Interior Architecture as Mediator of Experiential Influence;

ESTABLISHING A SOCIAL BELONGING FOR DISENFRANCHISED YOUTHS

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*Interior Architecture as Mediator of Experiential Influence;
Establishing a Social belonging for Disenfranchised Youths.*

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ABSTRACT

ver the last few centuries, studies have examined the fundamental relationships between architectural form and its effect on human emotion. Interested in the interplay between architecture and human emotion, this thesis explores how interior architecture can be designed to positively influence human behaviour. Sacred architectural typologies such as churches and memorials use scale, light and shadow, reverberation, materiality, et cetera to engage the occupant with an experiential response appropriate to the sacred objectives of the environment. The intent of this thesis is to challenge how such experiential influences can be applied within non-sacred typologies.

This research proposes that boarding schools, prisons, and low-cost housing projects are architectural typologies that could potentially provide significant benefits to inhabitants, if interior architecture is constructively engaged as a mediator of influence. More specifically, this thesis challenges how interior architecture may be utilised to enhance the sense of self-esteem, integration, and social belonging of disenfranchised adolescent groups. In addition this thesis aims to revitalise an abandoned 'disenfranchised' school, providing the principal vehicle for the design component of this study.

Overall the research suggests providing multiple opportunities for socialised engagement whereby interior architecture, through spatial relationships, contributes to the solution in establishing a sense of self-esteem, integration and social belonging.

THESIS FORMAT

1. THESIS FORMAT

CHAPTER 1

annotates the format and objectives of the research. The following chapters represent the study and outcomes of the research work.

CHAPTER 2

As an introduction to the study, this chapter organises and outlines the intent and argument of the thesis. The objective of the research aims to explore how interior architecture can be designed to positively influence human behaviour. Adopting a phenomenological approach, the study challenges how psychological effects of sacred milieu may be utilised in non-sacred interior architectural typologies to influence and condition aspects of the human psyche i.e. a sense of self-esteem, integration, and social belonging.

This thesis is comprised of two parts: the first of which is a theoretical discussion which outlines and explores psychological design and philosophical theory, as a means for establishing psychological response and opportunities for problem solving. The second part comprises of a series of design experiments that explore collaborative notions of experiential influence and environmental psychological effect specific to the studies interested culture group; disenfranchised youths.

is the theoretical argument central to the thesis, divided into three distinct sections. Section I establishes the emotive qualities of sacred architectural typologies as a precedent for psychological effect and experiential influence. The section reviews three primary aspects of 'sacred architecture': Form, space and path, which enables such experiential dialogues to take place. The introduction to Section II – chronologically ordered – overviews a historical background of the emergence for studies related to the human psyche, followed by an introduction of phenomenology and its application to the field of architecture. Furthermore, this section discusses space and place, attitudes and behaviour as applied to environmental psychology. Concluding the theoretical argument, Section III reviews two secular precedents: Prisons and schools. The thesis is particularly interested in the interplay of which these two architectural typologies interact with their occupants given their opposed, diverse, uncanny similarity and nature, e.g. blurred notions of containment and freedom – social engagement, post-adolescence vs. adolescence. The discussed architectural qualities and mechanisms; instigative of behavioural effects – both sacred and secular typologies, provide essential parameters leading into the design experimentation in the following two chapters.

CHAPTER 3

is the introduction to, and the review of, the chosen site for design experimentation and exploration. Also divided into three sections, the chapter begins introducing Heretaunga's former educational campus building; the Central Institute of Technology (CIT). Now abandoned, the CIT building will act as the vehicle for design exploration. The intent of this chapter aims to promote CIT as a suitable building with an inherent potential for experiential and influential transposition. Furthermore, the chapter studies surrounding and immediate contextual anomalies of both building and peripheral site. This analysis sets out to reveal latent themes and unique imperatives that may further characterize the designed intervention in the proceeding and concluding chapter.

CHAPTER 4

incorporates both experimental design visualisations and the conclusion for the thesis. The objective of the chapter explores avenues of architectural influence whereby it aims to provide a ritualised day that enables disenfranchised youths to gradually become reintroduced back into society. The chapter is divided into three sections; the first section exhibits the design methodology, exploring solutions for interior architecture to actively engage with its inhabitants as a mediator of influence. The second section; 'Experimental Design', proposes and discusses one possible holistic solution for reintroducing disenfranchised youths back into society, as applied to the Central Institute of Technology site. The third and final section of the chapter is the conclusion for both the chapter and the thesis.

THEORETICAL ARGUMENT

2. THEORETICAL ARGUMENT

I. INTRODUCTION - INTERIOR ARCHITECTURE AS MEDIATOR OF INFLUENCE

HISTORIC OVERVIEW OF INFLUENCE IN SACRED ARCHITECTURAL TYPOLOGIES.

Sacred Architectural typologies; such as churches and memorials, have a well documented tradition as mechanisms for establishing experiential influence and psychological effect: Worship, Enlightenment, Refuge and Solitude, et cetera. As the introductory Section to the research, the enabling aspects of 'Sacred Architecture' – through which experiential dialogues are established with its occupant/s – are explored.

SYMBOLISM AND RITUAL; FORM, SPACE AND PATH AS INFLUENCE IN 'THE SACRED'.

This Section reviews the symbolic and ritualistic imperatives of Form, Space and Path. It highlights their capacity as fundamental constructs in the construction of sacred spaces that invite religious ritual to take place and as a result, mediate a religious experiential response.

“...cultural symbols...retain much of their “spell”. One is aware that they can evoke a deep emotional response (and) function the same way as prejudices.”¹

For centuries Sacred Architecture has influenced human behaviour, evoking psychological responses through the affects of its architecture. For example: religious experiences; contact with a transcendent reality; deep intrinsic connections to the world, et cetera. In *Sacred Architecture* (1993), Alden Mann (1943-) points out that 'Sacred Architecture' has various different meanings; it is usually defined as a building or monument that either has a religious function or uses the vocabulary of forms consistent with religious practice.² Mann also believes there is a deeper meaning that resides in the term sacred architecture, one which has a common root in the life of the soul and spiritual vision – a connection with the human psyche.³

¹ Jung, C. "Man and His Symbols" – The Role of Symbols p. 83.

² Mann, A. "Sacred Architecture" – The Sacred and the Symbolic p.13.

³ Mann, A. "Sacred Architecture" – The Sacred and the Symbolic p.13.

I. FORM

“The spiritual is the active, dynamic aspect of the psyche, which is independent of forms, and yet is an essence which seeks expression in and through the world, always invested in forms.”⁴

Form – as applied to sacred architecture – exists as an emblematic stimulus, serving as a visible symbol for the abstract e.g. a sense of the divine.⁵ It is the innate symbolism in form – the systematic use of symbols and symbolic representations – that actively engages the individual with an experiential response. Church architecture is an example that evidences this expression e.g. a church spire, the cross or arch all carry living archetypal qualities and multiple layers of meaning.⁶ For example the Celtic cross, stands as a symbol representative of perfect cosmic order.⁷ Mann argues that the symbolic qualities these forms inherent evoke deep feelings, ancient drives and powerful realisations, because they are based on principles which extend beyond formal rules; form taps into the unconscious and mythic layers of being, and activates higher spiritual qualities.⁸

Figure 01. Tadao Ando. The Church on the Water;
Hokkaido, Jappan. 1988 - Entry

4 Mann, A. "Sacred Architecture" – The Sacred and the Symbolic p.13.

5 Mann, A. "Sacred Architecture" – The Sacred and the Symbolic p.13.

6 Mann, A. "Sacred Architecture" – The Sacred and the Symbolic p.14.

7 Pallasmaa, J. "Encounters: Architectural Essays" – The Two Languages of Architecture, p. 32.

8 Mann, A. "Sacred Architecture" – The Sacred and the Symbolic p.14.

Form is founded upon the simple or complex ordering of manifested geometries. Mann points out that geometries such as square, circle, triangle etc and their equivalent solid shapes; cube, sphere, and pyramid, transcend historical, religious, cultural, civilizational and social influences.⁹

Tadao Ando's *Church on the Water* [Figure 01], is a Sacred Architectural example which uses the interplay of a circle interlocking two squares to give rise to certain state of mind, establishing psychological tensions. When Forms collide, they can subvert, submerge, retain or link identities.¹⁰ Mann notes the circle, for instance, is a symbol of 'Self', expressing all dimensions of the psyche, including the man-nature relationship. Furthermore the circle indicates the unity of life.¹¹ Additionally Pallasmaa states the square is an expression of earthbound static materialism; the body and reality. Of the cardinal numbers, four is crucial, in Biblical exegesis there is the four quadrants of the world.¹² As an example, contained within the glass manifested entry of Ando's Chapel, stand four tall Celtic crosses. Here the eye is elevated towards the sky, acknowledging the heavens. These shapes and their proportions are found in virtually all sacred architecture, and as fundamental constructs establish the foundations of sacred architecture.

