Giovanni Battista Piranesi (1720-1778) is remembered as a visionary architect whose creation of the Carceri d’Invenzione (Imaginary Prisons) surpassed the limits of human imagination and which contains a power to constantly renew itself to transcend beyond time. Piranesi’s ideas exist in the psychological and theoretical realm. The challenge he posed to the limits of architectural representation, its conventions, and the space of representation was never resolved. The research re-examines the Carceri in an attempt to generate a contemporary approach to architecture.

This research document focuses on the analytical process of generating architectural space. While the Carceri are conceived as visionary architecture that existed solely on paper, there is an underlying complex system of processes and motivations involved. The research aims to develop a system of design, through analysis and the process of discovery, to ensure the perseverance of Piranesi’s ideas. The techniques will be generated through a process of analytical reading, model explorations, and spatial analysis. The new interpretation of architectural space will be represented in the form of a contemporary building.

The Carceri are capable of infinite reinterpretations. The possibilities represented cannot be expressed in a single solution. The essence of Piranesi’s architectural space lies in its ongoing, infinite construction.
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AIMS AND OBJECTIVES

There are two primary objectives for this project.

The constant reinterpretation of the Carceri allowed the ideas of Piranesi to stay alive over the centuries. What are the ideas generated from these reinterpretations and how might they aid in the translation of Piranesi’s ideas into contemporary settings?

With the possibility of multiple interpretations, the difficulty lies in the unlimited freedom of translation and impossibility of expressing the multitude of ideas in one single interpretation. How can a system of design, through analysis and the process of discovery, be formulated to ensure the continuity of Piranesi’s ideas? How can this system form a new interpretation in architectural space?

The project aims to devise a system of techniques that resonate with the essence of Piranesi’s ideas. Using these techniques, the Carceri will be translated to represent a possible contemporary architectural solution.
RESEARCH QUESTION

How can the study of Piranesi’s Carceri, through literature, analysis, and experimentation, generate techniques to approach contemporary architectural space in resonance to his ideas?
CURRENT KNOWLEDGE IN THE FIELD

The complexity of Piranesi’s work allowed it to be addressed by different discourses beyond traditional art and architectural theory. Various areas of artistic creation, including literature, architecture, fine arts and cinematography have addressed Piranesi’s work in attempts to redefine the notion of architectural space in dynamic terms. Piranesi influenced various individuals over the course of history including architectural historian Manfredo Tafuri who devoted a chapter to Piranesi on politics and critical history. Belgian author Marguerite Yourcenar wrote an essay entitled “The Dark Brain of Piranesi”. Many other writers, including Horace Walpole, Thomas De Quincey and Victor Hugo, referred to Piranesi in their works.

Piranesi’s influence spread to 20th century authors, in, for example, the labyrinthine, endless Library of Babel by Jorge Luis Borges and in the dark, mysterious architectural spaces in Umberto Eco’s novel The Name of the Rose. Fine artist M.C. Escher’s lithographs show strong references to Piranesi’s interior spaces. In the work “The House of Stairs”, flights of stairs are showcased in various directions and planes, extruding outside the picture plane and inwards into obscured structural space. Filmmaker Sergei Eisenstein, having been inspired by Piranesi’s work, analysed and developed several techniques that were evident in the Carceri.

Piranesi’s influence on the architectural discipline is significant. References to Piranesi’s work can be found especially in Lebbeus Woods’ interior drawings. His project “Underground Berlin” (1988), which features a subterranean network under the politically divided Berlin, resembles the graphic texture of Piranesi’s etchings. Piranesi’s images represent a new notion of space – infinite, dynamic, changing, mysterious – which manifest the possibility of constant redefinition. These characteristics continue to capture the attention and fascination of contemporary architectural practices.

3 Manfredo Tafuri, p. 321.
4 Manfredo Tafuri, p. 54.
METHODS AND TECHNIQUES

The Carceri have immense influence over various discourses beyond traditional art and architectural theory due to the unresolved and speculative nature of Piranesi’s work. Some of these interpretations may even contradict each other as a result of the unlimited freedom his work embodies. It is difficult to express the possibilities of ideas and layers of complexities in the Carceri in a single interpretation. How can this project ensure that, in the interpretation through this research, the core or the essence of “Piranesi” is covered, if there is such a multitude of interpretations which might even contradict themselves? A system of evaluation is necessary to select “techniques” that can be used to expresses Piranesi’s ideas in this project.

The Carceri consist of layers of complexities, but ultimately they express spatial experience through architecture. Through initial evaluations, it is revealed that literary interpretations from writers and film-makers are better suited as techniques for this project due to their descriptive spatial expressions of architectural space. One key characteristic was chosen for each of the seven written works analysed. These characteristics embody fragments of Piranesi’s ideas.

Another selection of techniques will be generated through a process of composition analysis, exploring through physical modelling, and through analysing Piranesi’s spatial composition.

The various techniques generated by the method of evaluation will be translated as a design tool to represent a possible architectural solution.
INTRODUCTION

Piranesi is remembered as an antiquarian and visionary architect whose suite of 16 prints influenced various areas of artistic creation: literature, architecture, fine arts and cinematography.

This chapter will be exploring the reinterpretations of the Carceri through seven written works.

Their selection were based on their descriptive spatial expressions of architectural space. One key characteristic which embody Piranesi’s idea was chosen from each of the following work:

Marguerite Yourcenar - Theme of Prison
Anthony Vidler - Uncanny
Sergei Eisenstein - Techniques
Ulva Vogt-Goknil - Perspective
Jennifer Bloomer - Narrative, Fragment, Collision
Manfredo Tafuri - Rational and Irrationality
Teresa Stoppani - [Re]interpretations
“I have need of great ideas, and I believe that if I were commanded to design a new universe, I should have the folly to undertake such a thing.”
- Piranesi

PIRANESI - ARCHAELOGY OF ROME AND VISIONARY ARCHITECTURE

Giovani Battista Piranesi (1720-1778) was a visionary architect whose etchings are highly influential and contain a power which exists beyond time. His most enduring architectural fantasies, entitled Carceri d’Invenzione (Imaginary Prisons), first published 1749-50, has been his suite of 16 prints, influencing various areas of artistic creation, including literature, architecture, fine arts and cinematography. Piranesi only dreamt to change the world’s architecture, but instead he changed the world’s minds.

Piranesi’s career can be viewed in two halves. He spent the first half of his life studying the archaeology of Rome and recording it for posterity. The splendour of ancient Roman antiquities captured Piranesi’s imagination. His technique of collaging Classical architecture with his idealized representation was also a major artistic and architectural tactic that influenced the twentieth century. The second half of his career can be seen as his exploration of visionary architecture. Many of his works explore and push the gap between the architecture within architectural drawings and the architecture of real, built buildings.

The growing resentment to discourteous clients, his yearning for an antiquarian vision, and his desires for architectural progression, led to his explorations on the limits of architectural representation through the medium of drawing. Through the realisation of the cavernous imaginary prison interiors, called the Carceri, he is remembered as the visionary architect who influenced the world.

7 Ibid.
Fig. 2. The 16 etchings of Carceri d’Invenzione 2nd State (1761)
The first set of Carceri etchings (1745-49) are revolutionary works ahead of Piranesi’s era. However, it was not until the second edition (1761) that the plates became a huge success in modern criticism. The deeply reworked series not only transformed architectural representation but opened up the possibilities of multiple interpretations.

The first album of the Imaginary Prisons (Invenzioni Caprice di Carceri), is a series of 14 etchings with resemblance to an inverted image of Roman and Baroque grandeur, steeped in Roman Antiquities. The enormous lofty Prisons are a whole world for the onlooker to wander. Even though Piranesi’s vision is ahead of his time, it was not popular during that period.

The second greatly reworked edition, now called Carceri d’Invenzione di G. B. Piranesi, contains sixteen plates. While gaining more acknowledgment, the series was still very mildly appreciated due to the lack of understanding of the work, and consequently seldom purchased.

Piranesi worked over the original etchings, multiplied the crosshatchings, permitting more generous inking, diminished the great bright spaces, darkened and augmented the areas of shadow. The new edition manifests a gloomier, atmospheric tone, detailed elaborations, intense and excessive strokes, constant change of perspectives, multi-directionality of lines that enhanced dynamism, several vanishing points, specified the qualities of light, and an endless optical journey through the labyrinthine structure. The Prisons even with their ominous instruments, only vaguely suggest notions of tortures and resemblance of a prison. This opens up discussion as to what the Carceri is, can be, or can become.

Beneath the frenzied line works and dark shadows of the Carceri lie several layers of meanings. These layers make multiple interpretations possible. It is both theatrical and architectural, conjuring a sense of poetry that has captivated people’s imagination over centuries.

CARCERI D’INVENZIONE

Marguerite Yourcenar in her essay on Piranesi’s engravings analyzes the formal motivations, and the psychological adoptions to them.

In the second edition of the Carceri, additions such as the mysterious machines, darkened halls, blackened stakes and ominous bristle with nails, all vaguely emphasise acts of torture in prisons. The question is why the theme of prisons? Prisons are the embodiment of Piranesi’s time. Is Piranesi merely swept by the current of his century? Yourcenar raises the possibility that he deliberately modified his work from Baroque art towards the direction and style of the gothic novel. But while this theme is common throughout that period, it is uncommon for physical and metaphysical expression of a tormented soul. The first state of the Carceri is believed to be conceived through his hallucination, a delirious dream of pure volumes, pure space. The second state suggests that Piranesi was attempting to rationalize images which may have lost the manifest meaning they possessed in his delirium, to justify their title by adding to these transcendental dungeons and dizzying torture chambers some unimpeachable detail of real dungeons and actual tortures.

