS	
Godot Engine 4	event broker; game environment; serial comms; OSC dispatch; death trigger; state management
TouchDesigner	video playback/mixing; projection mapping; face mapping; alpha overlay; OSC receive
Arduino IDE	hardware control; coin input; stepper motor; lighting relay; serial string dispatch; 15-second timer
3D / FABRICATION	
ZBrush	skull modelling (anatomy + Kuzozu reference); Mordurak mesh refinement post-Meshy, vein nodule
Meshy	3D model generation from 2D image (Mordurak)
Blender	Various 3D modeling preparations and fixes
NifSkope	Skyrim asset extraction (foliage materials)
Nexus Mods	Skyrim mod access for asset extraction
BambuSlice	FDM slicing for scaffold + fabrication parts
AI / TEXT	
GPT-2	Fine-tuned on 80k-word personal corpus; grief/no-grief text generation
Google Colab	GPT-2 fine-tuning environment
ChatGPT (GPT-5)	Mordurak painting rendered as 3D model image
DEVELOPMENT	
Claude Code	vibe coding; environment fixes; game logic
ChatGPT	vibe coding; issue resolution alongside Claude
Cursor	coding environment
GitHub	version control and code management
Zenva tutorials	Godot development reference
PRINT / TEXTILE	
Sublimation printing	white satin prints: tent photo; Skyrim moon; skeever / table / chair (Room Two)

D. Object Fabrication — Chrome Skull

CHROME SKULL · FABRICATION PROCESS

1. Source material
anatomical reference images of skull
tactile self-study: fingers tracing own skull structure
through skin and muscle
Kuzozu (nine stages of bodily decomposition) as
formal and fictional reference: jaw absent,
other fictional elements introduced from scroll imagery
2. 3D modeling
modeled from scratch in ZBrush
no photogrammetry; no scan source
form produced through anatomical knowledge,
tactile memory, and fictional distortion
3. Fabrication
FDM 3D print
resin coat applied (surface hardening/smoothing)
chrome spray: acrylic chrome paint
4. Installation
Room Two
Behind organza castle print - floor

The skull was not produced through photogrammetry. It was modeled in ZBrush using three simultaneous sources: anatomical reference images, the physical knowledge accumulated by pressing fingers through the artist's own skin and muscle toward the bone beneath, and the formal vocabulary of the Kuzozu scroll tradition, which introduced deliberate distortions — the absent jaw, among others — as fictional elements into an otherwise anatomical form. The result is a skull that belongs to no single body.

E. Object Fabrication — Daemon Mordurak

DAEMON MORDURAK · FABRICATION PROCESS

1. Source: original painting
hand-painted image by the artist
2. 2D-to-3D image generation
painting submitted to ChatGPT (GPT-5)
prompted to render as a 2D image of a 3D model
output: AI-generated image treating the painting
as if it were a real object in three dimensions
3. 3D model generation
ChatGPT image submitted to Meshy
Meshy output: initial 3D mesh
4. Mesh refinement
imported to ZBrush
surface detail, topology, and proportion corrected
5. Fabrication
FDM 3D print
resin coat applied
chrome spray: acrylic chrome paint
6. Eyes
LED eyes: battery powered
remain lit during coin sequence (Room Two lights off)
remain lit during idle loop
7. Installation
Room Two, floor

Mordurak originates as a hand-painted image. The pipeline moves from painting to AI-generated image of a 3D model (ChatGPT), to actual 3D mesh (Meshy), to refined sculpture (ZBrush), to physical object (FDM print, resin, chrome). The LED eyes are battery-powered and independent of the Arduino circuit: they remain lit regardless of system state, including during the coin sequence when all other Room Two lighting is extinguished. In the dark, the eyes are the only light source in Room Two.

F. Photogrammetry Pipeline — Bed (Zoetrope)

BED · PHOTOGRAMMETRY PIPELINE

Note: photogrammetry was used for the bed only.
The skull and Mordurak were produced by other means.
(See Appendices D and E.)

1. Capture
 - same physical bed scanned 8 separate times
 - consumer-grade photogrammetry software
 - each scan treated as a discrete object
2. Processing
 - each scan processed through Blender
 - no attempt to resolve or merge scans
 - artefacts retained: gaps, doubling, surface instability
3. Fabrication
 - each scan 3D printed in clear PLA
4. Installation on zoetrope
 - 8 3D prints mounted on rotating platform
 - stroboscopic LED frequency calibrated to stepper motor RPM
 - animation = the sequence of 8 failed resolutions

Formal note

the decision to scan 8 times rather than once was formal:
each scan's failure is the content, not the obstacle.
the zoetrope does not animate a resolved object.
it animates the attempt to resolve one.

