imagining the unseen: ai, memoryscapes, and the interiorities of the red road flats

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abstract

The interior is deeply interwoven with human subjectivity, serving as a repository for memory and affect. This intrinsic connection is profoundly challenged when urban renewal leads to the erasure of the built environment, displacing the collective memory of entire communities. The following exploration confronts this issue through the case study of the demolished Red Road Flats in Glasgow, positioning generative Artificial Intelligence (AI) as a speculative medium for preserving and representing marginalised histories. This research proposes a new approach that translates former residents' memories into a series of evocative interior moments. The process starts by producing 2D images and ends with 3D physical items being created. Instead of redeeming AI's non-literal and associational nature as technical constraints, the approach openly receives them as a creative catalyst. Through this human–computer collaborative work, ensuing visual depictions are empowered to step out of mere fact-based rehabilitation. In the final installation, it produces a new type of physical memorial that gives tangible form to individuals' subjective experiences. The work not only proposes a new template for commemoration of lost architectural history, it also shows the significant potential of AI to develop counter-narratives with images that challenge monolithic official histories.

keywords

generative AI; collective memory; speculative interior; architectural representation; interiority

cite as:
Xiaobin Huang, 'Imagining the Unseen: Ai, Memoryscapes, and the Interiorities of the Red Road Flats', *Idea Journal*, 23.2 (2026), pp. 157–171, doi.org/10.37113/ij.v23i2.649.

so many memories gone in seconds

The comment ‘So many memories gone in seconds…’ left under a YouTube video of a Glasgow tower block demolition encapsulates a central conflict of urban renewal.[1] The demolition of architecture is often hailed as a sign of progress, but for the people who lived there, the spectacle means that countless memories vanish in an instant. Councillors, officials, and local media celebrate the demise of a high-rise building, viewing it as progress.[2] These demolition actions are hailed as the ‘renaissance’ of the city, a necessary process towards a better future. However, beneath this grand narrative of progress, a fundamental question emerges: for those who once lived here, when the physical embodiment of home becomes invisible, where will their memories go? How do we preserve memories that are simultaneously constituted and effaced by the built environment?

Red Road Flats in Glasgow is a microcosm of this issue. Built in the mid-1960s to tackle the city's housing crisis, the flats were once the tallest residential structures in Europe, providing accommodation for almost 5000 people.[3] However, in the 2000s, a dominant narrative from official sources and media portrayed the Red Road Flats as a failed social experiment, branding them unsustainable and ripe for demolition. In the letter sent to residents by Glasgow Housing Association (GHA) in 2004, for instance, it detailed the various drawbacks of high-rise housing, including substantial maintenance and modernisation costs, excessive population density, and detrimental effects on children's developmental environments.[4] More importantly, it pointed out that the presence of asbestos in architecture renders any renovation attempt extremely hazardous and prohibitively costly.[5] The GHA letter is a small but significant inscription within the assemblage of objects that work to translate Red Road into a housing failure.[6]

However, Red Road Flats is not merely an architectural technology that could be summarised as ‘success’ or ‘failure’; within its walls lies the living space of many people. The narratives and memories of these residents are dispersed across unofficial archives, revealing qualities that stand in stark contrast to a rigid technocratic logic. For instance, in Alison Irvine’s novel *This Road is Red*, the book shows the changes and the community spirit in the area through the real stories of some of the flats’ residents.[7] Similarly, in Patricia Ferguson’s short film, she revisits her former home, retracing the spectral threads of her memories of Red Road.[8] These works offer us a glimpse into a multifaceted and intricate internal world — one that encompasses both the warm, joyful fragments of domestic life and the affective scenes of anxiety and sorrow. It is through these memories that we can still evoke an imagination of Red Road’s interior landscapes, even long after its physical structures have been erased.

Moreover, these accounts provide a unique portal through which to explore the rich 'Interiorities' of the physically erased community. Here, ‘Interiority’ is understood as a broader mode of subjective experience expressed through memories, emotions, imagination, and social relations. As Lajer-Burcharth and Söntgen argue, the relationship between interior space and human interiority has been constructed through multiple historical trajectories, including literary self-reflection, visual representation, architectural experience, and psychoanalytic conceptions of the self.[9] Interiority can therefore be understood as a cultural and psychological condition through which individuals negotiate identity, belonging, and lived experience. What is more, it is the medium through which a building embodies and communicates the inner lives of its inhabitants — their memories, imaginations, emotions, and desires.[10]

This broader understanding is particularly significant in the case of the Red Road Flats. When the Red Road Flats were physically erased, and official discourse reduced them to a monotonous narrative of technical failure, the community’s collective memory was placed at risk of erasure.