Comparing the two editions, neither bears much resemblance to traditional images of a prison. For one, prisoners in the Carceri are not confined, but instead roam aimlessly in the endless flights of stairs and vast space. Instead of a prison, it might resemble more of a theatre stage set. Every piece of timber, staircase, masonry, and arches is placed delicately and precisely where he wanted it. The onlooker is placed at the entrance of the edifice of Piranesi’s drawing, looking into the hollow centre with a continuous extension of space, linked by stairs and gratings to other invisible chambers. The Carceri are massively overscaled subterranean spaces, containing reminiscences of ancient reservoirs or Roman palaces with flight after flight of staircases, frail catwalks and drawbridges hung in midair. Humans are the size of ants roaming through the enormous spaces. This sense of total exposure, insecurity, perhaps contributes more than all else in making these fantastic palaces into prisons... The prison of Piranesi dwells in the psychological conscience. Perhaps it is precisely the fact that Piranesi imposed the topic of Prison upon his ambiguous setting that evoked curiosity and opened the question of them for centuries afterwards.

Delirium – Piranesi was thought to have malaria in 1742. However instead of a world of mental confusion, it increased his perception to the point of erethism, and almost to torment, thus providing dizzying energy and mathematical intoxication, combined with the crisis of agoraphobia and claustrophobia, the dark, anguish captive space of the Prisons resulted... Erethism or erethism mercurialis is a neurological disorder which affects the whole central nervous system, as well as a symptom complex derived from mercury poisoning. In olden times, England felt-hatmakers industrial workers were exposed to the mercury vapours, giving rise to the expression “mad as a hatter”.

Fig. 3: The Dark Brain of Piranesi Book Cover

Yourcenar, The Dark Brain of Piranesi and Other Essays, 108.
"Piranesi climbs again; he must climb and climb and arrive...he has arrived at the bottom level of a building similar to the first buildings..." - De Quincey

"all edifices calculated to produce an idea of the sublime, ought rather to be dark and gloomy [...] therefore you enter a building, [...] to make the transition thoroughly striking, you ought to pass from the greatest light, to as much darkness as is consistent with the uses of architecture." - Edmund Burke

ANTHONY VIDLER - THE UNCANNY AND THE SUBLIME

"The uncanny [is] something which ought to have remained hidden but has come to light" - Freud

Uncanniness can be seen in the strange unfamiliarity of the familiar, in the sameness that lurks in every corner, it is a metaphysical experience similar to fear, tinged with terror and insecurity. The architectural uncanny lies in the aesthetic dimension, a representation of the metaphysical projection that blurs the boundaries of the real and unreal to provoke ambiguity.

Kant describes the sublime as being something beyond human imagination, words and pictures; it is the inexpressible. Edmund Burke equates terror with the idea of the sublime. Burke believes that the synthesize of terror, wonder and fear created the sublime qualities. Psychologist Ernst Jentsch attributed the feeling of uncanniness to a fundamental insecurity brought about by a lack of orientation, and not knowing one’s way about.

Thomas De Quincey describes Piranesi’s Carceri as a “vértigo en abîme” in which he forever climbs the unfinished stairs in the labyrinth of carceral spaces. He views the Carceri as an endless repetitive space, and this endless repeating cycle is the cause of uncanniness. De Quincey’s (mis-)interpretation of Piranesi’s prisons as dreams induced by delirium gave rise to a long tradition of labyrinthine narratives. Charles Nodier from his rereading of De Quincey’s writings, generated his own interpretation of sublime space from the Carceri. He uses Burke’s characterization to describe the height, depth, and extension in conjunction with the uncanny—that of silence, solitude, of internal confinement and suffocation, the mental space where temporality and spatiality collapse. Vidler believes that Nodier placed the vertigo of the sublime side by side with the claustrophobia of the uncanny. Both De Quincey and Nodier imagined Piranesi lost within his own construction, climbing for eternity through a space that is endlessly repeating, until nothing is measurable by the imagination.

Piranesi’s uncanny lies in the endless repetition. The dark shadows that lurk in every corner. The labyrinthine space that embodies the infinite.

14 Tafuri, The Sphere and the Labyrinth, 82.
18 Ibid, 37.
19 Ibid, 38.
20 Ibid, 39.
21 Ibid.
22 Ibid.
Soviet film director, Sergei Eisenstein, in his fascination with the architectural frenzies of Piranesi’s Prisons, analysed several techniques from his film making perspective. Eisenstein first develops his technique through analysing Piranesi’s Carcere Oscura (Dark Prison, 1743, fig. 7). One particular technique he developed is called “explosion” or “ecstatic transfiguration”. He combines it with a sequence of elements to make the work result in an ideal explosion. This analysis goes hand in hand with Eisenstein’s theory of montage where “montage is the stage of the explosion of the shot”.

Furthermore, he states that “when the tension within the shot reaches its peak and can mount no further, then the shot explodes, splitting into two separate pieces of montage”. It is evident through his analysis that he considers the entire series of the Carceri as a whole, composed of disconnected fragments belonging to a single sequence of technique. For Eisenstein, architecture embodies the principle of montage. He thought of architecture as ‘exploding’ into successive stages of ‘montage’ decomposition and recomposition, as if they are multiple ‘shots’.

The explosion Eisenstein inflicts on Piranesi’s Carceri generates a new way of interpretation. With the technique fully explored in the Carcere Oscura (fig. 6), Eisenstein merely applies the same explosion sequence to Carceri d’Invenzione first and second state. He sees the Carceri as a relentless vertigo, capable of endless movement and internal explosions.

Eisenstein’s analysis on the overall compositional system of techniques in the Carceri:

1) The use of arches to enclose the design, creating a framing effect.
2) Placement of principal structures within the framed space to support the overall architectural composition.
3) Applying a system of arches thrusting into the depths or outwards beyond the etching, thus creating a sense of depth.
4) The staircase is applied to create vertical movement, ascending and descending from and into the depths in-between the placed structures.
5) Other ornamentation such as ropes, pulleys add the effect of movement to the composition.

Ecstatic Explosion

Eisenstein develops his own interpretation and applies its effects over Piranesi’s system of techniques:

1) The frame explodes. The partially framed space creates more dynamic than a fully enclosed one.
2) Materials transform from one to another; stone to wood.
3) The stones piled on top of each other break apart by shifting their alignment. (fig. 4).
4) Arches exploding out from arches.
5) Staircases exploding in flight of new passages of staircases (fig. 5).
6) A system of vaults, which creates a “continuous leap from each other into eternity”.

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**Montage** - French verb ‘assembly’
The collision of one montage with another to create conflict to produce a new idea.

5 methods of Montage:
1) Metric - cutting to the beat (tempo)
2) Rhythmic - rhythm of action in the shot
3) Tonal - concern with the tone
4) Over-Tonal - concerning with montage of large sequences (how they play against each other)
5) Intellectual of Ideological - express abstract ideas and relationships between opposing visual intellectual concepts.

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24 Ibid.
25 Ibid.
27 Anthony Vidler, Warped Space: Art, Architecture, and Anxiety in Modern Culture (Cambridge, MA: Massachusetts Institute of Technology, 2000), 119.
28 Ibid.
29 Ibid.
The analysis by Eisenstein identifies Piranesi’s visual techniques and compositions. However, it does not allow one to understand fully the multiplicity of ambiguities which still lie within the Carceri. It tries to critically expose the “dynamic valences hidden” and, while it reveals to us the techniques, the Carceri holds multiple layers of meanings not only in the visual but also the metaphysical realm.
ULVA VOGT-GOKNIL - PERSPECTIVE

Ulya Vogt Goknil’s studies the spatial structure in plate VII of the Carceri through reconstruction of the plan. The analysis consists of three horizontal sections, showing the spatial disjunction in the composition of architectural elements. The resulting image imposes confusion when the three different perspectives merge into one, the rough collision cleverly masked by Piranesi’s dark strokes and shadows. The dominating method of composition in plate VII consist of randomness of the episodes, the lawless intertwining of superstructures, and undermining of the laws of perspective in order to achieve the illusion that nonexistent sequences of structures seem real. This plate clearly reveals the conjunction of two contrasting elements: Piranesi’s compositional structures as fragments, and the rigid organization of Estruscan and Roman architecture.

In the Carceri, Piranesi applied several types of architectural solutions. He ruptured his etching from the natural laws of perspective not only by shifting vantage points, but also by implementing several vanishing points (fig. 10). This ultimately causes the Euclidean space to collapse. The construction of Ulva’s plan shows the impossibility of the Carceri being built in reality. This shifting of perspective is only possible in the realm of visionary architecture.

31 Ibid, 310.
Jennifer Bloomer’s critique developed from the juxtaposition of literature and architecture. She argues that Piranesi’s etchings creates an ambiguous curiosity that engages viewers to develop their own narrative interpretation of what is going on.

Fragment and Collision

The idea of fragment is not an idea of origin. Fragment demands a preceding action. The object is fragment from the act of collision. The cause is collision; the effect is fragment. Implied is the shattering of a whole. The shattered whole is a synthetic whole, in which the shattering is the mechanism of the syntax.33

The Carceri is like the surrealist object, it is partial; it is the result of a collision. As in the surrealist object, the collision is born in the brain of the maker, a collision that the reader seeks and makes again; for collisions constitute the language.34 However, associations are required – based upon knowledge of the conscious, national world of ideas.35

Piranesi’s Carceri is an internal labyrinth. The walls of the labyrinth collide and crumble to bits. The resulting chaotic configuration of fragments suggests a new enclosure, a new labyrinth, inviting and forbidding, in which the wanderer finds another way.36
The Carceri was published in the late Baroque period, when abundance and Rococo embellishments decorated the churches and palaces. It was a time when urban reorganization founded on great public works was ignored by the government authorities and aristocracy. The government was ruled under strong principles and controlled by those with power and wealth. Piranesi stood within the controversy of his epoch, which explains the rejection and unpopularity of his Carceri when published. He understood that imagination is the key to voice his manifesto. It was his belief that gave birth to a highly experimental line of research for centuries to come. Piranesi wrote in 1743, aiming at the customs of the Roman milieu, of the “abuse of those who possess wealth, and who makes us believe that they themselves are able to control the operations of Architecture.” The Carceri was devised to invite its audience to step on a journey without a way to return. It was designed to be irrational and limitless. After all, how does one return from the Carceri whose form is exaggerated in its dimensions, distorted in its reality, and confronting its viewers with its wanderings in the maze?