II. SPACE

“(Space) frames, articulates, structures, relates, separates and unites, facilitates and prohibits...it is approached, confronted, related to one's body, moved through, utilized as a condition for other things. (Space) directs, scales, and frames actions, perceptions, and thoughts.”¹³

Space; defined by the arrangement and articulation of form, numbers and proportion – the *proportional systems* in architecture – acts as a vehicle for meaning and communicating ideas based on the sacred objectives of the environment.¹⁴ The essential feelings established, as argued by Pallasmaa and Mann, are further amplified by the use of Light and Shadow, Reverberation, Colour and Materiality, et cetera. For example, light alters our perception in remarkable ways, such as the effects transposed as a result of light rays passing through a rose window. In

9 Mann, A. "Sacred Architecture" – The Sacred and the Symbolic. p.16

10 Ching, F. "Architecture: Form Space and Order". p. 339.

11 Pallasmaa, J. "Encounters: Architectural Essays" – The Two Languages of Architecture. p. 35.

12 Pallasmaa, J. "Encounters: Architectural Essays" – The Two Languages of Architecture. p. 36.

13 Pallasmaa, J. "Encounters: Architectural Essays" – Stairways of the Mind. p. 60.

Poetics of Light Henry Plummer writes that “there are deep emotive reverberations between light atmospheres and our feelings – in the cheery invigorative light of a sparkling day, the soft dreamy light of fog and snow, and the depressing light that is flat and dreary.”¹⁵ Mann points out that the power of light is used in sacred architecture to transcend the constraints of temporal reality.¹⁶

Figure 02/03. Giattina Aycock Architecture Studio. Alabama Veterans' Memorial, Birmingham, Alabama, USA. 2002
Top: Regiment Columns, Above: The Sanctuary.

¹⁴ Mann, A. “Sacred Architecture” – Introduction. p.10.

¹⁵ Malnar, J. “Sensory Design” – The Light Fantastic. p. 202.

¹⁶ Ibid

Finite, illusive or infinite, space is the creation of a boundary. The Alabama Veterans Memorial Park [Figures 02/03], designed by GA Architecture Studio (2002), is conceived as a place for reflection, education and celebration, occurring in three sequential parts. The first space encountered is landscape creating a sense of wonder and time; represented by a parameter defined by trees, vegetation and winding paths. The second space acts as a threshold prior to entering the official sanctuary. Here, the free array of trees become static, represented through regiments of columns indicative of confrontation and guardianship. Lastly, concluding the voyage is the sanctuary space. The dense columns now become linked and solid, entombing the inhabitant as a place of pause, silence, and resolution.

III. PATH

“A proper door simultaneously protects and invites; it mediates gestures of privacy and welcome, courtesy and dignity. How concrete everything becomes in the world of the spirit when object, a mere door, can give images of hesitation, temptation, desire, security, welcome and respect.”¹⁷

The architectural shaping of an experiential response – as applied to sacred architecture – also consists of a set of actions prescribed by religion – a ritual. Ritual in sacred design is primarily the formulation of a spiritual path to a sacred place. It is path that the notion of journey and/or narrative is explored e.g. ‘rite of passage’, et cetera. ‘Path’ passes by, through or terminates in space. It establishes an axis, which forms and spaces can be arranged in a symmetrical or balanced manner, relating to a point, plane, space or view.

The direction of space is experienced as being *different*; up then down, forward then back. All human activities are directed forward, while the distance traversed recedes to the past. Society strives forward or draws back and their attention is directed upwards or downward.¹⁸ Path and the horizontal plane indicate scale through compression and expansion, as well as being suggestive of activity in narrow or widening corridors; such as colonnades, becoming an extension of passing spaces.

¹⁷ Gaston Bachelard, *The Poetics of Space* (1958), as quoted in Juhani Pallasmaa, *Encounters: Architectural Essays*, p. 62.

¹⁸ Norberg-Schulz, C. “Meaning in Architecture”. p. 224.

Figure 04. Mario Botta. Chapel of St. Mary of the Angels, Monte Tamaro, Ticino, Switzerland. 1996
Above: Lower entry to Chapel

Path is not only expressed through corridor; as horizontal, but also on a vertical axis. The staircase can be thought of as a gateway or threshold, mediating between different metaphysical realms. This notion is strongly evident in Mario Botta's *Tamaro Chapel* (1996); expressing the passage of time and place. First encountering the Chapel entry, acts as a threshold taking one from ground: reality, to having a sense of awe and spiritual affinity. This is achieved by placing the occupant against a seamlessly expansive view of the expansive landscape. From the top of the overhead path – descending into the chapel below – the measure of 'self' placed against the landscape, shifts manifesting a sense of reflection. The Staircase, as well as symbolic of power and authority, prestige and status, hierarchy and classification, also operates giving flight, elevation, depth, and feelings of sinking and/or falling.¹⁹

¹⁹ Pallasmaa, J. "Encounters: Architectural Essays" – *Stairways of the Mind*, p. 65.

CASE STUDY: LE CORBUSIER'S MONASTERY OF SAINTE-MARIE-DE-LA-TOURETTE, FRANCE.

This section reviews Le Corbusier's Monastery of La Tourette, France. It evidences Corbusier's ability to redefine the formal representation of symbolism and 'the sacred' – void of features specifically Catholic – while simultaneously engaging with its occupants with a religious experiential response.

“The Architect, by his arrangement of forms, realizes an order which is a pure creation of his spirit; by forms and shapes he affects our sense to an acute degree and provokes plastic emotions; by the relationships which he creates he wakes profound echoes in us, he gives us the measure of an order which we feel to be in accordance with that of our world, he determines the various movements of our heart and of our understanding; it is then that we experience the sense of beauty.”²⁰

²⁰ Corbusier, “Towards a New Architecture” – Guiding Principles. p. 59.

Swiss-born French architect Le Corbusier (1887-1956) was renowned for challenging functional and aesthetic expectations in architecture, establishing innovative structural pilotis (stilts on reinforced concrete), open interior plans and strip/ribbon windows, et cetera. As a result Corbusier's creative ingenuity gave him recognition as one of the most brilliant and influential architects of the twentieth-century.

The Dominican Monastery of Sainte-Marie-de-La-Tourette (1960) - the last of Le Corbusier's major works in Europe - is yet another example of his ability to redefine the way in which we experience sacred-buildings. Corbusier (in collaboration with Musician/Architect, Yannis Xenakis 1922-2001) and the Dominicans, sought to renew sacred art and architecture, through the utilization of powerful contemporary forms and materials.²¹ Corbusier's non-catholic belief coupled with his desire to glorify industrial materials meant that much of the traditional semiotics of sacredness would be abandoned.