G. Scaffold Fabrication

SCAFFOLD · DESIGN TO INSTALLATION

Scale

approx. 300 tubes
approx. 150 joints
extends through both Room One and Room Two

1. 3D modelling
custom joint and rod geometry in 3D software
joint file: UniversalJoint_SIMPLE_Veins3.obj
(Veins3 = third iteration; vascular branching quality
built into design brief from first version)
2. FDM printing
material: PLA (matte grey)
print strata visible on all surfaces
each rod and joint: geological record of its own making
3. Modular assembly
identical joint module repeated along axis
no fixed destination; structure proliferates until axis ends
assembled on-site; lean and angle adapted to gallery geometry
4. Installation
leans at angle to walls (vine logic: shape adapted to the
space it grew around rather than constrained by it)
shadow cast on floor = grief architecture visible on ground
5. Reproducibility
same file + same printer = same scaffold anywhere
the scaffold is an instance of a file

The scaffold consists of approximately 300 tubes and 150 joints, all printed in grey PLA. The grey corresponds to the colour of an untextured mesh in 3D software — the working state, before skin is applied. The structure runs through both rooms, leaning at an angle that records the vine logic of its assembly: shaped around the gallery space rather than squared to it. Because it exists entirely as a file, it can be regrown from any FDM printer that can access the geometry.

H. Tent and Rug

TENT

Base object: child's tent (commercially available)
Print: photograph of artist and father
(artist aged approximately 2 years old)
printed onto white satin via sublimation
satin fitted to tent surface
Lighting: single LED lamp inside tent; backlit
photograph glows from within the structure
Location: Room One

RUG

Source: Skyrim foliage assets (grass, ground cover)
Extraction: Nexus Mods --> NifSkope --> GIMP
assets extracted from game engine files,
processed in GIMP for print output
Output: physical rug, printed from game foliage materials, sublimation
Location: Room One, floor

Note: the rug materially connects the Skyrim game world
to the physical floor of the installation space.
The visitor walks on the game's ground.

The tent is a child's tent whose satin surface carries a sublimation print of a photograph of the artist and his father, taken when the artist was approximately two years old. Backlit from within by an LED lamp, the photograph becomes luminous rather than reflective — the image glows from inside the structure rather than being displayed on its surface. The rug is made from Skyrim's own foliage materials, extracted from the game engine via Nexus Mods and NifSkope and processed in GIMP for physical print output. The visitor standing on the rug is standing on the game's ground.

I. Zoetrope Mechanism

ZOETROPE · COMPONENT AND CALIBRATION

Components

- stepper motor (platform rotation)
- stroboscopic LED array (calibrated to motor speed)
- 8x clear PLA prints of bed scans (on platform)
- Arduino (motor + LED control via coin signal)

Calibration

stroboscopic LED frequency matched to stepper motor RPM
to produce persistence-of-vision effect
animation: bed appears to vibrate between 8 states of
failed resolution – reaching toward resolution, failing

States

IDLE: motor off; platform stationary; LEDs off
ACTIVE: motor on; LEDs strobing
activated by Arduino on receipt of 'Coin Active'
deactivated by Arduino on receipt of 'Coin Inactive'

Sound

stepper motor timbre under load: formal element
the sound of labor, not the sound of magic

J. Godot Engine 4 — Game Environment and Death Trigger Logic

[Verify internal variable names, death condition, and trigger selection logic before submission]

GAME ENVIRONMENT

Map: aerial view of childhood housing estate,
North London (reconstructed photoshop then in Skyrim assets)

Avatar: photograph of artist and father
(same image as tent; same photograph)

Traversal: avatar moves autonomously through the map
no player input possible (unplayable)

Music: 21 Skyrim town/village/exploration tracks
(relaxed register; no combat or threat music)
one track plays; then 60-second silence
to allow diegetic sound from documentary footage
to enter; then next track

Death sound: phone app click / notification sounds
lifted from smartphone interface
acoustic medium of the death trigger