Piranesi’s anguish was at the constraints by which usefulness governs the law. He questioned the functionality of intellectual work in the field of architecture, the role of the architect in the humanist school of thought. Piranesi had already foreseen the crisis of the reduction of intellectual work to abstract repetitive work, expressed in his writings. He wrote that “Architects are normally called in when one intends to build a beautiful building: this is what we may well affirm Architecture consists of today. But when one does not have such a concern, it is the patrons themselves who are the Architects, and it is enough for them to find someone merely to throw up the walls...”

Piranesi’s Carceri may be deemed a useless pursuit of unprecedented structures, but his imagination became a legacy. The process of freeing imagination is complex, but only imagination can bring on renewal.

Where is the balance between the rational and irrational and how can one define it?

The Carceri, while not completely irrational, leans towards the purely sensory and can exist solely as paper architecture. This type of architecture is useful in conveying past or current faults, but it is difficult to surpass this. The Carceri wears a mask that deceives the onlooker to be rational, but on closer investigation one discovers that it does not conform to any rules, resulting in a loss of any hierarchical structure. However, if the focus of a building is based on pure functionality, architects will not be needed. Piranesi’s Carceri may be deemed a useless pursuit of unprecedented structures, but his imagination became a legacy. The process of freeing imagination is complex, but only imagination can bring on renewal.
TERESA STOPPANI - [RE]INTERPRETATIONS

Having never been resolved, Piranesi’s work still offers an opportunity for the contemporary re-examination of critical architectural thinking. Teresa Stoppani sees the work as being capable for infinite redefinition. Piranesi has created his own architectural language through pushing the limits of the classical language of architecture. Paper was his deliberate medium and was used to generate experimental, impossible spaces and evoking uncanniness to contradict the well-established architectural regulations of type, composition and proportion. Regularity was chosen only to be broken and stripped from its original values. Piranesi himself continuously challenges and redefines the medium of representation, its conventions, and the space of representation.

The spaces represented in the Carceri are, at times, impossible not only in perspective view but also in plan and horizontal section. The traditional formula of reading plans and ideas of the section is redefined. Piranesi’s images represent a new notion of space – open, infinite, changing, smooth, dynamic – that is still seen in contemporary architectural and, in general, spatial practices. However, the questions Piranesi poses on the representation of architectural space and the very making of space have never been resolved. For this reason, it remains an ongoing construction, constantly being redefined, and renewed.

44 Ibid.
45 Ibid.
46 Ibid.
Part Two presents my investigation of the Carceri. The techniques generated from the previous written works will be further evaluated.

Piranesi stages his imaginary world through techniques of graphic virtuosity, specific qualities of light and shadow, point of view, intensity of tone and texture, restlessness of movement, composition, all contributing to the solid construction and compelling representation.

Through a process of composition analysis, exploring through physical modelling, and through analysing Piranesi’s spatial composition, a selection of techniques will be generated from this chapter.

ANALYSING THE CARCERI

Eisenstein compares Piranesi’s method of composition to the formulation of the vertical landscapes of Chinese and Japanese painting and recognised two different techniques each used. While the Oriental art attempts to reconcile the opposition through the act of fusion, Piranesi’s drawings juxtapose and collide with each other, creating extreme destructive dynamism.  

Fig. 12. Eisenstein’s sketch of a Chinese painting

47 Tafuri, The Sphere and the Labyrinth, 62.
THE CARCERI

Piranesi’s Carceri is depicted as sixteen separate drawings. Each drawing contains fragments within as result of multiple perspectives colliding. The drawings are combined horizontally and vertically in attempt to form new interpretations.

Fig. 13. Combined images of the Carceri - horizontal and vertical
FRAMING
Piranesi frames his etchings, staging his space and creating foreground that draws the viewers eyes inwards.

CIRCULATION
The circulation creates an invitation for the viewers to enter from the bottom right hand corner. Piranesi uses circulation to generate the effect of layering by creating foreground, midground, and background.

STRUCTURAL DIRECTION
Structures were used to emphasise spatial movement. It draws the eyes into the image by leading the viewers up the staircase and transferred onto the columns, then up the structure and leading into the depth or outwards beyond the image.

DEPTH
The composite of foreground, midground, and background emphasise the spatial depth. The deepening volumes and spaces are connected and intersected by staircases.

MOVEMENT
Piranesi uses multiple extravagant, enigmatic staircases to enforce the sense of unrest and continuous movement into the depths of the dungeons. The staircase was used to forces the eyes in the frenzy ascending and descending motion.
Fig. 15. Analysis of three plates.
LIGHT
The depiction of light is staged in ambiguous sources. It is manipulated and exaggerated to create Piranesi’s desired effects. The strong shadows suggests bright, direct light similar to natural light. The shadows are depicted almost parallel, conveying strong light. There is no indications of multiple shadows cast by several sources. The shadows are sharp-edged and creates a strong contrast to light.

The question of light remains unclear. How can a dark, cavernous interior illuminate by a bright, strong sun? Light and shadow is a technique Piranesi uses to emphasise spatial ambiguities.

MULTIPLE PERSPECTIVES
Piranesi manipulates the conventional rules of perspective. He exploits the technique of two-point perspective to push the boundaries of the imagination. He uses low vantage points in most of the Carceri drawings seen in the horizontal line near, and at times, the base of the plate. This technique forces the viewer to look up, engulfed by the height and grand scale of the architecture constructed.

The low vantage point causes the vanishing lines to become increasingly steep diagonals at the top of the image. This creates the upward motion of the bottom part, acting as a starting point, while the top part seemingly lifts up enhancing the feeling of grandness and sublime. The vanishing points are located at approximately equal distances to the left and right, emphasising the centre of the image. The vanishing points reinforce movement, the different planes breaking the continuity of spatial flow and creating the ‘leaping effect’ into the depth.

HIDDEN SPACES
The Carceri contain various hidden space or in-between space. These spaces are visible in forms of openings carved into the monolithic structures. They arouse curiosities and speculations as to what lies within. The spaces within the walls seems to be neither interior nor exterior.

The construction of hidden spaces heightens the feeling of the curiosity and the uncanny. It expresses the outside and inside, seen and unseen, open and closed.

STRUCTURE AND CHAOS
Piranesi, as an architect and antiquarian, fully understood the laws of perspectives and dimensions. He chose to deconstruct architecture and its conventions to raise new suggestions. Despite looking chaotic, there is a sense of balance in the Carceri. The composition shown in Ulva’s analysis, consist of a grid system that is only broken when the three different perspectives collide.

The structure in the Carceri creates a succession of densities, movement, and leaps. It is designed to give a false sense of irregular pattern free of any visible structural order.

INFINITY
The Carceri embodies the notion of infinity. It lies in the seemingly unlimited extension in the horizontal and vertical planes and also in the constant reinterpretation over the centuries. The idea of the infinite of space in the Carceri lies in the undefined boundaries.

The Prisons does not have a center. Viewers are always placed on a vectorial branch; on the diagonal perspective that creates the feeling being in an asymmetrical universe. The world Piranesi created is infinitely expandible. Behind the columns and arches is yet another set of bridges, drawing the viewers eyes deeper into the image and disappearing into space beyond their vision. The Carceri belongs in the world of infinite space.
**RESTLESS MOVEMENT**

Piranesi’s prisons are subterranean caverns with endless stairways and grand arches, drawing the viewers in a sublime trance. They express constant dynamism through their continual changing of perspectives, multi-directionality of lines and multiple vanishing points. They are a dynamic movement that engulfs the spectator.

The Carceri contains a tension within the system of classical space seen in the colliding structures, and the lines of direction that draw the viewers’ eyes in a frenzy motion. Deleuze and Guattari believe that space is characterized by movement that occurs in it through ‘voyage’. The movement in the voyage brings into play ‘dissymmetrical movements’, ‘differentials of speed, delays and accelerations, changes in orientation, continuous variations’.

Piranesi’s movement on the one hand, is created by his techniques of representation - the structure of the image, the perspectival construction, the drawing and etching techniques - constructing spaces that reveal themselves to be incomplete, impossible or distorted under close examination. Movement are represented in the frenzy lines, with different levels of intensity, precision or intentional blurring. On the other hand, he often uses mysterious machines, objects, people, to integrate with the structures within the space represented. The movements in the Carceri are suggested through the construction of lines and by the inhabitation of objects, machines or living beings.

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48 Stoppani, From Models to Drawings, 103.
In her essay, Yourcenar wrote that the irrational world of the Carceri dizzies us not from the lack of measurements but multiplicity of calculations which we know to be exact and which bears on proportions which we know to be false. The figures with infinitesimal dimensions, the distance and proportion suggest various scales from the same location. The logic the Carceri present to us at first glance is only an illusion that when we are drawn in closer we will realise that no measurements are accurate.

In Carceri Plate XIV (fig. 22), Piranesi employed the contrast of multiple flat planes to create unusual, impossible spaces resulting in an entirely new manner of spatial contradiction. He deliberately creates unclear and even contradictory spatial details to achieve his goal to suggest three-dimensional space on a two-dimensional surface. He thereby produced the impossible architecture.