Collective memory is not an objective replication of past facts; rather, it consists of 'images of the past' that are continually negotiated through communication within a group to sustain its continuity of identity and sense of belonging.[11] Within this process, interiority persists through stories, recollections, emotions, and everyday experiences that survive beyond the lifespan of the physical architecture itself.

Therefore, the excavation and representation of Interiority is a vital means of preserving those memories that are constituted and effaced by the built environment. The challenge of representing demolished environments has traditionally been addressed through documentary forms such as photography, architectural drawings, archival reconstruction, and digital modelling. While these approaches are valuable for preserving physical information, they often prioritise accuracy, material evidence, and spatial fidelity. Such methods are highly effective in recording what a building looked like, but are less equipped to represent how it was experienced, remembered, or emotionally inhabited.

A different representational objective is adopted in this essay. Instead of asking how the Red Road Flats can be reconstructed, it asks how their interiorities might be reimagined. The aim is not to recover an objectively accurate image of the past, but to visualise the affective and mnemonic worlds embedded within residents' recollections. Yet a fundamental contradiction arises: while these memory archives are imbued with profound emotion, they exist primarily in textual form, whereas the interiorities they describe emerge through complex entanglements of spatial experience, memory, affect, and social relations. How, then, might these intangible interior worlds be translated into perceptible forms without reducing them to mere architectural reconstruction?

Therefore, this essay aims to explore a design method capable of transforming these fragmented, subjective textual memories into speculative interiors that counter the grand narratives of urban development. By translating and reconstructing these subjective interior spaces, it does not merely document a 'failed' architectural project; rather, it actively rebuilds the shared emotional landscapes and identity values of the Red Road community, ensuring that its cultural spirit endures long after its physical structures have been erased.

A visualised counter-history of the Red Road Flats is constructed in three stages. First, the section 'Translation of Memory' elaborates on the methodological workflow, demonstrating how sensory anchors are extracted from fragmented oral archives. It further argues how the 'hallucinatory' nature of generative AI resonates with the psychological logic of subjective reconstruction inherent in human nostalgia. Subsequently, the 'Analysis of Memoryscapes' section provides a visual analysis of AI-generated interiors, exploring how these landscapes capture and represent the complex Interiority and emotional values of the residents through a speculative visual language. Finally, the 'Memory Sculptures' section turns toward the dimension of artistic practice, documenting the collaboration between the researcher and AI. By utilising depth estimation and handcrafted ornamentation, digital hallucinations are transformed into tangible physical installations. At the end of this section, it tries to answer a fundamental question: When a community is physically demolished, how can we, as artists and designers, collaborate with AI to reimagine and represent the intangible memories of its former residents?

translation of memory

> We had two bedrooms and a box room. You could put a bed in the box room and a wee bit of furniture, and it had no windows, so you were in complete darkness. Any time of the day, it could be any season, and it would be complete darkness, and you'd wake up and couldn't see your arm or your hand in

> front of your face. My mum put a drying rail up, and that's where she'd hang the washing, in this tiny wee box room. It must only have been about seven feet long and three feet wide. I think some folk used to just put junk in there. But we put a bed and a wee cabinet, and a wee record player or a tape player in there. We drilled a hole in the wall, which was a no-no because of the asbestos, but we drilled a hole in the wall and plugged into Mum and Dad's electrical supply. It was great, it was a great wee room.[12]
>
> Finlay McKay

This passage captures the recollection of a former resident regarding the 'wee room' from his memory. In his description, the space is characterised by minimal natural lighting and extreme spatial constraints, yet it is celebrated as a 'great wee room.' Concrete spatial descriptions are sparse; instead, the narrative presents a montage of life snapshots, collaged from arrangements of furniture — a bed, a cupboard, a record player, and other domestic objects. This scene, constructed through words, is not a precisely measured drawing, but rather a blurred yet vivid emotional sketch. Although it lacks concrete forms or distinct details, it successfully evokes the overall atmosphere and impression of the space.

From a psychological perspective, the sketch-like quality of this narrative finds its logical support in the theories of Nostalgia. Nostalgia is not a simple, objective reproduction of the past, but a profound subjective reconstruction.[13] When we attempt to look back, the brain is not retrieving a faithful recording; for at the moment of experience, we never pressed a record button, and in the moment of recollection, there is no replay button. Instead, memory is essentially a highly imprecise, creative reorganisation. Within this profound longing for the past, the process of memory reconstruction often undergoes a 'warm' skew.[14] While the actual lived experiences of the past may not have been entirely positive, through the lens of nostalgia, our brains tend to filter out specific, trivial distractions to capture a broader, more universal atmosphere of the era.