Consequently, Le Corbusier's intent to look past the monastery's Catholic purpose enabled him to explore his own interest in ritual, space, communal life, and expression of the 'spiritual' without the demands for features specifically Catholic.²² To be denounced of its association and promotion of Catholicism, Corbusier sought precedent in a church near Moscow. Described as a box standing on its end with a ramp giving access, for Corbusier it modelled ideas for pagan ritual, this was powerfully plastic in its simplicity.²³

“Le Corbusier's ideas began and ended with the concept that industrial society had an inherent form, an objective order derived from the nature of man and the nature of machines, an ideal structure, which - if realized - would bring prosperity, harmony, and joy.”²⁴

The Monastery demanded a complete, self-contained world for a community of studying silent monks who were to live a life of austerity. To house this community, the Monastery comprises of 100 individual 'cells'; each with an outward facing balcony, communal library, classroom and refectory, chapel and unconventional

21 McNamara, D. "Almost Religious" unpaginated.

22 McNamara, D. "Almost Religious" unpaginated.

23 Xenakis, Y. "The Garland Essays" - The Monastery of La Tourette, p. ix.

24 McNamara, D. "Almost Religious" unpaginated.

rooftop cloister – rooftop gardens another one of Le Corbusier’s signatures. In an article by Xenakis, appointed project architect for La Tourette, he writes “It was necessary to follow [the Dominicans] planning of physical spaces, of circulations and functions, and to organize them in the best possible way into receptacles that were stark but resonantly architectural. To discover, to create a different, other architecture, unique and original in its essential nudity – that was our goal.”²⁵

Starkly grey and geometric, La Tourette is sited among the green contouring hills; its dramatic setting and contrast to the surrounding environment attempts to emphasise the buildings sacredness. The concept of the Monastery is based around the reinvention of a cloister. A traditional cloister has an open passage around a square garden – within La Tourette lies a cross in its centre; defined by conduits

Figure 05. Le Corbusier. La Tourette, Eveux-sur-Arbresle, France. 1960
Above: Conduit promenade

25 Xenakis, Y. “The Garland Essays” - The Monastery of La Tourette, p. xii.

Figure 06. Le Corbusier. La Tourette, Eveux-sur-Arbresle, France. 1960
Above: Chapel nave towards high Alter

that provide access and regulate circulation to the interior spaces. Elevated on stilts, its cloister - also a rooftop terrace - suggests walking between earth and sky. The monks' cells, based on Corbusier's worker housing theories, generate a meditative space of silence and peace. The large chapel disengaged from the other three sides, accentuates the chapel as being of an 'other'; of sacredness.

The climax within the architectural promenade is the single lone doorway into the chapel [Fig. 05]. An austere play of lightness into dark is created, compressing the inhabitant while descending a narrowing ramped concrete corridor, faced with unevenly-rhythmic glazing. At the foot of light washed path, sits a solid metal mass in shadow, pivoting, it opens into the expansive dark coloured glow of the chapel beyond. The grand and imposing, tall, plain, concrete form of the chapel; devoid of

*Figure 07. Le Corbusier. La Tourette, Eveux-sur-Arbresle, France. 1960
Above: The Crypt.*

associations with traditional iconography, is given a spiritual essence through the selective and careful use of natural light and subtly strong colour. This threshold between path and chapel makes reference to Corbusier's precedent of a simplified ritual, while a cleansing of the individual prepares the sensitised sight for saturation of the bleeding light within – amplifying holy awe.

Though 'denounced' of any immediate sacred iconography, the foot print of the chapel does suggest reference to a traditional cruciform, with the sacristy on one side and the crypt on the other meeting to form the transept. Further wandering the chapel; stepping down onto the nave running perpendicular – suggesting a parting from the world of which one came from – the inhabitant finds themselves shifted on axis, encapsulated within the glory of its space. Where the main volume of the nave meets the transept stands the altar isolated atop a series of stairs.²⁶

Either side of the altar – in the wings of the chapel – is the sacristy and the crypt. Set lower as to separate the crypt from the main volume, are seven individual tiered altars; for the mass each of the monastery's priests have to celebrate once a day. The combination of soft sounds and light which filters, provoking the decent into one's own self, conjuring Symbolic associations.

Sculpted concrete forms light shafts; appropriately named 'Light Cannons', replace traditional church steeples and are one of five methods in illuminating daylight around the chapel. A weighted cave-like atmosphere denotes a solemn and reflective experience [Fig. 07]. Strong but deep colours within some of the openings give the chapel its warm and moving glow and creates a symbolic representation of a new age while evoking archetypal feelings of silence and reflection. Corbusier's 'strip' windows – while void of any didactic function – play on ideas of light and shadow. Near the altar, a high vertical slit allows light to wash in during the rising sun, while at the rear of the nave a wide horizontal slit lets in the light of the setting sun – marking the sun's passage from east to west. According to Corbusier, "[Lighting] is the wall on which light falls, it is the illuminated wall. The emotion arises from what the eye sees that is the volume that the body receives by the impression or the pressure of the wall upon it."²⁷

Corbusier's La Tourette, is a visual representation of then, new artistic impulses of the late Modernist style. More interested in the parts of the programme that fit his social agenda, Corbusier endeavoured to create an essential interior composed of two opposite forces – freedom and restriction. Corbusier has been able to instigate both tension and compression, sensations of both openness and density and he has guaranteed a stimulus so acute that the visitor is not aware of the abnormality of his experience.²⁸ According to Juhani Pallasmaa, encountering La Tourette forcefully mediates metaphors of life's basic tragedy, man's simultaneous desire to live and to die, to achieve flight and to remain earthbound – the building is simultaneously a cave and a vehicle of flight.²⁹

26 Xenakis, Y. p. Xii. "I designed a high altar that was judged by the monks to be too abrupt, too high, too, separative. In fact I had conceived it a little like a place for terrible sacrifices. It was too dramatic...Christ sacrificed himself...but the drama had to remain internal and luminous."

27 "Le Couvent De La Tourette" (1987) unpaginated.

28 Rowe, C. "Dominican Monastery of La Tourette, Eveux-sur-Arbresle, Lyons", p. 410.

29 Pallasmaa, J. "Encounters: Architectural Essays" – The Geometry of Feeling, p. 89.

2. THEORETICAL ARGUMENT

II. INFLUENCE IN SECULAR ARCHITECTURAL TYPOLOGIES

HISTORIC OVERVIEW.

This section chronologically outlines historic ideas which lead to studies examining the relationship between architecture and the human psyche. It introduces Geoffrey Scott; architectural historian, whose ideas hypothesise a connection between architecture and the human emotion.

“For weight and resistance, burden and effort, weakness and power, are elements in our own experience, and inseparable in that experience from feelings of ease, exultation, or distress. But weight and resistance, weakness and power, are manifest elements also in architecture, which enact through their means a kind of human drama... The art of architecture studies not structure in itself, but the effect of structure on the human spirit.”³⁰

The eighteenth- century gave rise to the Age of Enlightenment in the Western philosophical tradition. At its very core these changes set to challenge traditional institutions, customs, and morals, and had a strong belief in rationality and science breaking through traditional class distinctions and enabling social structure to be based on the importance of the human condition. The late seventeenth-century, typically known as the Age of Reason, was considered the prelude to the ideas of the Enlightenment addressing logic, ethics and metaphysics.³¹ Following the Enlightenment was Modernity, which further emphasised social conditions rather than specific philosophies of the Enlightenment, and notes an even stronger notion of secularisation.

³⁰ Scott, G. “The Architecture of Humanism: A study in the History of Taste” – The Mechanical Fallacy. pp. 118-20.

³¹ Hackett, L. “The European Dream of Progress and Enlightenment”. unpaginated.

³² McCormick, C. “Historical background of Kant”. unpaginated.

The seventeenth- and eighteenth- century saw the emergence of two competing schools as classified by Immanuel Kant - Rationalists and Empiricists.³² Rationalists believed knowledge could be gained by the power of reason alone; Empiricists rejected this, believing that all knowledge has to come through the senses, from experience. Experience teaches us everything, including concepts of relationship, identity, causation, and so on. Kant argues that the blank slate model of the mind is insufficient to explain the beliefs about objects that we have; some components of our beliefs must be brought by the mind to experience.³³

It was around this point that the ideologies of humanism started, focusing on human values and concerns. This subsequently led into the field of psychology and other fields that then began to understand the importance of implicating the human psyche e.g. architecture. Early in the twentieth-century, architectural historian Geoffrey Scott (1884-1929) began to look at the connection between architecture and human emotion. In *The Architecture of Humanism: A Study in the History of Taste* (1914), Scott discusses the power of architecture to elicit an emotional response from its occupants. Relying on the concept of empathy, he declared that “[we transcribe] ourselves into terms of architecture...[and]...transcribe architecture into terms of ourselves.”³⁴ Scott’s theories would later foreshadow future studies into the subject of architecture and the human psyche – an early study of human experience.