The impossible objects becomes instantly and clearly recognizable, through the process of modelling. The staircase is to deceive our eyes, drawing its viewers into the etching and led them upwards towards another staircase on the right. A long wall featuring three pointed arches starts from the left and runs across and beyond the centre of the picture. At point B (fig. 26) a section of this wall moves forward, whereby the lower half of the wall projects much further into the foreground than the section above. A multiple plane is thus created. The dimension of the staircases completely fills the space between the two piers, creating a gap. However, the perspective shifted as we glance upwards at the arch and we realise the distance between the two piers does not exist. Piranesi reinforces this effect by adding a flight of steps (C), which runs parallel to the wall and yet disappears behind it. The friction between the two conflicting perspectives disorient us. What seemingly appeared logical was only an illusion.
THE IMPOSSIBLE STAIRCASE

Another impossible construction in the Carceri is the staircase in Plate VIII. The arch forms a face and does not appear obscured. The stairs begin on the left at one of the uprights of the arch, hugging the face, then turn at a right angle before meeting the other upright of the arch. If the arch really had a face, there would be no room for stairs to turn into it before intersecting it. The arch below the second flight of stairs carries the upper landing behind the left-hand upright, demonstrating that the upper landing goes through the main face.

Modelling reveals the impossible space within the plate. From a low perspective (as Piranesi staged) the perspective looks accurate. However, once removed from that particular angle and the staircase distorts (fig. 29).
Through previous analysis and selection of ‘techniques’ that embodies Piranesi’s ideas, this chapter investigates how these techniques can be implemented into an architectural building design.

The Carceri consists of layers of complexities, but ultimately they express spatial experience through architecture. Piranesi challenge the process of making architectural space. Structure and circulation have played an important role in the Carceri. How can they be further developed in the reinterpretations?

The capability for infinite reinterpretations equates to endless possibilities. This chapter attempts to develop possible contemporary reinterpretations through architectural space.
INTERPRETING PART THREE

FRAGMENT
Each interpretation is a fragment. Each fragment expresses an architectural technique that embodies certain qualities of the Carceri.

INTERPRETATION
Contains the summery on the development of the fragment. It reflects on the relation between Piranesi’s ideas and the contemporary interpretation.

TECHNIQUE
The various techniques generated from previous analysis will be translated and used as a design tool to develop contemporary architectural representation.

PROCESS
The steps that generated the development of the fragment.
THE SPACE IN THE CARCERI

Piranesi’s spaces inspires a particular spatial experience. The four key compositional characteristics in the Carceri are movement, volumes in space, the surfaces that define the volumes, and the breaking of the volumes.

The four characteristics have major or minor influences over each Fragment:

1) Movement is defined by the vertical access and floor planes acts as the medium between the different levels. The structure reinforce the visual directional movement and the depth of space.

2) The volumes in space is formed by the solid mass, the roof, the poché, subtracted volumes, interlocking volumes and scale.

3) The surfaces that define the space are the walls, floors, ceilings, roofs. Through spatial organisation, their functions overlaps movement and the forming of space.

4) The volumes are broken by elements that interrupts the space. Piranesi breaks his classical architecture by colliding it with multiple perspectives.
Piranesi’s labyrinth was created by the sense of disorientation within the staged space. The infinite is expressed in the unbounded space. The seemingly endless expansion of space. Piranesi cleverly constructed his perpectival space to veil the impossible architecture.

Edmund Burke expresses the sublime found in terror. It is an inexpressible feeling.

The Carceri is embodies ideas ahead of its time. Their visionary ideals challenges the limits of representation.

The Carceri contain many hidden spaces. It lies beyond the visible space, evoking curiosities.

The Carceri are represented as a internal subterranean space. The facade is a mystery to us.

Piranesi tested and pushed his ideas to the limit in the Carceri. He uses the medium of paper to challenge conventional representation.

What makes the Carceral spaces ‘prisons’ are the sense of total exposure and insecurity in the vast hollow space. The prison symbolizes the theme or program.

The uncanny and the sublime is closely linked together. It lies in the sameness, the repetitive space, the dark shadows, the silence, and the lack of orientation.

Piranesi’s labyrinth was created by the sense of disorientation within the staged space. The infinite is expressed in the unbounded space.
VERTIGO MOVEMENT

This Fragment explores the vertical movement of the Carceri through various axonometric drawings.

One key characteristic of the Carceri is the movement in space. Piranesi generates his movement through his drawing technique, directional movement from structures, inhabitation of objects. What are the devices and elements that generate movement in space and what should be the medium of representation?

Axonometric drawings was chosen in order to show three dimensions simultaneously, depicting length and width in relationship to the height. The construction of axonometric drawings is based on the parallel. The lack of vanishing point creates the effect of infinite extension.
The process began with identifying elements that evoke movement in space. Structure, arches, and staircases are some of the key components that constructs the Carceri. Therefore in attempt to begin a dialogue between the Carceri and possible reinterpretations, ideas were tested in the form of axonometric drawings.

The axonometric drawing is developed by using the staircase to create vertical movement. The flight of stairs connects and forms the link between different level planes.

The attempt to combine a vanishing point within an axonometric drawing. Piranesi inserts several different perspectives into his drawings. Through the breaking of the image, new interpretations of space is created. The collision of the two different drawing techniques creates an uncanny perspective.

The axonometric drawing is inverted to investigate the relation between the linework, and the positive and negative space.

The drawing is reflected at the top to create a mirror effect. The junction at the vanishing point creates a collision that results in the strange abstraction of the image.
VERTICAL MOVEMENT

The movement in the Carceri is generated by the constant dynamism of changing perspectives, frenzy lines, different levels of intensity of strokes, and multiple vanishing points.

Axonometric drawing was chosen to translate their movement into three-dimensional space. The staircase is the key element used to create movement and connect the vertical planes.

The repetition of the staircase and structure generate a sense of uncanny. The endless multiplication expresses the idea of infinite extension in the vertical plane.

VOIDS

The enclosure formed from the structure and the staircase reveals voids.

CIRCULATION

The staircase emphasize movement and visual continuity

STRUCTURE

Structure is used to divide and define space. Similar to the Carceri, the openings in the structure is ambiguous as it hides what lies beyond.

VERTICAL MOVEMENT

The staircase creates a vertical connection. It represents the transitions, hierarchy, and journey through the space.
The Carceri contains a tension within the system of classical space seen in the colliding structures, and the lines of direction that draw the viewers’ eyes in a frenzy motion.

These drawings attempt to generated a continuous motion in space through the technique of vertigo movement. The results are regular, repetitive, and coherent. The application of vertigo movement in these drawings express the idea of infinite. A bound limitation is required in order to give more definition to the spatial experience.

A space with only circulation cannot constitute as a functional space. To further articulate movement and space:
- a boundary will be defined
- elements that encloses space will be explored.

MULTIPLICITY
The image was multiplied to achieve the effect of infinite extension. The staircase enhanced the vertical movement as the viewers eyes are guided upward or downwards. The act of repetition at regular intervals creates a sense of movement through the sequence of space.

MULTIPLICITY & REFLECTION
The image was multiplied and reflected to generate a stronger sense of movement through the vertical and horizontal plane. They result in a more dynamic spatial experience and smaller spaces begin to emerge with the partially enclosed space.

INTERPRETATION
The Carceri contains a tension within the system of classical space seen in the colliding structures, and the lines of direction that draw the viewers’ eyes in a frenzy motion.

These drawings attempt to generated a continuous motion in space through the technique of vertigo movement. The results are regular, repetitive, and coherent. The application of vertigo movement in these drawings express the idea of infinite. A bound limitation is required in order to give more definition to the spatial experience.
BOUNDARY

It is necessary to give limit to the unlimited space in order to define it. How do you define architectural space? Architectural space is created through the relationship between objects, boundaries, edges and planes which define limits.

The Carceri does not have a visible boundary. However, Piranesi uses elements such as structures, staircases, and drawbridges, to convey a sense of enclosure. He compose his drawings in two stages. First he applies the conform classical language in his composition. Then he breaks it by shifting the perspective within.

How can a space be bounded through a ordered system? How can it be broken to create new interpretations of space?
GRID

The Carceri does not have a plan, however, in Ulva’s reconstructed plan on Plate VII reveals Piranesi’s order system on the grid. The interpretation reveals that the disordering of the Carceri is created by the shifting vantage points after the initial composition.

The grid represents an ordering system. Order is a system that provides logical sequences. Disorder exist when that sequence is broken. Therefore an ordered system must be constructed before the disordered system.

The ordering system was generated by:
1) A grid of 11 x 11 x 11 (width x height x length) was set as boundary.
2) The structure of column and beam was designed and placed within the grid
3) The circulation path was then determined from the grid to weave around the structure in both vertical and horizontal plane. This creates an expression of ongoing movement.
4) More structures are added to support the circulation.

CIRCULATION

The circulation is designed to create a continuous flow within the bounded space. It navigates around and in-between the structures.

VOIDS

After the circulation and the structure has been constructed, the residue space creates a void or pocket of space.

STRUCTURE

Structure used to divide space. It creates a sense of movement through the structural direction.

GRID

Both the circulation and the structure are constraint to the grid dimension in order to give space a boundary. This boundary allows space to be defined.
The grid is the system of spatial organisation used to form the boundary. The models were combined in order to break the rigid grid system. This process can produce an endless combination of space. However, the results were so disordered that all sense of the original order is lost. It became the labyrinth in which the wanderer loses all sense of orientation.

The boundary generated a way to define space. The ordered system of the grid and the process of breaking it requires further investigation.