In other words, nostalgia causes us to remember the overall impression of a period rather than every precise physical detail. This explains why the resident's recollection lacks technical accuracy yet is saturated with a dense sense of atmosphere. The function of memory here is not to restore historical archives, but to serve as an emotional bridge, establishing a form of spiritual continuity between the scarcity of the present and the perceived abundance of the past. Therefore, nostalgic memory is a highly selective subjective construction. It stitches together personal desires, emotional tensions, and material fragments, ultimately forming a psychological landscape that, despite its blurred outlines, possesses authentic emotional depth. Though it lacks a clear physical outline, it reconstructs that living internal world through the simulation of atmosphere rather than the replication of details.

While this nostalgia-driven psychological landscape is physically absent, its sensory authenticity offers a profound alternative dimension for architectural representation. When traditional, precision-oriented mapping fails to capture such irrational interiority, the research lens must shift from what this essay terms the *rehabilitation of facts* toward the *speculation of experience*. This transition leads to the core design category of this study: the Speculative Interior.

The reconstruction of such affective textures necessitates a conceptual framework that moves beyond mere archival restoration. Traditional architectural representation, while precise, often fails to account for the 'voids' left by official histories — the intangible gaps between public records and the lived subjectivity of residents. To bridge this rift, this research engages with the concept of the speculative interior as an apparatus of memory. Originally proposed by Evan Pavka, this framework positions interior spaces as vital intermediaries where personal oral histories and familial records can coalesce to

challenge monolithic official narratives.[15] For instance, in his research case studies, students imagined the hidden lives of passengers aboard the Komagata Maru by drawing its cross-section or collaborating with family members to recreate destroyed buildings in Japanese Canadian internment camps through architectural drawings and sectional models.[16]

However, where Pavka's methodology traditionally relies on human designers to interpret and draw these counter-narratives, this study proposes a significant methodological evolution: replacing the human hand with the generative capacity of Artificial Intelligence (AI). This shift is not merely a change in tool, but a profound response to the psychological mechanism of nostalgia. While manual drawing often strives for a degree of formal or structural logic, the representational medium of memory should ideally mirror the subjective, reconstructive nature of the mind.

Generative AI is proposed here as the ideal speculative medium. Rather than replicating, AI 'hallucinates'; in this context, the term does not denote an error, but rather the creative act of generating plausible new details by associating patterns from its training data. This process, operating through association rather than logic, aligns with the non-linear, non-rational qualities of memory and oral history.[17] As architectural theorist Kudless suggests, AI's generative qualities, which often produce abstract or interpretive results, are uniquely suited for representing memory.[18] The visual outputs of this process are what this essay terms 'Memoryscapes': defined not as photorealistic reconstructions of a lost physical space, but as speculative visual translations of subjective, narrative memories that prioritise affective texture over technical precision. Moreover, these AI-generated Memoryscapes function not as a destination, but as a fertile threshold for human intervention, allowing the researcher to fill semantic voids with artistic language and reclaim the interiority of a vanished community.

five-stage speculative workflow

To translate ephemeral oral histories into tangible spatial forms, this research establishes a structured yet interpretive five-stage methodology. This process moves beyond mere data processing; it is designed as a collaborative translation between human memory, machine hallucination, and physical craft.

Phase I: Narrative Excavation and Sensory Anchor Extraction

Gathered textual descriptions of Red Road Apartments from novels, interviews, and online archives, while meticulously extracting fragmented spatial clues. The sources include: «This Road is Red»; Red Road Stories — online residents' recollections collected by the Glasgow Housing Association (GHA).[19] Rather than seeking structural data, this stage focuses on extracting specific domestic objects or atmospheric qualities that serve as the building blocks of a resident's subjective reality.

Phase II: Semantic Translation and Speculative Prompting

This step is crucial for translating the oral history into narrative prompts comprehensible to AI. Rather than merely listing keywords, we systematically reconstruct the text. The process first extracts physical anchors forming the scene's framework (such as tiny box room, no windows), then captures sensory and atmospheric cues that imbue the scene with emotional resonance (such as complete darkness, claustrophobic). For example, based on the memory of 'box room', this is the input prompt for Midjourney:

> *An interior of a tiny windowless apartment box room, complete darkness but illuminated by the warm, amber glow of a vintage record player, a single small bed, a drying rail with laundry hanging overhead, cosy --v 5.2 --ar 1:1.*

Phase III: Iterative Visualisation of Memoryscapes

Using Midjourney, the research undergoes an iterative process of image generation to produce what we term Memoryscapes. These are speculative visual translations where the AI's ability to associate patterns from training data is leveraged to fill the semantic gaps in human memory. The goal is to reach a visual expression that resonates profoundly with the text's original emotional undertones.