“Forms impose their own aesthetic character on a duly sensitive attention, quite independently of what we may know, or not know about them... The concavity or convexity of curves, the broad relations of masses, the proportions of part to part, of base to superstructure, of light to shade, speak their own language, and convey their own suggestions of strength or weakness, life or repose.”³⁵

33 McCormick, C. “Historical background of Kant”. unpaginated.

34 Geoffrey Scott, *The Architecture of Humanism* (1914), as quoted in A. Krista Sykes, *The Architecture Reader*, p. 241.

35 Scott, G. “*The Architecture of Humanism: A study in the History of Taste*” – *The Mechanical Fallacy*, p. 115.

INTERIOR ARCHITECTURE AND THE ROLE OF THE HUMAN PSYCHE.

PHENOMENOLOGY: THE INNER LANGUAGE OF ARCHITECTURE.

This section presents an initial overview of phenomenology and presents different phenomenological approaches to architecture as discussed by founder Edmund Husserl and architectural theorist Juhani Pallasmaa. The principle aim in this section is to highlight the way in which a phenomenological approach enables a comprehension of the vocabulary of architecture, in order to establish an influential and psychological dialogue with its inhabitants.

“Architecture holds the power to inspire and transform our day-to-day existence.” ³⁶

During the early twentieth- century – prolific at the time of Scott’s theories; suggesting an integral relationship between architecture and human emotion – the term ‘phenomenology’ emerged through the field of psychology. As defined in a philosophical doctrine by founder Edmund Husserl (1859-1938), it involves the study of human experience in which considerations of objective reality are not taken into account. ³⁷ The concept of phenomenology has since been divided into various different fields, characterised specifically to each; in psychology, phenomenology refers to subjective experiences or their study.

This notion of subjective experiences has since become a prominent topic in philosophical design within contemporary architecture. Its basis critiques the experiential and mental dimensions of architecture. Juhani Pallasmaa (1936-) architect and theorist, interested in the realities of human experience and emotive possibilities points out that, “architecture is experienced through many simultaneous sensations, and its meaning is communicated through an unconscious body language, not in intellectual, verbally articulated terms.” ³⁸

³⁶ Holl, S. “Questions of Perception – Phenomenology of Architecture”. p. 40.

³⁷ Published - Ideen (Ideas) in 1913; constituting an elaboration on his earlier findings in Logische Untersuchungen (Logical Investigations; first edition, 1900–1901).

³⁸ Pallasmaa, J. “Encounters: Architectural Essays” – The Two Languages of Architecture. p. 29.

Pallasmaa views the role of the architect, not to design buildings primarily as physical objects, but with regard to the images and emotions of the people who live within them. The effect of architecture stems from more or less shared imagery and basic emotion connected with the inhabitation of buildings.⁴⁰ Phenomenology analyses such basic responses; in essence, the phenomenology of architecture seeks to define the inner language of building.⁴¹ According to Ralf Weber in his book *On the Aesthetics of Architecture* (1995), the notion that architecture can 'represent', 'express', or even, like a language communicate is not new.⁴² For example, such phrases as: 'Houses of metaphor', 'architecture's narrative qualities', 'communication between buildings and their contexts', 'vocabulary of architectural forms' – do not just result from architects' proverbial love of metaphor.⁴³ In contrast to this Weber argues that they are indicative that there are meanings to architecture that transcend their immediate concerns for e.g. style.

The popular view that architecture is a kind of language can be further addressed in the writings of Pallasmaa. In one of his essays, *The Two Languages of Architecture: Elements of a Bio-Cultural Approach to Architecture*, Pallasmaa discusses the notion of *Language* as a medium for storing and transmitting the messages of poetry.⁴⁴ Furthermore Pallasmaa stipulates that "both poetry and architecture convey, or give rise to, certain states of mind with their own systems of signs and symbols, each consisting of conscious and unconscious meanings, mental images, feelings, associations, flashbacks, sensory images, and psychological tensions."⁴⁵ According to Scott:

"We feel the value of certain curves and certain relations of pressure to resistance by an unconscious (or usually unconscious) analogy with our own movements, our own gestures, our own experiences of weight. By virtue of our subconscious memory of these, we derive our instinctive reactions of pleasure, or the reverse, to such curves and such

³⁹ Pallasmaa, J. "Encounters: Architectural Essays" – The Geometry of Feeling, p. 90.

⁴⁰ Ibid

⁴¹ Pallasmaa, J. "Encounters: Architectural Essays" – The Geometry of Feeling, p. 91.

⁴² Weber, R. "On the Aesthetic of Architecture" – The Issue of Form: Some Questions Posed, p. 28.

⁴³ Ibid

⁴⁴ Pallasmaa, J. "Encounters: Architectural Essays" – The Two Languages of Architecture, p. 27.

⁴⁵ Scott, G. "The Architecture of Humanism: A study in the History of Taste" – The Mechanical Fallacy, p. 116.

relations... Our aesthetic relations are limited by our power to recreate in ourselves, imaginatively, the physical conditions suggested by the form we see: to transcribe its strength or weakness into terms of our own life.”⁴⁶

It is in this sense, a phenomenological understanding and approach – its study of architectural communication and the states of mind it generates – enables crucial considerations to the thesis argument; how interior architecture can be utilized to positively influence human behaviour.

⁴⁶ Scott, G. “The Architecture of Humanism: A study in the History of Taste” – The Mechanical Fallacy. p. 116.

ENVIRONMENTAL PSYCHOLOGY: SPACE, ATTITUDE AND BEHAVIOUR.

This section discusses the role in which architecture has both a collective and individual ability to affect human behaviour and, as a result, establish identity. Furthermore, this section discusses the importance of an individual's relationship within the greater society as well as their ability to maintain a sense of individuality.

“The timeless task of architecture is to create embodied existential metaphors that concretize and structure man’s being in the world. Images of architecture reflect and externalise ideas and images of life; architecture materializes our images of ideal life. Buildings and towns enable us to structure, understand, and remember who we are. Architecture enables us to place ourselves in the continuum of culture.” ⁴⁷

Architecture exerts strong influences on society's living conditions. Ralf Weber argues that the impact of architecture is unavoidable, creating not only physical, but psychological environments. ⁴⁸ In addition, Pallasmaa argues that, “Architecture aiming at simplicity does not reach the archetypal experience of our consciousness, and architecture trusting only to richness of form does not arouse our imagination.”⁴⁹ We as entities in our architectural environment need both simplicity and richness in order to enable these qualities to take the form of individual self expression and also collective behaviour. Weber notes that when the environment no longer provides a sensitive, stimulating setting for our fantasies, our behaviour becomes harsh and aggressive. ⁵⁰

47 Pallasmaa, J. “Questions of Perception” – An Architecture of the Seven Senses. p. 37.

48 Weber, R. “On the Aesthetic of Architecture” – The Issue of Form: Some Questions Posed. p. 2.

49 Pallasmaa, J. “Encounters: Architectural Essays” – The Place of Man. p. 80.

50 Pallasmaa, J. “Encounters: Architectural Essays” – The Place of Man. p. 76.

I. ARCHITECTURAL SPACE AND PLACE MAKING

“...architecture is the metaphorical expression...of the collective “soul” of the society which produces it. In this sense, the human rendering of the imagery of nature in architecture becomes a profoundly spiritual and autobiographical act.” ⁵¹

The experience of a building entails much more than the perception of a shell. ⁵² The spaces within the architectural shell, enable the possibility to establish individuality; a sense of self identity. According to Sue Best, “Space [...] becomes a creation of and for the subject and similarly the subject is a creation of and for this space.” ⁵³ That is to say, space becomes a canvas upon which an individual expresses and objectifies itself, thereby enabling an individual to produce itself, and come to know itself. ⁵⁴

In *Space and the Architect* (2000), Herman Hertzberger views our urge for space as centrifugal by nature – we wish to grasp more and make it our own – Space is a longing, we explore the unfamiliar to increase our circle, our experience, our awareness. ⁵⁵ Subsequent to this exploration we instil space with certain associations based on memories and archetypes. As a result, space obtains a certain significance and thus comes to mean place. As architectural space provokes us, more and more associations take hold. Our focus then becomes inward-looking concentrating on the psychological and emotional accessible areas of self; the human psyche. In this sense, space then condones behavioural engagement. Hertzberger defines this as a switch from centrifugal to centripetal attraction. ⁵⁶ According to Pallasmaa:

“The experience of place returns the experience of ourselves (...) an experience of the self. An architectural space touches something deep and familiar in

⁵¹ McCully, S. “The Language of Architecture: John Ruskin’s “Stone of Venice.” p. 11.