**INTERPRETATION**

The six different combinations were stacked, placed against each other to form new enclosures. The random placement generates a labyrinthine space. The once systematic compositions are hidden by the chaotic results.
PATH

A path is a sequence of spaces. It contains a starting point and a destination. While there is no distinct starting point or destination in the Carceri, the path extends infinitely in the labyrinthine space.

The Carceri was devised to invite its audience to step on a journey without a way to return. It was designed to be irrational and limitless. After all, how does one return from the Carceri whose form is exaggerated in its dimensions, distorted in its reality, and confronting its viewers with its wanderings in the maze?

This Fragment explores the configuration of the path presented in architectural representation.
Drawings offers an unbounded surface for speculative possibilities. Piranesi use the medium of drawing and pushed it beyond the boundaries of imagination and normative constraints of physicality. His architecture is not limited to gravity, function, scale, or materiality. They anticipate worlds previously unbuilt and unimagined. His etchings exist without plans. The spatial experience it conjures are more important then the realities it represents.
PATH

In order to generate a path, the space surrounding it must first be conceived. Once again, a boundary must be given in order to define space.

The process of space is constructed in a number of steps:
1) Selected views is converted to axonometric drawings.
2) A process of tracing, scanning, overlapping, editing, erasing, joining, multiplying, layering to generate the new image.
3) Structure is layered above each other to create the sense of verticality.
4) The circulation was highlighted to emphasise the movement
5) Residue space is formed by the circulation and structure.
6) Structures and circulation paths is adjusted and redefined to accomodate the new enclosures.

2) PROCESS
The image is the process of combining elements of tracing, scanning, overlapping, editing, erasing, joining, multiplying, and layering.

3) STRUCTURE
The structure provides the space with a form. It encloses or opens up a space.

4) CIRCULATION
The highlighted circulation reveals the horizontal and vertical movement. It links the different floor planes and led the spectator on a visual journey through the space.
5) Enclosure
The space is enclosed in walls, floors, roof to give it form. However, the space remains ambiguous.

6) Redefine
Structures and circulation path is adjusted and redefined to accommodate the new enclosure.

**INTERPRETATION**

Piranesi challenge the limits of architectural representation, its conventions, and the representation of space through the medium of drawing.

The Carceri, while remaining a representation on paper, demonstrate the potential to represent the physical form of an environment as well as actively engage a viewer in a mode of perception. This drawing attempts to convey Piranesi’s ideas through the drawn representation.

The spatiality in this Fragment evokes a dynamic, visual journey. The sequence of space is conveyed through the movement of the path. This building, like the Carceri, can be described as a folly. It has no practical purpose except to convey the delight in experiencing space.
The Carceri while remaining a representation on paper, actively engage the viewer in a mode of perception. Piranesi staged his imaginary world through techniques of graphic virtuosity, light and shadow, point of view, intensity of tone and texture, restlessness of movement, and composition. They all contributed to the solid construction and compelling representation. Piranesi’s representation of space is visual, psychological, and theoretical.

This Fragment investigates the possibilities of two dimensional representations.
GRAPHIC REPRESENTATION
Piranesi uses the exploratory possibilities of drawing to expand the boundaries of architecture. Drawings can be used as a means for speculation, testing ideas through their graphic representation.
**REPRESENTATION**

Piranesi’s Carceri began as an experimental project which gradually over time, gained the power to produce its own reality. How the Carceri were constructed remains ambiguous. The organising of the grid is the first step in generating a system of representation.

Can the organisation of space - over a three-dimensional grid, and through techniques of repetition, subtraction, addition, layering, formal manipulations, and shifting planes - generate a Piranesian architecture?

1) The grid is used to generate an ordered system
2) Representing on axonometric drawing conveys the idea of unlimited space
3) The structure is placed. The location of placement forms boundaries of space
4) The circulation is inserted between the structures
5) The image is scanned and overlayed to create repetition.

3) STRUCTURE

Structures establish order within the grid. It is used to create a pattern of regularity and continuity. Although they are dissimilar in size and form, the skeletal structural system of columns and beams forms an ordered module once they are interlocked.

4) CIRCULATION

The circulation generates horizontal and vertical movement. The staircase and ramps links the different floor planes and led the spectator on a visual journey through the space.

5) OVERLAPPING

The overlapping area forms an interlocking continuity with the space beneath.

1) GRID

The grid pattern anchors the overall balance. The space within the grid is subtracted, added, and shifted to generate disorder in the system.
INTERPRETATION

This drawing represents a unique way of seeing. The graphic quality in the representation of space is ambiguous.

This Fragment convey ideas of the infinite, and the labyrinth. The labyrinth’s indecipherable design surpasses the capacity of its own creator. Even when it is a concentrated localization of chaos, it appears to be orderly in logic and elaborate in design.

The labyrinth is a juxtaposition of chaos and order. What we see when we look at a labyrinth are its walls. In the labyrinth, the walls are the presence, but the walls are not the substance. Only the space captured by the walls, the way, occupies the wanderer. In his flight into the unknown of the labyrinth, Piranesi displays his terror of the all-inclusivity of the known.
STRATIFICATION

Stratification allows the viewer to ‘journey’ through the space creating an ongoing spatial experience through the layered planes-spaces. The sequential layering of frontal planes and spaces creates transparency of seeing or passing-through. It creates a visual journey and penetration.

The stratification in the Carceri lies in the constant interruption and the visual leap. The interruptions and leaps evokes the sense of movement and journey deeper into the constructed space.
Structures in the Carceri interlock each other to generate continuous structural movement. There are strong shifts in ground planes and there are multiple layers of floor planes.

This Fragment explores the construction of space through the use of structure and floor planes:
1) The grid is set as the base plane to give measurement to the space.
2) Structures is designed with a human scale to enable translation into reality.
3) The structures interlock with each other to form boundaries of space.
4) Floor planes are link to the structure to form an interlocking spatial relationship.
5) The overlapped planes reinforce the sense of interlocking continuity.

2) STRUCTURE
The structure is designed with three different height (3m, 5m and 7m) and three sets of width (3m, 5m and 7m). By interlocking this regular structure, the differences in their dimensions creates a dynamic structural relationship.

3) INTERLOCKING STRUCTURES
The interlocking structure disrupts the pattern of the regular grid. This process begins to form new irregular spaces.

5) OVERLAPPING
Multiple spatial overlaps reinforce the sense of interlocking continuity.

4) FLOOR PLANE
The floor planes overlaps each other. This creates an ambiguity to the function of the overlapped areas.
The interlocking system of the structure and floor planes generates an overlapping of spatial fields. The overlapped space begins to form shared zones with its adjacent spaces.

The process of spatial layering creates the sense of depth. The structures forms series of parallel lines through their repetitiveness and reinforces the vertical plane. When another structure interlocks it, the plane is interrupted and the order is disrupted.

It is becoming evident that the reinterpretation into a contemporary approach requires a form of organisation. In order to give space a meaning, a building programme must be considered.
The translation of the Carceri into a contemporary context is a complex one. The Carceri’s theme is prison, however, it is arguable that it resembles little of a traditional prison. Prisoners in the Carceri are not confined, but instead they roam aimlessly in the endless flights of stairs and vast space. Yourcenar in her essay mentions that the sense of total exposure, insecurity, is what constitutes in making the palace-like spaces into prisons. The prison of Piranesi dwells in the psychological conscience.

How then, can the programme generate a link that ties Piranesi’s ideas to contemporary settings?

Due to the ambiguous setting the theme, the journey to discover a programme turns to the embodied idea of the Carceri: the idea of the infinite.
THE IDEA OF THE INFINITE

The Carceri embodies the idea of infinity. It is represented in the unlimited extension of space and the possibility of constant renewal. The ability for infinite reinterpretation and renewal resonates with the idea of knowledge.

Knowledge has no limits nor boundaries. It is found in the form of collections that sparks curiosities. In order to evoke our curiosities, we must first know of its existence through a form of access and visibility.

Through the juxtaposition between the idea of infinite and knowledge, a new layer in the dialogue is formed.
INFINITE, OBJECT, KNOWLEDGE AND THE LABYRINTH

Piranesi’s architectural ideas on printing paper prove as durable as the marble of edifices. The autonomous values in Piranesi’s prints came from their embedded ideas. Paper may fade but as long as they endure in some form of record, they will not disappear. The power to exist beyond time and the capacity for infinite redefinitions resonates with the idea of infinity. Yet what is the connection between the object and the infinite?

Knowledge has neither limits nor boundaries. Over centuries, mankind has tried to collect, organise and contain all forms of knowledge into one centralised location. From the Royal Society - an institution that accumulates experimental equipments and natural rarities for the purpose of furthering scientific research - to the Library of Congress - which was established with the intention of collecting a copy of every printed work in the world – knowledge is found in the form of collections. The Royal Society’s collection has its origins in a private cabinet limited to natural rarities. The expansion of the collection was to achieve a collaborative endeavour in transforming the collection into a valuable tool for the reform of knowledge. This results in transforming the Royal Society and libraries into repositories of knowledge.

Museums, archives, galleries and libraries are all contemporary repositories of knowledge. They are worlds in themselves, filled with secrets and curiosities. The foundation of these institutions is a permanent order of knowledge. The infinite of the collection lies in the sphere of collective knowledge generated through accumulation. Collected materials serve as evidence of particular truths, they constitute physical evidence, and underpin a narrative upon which other stories depend. Collections are not merely demonstrated knowledge, they are knowledge. Therefore, organised material is knowledge and knowledge is organised material.