The selection process during this phase was not based on photorealistic accuracy but on what this essay terms *affective resonance*: the capacity of an image to communicate the emotional register of the original testimony. For every final Memoryscape chosen, dozens of iterations were discarded. The researcher acted as a curator, identifying what might be called *correct errors* — such as the surreal placement of objects — that better mirrored the fragmented and heightened nature of nostalgic recall than a logically perfect image would.

It is important to note that this process was far from automatic or consistently successful. Many generated images were rejected during the iterative workflow. For example, the model failed to respond to key elements of the prompts. Technical limitations also emerged, including distorted spatial relationships, inconsistent scales, and implausible architectural configurations that weakened the credibility of the resulting Memoryscapes.

Furthermore, the outputs often reflected biases embedded within the model's training data. Narratives drawn from working-class social housing in Glasgow were sometimes translated into idealised or commercially styled domestic environments, revealing a tendency towards dominant visual archetypes rather than the specific social and cultural realities of Red Road. Consequently, human judgement remained essential throughout the process. The researcher continuously evaluated, rejected, and revised generated images, negotiating between algorithmic suggestion and narrative fidelity in order to produce Memoryscapes that remained both speculative and emotionally resonant.

Importantly, not all hallucinations were treated as errors. A key distinction emerged between productive and unproductive hallucinations. Productive hallucinations referred to AI-generated elements that were absent from the original narratives yet amplified their emotional, atmospheric, or symbolic qualities. For example, the introduction of unexpected domestic objects or exaggerated material conditions occasionally revealed aspects of everyday life that resonated with the broader affective character of a memory. Such outputs were retained and analysed as speculative interpretations rather than factual reconstructions.

By contrast, unproductive hallucinations were rejected when they disrupted the narrative coherence of the memory or introduced visual elements disconnected from the social and spatial context of Red Road. Examples included excessively fantastical environments, implausible architectural forms, or irrelevant objects that transformed lived memories into generic dreamscapes. The aim of the curation process was therefore not to eliminate hallucination altogether, but to identify those hallucinations that meaningfully contributed to the representation of collective memory while excluding those that obscured it.

Therefore, the speculative nature of generative AI introduces uncertainties. The same narrative can produce radically different visual outcomes depending on prompt construction, model updates, or algorithmic biases embedded within training data. While this ambiguity aligns productively with the reconstructive nature of nostalgia, it also raises important questions concerning authenticity, representation, and authorship.

Phase IV: Speculation via Depth Estimation

While the 2D images capture the affective texture of memory, the translation into three-dimensional

form offers an additional mode through which these subjective experiences can be materially encountered.[20] The translation into three-dimensional form was not pursued in order to increase spatial accuracy, but to explore whether collective memories could acquire a form of material presence beyond the screen. By giving physical substance to otherwise intangible recollections, the resulting sculptures invite viewers to engage with memory not only visually, but also as an embodied and spatial encounter.

ZoeDepth is an advanced AI model capable of estimating depth information from a single image.[21] This process is itself a further layer of speculation rather than a neutral act of reconstruction. The AI-generated depth map proposes one possible interpretation of the spatial relationships embedded within the Memoryscape. Consequently, the resulting sculptures should be understood as material translations of subjective memories, shaped through successive acts of narration, machine speculation, and human interpretation.

Phase V: Physical Manifestation and Subjective Ornamentation

The final stage of this methodology gives physical form to the digital models, transforming them into tangible artefacts. The process began with fabricating the 3D digital files into physical objects via laser cutting. Following this, each model underwent 'ornamentation' — a deliberate act of hand-applied colouring and texturing. This human intervention, grounded in architectural theorist Antoine Picon's work on ornament and subjectivity, allows the designer to reclaim creative agency from the algorithm, infusing the cold industrial output with the warmth or trauma of the original lived experience.[22]

analysis of memoryscapes: visualising the unseen interiorities

The Memoryscapes generated in this study are not objective replications of past physical spaces; rather, they serve as a series of speculative visual translations designed to challenge official grand narratives. While official discourse, such as the 2004 Glasgow Housing Association (GHA) letter, reduced the Red Road Flats to a monolithic symbol of 'technical failure' and unsustainable housing, the following analysis of four core cases demonstrates how AI-driven hallucinations fill the gaps within these official archives. Together, these images constitute a multifaceted emotional spectrum that restores the marginalised subjectivity of the residents.