⁵² Weber, R. “On the Aesthetic of Architecture” – The Issue of Form: Some Questions Posed. p. 5.

⁵³ Best, S. “Space For The Subject”. pp. 1.

⁵⁴ Best, S. “Space For The Subject”. pp. 1.

⁵⁵ Hertzberger, H. “Space and the Architect: Lessons in Architecture 2”. p. 24.

⁵⁶ Hertzberger, H. “Space and the Architect: Lessons in Architecture 2”. p. 24.

*us. The sense of silence connected with an architectural experience is perhaps due to the fact that we are listening so intently to ourselves. Here we see the importance of environment for our personalities and psyche.”*⁵⁷

Place implies a centre of attention, it is a special value added to space, whether for individuals or for small or large groups. It has a particular meaning for a number of people who feel attached to one another or derive from it a feeling of solidarity.⁵⁸ Place provides the conditions for where one recognises oneself by experiencing something familiar and safe, fabricated specially for that individual.

*“A properly organized environment—full of significance, finding echoes in the measurements of our body, and in the memories of our minds—expresses our relationship with the world, but at the same time reinforces our self-identity.”*⁵⁹

II. ARCHITECTURE AND AFFECTIVE BEHAVIOUR

Best argues that the notion, in which the subject casts its image into space and sees oneself in space, thereby becomes both the object and subject of knowledge.⁶⁰ That is to say; according to Weber, “The development of knowledge is the result of an interaction between the person and the surrounding milieu.”⁶¹ Paul Bell Environmental Psychologist writes that our attitudes colour our relationship with the natural world and are based on affective (emotions), behavioural (actions), and cognitive (thoughts) components.⁶² Our architectural milieu establishes behavioural

⁵⁷ Pallasmaa, J. “Encounters: Architectural Essays” – A Place of Man. p. 76.

⁵⁸ Hertzberger, H. “Space and the Architect: Lessons in Architecture 2”. p. 24.

⁵⁹ Pallasmaa, J. “Encounters: Architectural Essays” – A Place of Man. p. 76.

⁶⁰ Best, S. “Space For The Subject”. pp. 1.

⁶¹ Weber, R. “On the Aesthetic of Architecture” – Form and its interpretation. p. 65.

⁶² Bell, P. “Environmental Psychology” – Nature and Human Nature. p. 26.

reactions as a result of our interaction based on these components. In this sense, architecture has an ability to change our attitudes based on the perception of its environment. According to William Ittelson, "The environment is considered real, existing in its own right, and can therefore be described in terms of stimuli which provoke a certain behavior. The individual's behavior can be described in terms of an aggregate of habitual responses to recurring similar situations." ⁶³

"To influence ones attitude; to change ones perception of the environment, is to redefine ones understanding of it...Our behaviour stems from our attitude, if we can first change behaviours, attitudes consistent with those behaviours will develop in order to maintain consistency between our behaviour and our attitudes as we perceive them or wish them to be perceived by others." ⁶⁴

Changed attitudes, affects our knowledge. Perception is seen as a mode of interaction between the organism and its environment. ⁶⁵ Empiricism views perception as an integral part and function of cognitive behaviour; in other words what we see is what we know. ⁶⁶ According to Jean Piaget, our *biological-development* is a result of our adaptive actions in an environment and encompasses the basis for a maturation of intelligence. ⁶⁷ Our knowledge is an extension of our attitudes and value systems. Suffice to say, as well as containing a knowledge that guides us, environment also tells us who we are. ⁶⁸

Architecture is not about a total manipulation of its users, it is instead bringing about a need to understand how space affects us all; as a part of a greater society, as a part of a history of society. Architecture also is about providing a requisite that enables the individual to experience space on their own – creating space that invites and enables that individual to change their behaviour, which as a result instills changed attitude and shapes knowledge.

⁶³ William H. Ittelson, *An Introduction to Environmental Psychology* (1974), as quoted in Ralf Weber, *On the Aesthetics of Architecture*, p. 53.

⁶⁴ Bell, P. "Environmental Psychology" – *Nature and Human Nature*, pp. 27-34.

⁶⁵ Weber, R. "On the Aesthetic of Architecture" – *Form and its interpretation*, p. 57.

⁶⁶ Weber, R. "On the Aesthetic of Architecture" – *Form and its interpretation*, p. 53.

CASE STUDY: DANIEL LIBESKIND'S JEWISH MUSEUM, BERLIN, GERMANY.

Daniel Libeskind's architectural intervention for the Jewish Museum assumes systematic spatial sequencing to engage both the individual and the collective occupant, in an attempt to recreate a kind of human drama associated with the holocaust. This section reviews the museum discussing Form, Space and Path, Phenomenology and Archetypes in an effort to unveil these events.

"The Jewish Museum is conceived as an emblem in which the Invisible and Visible are the structural features which have been gathered in this space of Berlin and laid bare in an architecture where the unnamed remains the name which keeps still." ⁶⁹

Figure 08. Daniel Libeskind. The Jewish Museum of Berlin, Berlin, Germany. 1999

Above: Plan Drawing

The architecture of Polish born, American architect and theorist Daniel Libeskind (1946-) underscores an interaction and inversion of interior and exterior. The Jewish Museum of Berlin (1999); was Libeskind's first major international success, and was one of the first buildings designed after German reunification. Situated on land that was West Berlin's before the Berlin Wall fell and adjacent the existing Baroque style Berlin museum: The Collegienhaus (1735), instilled they cover the span of German Jewish history. The museum; a tortured zig-zag design – reminiscent of a warped Star of David, embodies the violence and raptures of Jews in Germany, sitting as a dramatic contrast adjoining the old Berlin Museum. ⁷⁰

⁶⁷ Weber, R. "On the Aesthetic of Architecture" – Form and its interpretation. p. 65.

⁶⁸ Pallasmaa, J. "Encounters: Architectural Essays" – The Place of Man. p. 78.

⁶⁹ Schneider, B. "Daniel Libeskind: Jewish Museum, Berlin – Between the Lines". p. 6.

⁷⁰ Schneider, B. "Daniel Libeskind: Jewish Museum, Berlin – Between the Lines". p. 6.

The notion of the museum is to generate an imaginative world, creating a connection with place and time, et cetera. Here, the Jewish museum is an intervention that is to be experienced purposefully and evocatively - . It comprises of three main passageways – the likes of a hidden network – which intersect connecting three spaces symbolic of the three realities of Jewish life in Germany: Continuity with German history (Connection), Emigration from Germany (Exile), and the Holocaust (Death). ⁷¹ The first passageway represents an extension of German history. It is a tunnel connecting the Jewish museum with the existing Baroque style German

Figure 09/10/11. Daniel Libeskind. The Jewish Museum of Berlin, Berlin, Germany. 1999
Left: Intersection of Pathway Network, Middle: Shalechet (Fallen Leaves); an installation by Menashe Kadishman, Right: Interior of The Holocaust Tower.

museum; the only access to the Jewish museum. Within the baroque building projects a massive stairwell, which steps fall away into the depths of shadow descending to the underground passageway; linking old with new, the city's history with Jewish history. Within the well, a sense of oppression manifests as a result of the shadow and the introduction to materiality expressing the notion of a worn path travelled by many. The passageway itself then ascends gradually, framing in the distance the beginnings of a stairway; which at its toe expands vertically to reveal itself covering four stories of the Jewish museum – an insight to Jewish-German history, inducing a journey of struggle and triumph.

Off the main corridor sprouts two other passageways; more steeply inclined, with ceilings that remain constant acting to constrain the visitor. The first to branch off leads to the sunken 'Garden of Exile'. Ascending its darkened path to the lightness of the outside world evokes the idea of exile as the only way to freedom. The other branching passageway on the underground floor ends in the darkness of the Holocaust Tower, a 24 meter tall empty silo. The compression of darkened space and the virtue of light is a recurrent theme within the museums narrowing passageways

71 "Das jüdische Museum in Berlin" (2003) unpaginated.

and corridors, within which the echoes draws a deep sense of reflection and awareness from the visitor.