Knowledge is generated by curiosity. In order to evoke our curiosities, we must first know of something’s existence through a form of access and visibility. In the Great Exhibition of 1851, objects of curiosities, scientific discoveries, mechanical inventions, art galleries, and arcades were all brought together for display. It existed not only as a building but as an atmosphere that exhibited knowledge. Graeme Davison states that the Crystal Palace contained reverse panoptical principles “by fixing the eyes of the multitude upon an assemblage of glamorous commodities.” The Panopticon was designed so that everyone could be seen; the Crystal Palace was designed so that everyone could see.” The Crystal Palace was designed to allow engagement between the public and exhibits. However, while everyone could see, there were also vantage points from which everyone could be seen, thus combining the functions of spectacle (seeing) and surveillance (being seen).

The repository subsumes the idea of infinite knowledge through the accumulation of collections. Without a system of organisation and classification, knowledge equates to a chaotic labyrinth where one loses oneself in the multiplicity of objects and information. The form of knowledge is clarified only when it is collected, organised, and made available for access. In order to yield up their inherent knowledge, materials must be observed and arranged. They must then be preserved to allow an ongoing demonstration of the truths asserted. Collections are essential to our understanding of the ways in which ideas and knowledge have developed. The justification for such reference collections lies, then, as much in their value as sources of knowledge and treasuries of ideas as they are in their value as tools for the reform of knowledge.

54 Ibid.
57 Tony Bennett, “The Exhibitionary Complex,” 418.
in their display. In order to yield their inherent knowledge, the collection must be seen. Therefore, instead of 'hiding all the good stuff' in storage for exclusive use of curators and scholars, the visible storage concept will democratize the contemporary museum model and open up museum resources to the public. The synthesis between the repository of knowledge and the visual storage will consolidate the idea of infinite, object, knowledge, and labyrinth.

The development of the visible storage model of museum developed in the 1960s and 1970s based on the ideal of 'the democratization of museum collections'. This ideal emphasis the public as the true owner of the collections and should have full access to museum resources. Instead of 'hiding all the good stuff' in storage for exclusive use of curators and scholars, the visible storage concept democratize the contemporary museum model and open up museum resources to the public. Visible storage, also referred to as open storage or study storage, combines the functions of storage and display. The collections are usually systematically presented in high-density arrangements that lack interpretive labels but include access to the information available on each object.

The Visible Storage Model as the Basis for the Repository

The visible storage model resonates with the idea of the repository as a space to 'see and be seen'. It provides the public with extensive visual access and open up access to the general audiences. Visible storage can generate interest, participation, independent exploration and interaction with the objects.

Most visitors to museums of national and regional significance are unaware that what they see is often less than 10% of a museum’s holdings. That remaining 90% has to be stored, conserved, documented, insured and located, preferably under optimum physical conditions. In many instances the objects subject to this regime require unique conditions of storage due to issues such as fragility, rarity, value, and size.

Importance of Display

The collections held at National Museums are national assets and assets should be properly used. If they are not, the public interest will suffer, bearing the opportunity-cost of funds tied up which could be put to better use elsewhere or, looking at the issue less commercially, missing out on the pleasure and the instruction that could be gained from them. Museums and other national institutions should therefore be willing to dispose of objects when this will help to ensure their preservation, enable them to be more widely used and enjoyed, place them in a context where they are more valued and better understood. Preservation is essential. The importance of these collections to future generations may increase as much in the present century as it has in the last one.

Access and Use

It is widely observed that many objects in national collections are not on display. For many museum collections display is not, and can never be, the primary route to access and use. Indeed many collections could never be displayed in their entirety due to the number of works and light sensitivity. However, collections are essential to our understanding of the ways in which ideas and knowledge have developed, even if it may not be possible or desirable to keep all of them on display.

The justification for such reference collections lies, then, as much in their value as sources of knowledge and treasuries of ideas as in their display. However, the reference potential of a stored collection is not, on its own, sufficient justification for its retention. A collection which has this potential, but which cannot readily be used, is a denial of opportunity. A collection which is kept, but is laborious and time-consuming to access, is clearly of less public benefit than one which is readily available to all who are interested to see it. Usage is important. If a collection is usable, but in fact largely unused, there has to be considerable confidence in its value to future generations to justify present preservation.

.Visible Storage

‘The responsibility to share knowledge is just as strong as the responsibility to conserve it.’

60 Knell, Care of Collections, 187.
61 Ibid, 188.
62 Ibid, 189.
64 Ibid.
65 Ibid.
Fig. 31. Visual Storage - V & A

Fig. 32. MAS Museum in Antwerp

Fig. 33. The Clothworkers’ Centre for Textiles and Fashion Study and Conservation in London

Fig. 34. Visual Storage - Brooklyn Museum
Gordon Bunshaft designed the rare book library and literary archive of the Yale University Library in New Haven, Connecticut in 1963.

The Beinecke Rare Book and Manuscript Library is designed with two key characteristics. The first is that the library stacks can contribute to the display and become the focus of the exhibition space. Bunshaft designed the space to centre around a huge air-conditioned glass box, providing security and sealed environment for the books. The second characteristic is light condition. While the space requires natural light, direct sunlight will damage the books. Bunshaft’s solution is to design a box within a box. The exhibition space, and the glass box that encases it, will be within a bigger box with translucent marble walls. The marble appears entirely opaque on the exterior but through direct light, the panels transmit a honey-coloured light into the internal space. These two design characteristics contributed to the simple but powerfully portrayed sense of space.

Bunshaft’s original choice of material for the library is alabaster. His vision of the library walls originated from Renaissance-style palaces in Istanbul. However, he ultimately decides to use marble from Vermont after knowing that alabaster dissolves in the rain. The result is appealing and the marble blended with the white concrete supporting frame on the exterior. Bunshaft maintains that he would still preferred the use of alabaster. This reveals that often architectural ideas begin as visions and compromises are required to translate ideas into reality.

67 Ibid, 265
68 Ibid.
Fig. 35. The Beinecke Rare Book and Manuscript Library - Interior View
LEAP AND MOVEMENT

This Fragment explores the technique of visual leaping and movement. Eisenstein believes the leaping effect in the Carceri is created by the system of vaults, which creates a “continuous leap” from each other. The technique of leaping will generate a unique way of viewing objects in the repository.

How can structure be used as means to create a leaping effect?

The Carceri does not have a clear distinction between functional space and circulation space.

In what ways can two differentiating spaces integrate into a unique spatial experience?
LEAP

The leap is created by multiple elevated planes. It maintains spatial and visual continuity. Piranesi’s leap is constructed by the constant interruption in his images that create a ‘leaping’ effect. The initial movement of deepening perspective view into the depths is continuously interrupted by elements such as a bridge, a column, an arch, a passage.

Elevated planes conjures vertical movement. It creates a leap from one space to the next. When two planes are placed on the same level but with stratification in-between, it creates a horizontal leap.

Floor planes are placed on multiple levels, but it is not designed to have a hierarchical system. The planes were used as continuous, transitional linking spaces.

How can the programme integrate with stratification to recreate a system of leaps?

Can this system create a unique way of viewing objects and emphasise movement at the same time?
VIEWING ACROSS STRIATION
Object can be seen but not touch. Evokes the sense of curiosity. Not physically accessible but maintains continuous visibility.

WAYS OF VIEWING
Shows the possible ways of viewing the objects and other visitors. The stratification allows the viewers to engage in continuous visibility. Plane is lifted to eye level. While visibility is continuous, spatial continuity is interrupted and stairs or ramps are required for access.

VIEW FROM ABOVE
The view from above or from the top of the circulation creates a sense of journey. The plane is raised enough to maintain both visual and spatial continuity is maintained. Physically accessible.

MULTIPLE VIEWS
Some floor planes are above eye level. The interrupted visual and spatial continuity creates visual disconnection. Both ground plane and elevated plane is disjointed and the elevated plane forms a new enclosure for the space below.

VISUAL TRANSPARENCY
The visible transparency allows simultaneous perception of different spatial locations. The continuous vision stimulates visual movement.
The distinction between circulation and space of function may only depend on the programmes or the intentions. The Carceri is an unconventional prison. Movement seems to be their primary objective. The prison is at one with the circulation.

In the repository, the visitor is engaged in constant motion. Movement is generated by the horizontal floor planes, vertical structures and the beams that disrupts the spatial continuity. There are multiple ways to view an object. The stratification aids in the creation of vertigo movement and visual leaps.

In the Benz Museum, the circulation path becomes the catwalk for cars. By redefining the purpose of the space, circulation and function can integrate with each other. By deliberately blurring the distinction, that ambiguity can be treated as an opportunity to create new meaning of space.

MOVEMENT

4) FLOOR PLANE
The multi-level floor planes adds to a visitor’s sense of movement and exploration. The visual volume of space is reinforced by the shifting base plane. The floor plane acts as both upper and lower limits of space.

4) STRUCTURE
The vertical placement of the structure follows the grid organisation. The columns defines a invisible volume of space. The beams spanning between the columns reinforce the volume of space and creates structural movement.

4) CIRCULATION
The circulation and the function space integrates into one another. The spatial configuration is undirected, encouraging visitors to select the path they desire.
REVEALING AND CONCEALING
The dividing wall reveals and conceals what lies on the other side. It also acts as a framing device. The space opposite the wall is revealed through the sequence of movement.

SEQUENCE
The sequence is the order of movement through space. The blurring of the circulation and function allowed the sequence of space to be experienced simultaneously. The spatial configuration is undirected, encouraging the visitors to wander around the space.
COLLISION
The collision from the conflicting structures and floor plates creates disorder. The elements are disconnected and the open space evoked a sense of estrangement. While there is no center in the Carceri, it uses large structural elements as a grounding point.
The space expresses continuity but there are no obvious route. Movement and transitions of floor plates play an important role in creating a dynamic journey through space. The lack of hierarchy in this space is similar to the Carceri. However, in order to build up the experience of space, the spatial sequence and enclosure of the space requires more definition.