In contrast to official narratives that branded the flats as detrimental developmental environments, the first two cases illustrate how residents anchored dignity and warmth within restricted spaces through everyday domesticity.



Figure 01.
'Wee Room'. AI-generated Memoryscape created by the author using Midjourney.

The first AI-generated image is a visual translation of an oral history account concerning a 'box room', a space imbued with emotional ambivalence [Fig. 01]. The narrator describes this area as a cramped chamber 'without windows', 'completely dark', yet ultimately refers to it emotionally as 'a great wee room.'[23] It precisely captures and magnifies this duality. On one hand, the overall composition

and atmosphere convey a profound sense of enclosure. The deep green walls, heavy shadows cast by a single overhead light source, and the tight, cluttered space filled with various objects all resonate with the physical descriptions of 'tiny' and 'darkness' in the text.[24]

On the other hand, the AI hallucinated the narrator's deep emotional attachment to this space. For instance, the walls hung with photographs, clocks, the warm-toned textiles on the left, and the vintage-patterned carpet on the floor collectively fostered a chaotic yet profoundly cosy atmosphere, despite these elements not being explicitly mentioned in the original text. The washing machine, which is absent from the text, is a classic AI hallucination. It likely stems from a misinterpretation of the phrase 'drying rail with washing'.[25] Yet this 'error' proves remarkably 'correct' on a speculative level; it brutally implants traces of domestic routine into this private teenage space through surreal means.