INVENTORY

Door image: front door of childhood apartment block
screenshot from Google Maps; balcony just visible

Avatar image: photograph of artist and full-blood brother
(same mother and father; same marriage)

Grave image: photograph of father's grave
image begins fragmented
one fragment added per death trigger
fully assembled after 30 triggers

ANIMATED LLM TEXT

Source corpus: approx. 80,000 words
written by artist over 10 years
diary entries, prose, film ideas, observations

Model: GPT-2, fine-tuned on corpus

Environment: Google Colab notebooks

Two outputs produced:

TEXT A (grief corpus): only letters of the word GRIEF remain
(g, r, i, e, f)

TEXT B (no-grief corpus): all letters except g, r, i, e, f

Display: text set into 9 tapestries
one tapestry active at any time
tapestry switches with each death trigger

DEATH TRIGGER LOGIC

Condition: internal logic consumes scaffold joints over time

On trigger: Godot selects Death01, Death02, or Death03
[VERIFY: random / sequential / conditional]
--> serial to Arduino: lighting state 1, 2, or 3
--> OSC to TD: new London/Turkey video pair
--> animated text: switches to next tapestry
--> grave image: one new fragment added, constant rotation

Coin pause: game freezes; all sound + music cut immediately
Coin resume: game resumes from exact point of pause;
sound + music resume

K. Video Archive Structure

[Verify clip counts for Turkey and London archives before submission]

THREE VIDEO STREAMS

STREAM 1: Turkey archive
footage from a single trip to father's village
road journey: Burnham-on-Sea, England
to Denizli, Turkey
selection: random on each death trigger
display: stacked browser projection, desktop wall

STREAM 2: London archive
footage shot over approximately 5 years
from a single apartment:
father's first home with his children
rented by artist when father re-entered his life
shot on first video cameras – beginning of
artist's directing practice
selection: random on each death trigger
display: stacked with Stream 1, same projection

STREAM 3: Riddley (son's video)
single shot of Riddley eating
age approximately 2 years old
continuous loop
independent of all triggers; cannot be paused
display: Room One desktop wall

STACKING LOGIC

on each death trigger: one clip from each archive
selected randomly and layered as browser projections in TD
previous pair replaced on next trigger

COIN SEQUENCE OVERRIDE

stacked video paused
face mapping activates (Room One, silicone mold + tent surface)
alpha channel overlay: Skyrim video + sound
on reset: stacked video resumes from point of pause

The two documentary archives are geographically and temporally distinct. The Turkey archive records a single journey — the road from Burnham-on-Sea to Denizli, the father's village — made in a concentrated period. The London archive records five years of footage shot from a single apartment: the first home the father shared with his children, which the artist rented during the period of renewed contact. These were the first videos the artist made. Riddley's video is a single take, a single meal, a single age. It runs without interruption through everything (approx.. 7.5mins)

L. Speculative Clocks — Temporal Registers

FIVE SIMULTANEOUS TEMPORAL REGISTERS

REGISTER	DURATION	COMPONENT	COIN STATE
Coin cycle	15 seconds (discrete)	Arduino timer coin mechanism	active (running)
Zoetrope cycle	continuous while active	stepper motor 8-position loop	active (running)
Game loop	indefinite (no end)	Godot Engine 4 death / reset cycle	paused (frozen)
Frozen footage	indefinite held on last frame between triggers	TouchDesigner stacked video suspended between triggers	replaced: face mapping + alpha overlay
Son's video	continuous (no trigger possible)	independent loop runs regardless	unaffected always running
Music	21-track loop + 60-sec silence gap	Godot / Skyrim OST; diegetic sound enters gap	paused with game; resumes on 'Inactive'

The registers are non-hierarchical and asynchronous.
No register governs the others.
The son's video answers to none of them.

The installation runs six simultaneous temporal registers, none of which governs the others. The coin cycle is the only register with a fixed duration. The zoetrope has no duration of its own — it runs for as long as the coin sequence lasts. The game loop is indefinite, with no end state and no win condition; it pauses only when the coin fires and resumes from its exact point of interruption. The stacked footage sits between death triggers in a state that is neither running nor stopped — suspended on its last frame, waiting. The music runs on its own logic: one track, then sixty seconds of silence to let the documentary footage's diegetic sound enter the room, then the next track. Riddley's video is exempt from all of these. It has no trigger, no pause state, no coin condition. It runs regardless.

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