For Piranesi, regularity was chosen only to be broken and stripped from its original values. This Fragment attempts to break the regularity of the grid through the multi-level floor planes and conflicting planes. The more enclosed areas succeed in creating the effect of leaping but in open areas the disorder overwhelms the image and the balance is lost.

INTERPRETATION

The multi-level floor plates add to a visitor’s sense of movement and exploration.
POCHÉ

In ancient times, small secret compartments within temples were used by priests to make them more mysterious and affecting.

Piranesi introduced hidden spaces into the Carceri. They are represented as caged openings within monolithic structures. What lies within these spaces remains ambiguous.

This Fragment attempts to reinterpret the idea of hidden spaces. In contemporary settings, Piranesi’s hidden space can be translated as ‘poché’.
POCHÉ

In J.F. Blondel’s collection of 1737 De la distribution des maisons de plaisance, the house inside the main rooms are symmetrical, however, Blondel inserted a hidden world into the interstices complete with stairs and doors to the outside. A visitor standing outside these poché walls will not suspect the secret passages that give access for servants to pass discreetly into every room.

Hidden spaces in Blondel’s house are secret passages to allow access for servants, these spaces are similar to the service space in the modern building. The in-between space is secretive and mysterious. It is what Anthony Vidler expresses as uncanny. The possibilities of secret passages and hidden rooms sparks curiosity.

**AMBIGUOUS RELATIONSHIP**

Poché offers blackness, obscurity, dark pockets of space. It creates an ambiguous relationship between the inside and outside, seeing and being seen.

**IN-BETWEEN**

Poché is the in-between space. It can be experienced in the transition from one side of the wall to another.

**HIDDEN ROOM**

Poché is the pocket contained within the solid building, constitutes a hidden, secret room. The juxtaposition of the poché and floor planes creates primary and secondary voids.

**SPATIAL DIFFERENCES**

Walls and height differences emphasise the enclosure of the space. The tightly enclosed space generates a similar experience as the poché.
What lies within the hidden spaces in the Carceri remains a mystery. Viewers were made aware of the hidden space behind the wall. It provoke the feeling of unease.

Piranesi’s hidden space can be translated as poché. It is the representation of solid material that has been cut through such as walls, columns, and beams. Poché identifies the hierarchical relationship within the space.

Poché are secret places between the walls. Within the repository, it can be used as a device to evoke curiosity to navigate around the space. The poché space can be represented through vertical access routes, small, interlinked chambers, alcoves, and deep protrusions in the walls.
SITE

The site boundary can be translated as the boundary of space. Site is necessary for the translation of ideas into a contemporary setting and in order to define space.

How do you define architectural space? Architectural space is created through the relationship between objects, boundaries, edges and planes which define limits. These limits may be the relation between four columns, walls, roof and floor planes. Space can also be defined by a series of parallel walls with various openings. The edges of the openings, combined with the walls, forms an implicit plane which then defines the limit of the principal space.
In order to pursue the architectural development of the project, an existing site is required.

The site is used as a boundary to give limitation to space and allow the visualisation of the building into the public dimension. The site is an element of collision that generates a boundary and inserts a human scale into the project.

The selected site is the existing car parking site on the corner of Symonds Street and Airedale Street. The site, situated on top of the steep slope and at the edge of a busy street, evokes the feeling of fleetingness. The location is in close proximity to educational institutions, the city centre, and the motorway. The steep slope of the site runs from Symonds Street down to Liverpool Street. The site is chosen for its sense of movement, transitory, and contour variation.
SLOPE OF THE SITE
The steep slope provides the potential for the building to submerge in the landscape. The relation between the ground and the sky becomes an important dialogue.
**SYMONDS STREET**
It is a main connecting street that links the motorway, several educational institutions, and the city centre.

**LIVERPOOL STREET**
Situated below the steep slope, Liverpool Street is a quiet approach to the site. Without the disruption of the busy traffic, Liverpool Street provides a better entry for services and loading access. It is 25 meters below the entry from Symonds Street.

**AIREDALE STREET**
Airedale Street links Symonds Street to Queen Street. The contour creates a rapid movement from these two streets. The site is a moment of fleetingness.

**WAKEFIELD RESERVE**
Wakefield Reserve provides green spaces that the public can use for recreation.

**SYMONDS STREET**
It is a main connecting street that links the motorway, several educational institutions, and the city centre.
SHAPE
The shape and the boundaries of the site define the finite context for the composition, while in sections and elevations an upper, height-limit, and a lower ground limit usually exist for the building.

The boundary lines not only a boundary of a shape but also limits the space. Each part of the finite context is individual and has its own character.

BUILDING ENVELOPE
Edges and boundaries mark moments of entry and exit. The building envelope is another boundary that limits space.

RESPONSE TO CONTEXT
The steep slope generates a natural directional flow from Symonds Street down to Liverpool Street. The lower ground plane is submerged in the landscape, the building protrudes from the slope with dramatic elevations to the south.

FORM GENERATION
The building form is a response to the topography and the edges of the boundary. Parts of the building will be embedded in the slope, resonating the subterranean spaces in the Carceri.

SITE GEOMETRY
The irregular shaped geometry has multiple conflicting edges. The site is formed by two interlocking geometries. It resembles a figure of eight and the center link evokes the sense of transition from one space to another.

The Symonds Street entry is more public orientated while the Liverpool Street entry is quite and private. The nature of the site generated the separation between high and low, public and private.

IRREGULAR BOUNDARY
The irregular boundary creates a conflicting relationship between site boundary and the regular grid. In response to the irregularity of the boundary, the grid direction will shift according to the angle of the edges.
The site boundary is the boundary of space, while the programme generates a link that ties Piranesi’s ideas to contemporary settings.
Piranesi fully understood the laws of perspectives and dimensions. He chose to deconstruct architecture and its conventions to raise new possibilities. A number of techniques is used to construct the layers of complexity. Piranesi uses multiple perspectives to break the order in his images.

How can a system be formulated to create disorder in an ordered system?

The system of collision is resulted from the collision of two or more geometries. Due to the conflicting site boundary, the grid pattern will collide with the different orientation of forms. Through the combination of the conflicting boundary of the site and the geometry of the grid, a new reinterpretation is formed.
COLLISION OF FORMS
When two forms differing in geometry or orientation collide and interpenetrate each other’s boundaries, each will complete for visual supremacy and dominance. The site chosen has generated conflicting forms.

BOUNDED BY THE EDGE
The edges of the site is irregular and competes for dominance. Each edge forms its own boundary of space and when these forms collides, they break and fragments. The collision is the breaking force that causes the space to collapse.
THE GRID
A grid generates a geometric pattern of regularly spaced points at the intersections of the grid lines and regularly shaped fields defined by the grid lines themselves.

The square grid, when projected into the third dimension, generates a spatial network of reference points and lines. Various number of forms and spaces can be visually organised in this modular framework.

RUPTURE
Portions of the grid can shift or ruptured to create visual and spatial discontinuity. The irregular grid can differentiate in size, proportion, and spatial dimension.

FRAGMENT
In order to result in a fragment, a collision must precede. Piranesi’s method of composition consist of randomness of the episodes, the lawless intertwining of superstructures, and undermining of the laws of perspective in order to achieve the illusion that nonexistent sequences of structures seem real. This is revealed in the conjunction of two contrasting elements: Piranesi’s compositional structures as fragments, and the rigid organization of Estruscan and Roman architecture.

COLLISION
A collision. It is caused by the conflict between two oppositional object or form to each other. The interpenetrating geometries fragments as the result of the collision. The Carceri contains spatial disjunction in the composition of architectural elements. Piranesi uses three different perspectives within one space. The resulting image imposes confusion when the three different perspectives merge into one, the rough collision cleverly masked by Piranesi’s dark strokes and shadows.

NEW ENCLOSURE
Piranesi’s Carceri is an internal labyrinth. The walls of the labyrinth collide and crumble to bits. The resulting chaotic configuration of fragments suggests a new enclosure, a new labyrinth,
What we see when we look at a labyrinth are its walls. In the labyrinth, the walls are the presence, but the walls are not the substance. Only the space captured by the walls, the way, occupies the wanderer. In his flight into the unknown of the labyrinth, Piranesi displays his terror of the all-inclusivity of the known.

69 Bloomer, Architecture and the Text, 82.
LIGHT

Piranesi manipulates the depiction of light freely to exaggerate the spatial effect, casting it from unseen sources. The interiors of the repository would be lit by the combination of artificial and natural light. Ways to create the sense of concentrated light into a cavernous interior will be explored.

COLLISION OF FORMS

After the collision of forms, the new enclosure is formed. The resulting space is unpredictable and it resonates with a labyrinth where spectators loses their sense of orientation.
The collision is generated by the differing orientation of forms interpenetrating each other’s boundary. The collided forms were intermesh, interlocked, subtracted, pushed away, linked by another plane or staircase, in forming the new enclosure. The colliding forms compete for visual supremacy and dominance.

The interpenetration of forms creates a spatial continuity from one space to another. These interlocking volumes interpenetrate each other’s space, merging into a single form.
The Carceri evokes a sense of spatial ambiguity, complexity, and mystery. How big the spaces are, what the relationship between the elements is, or what the relationship between the viewer and the space is, remains undefined.

In this Fragment, the disorder generated by the collision subdues the system of order. While it is spatially ambiguous, a sense of unity within the collided forms is desired in order to create the balanced whole. The viewers are totally lost in the vast interior space that does not seem to have a coherent structure.