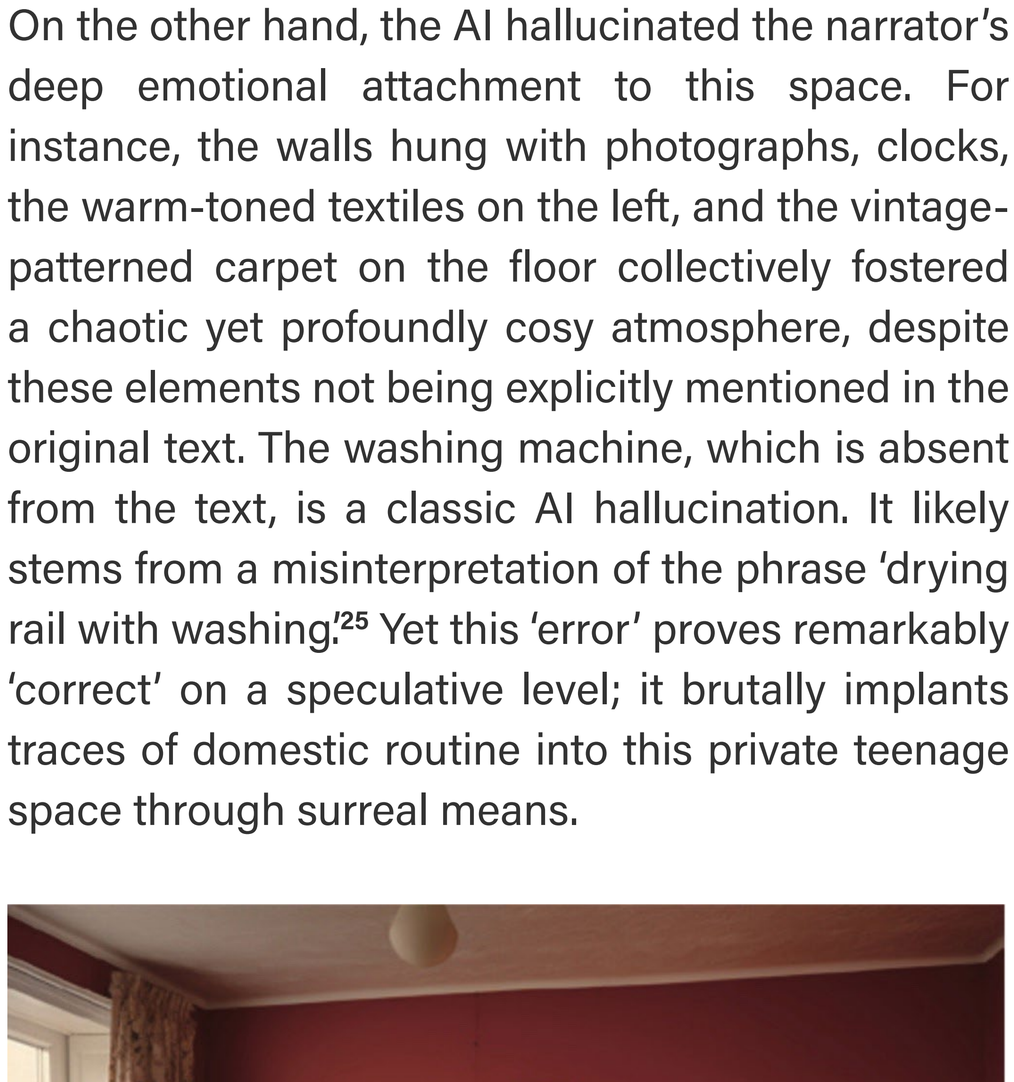


Figure 02.
'Outlive'. AI-generated Memoryscape created by the author using Midjourney.

Moreover, the hallucinated picture frames, placed erratically throughout the room amid the crowding of tools and junk, profoundly reveal the reality of forced functional mixing within high-density housing, and the preciousness of this adolescent carving out a secret base within such a reality. Thus, this image is not a restoration of physical space, but rather, through the materialisation of the interior, presents the coexisting emotions of individual repression and attachment.

This expectation of permanence is further echoed in the second image, 'Outlive', which originates from a family memory about red wallpaper, exploring 'home' as an expectation of permanence [Fig. 02].[26] The narrative's description of the space only mentions a table and the wallpaper, with the father proudly proclaiming that the wallpaper 'will outlast us.'[27] The AI's interpretation of this text once again demonstrates its ability to combine and hallucinate symbols. The AI amplifies the core element of 'red wallpaper', causing the entire space to be dominated by a strong red colour, including a red sofa and tableware. Sunlight streams in through the window, casting warm patches of light on the red sofa and walls, further reinforcing this atmosphere of warmth and hope. Although no era or style was specified in the prompt, the output consistently drew on recognisable visual conventions of 1970s domestic interiors, translating a brief exchange into a fully realised space with a distinct period character and emotional warmth. This tendency suggests the influence of dominant visual archetypes within the model's training data, the composition of which is not publicly documented.

In contrast to the previously discussed memories filled with ambivalent warmth, 'Frozen' originates from a description of steeping in pain and helplessness, describing the physical decay of the apartment building in its later years [Fig. 03].

> The houses are frozen, the windows are getting in rain [...] the dampness is all over the walls in the kitchen, bathroom, hall press and the window ledges are full of black mould.[28]
>
> Red Road Stories



Figure 03.
'Frozen'. AI-generated Memoryscape created by the author using Midjourney.

The AI's translation of this text fully leverages its ability to create a 'distorted' and 'uncanny' atmosphere, sublimating a physical problem into a psychological horror experience. The image presents an abandoned, horrifying bathroom. The AI accurately captures the core elements from the text: the frost on the windows, the large areas of peeling and water stains on the walls (dampness), and the mould-like filth on the floor and objects (black mould). Through extreme low-key lighting, strong chiaroscuro, and dilapidated details (such as a broken mirror and a dirty bathtub), it 'hallucinates' a housing problem into an almost uninhabitable ruin. This familiar domestic scene (the bathroom), under the AI's 'hallucination', becomes strange and threatening, thereby accurately reproducing the traumatic psychological feeling of a 'home' no longer being a sanctuary.

In contrast, 'Wet room' is a visual hallucination of a sudden catastrophe, based on a traumatic memory of returning home after a fire: 'There was a terrible smell of smoke [...] the carpets sodden, and there was fungus on the walls. Their panicked beds were wet through'[29] [Fig. 04]. The AI's translation of this text is not limited to singular elements of decay; instead, it constructs a post-disaster scene filled with dramatic tension.

The AI captures the core symbols of disaster from the text: the smoke pervading the air, the books and papers scattered on the floor, seemingly soaked with water (sodden carpets, wet books), and the broken windows. However, the AI does not render a messy, modern apartment living room. Instead, it hallucinates a space resembling a classical study, where tall bookshelves allude to the cultural value of the destroyed objects. Light dramatically streams in through the broken windows, illuminating the dust and smoke in the air, creating an 'aesthetic of ruin' that is both tragic and imbued with a sense of the sacred.[30] The highly emotive phrase from the text, 'panicked beds', is translated by the AI into the chaotic state of the entire space.[31] Notably, the lone chair standing in the light becomes a powerful symbol for the displaced resident and their interrupted daily life. This image thus transcends a simple representation of a disaster scene, becoming a visual allegory about loss and chaos.