“Sight makes us solitary, whereas hearing creates a sense of connection and solidarity. Architecture is a drama... (It) is the art of petrified silence”.⁷²

From out of the passageway into the Garden of Exile stands a field of forty-nine rough concrete columnar planters. The clustered inclined concrete columns and the uneven ground plane creates an unsettling feeling for the visitor. The tilted columns which are perpendicular to the sloping paving exude feelings of disorientation and lack of security as the surrounding buildings appear to totter.⁷³ At the end of third terminated passage rests The Holocaust Tower, accessed from behind a blackened door. Closed, bare, empty, and unheated, the free-standing pentagonal tall concrete tower is an austere space, dimly lit by a single beam of daylight passing through a crevice overhead. The space itself, its choice of materiality and sense of estrangement conjures associations of the gas chamber: fear and blinded alertness. Both the columnar typology in The Garden of Exile combined with the Holocaust Tower lead beyond the contours of the building, relying on their own intrinsic geometry, acting like outposts of the new building.

Slicing linearly through the entire building runs a fragmented 20 metre tall vertical Void; creating vertical links extending through all floors, illuminated by the skylights above. Within one of the six fragments is Shalechet (Fallen Leaves); an installation by Menashe Kadishman containing over 10,000 coarse iron faces. Causations exploring its space, casts an echo of eerie sounds prompting emotional tensions of those dispersed throughout the museum. The Jewish Museum acts to engulf the visitor; the continual change in horizons; above and below ground, the sloping floors, the bands and apertures of light retreating the eye, all contribute to distort the assumptions made of its space.

⁷² Pallasmaa, J. “Questions of Perception: The Phenomenology of Architecture: Architecture of the Seven Senses”. p. 31.

⁷³ “Das jüdische Museum in Berlin” (2003) unpaginated.

2. THEORETICAL ARGUMENT

III. OPPORTUNITIES FOR POSITIVE INFLUENCE IN SECULAR ARCHITECTURE

Prison and School architecture are contributors in giving rise to experiential influence. However, rather than a central task of establishing an emotional response, their purpose is more a means of problem solving. This Chapter reviews architectural techniques which provide requisites for isolation and/or openness, for Collective Identity and Individuality, et cetera.

CASE STUDY: PRISONS.

Throughout history, prisons and jails have shifted in their function to influence – from incapacitation to retribution to the reform of offenders. The review of Prison architecture in this section highlights psychological design imperatives evocative of order and control, et cetera. Its objective is to establish an understanding of problem solving architecture.

HISTORIC OVERVIEW – RECTIFYING AN ABNORMALITY.

As an initial introduction to the case study, this section provides an historical overview of prisoner treatment and their confines. The review outlines both architectural and resulting psychological developments in prison evolution.

The Early Penal system is represented by three distinct eras: the Wellspring Era; Middles Ages to 1790, the Penitentiary Era; 1790-1876 and the Reformatory Era; 1876-1900's. Collectively they evidence a critical evolutionary change in English prison architecture as reviewed by Robin Evans; in: *The Fabrication of Virtue: English Prison Architecture 1750-1840*. As Evans points out this critical change was where "the state of English prisons [which were characterized as being] horrible and disgusting" ⁷⁴ were transformed when reform became an active political issue – "A fundamental tenet of the penal reform was that under certain circumstances the character of an offender would inevitably shift from vice towards virtue." ⁷⁵

In the mid sixteenth- century of the Wellspring Era, the correctional system witnessed its first institutionalised prison building; *The House of Corrections* – directed at laziness and disobedience. Two approaches characterised prisoner punishment; one corporal and two ecclesiastical. Corporal Justice was a capital punishment that herded men and women into a kind of almshouse forcing them to work, acting as a didactic instrument that punished, instructed and improved.⁷⁶

74 Evans, R. "The Fabrication of Virtue: English prison" – Another world, yet the same. p. 10.

75 Evans, R. "The Fabrication of Virtue: English prison" – From correction to reformation; from dungeon to cell. p. 47.

76 Evans, R. "The Fabrication of Virtue: English prison" – From correction to reformation; from dungeon to cell. p.48.

However, its prisons were typically a colonisation of buildings used for other purposes; abandoned workshops, palaces and empty convents, and therefore inhibited prisoner development.⁷⁷

“The houses of correction were designed to punish and at the same time reclaim their inmates. But, unlike the penal institutions of the late eighteenth and nineteenth century, they were not meant to reclaim lost souls. Their aim was the simpler one of demonstrating a principle.”⁷⁸

Figure 12. Bridewell Palace, London. Originally built 1515 for King Henry VIII (Commissioned for Prison use in 1556)

Ecclesiastical Justice attempted to infuse imprisonment with spiritual aims, believing that secular justice terrified and oppressed individuals and that leaving prisoners to themselves would only ‘accelerate their own destruction’, immersing them ever deeper in their own violence and folly.⁷⁹ Monastic Prison design; similar to a Carthusian cloister, used a special penitential rule of strict solitude as a driving psychological factor for the reformation of its inmates. Removed of all material distractions, reflecting spiritual belief and sacred intentions, a grouping of

⁷⁷ Clement, Carl B. “Correctional Facility Design: Past, Present and Future”, p. 2.

⁷⁸ Evans, R. “The Fabrication of Virtue: English prison” - From correction to reformation; from dungeon to cell. p. 52.

⁷⁹ Evans, R. “The Fabrication of Virtue: English prison” - From correction to reformation; from dungeon to cell. p. 70.

hermitages – typically single plain cells – were used to encourage and stimulate remorse through the act of meditation.⁸⁰

The monastic rule of silence, solitary confinement and exposure to religious ritual, and the secular order of labour as discipline informed the construction of the Hospice of St. Michael, Rome. Built 1703, St. Michael's was founded as a *House of Corrections* for Boys, centred at reforming juvenile delinquents. Its purpose built prison consisted of two storeys of cells and a working area, arranged around a monastic core which played a symbolic and psychological role in conditioning its inmates – at the east an altar and the west a whipping post.⁸¹ St. Michael became the forerunner for modern penitentiaries.

“While the houses of correction had focused attention on the tangible reality of productiveness, turning the useless into the useful, the reforming prisons would concentrate on the moral transformation of their inmates, turning evil into good.”⁸²

Figure 13. Monastic Prison - Mount Grace Charter House, Perth, United Kingdom. 1429. Founded by King James I - Destroyed at the Reformation in 1559

By the late eighteenth-century, with the introduction of the Penitentiary Act 1779, reformers and architects were able to suggest an instrumental relationship between architecture and morality. The Penitentiary Era witnessed an architecture that had discovered itself to be a serviceable weapon in the continuing war of attrition against vice; standing as an element in the armoury of civilization, as a defensive strategy against depredation and emblem of political order. The interiors however

80 Fairweather and McConville, "Prison Architecture: Policy, Design and Experience" – The Architectural realization of penal ideas, p.9.

81 Evans, R. "The Fabrication of Virtue: English prison" – From correction to reformation; from dungeon to cell, p.60.

82 Ibid, p.57.

would subscribe to another set of principles, neither defensive nor emblematic; but by supplying the precondition of solitude, sanitation, pacification and observation intending to work on the mind, the character, the soul, subduing temper and raising the spirit.”⁸⁵

“Grouped or in solitary, moving or at rest, under instruction or at work, unseen, seeing or being seen, heard or unheard, nearby or at a distance, it was always architecture that fixed the shape of experience. This is what made the reformed prisons and model prisons into far more than places of punishment, providing sites for the development of an architecture that would, for the first time, take full advantage of its latent powers.”⁸⁶

The rectangle and circle shape – and the most prevalent in the nineteenth-century; the radial design dominated prison building architecture.⁸⁷ The Panopticon is an example which used a circular design enabling guards to observe any inmates without them knowing if and when they were being watched. Designs featured a central platform surrounded by a ring of cells and was built for solitary confinement with an observation tower in the centre.

With prison architecture exploring humanitarian conditions, the Reformatory Era incorporated an emphasis on education and training, preparing inmates for their release back into the community, abandoning the silent system.