Piranesi challenges the making architectural space. Therefore the system of collision was used to test the limits of creating architectural space. While there are unlimited potential and possibilities of generating space in this Fragment, the spatiality consumes the functionality. This system of collision will be evaluated in order to form an improved reinterpretation.
Spatial depth is generated by a number of elements. The structure, floor planes, and dividing walls all play vital roles in its construction. The visibility across the voids, framed openings, ability to gaze at atriums above or below, all contributes to the sequence of experiencing spatial depth. Depth can be emphasise with materials, light, multiple planes, textures and gradients.

Piranesi’s spatial depth is seen in the framing of his space, the staging effect of foreground, midground, and background, the structural elements he deliberately composes to draw the viewer’s eyes into the depths.

Spatial depth can become a dynamic experience when it is combined with the sequence of moving through space.
**SPATIAL DEPTH**

In order to create spatial depth, the construction of spatial organisation is essential. Spatial depth can be generated through movement and visibility. The glimpses through the walls and the process of seeing something disappearing beyond the visible boundary enhance the spatial depth.

Another techniques Piranesi used to beguile the eye is two-point perspective construction. He uses low vantage points close to the horizon line to force the viewer to look up. This emphasise the height and scale of the architecture. The combination of spatial depth and the staged perspective dramatise the spatial experience.

The techniques used in order to create this Fragment are:

1) Structure
2) Spatial depth
3) Spatial break
4) Circulation
5) Leap

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1) **STRUCTURE**

The structure provides the space with a form and encloses or opens up a space. It creates directional movement guiding the eye along the structure beyond the visible space.

2) **SPATIAL DEPTH**

The opening of the wall creates a visual leap into the depth. Also acts as a hidden element/poche as it veils the objects on the opposite side of the wall.

3) **SPATIAL BREAK**

The column acts as a spatial break to disconnect the space creating a visual leaping effect.

4) **CIRCULATION**

Creates vertical movement and provides a platform of joining the different level floor planes.

5) **LEAP**

Spatial leap is created by the openings in the structure and through the division of space.
In his essay, Eisenstein wrote, “Piranesi’s continuity of perspective is smashed by columns, arches, and bridges.” Indeed Piranesi’s space is filled with disconnections. The uniqueness of his space is their constant interruption and leaping into the depth of space. The direction of the structures creates the movement. The spatial movement is constructed by a succession of independent spaces broken up by columns and arches.

The same principles were used in this Fragment. Structure acts as a dividing element to disconnect the space resulting in visual leaping. The initial movement of deepening the perspective is interrupted by another plane, column, beam, and passage. Dynamism is important as it expresses the ecstatic motions in the Carceri.
THE SYSTEM

Piranesi’s spaces inspires a particular spatial experience. The four key compositional characteristics in the Carceri are movement, volumes in space, the surfaces that define the volumes, and the breaking of the volumes.

The four characteristics have major or minor influences over each Fragment:
1) Movement is defined by the vertical access and floor planes acts as the medium between the different levels. The structure reinforce the visual directional movement and the depth of space.

2) The volumes in space is formed by the solid mass, the roof, the poché, subtracted volumes, interlocking volumes and scale.

3) The surfaces that define the space are the walls, floors, ceilings, roofs. Through spatial organisation, their functions overlaps movement and the forming of space.

4) The volumes are broken by elements that interrupts the space. It is demonstrated in the collision of the grids.

This Fragment will focus on the visualisation of a architectural building design, reinterpret through a system of ideas generated by the Carceri.

Apart from the four key compositional characteristics, techniques from previous Fragments, the programme and site conditions will synthesise into this new interpretation.

Techniques explored from the previous Fragments:
1) Vertigo Movement
2) Boundary
3) Path
4) Representation
5) Stratification
6) Leap
7) Collision
8) Spatial Depth
LOWERING BASE PLAIN
By lowering the base plane, a new space is created that isolates from the space from the larger context. The vertical surfaces of the depression establish the boundaries of the field. The visible edge of the recession forms the walls of the new space.

Different levels of recess planes can further contrast the relation between the ground and the sky, interior and exterior, open and closed, up or down.

COLLIDING GRID
This system developed from the collision of two forms. The above image shows the two grid colliding against each other. By applying rules and conditions, a more systematic approach can be generated.
THE SYSTEM
The colliding edges cause the two geometries on different orientation to strife for dominance. Therefore if the geometries collide:
1) They merge to create a new form
2) The form subtracts, canceling out overlapping areas to creating deep voids
3) They interlock with each other

STRUCTURAL FRAMEWORK
The vertical structural framework will follow the grid layout. Frameworks in different orientations will not collide. When they meet at the collision point, the framework will:
1) Shift in height to avoid collision
2) Cancels out at collision point

PLANES
Horizontal planes will integrate functions of the programme and circulation as one. There will be secondary spaces such as conservation areas, loading areas which will mainly be for staff access. The main aim for horizontal planes is to:
1) Create stratification
2) Ensure visibility to create leaps and spatial depth
3) Create the feeling of continuous movement through space
WAYS OF VIEWING

In order to conserve objects, the ways of viewing is important.
1) Objects will arrive to collection storage areas to be recorded and catalogues to enhance accessibility and future retrieval.
2) Objects will be stored in secured but visible areas protected against theft and vandalism. The building will have secured measures against fire.
3) To allow conservation, the building will be in a proper environment suitable for storage and conservation.

THE PERPETUAL AND THE FLEETING

To enable a contemporary translation of architecture, we must first understand the contemporary conditions which produce the sensual experience in space and time. Function and needs are still the fundamental architectural obligations that requires resolutions. However, the system to fulfil this obligation is indefinite. Our perception of space is constantly redefined by the perception of time and meaning. Movement, transitory and speed is the contemporary condition of our culture.

The Carceri is an experience in constant motion. The viewer is on a continuous journey through the dynamic movement of arches, columns, bridges, and staircases. Piranesi’s architecture embodies both fleeting and monumental. The expression of movement and the constantly changing perception of space will be used as a key generator to design the new reinterpretation.
DEVELOPING SYSTEM
The system in this Fragment incorporates several techniques developed in the previous Fragments to generate a new reinterpretation. Conditions such as the building enclosure, facade, ways of access will be included in this new process.

SHIFTING GROUND
The lower ground planes are broken up from the collision of the edges. Piranesi’s shifts his ground plane constantly to create a vertigo movement and dynamic spatial experience.

EXPERIENCE OF SPACE
To further accentuate the visitors experience, elements such as punctuated balconies, bridges, stairs, openings, shafts and art objects can be used to stimulate the visitor to explore the building and engaging in its collections.
The Carceri contain a power to exist beyond time and the capacity for infinite redefinitions. Piranesi’s ideas exist in the psychological and theoretical realm. Piranesi’s images represent a new notion of space which emit the possibility of constant redefinition. He challenged the limits of architectural representation, its conventions, and the representation of space through the medium of drawing. Piranesi applies the conformed classical language of architecture and deliberately breaks it to open up the possibility of redefining space. His challenge is directed at the question of making architectural space. Due to the unresolved and constantly redefining nature of his challenge, this research document re-examined the Carceri in an attempt to generate a contemporary approach to architecture. While anything is possible in a drawing representation, the translation into reality contains several constraints. The capacity for infinite redefinitions established the underlying condition for the expected outcome – the possibility of multiple outcomes.

The unresolved nature of Piranesi’s work allowed it to be addressed by different discourses beyond traditional art and architectural theory. From film theory (Eisenstein), to literary criticism (Yourcenar), from architectural critical history (Tafuri), to architectural reconstructions (Ulya Vogt-Göknil), from critical theory between literature and architecture (Bloomer), to contemporary criticism (Stoppani) various forms of discourse have identified Piranesi’s work as an ongoing construction in space. Problematic and unresolved, the critical dialogue in his architectural space and limits of architectural representation remain active. This research addressed the challenges Piranesi raised over two-and-a-half centuries ago and attempts to establish a new approach that resonates with contemporary architectural ideas.

Piranesi’s architecture exists in the realm of impossibility and representations. Paper may fade, but the ideas contained in the Carceri will outlast any paper they are printed on. The translation into contemporary architecture created a synthesis between the object, preservation, knowledge and the infinite. The fusion of ideas re-emerged as a repository where multiple reinterpretations can be made.

The complexity of Piranesi’s ideas cannot be realised in one solution. The process of reinterpreting a contemporary architectural approach generated a system of techniques. Various techniques identified in the Carceri were translated to represent a possible architectural solution. Structure and circulation have played an important role in the continual development of the architectural space. Owing to the conflicts inflicted by realistic conditions, the translation of ideas was one of constant debate and negotiations. The site boundaries were translated as the boundary of space, while the programme generates a link that ties Piranesi’s ideas to contemporary settings. Site requirements and programme were used as the colliding forces to generate new interpretations. Each solution was revised in order to generate a more desirable solution in the next translation.

The capability of infinite reinterpretations equates to endless possibilities. Having only one solution would destroy the integrity of Piranesi’s ideas. The outcome of this research is one of many possible contemporary reinterpretations. The value of Piranesi’s architecture lies not in its usefulness, or functionality, but in its ability to influence, inspire, and renew. The reinterpretation of the Carceri is a continuous dialogue.
BIBLIOGRAPHY


THE INTERPRETATIONS

The two stages of the final outcome in the interpretation of Piranesi’s work. The project continues to morph and transform, however, the space within will remain mysterious, alluring, and continues to challenges the representation of architectural space.
Above: Exploded view of the building
Top right: Entry into the building
Bottom left: Art storage and visual storage area
Bottom right: Reading space beneath the light shaft
Left: SDA presentation title
Right: Conceptual development and interior spatial perspectives
Image: Sectional floor plan
Images: Three A0 perspectives revealing ambiguous linkages with each other.