Figure 04.
'Wet room'. AI-generated Memoryscape created by the author using Midjourney.

These four cases demonstrate that AI is not merely a tool but a collaborator in constructing a collective counter-history. By embracing rather than avoiding machine hallucination, these Memoryscapes give tangible sensory form to the intangible memories of a vanished community. This synthesis ensures that the Interiority of the Red Road Flats can be peered at through the transparent, rational shell of official history, allowing the community's cultural spirit to endure.

memory sculptures

In this essay, memory sculptures refers to the physical outcome of transforming AI-generated digital images into tangible art through spatial data and manual crafting. This stage of the research directly addresses a central question: how can artists and designers collaborate with AI to represent the intangible memories of a community that has been physically demolished? Rather than simply documenting an architectural project, this process aims to rebuild the emotional landscapes of the Red Road community by filling the gaps left by official records. In this sense, the sculptures operate as material translations of the Memoryscapes, providing a physical medium through which otherwise intangible memories, emotions, and interior experiences may be encountered.

The process begins by using AI tools, such as ZoeDepth, to extract depth information from the 2D Memoryscapes. This allows the designer to translate flat images into 3D layered models via laser cutting. These physical layers act as a structural foundation for the memory, yet their raw, industrial texture initially lacks the emotional warmth of actual lived experience. To fill this gap, the designer introduces Speculative Ornamentation, which means, through the manual application of textures and colours, to reclaim creative agency from the algorithm. This stage is theoretically grounded in the work of Antoine Picon, who argues that ornament is far from a superfluous addition to architecture; rather, it is a direct projection of subjectivity into the material world.[32] It allows the artist to inject human sensory details back into the cold machine output.

Taking the 'Wee Room' model as an example, the choice was made to randomly spray fine white and gold specks over a deep, oppressive dark base [Fig. 05]. This visual treatment aligns perfectly with the warmth inherent in nostalgia: although the actual physical space was windowless, claustrophobic, and threatened by asbestos, it remains a secure and warm haven in the depths of the narrator's memory.



Figure 05.
'Wet Room' Memory Sculpture. Laser-cut physical model derived from an AI-generated Memoryscape and hand-finished by the author.

In contrast, for the 'Wet Room' model, which symbolises fire and decay, the palette shifts entirely toward aggressive dark greys and charred blacks [Fig. 06]. The coarse, granular texture transmits a sense of ash-like desolation to the fingertips. This tactile discomfort directly echoes the helplessness and despair experienced by residents as they witnessed the destruction of their homes.

Central to this work is a deliberate visual tension. The precise, rational grid on the transparent acrylic panels manifests the 'official' identity of

the flats as a modernist architectural entity — standardised, measurable, and objective. This transparent shell serves as a ghostly outline, merely framing the contour of a reality that often remains 'unseen.'



Figure 06.
'Wet room' Memory Sculpture. Laser-cut physical model derived from an AI-generated Memoryscape and hand-finished by the author.

Suspended within this rational framework are seven abstract models, varied in form, dappled in colour, and imbued with emotion. They represent the unofficial, subjective, chaotic, and contradictory personal memories. Through this juxtaposition, the installation materialises the core conflict: the clash between the public and narrative and personal memory. The audience is invited to peer through the transparent, which represents 'official history', to glimpse the world of true 'interiority' composed of countless personal stories within.

synthesising agency: human-ai collaboration in heritage

By positioning generative AI as a collaborator, the oral histories and texts of former residents of Glasgow's Red Road Flats can be translated into perceptible Memoryscapes and tangible memory sculptures. These interior images produced through this method emerge from a speculative process of 'hallucination.'[33] This associative process, which prioritises pattern recognition over strict logic, aligns with the psychological mechanisms of human nostalgia. Within this framework, nostalgia operates as a subjective memory reconstruction rather than an exact replication of facts, serving as an emotional bridge between the scarcity of the present and the perceived abundance of the past.

AI's 'hallucinations' effectively capture the non-linear and uncertain qualities of memory, providing visual continuity for the sensory fragments found in resident narratives. This approach offers a vital resistance to the grand narratives of urban renewal, which simplified the Red Road Flats into a monolithic symbol of technical failure and silenced the rich interior lives of its inhabitants. By introducing the speculative potential of AI, this method gives sensory form to these marginalised interiorities, restoring the building as an emotional container for subjectivity rather than a cold, objective entity.