83 Evans, R. “The Fabrication of Virtue: English prison” – Introduction. p.6

84 Evans, R. “The Fabrication of Virtue: English prison” – Introduction. p.6

85 Evans, R. “The Fabrication of Virtue: English prison” – Introduction. p.5

86 Evans, R. “The Fabrication of Virtue: English prison” – Introduction. p.6

87 Clement, Carl B. “Correctional Facility Design: Past, Present and Future”. p. 3.

PSYCHOLOGICAL EFFECTS OF THE PRISON ENVIRONMENT.

Examining twentieth- century prison design, the objective of this section is to review fundamental design imperatives, which actively engages collective user groups; inmates, staff and visitors, as a vital part of the problem solving process.

In *Correctional Institutions; Jails; Planning; Design and Construction* (1986), Jay Farbstein writes:

“The “normal” physical environment is non-institutional in character, similar to other buildings in use elsewhere, and has a scale that is neither overwhelming nor oppressive. The physical appearance of a space creates its image and indicates its degree of closeness to life. This image is a combination of elements such as size, shape, color, light, view, furnishings, and symbols. An individual’s reaction to image and space will depend upon his or her past experiences and reason for being there. We recognize what type of place it is and then develop expectations of how we may be treated and what might happen there. Thus space or building itself serves

88 Farbstein, J. “Correctional Institutions; Jails; Planning; Design and Construction”, p. 38.

89 Fairweather, L. “Prison Architecture: Policy, Design and Experience” – Psychological effects of the prison environment. p. 30.

90 Fairweather, L. “Prison Architecture: Policy, Design and Experience” – Psychological effects of the prison environment. p. 31

*as a medium of communication
between its operators or designers
and its users.”⁸⁸*

To have a healthier correctional environment – one with fewer symbols of incarceration – is said to have a positive impact upon both staff and inmates, reducing psychological tensions typically associated with the loss of freedom. In *Prison Architecture: Policy, Design and Experience* (2000), Leslie Fairweather points out that, “a buildings environment, the location and the size of the institution, the operational philosophy, violence and the fear of violence, the satisfaction and perceived safety of the staff, the relation of all these to design and construction, participates in the behavioural responses in prison buildings.”⁸⁹

I. PRISONER INTERACTION – SOCIAL COMINGLING

The most fundamental design change in the last 30 years has been the switch from indirect, to direct supervision. ‘New generation’ designs are defined as ‘direct’ supervision prisons, whereby a greater degree of staff-inmate contact is encouraged.⁹⁰ Conversely, prisons with indirect supervision are those where inmates and staff occupy, to some extent, their own territories. Staff may intermingle with inmates though this is limited; supervision and control are more remote reliant on distant visual surveillance.⁹¹ Typical layouts include radial and cruciform designs – other variations are the courtyard ‘T’ and ‘L’ configurations with central open galleries with cells off a series of landings or enclosed corridors. A sense of alienation is typically associated with these prisons, encouraging inmate cultures and hierarchies that staff may find difficult to understand and control.⁹²

Figure 14/15. Left: Stevenson and Turner Architects. Mt Eden Prison, Auckland: Collective Space. Right: Opus Architecture. Rimutakta Prison, Wellington: Social Space.

⁹¹ Fairweather, L. “Prison Architecture: Policy, Design and Experience” – Psychological effects of the prison environment, p. 35

⁹² Fairweather, L. “Prison Architecture: Policy, Design and Experience” – Psychological effects of the prison environment, p. 31

In contrast to this, direct supervision prisons have a much larger central association area surrounded by only one or two storeys of cells. The space is usually triangular or rectangular, and officers are encouraged to roam or mingle there with the inmates. Greater staff-inmate contact promotes positive relationships, allowing more effective surveillance and better security. Such contacts also help to dissolve tensions and lower the social temperature.⁹³

II. INSTITUTION SIZE

Studies note that there is a considerable psychological effect on inmates and staff if the institution is too large, individuals may feel swamped and intimidated by its sheer size and scale. An institution can be divided into separate semi-autonomous units sharing the entirety of infrastructure. Fewer beds enable staff to recognise every resident and develop personal relationships. Overcrowding does have a high negative effect in larger prisons resulting in riot, et cetera. Subdivided prisons with small units achieve more spontaneity, support and autonomy, and allow closer personal relationships to develop between inmates and officers.⁹⁴

III. THE INMATE AND HIS CELL

According to Fairweather, some inmates prefer companionship in a dormitory/ shared cell environment. However, it is argued that dormitories and shared cells deprive people of privacy and invariably foster intimidation, bullying, extortions and other undesirable social activities. This creates a considerable amount of stress and aggression. Privacy provides an emotional haven; it allows the opportunity for self-evaluation, permits limited communication and establishes a psychological distance from others. Fairweather points out that it provides personal autonomy and a sense of individuality and control over one's situation.⁹⁵ In a photographic series by Jürgen Chill; *zellen*, it explores birds eye perspectives as applied to 9 different in-use cells across several German prison's. *Zellen* illustrates the smallest possible space for habitation by an individual, depicting personal and functional items that would be seen as necessities of modern privileged life. Fairweather asks, "Should the punishment and repression of crime lead us to a penal aesthetic? Should ugliness, vulgarity – or mere indifference – be a part of punishment?"⁹⁶

93 Fairweather, L. "Prison Architecture: Policy, Design and Experience" – Psychological effects of the prison environment. p. 35

94 Ibid. p. 37

95 Ibid. p. 38.

96 Fairweather and McConville, "Prison Architecture: Policy, Design and Experience" – The Architectural realization of penal ideas. p. 10.

Figures 16/17. Jürgen Chill. 'Zellen'. 2006

IV. ENVIRONMENTAL PERCEPTION

There can be no justification for deliberately designing unpleasant accommodation or choosing dull colours, dim lighting and excessively harsh materials. These evoke negative effects and inhibit hopes of encouraging prisoners back into a society which, to them, sometime looks as though it has given up on them.⁹⁷ This form of institutional brutality only erodes the values of society as a whole. Prison design must achieve, overall, a more proactive and benevolent influence than squalor. This in turn will affect the way people behave. Oppression and ugliness can lead to alienation and aggression and as a result monotony and boredom, caused by enforced idleness, lack of variety and sensory deprivation, can contribute to vandalism.⁹⁸ Flat, square, barren concrete yards overlooked by cells, could more effectively be designed as a series of terraced, grassed and softer landscaped areas, appreciated by both inmates and staff.⁹⁹ Landscape design is as important as design within the walls, inducing a mood of calm and repose in an atmosphere not associated with either.

- LIGHT AND VIEW

Windows are more than just a luxury for the incarcerated, the lack of contact with the outside world heightens stress and depression. Fairweather points out that, the highest stress areas in prison, isolation cells, are those that most commonly lack windows.¹⁰⁰ James Kessler believes that natural light is the lifeblood of architecture, also cautioning the height of windows is important, as views in as well as out must be considered

Figure 18: Josef Hohensinn. Justice and Detention Centre, Leoben ,Austria. 2005

⁹⁷ Fairweather, L. "Prison Architecture: Policy, Design and Experience" – Psychological effects of the prison environment. p. 41

⁹⁸ Ibid

⁹⁹ Ibid

¹⁰⁰ Ibid. p. 43.

¹⁰¹ Ibid

- COLOUR

Colour plays a large part in affecting behaviour. Cells could be painted a lighter colour, however, Fairweather points out that studies have shown a positive inmate response to bright colours and murals elsewhere, especially those painted by the inmates themselves.¹⁰¹ Colour can enhance light by brightening or subduing spaces, provide sensory stimulation, give directional and other information, and optically change the proportions of a room. 'Saturated' colours are thought to be inviting and reassuring. Certain hues of blue, red, black and yellow should be avoided, due to their psychological or cultural connotations.

Figure 19: Stevenson and Turner Architects. Mount Eden Correctional Facility. Auckland, New Zealand. 2011

¹⁰¹ Fairweather, L. "Prison Architecture: Policy, Design and Experience" – Psychological effects of the prison environment. p.43

CASE STUDY: SCHOOLS.

“...a thing exclusively made for one purpose, suppresses the individual because it tells him exactly how it is to be used. If the object provokes a person to determine in what way he wants to use it, it will strengthen his self identity. Merely the act of discovery elicits greater awareness. Therefore a form must be interpretable – in the sense that it must be conditioned to play a changing role.”¹⁰²

HISTORIC OVERVIEW.