Finally, the roles of AI and the designer are also topics worthy of discussion. Although the project is framed as a human–AI collaboration, the distribution of agency throughout the workflow was uneven. AI was responsible for generating visual possibilities and speculative spatial interpretations, yet every critical decision remained dependent upon human judgement. The selection of archival materials, extraction of sensory anchors, construction of prompts, evaluation of outputs, and final transformation into physical artefacts were all directed by the researcher. In this sense, AI functioned less as an autonomous author and more as a generative instrument operating within parameters established by human intention.

This became particularly evident during the iterative visualisation stage. A single memory narrative often produced dozens of alternative images, many of which were discarded. The decision to retain or reject an image was based on its capacity to communicate the emotional and atmospheric qualities embedded within the original testimony, and not on technical quality alone. Consequently, authorship emerged



Figure 07.
Final installation composed of seven Memory Sculptures suspended within an acrylic framework referencing the original Red Road Flats grid. Photograph of physical installation created by the author.

beyond the production of images themselves, through a continuous process of selection, interpretation, and negotiation. The researcher did not simply accept machine outputs; rather, the final Memoryscapes were actively curated through repeated cycles of prompting, evaluation, rejection, and refinement.

Rather than locating authorship exclusively within either the human designer or the algorithm, this project suggests a model of negotiated authorship. The resulting images emerged from an ongoing dialogue between resident testimony, machine association, and human interpretation. While AI introduced unexpected visual possibilities through pattern-based generation, the researcher continuously shaped the direction of the process by determining which outputs aligned with the project's conceptual aims. Authorship therefore resided not in a single act of creation but in the negotiation between human intentionality and algorithmic contingency.

Furthermore, the transition from digital speculation to physical manifestation through ZoeDepth-driven modelling provides the final stage of agency reclamation. The application of ornament serves as a direct projection of subjectivity into the material world. Therefore, the manual application of textures infuses the cold, industrial output of the laser cutter with the warmth or trauma of lived experience. This intervention introduces a further layer of human interpretation into the workflow. Through the manual application of textures, colours, and material adjustments, the memory sculptures become sites of continued negotiation between machine-generated speculation and human experience. The resulting artefacts therefore embody a hybrid form of authorship shaped through successive acts of translation and reinterpretation. As Chen suggests, AI-driven tools may unlock new forms of artistic expression and extend the boundaries of what is possible in art.[34]

In the present study, the researcher functioned as an intermediary between resident testimony and machine generation, translating archival memories into prompts, evaluating outputs, and shaping the final visual narratives. While this curatorial role was necessary for the development of the project, it also concentrates interpretative authority within a single individual.

Future developments in generative technologies may enable a more participatory model of memory reconstruction. Rather than relying on researchers to mediate between communities and AI systems, former residents could potentially engage directly with generative tools, contributing prompts, evaluating outputs, and collaboratively shaping representations of their own histories. In such a framework, the role of the researcher may shift from author or curator towards facilitator, designer of platforms, or steward of the process itself.

This possibility raises important questions concerning authorship, authority, and representation. If AI systems become sufficiently accessible and transparent, can collective memory be co-produced directly by communities rather than interpreted through academic or artistic intermediaries? Such a transition would fundamentally transform the politics of heritage representation, redistributing creative agency from institutions and researchers towards the communities whose memories are being preserved.

conclusion

When the physical environment of a community is erased by urban renewal, generative AI emerges as a vital speculative medium to prevent the 'voiding' of collective memory. Through the implementation of a five-stage speculative workflow, it becomes evident that AI's non-linear hallucinations function not as technical flaws but as essential creative catalysts that mirror the subjective and fragmented nature of human nostalgia.

The strength of this collaborative model between artist and algorithm lies in its capacity to anchor digital visions into a tangible, human-perceived reality. While AI generates initial Memoryscapes

through symbolic association, the designer's intervention provides the necessary material grounding to bridge the gap between machine logic and lived experience. Such a process intends to fill the technocratic silence of official archives with a visualised 'counter-history' composed of individual interiorities.

Ultimately, the Memory Sculptures produced in this method prove that preserving heritage is not merely a task of scanning physical shells, but of reimagining the invisible spiritual worlds of former residents. It does not seek to recover a lost architectural reality; instead, it creates a material encounter with the interiorities that persist beyond the disappearance of physical space. This methodological template offers potential for future applications in digital humanities and heritage protection, providing a way to ensure that the cultural spirit of displaced communities endures long after their physical structures have been erased.

acknowledgements

The author expresses profound gratitude to the former residents of the Red Road Flats for sharing the oral histories that formed the basis of this essay. Recognition is also given to the technical staff at the host institution for their support with 3D fabrication and laser-cutting facilities.

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notes

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