This section discusses the shift in traditional school architecture – originally conceived as an instrument imbued with control, order and discipline to, providing the opportunities to engage with the surrounding milieu – encouraging social interaction and creativity.

Two forms of School buildings best represent the shift of school building architecture in the nineteenth- and early twentieth- century: one, with the urge to impose discipline and control through a resolute set of space; the second, an emerging desire to encourage individual creativity by providing the precondition for exploration and affinity with the environment.

I. THE FIRST SCHOOLS

The school building; and its classrooms, originated from the *School House*; which was a detachment of the Victorian home. Appointed with a single school master, the urge of the School House imposed strict discipline and control; which was reflected in a resolute set of space.¹⁰³ In the early eighteenth- century, as a result of segregated spaces with prescribed functions, the concept of the corridor came into

¹⁰² Hertzberger, H. “Harvard Educational Review” – Architecture and Education p. 95.

¹⁰³ Dudek, M. “Architecture of Schools: The New Learning Environment”. p. 10.

being. The first boarding schools inadvertently adopted this model, with individual classrooms, clearly articulated circulation routes and a large assembly hall at its heart. This regiment configuration established a framework of which interpretation can be seen in the wider urban environment; prisons and churches et cetera. relied on this particular architectural language, to impose social hierarchies upon the city.¹⁰⁴ This form of school building design continued into the nineteenth- century, conjuring images of classrooms as hollow stone spaces, shutoff from the outside world, where students would be forced to concentrate on the teacher and his blackboard.

Figure 20. One Room School 1900's

Figure 21. Beaudouin and Lods. Open Air School, Suresnes, Paris. 1935

II. OPEN AIR SCHOOLS

At the turn of the early twentieth- century, an emerging desire to encourage individual creativity brought the production of school buildings which would engage with its surrounding environment. With the role of education within society gaining importance, social interaction rather than autonomous isolation became a prime educational strategy. Initially established to eliminate tuberculoses (1900's), the concept and practicalities of the Open-aired School was revisited focussed towards less able and neglected children of the disadvantaged urban proletariat.¹⁰⁵ No longer enclosing and confining, the notion of transparency; enabling a duality of exterior and interior interaction, steadily relieved the classroom of its excessive formality.¹⁰⁶

¹⁰⁴ Dudek, M. "Architecture of Schools: The New Learning Environment", p. 10.

¹⁰⁵ Hertzberger, H. "Space and the Architect: Lessons in Architecture 2" p. 54.

¹⁰⁶ Hertzberger, H. "Space and the Architect: Lessons in Architecture 2" p. 59.

SCHOOLS – SOCIAL STRUCTURE.

This Section reviews school architecture as a social development device, based on the theoretical writings of Herman Hertzberger.

“The architecture I aspire to is one that is able to encompass the poetry of society and of living together, in other words, it must provide the right spatial conditions for social life.” ¹⁰⁷

The previously established tradition and attitude towards reform has been replaced by a more socially sensitive environment. Dutch architect Herman Hertzberger (1932-) argues that school architecture and the way school buildings are programmatically arranged impact on the social development of children. He notes, “In today’s schools social skills are coming to be just as important as the traditional subject matters, skills such as working together, living together [and] learning how to get along with each other.” ¹⁰⁸ The increased emphasis on social skills over the traditional basics such as mathematics, science and the arts as a vehicle for social change and development requires a conception of space that is less oriented outwards rather is all the more present in its interior marked by greater spatial openness. ¹⁰⁹ By designing a school where its spaces are less isolated units and its corridors more so as learning spaces not only expands opportunities for learning situations, but also provides suitable spaces for communal use by diverse groups creating greater social cohesion. ¹¹⁰

“The trend towards more and smaller groups...calls for the space to be articulated, but not fragmented. Spatial cohesion must always be preserved.” ¹¹¹

While openness is important in establishing social cohesion, the articulation of space is also essential so that people can work individually or in groups. This means

¹⁰⁷ Hertzberger, H. “Articulations” p. 17.

¹⁰⁸ Hertzberger, H. “Space and the Architect: Lessons in Architecture 2” p. 58.

¹⁰⁹ Ibid

¹¹⁰ Hertzberger, H. “The Schools of Herman Hertzberger” p. 9.

¹¹¹ Ibid. p.11.

using full- or half-height walls as well as steps, storeys and elevated areas. Size too is also a fundamental resource which creates a sense of boundary, protection and separation from others.¹¹² Recessed cavities are typical examples which provide spatial environments for separation and seclusion, while simultaneously retaining the overall feeling of unity and community. The more complex a building becomes, the more its articulation of space attempts to subdivide intentions for openness disrupting opportunities for social co-mingling. This is a result of which each of its participating entities seeks to express its own identity. The building must remain a unified spatial entity, as a place where people are aware of each others' activities and feel invited to take part in open exchanges with them.¹¹³

Hertzberger notes that by introducing spatial themes, encompassing the building as a whole, does not just encapsulate the sense of community, it also expresses and emphasises it.¹¹⁴ Only by creating a kind of spatial cohesion, can it serve to provide opportunities to engage in joint ventures and undertake activities. The schools of Hertzberger embody spatially comprehensive themes wherein they not only allude to but also function much like cities. He believes that schools and cities can be read in many different ways, they are challenging, inspirational and inviting. Examples of Hertzberger's school designs respond to a combination of design types, for example: The 'Street' layout [Fig.22]; where the school is organised around a central opening linear space, onto which activities and spaces can open out on to. A Street may have an entrance at either end of the route and the form is often expressed on the outside of the building. The street principle helps to organise and focus a school around typically one large space, making way finding simple and helping to reduce ancillary circulation.¹¹⁵ The City or Town layout [Fig.23] enables a more flexible organisation and use, characterised by social spaces that are typically squares or parks. There is usually a centre-piece; the like of a 'Town Hall', encouraging formal congregations as a group, and classroom spaces are often arranged around its

Figure 22/23. Herman Hertzberger; Left: Montessori College Oost, Amsterdam. 2000, Right: Multifunctional Centre, Presikhaven, the Netherlands. 2009

112 Hertzberger, H. "The Schools of Herman Hertzberger" p. 11.

113 Ibid

114 Ibid. p.13.

115 Imagine "Our Analysis" unpaginated

periphery.

*“The city, even more than the house, is an instrument of metaphysical function, an intricate instrument structuring action and power, mobility and exchange, societal organizations and cultural structures, identify and memory. Undoubtedly the most significant and complex of human artifacts, the city control and entices, symbolizes and represents, expresses and conceals. Cities are inhabited excavations of the archaeology of culture, exposing the dense fabric of societal life.”*¹¹⁶

By creating open, small scale interpretations of the city, the school environment not only introduces children to a sense of community but provides the requisites to withdraw and adopt positions with respect to others, and inevitably to take place in society.¹¹⁷

¹¹⁶ Imagine “Our Analysis” unpaginated

¹¹⁷ Pallasmaa, J. Encounters: Architectural Essays, “City Sense” p. 142.

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Figure 01. Tadao Ando. Church on the Water, Hokkaido, Japan. 1988

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Figure 02/03. Giattina Aycock Architecture Studio. Alabama Veterans' Memorial. Birmingham, Alabama, United States of America. 2002

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Figure 16. Opus. Rimutaka Prison. Upper Hutt, New Zealand. 2010

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Figure 17. Stevenson and Turner Architects. Mount Eden Correctional Facility. Auckland, New Zealand. 2011

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Figure 18. Josef Hohensinn. Justice and Detention Centre, Leoben, Austria. 2005
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Figure 19. Stevenson and Turner Architects. Mount Eden Correctional Facility. Auckland, New Zealand. 2011
Source: http://www.zimbio.com/pictures/4qw4h8Pk_11/Inside+New+Zealand+New+est+Prison/fUEJ1vA9J6T

Figure 20. One Room School House. 1900's
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Figure 21. Beaudoin and Lods. Open Air School, Suresnes, Paris
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Figure 22: Herman Hertzberger. Montessori College Oost, Amsterdam. 2000
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Figure 23: Herman Hertzberger .Presikhaven multifunctional centre, Arnhem, the Netherlands. 2009
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SITE ASSESSMENT

3. SITE ASSESSMENT

I. CENTRAL INSTITUTE OF TECHNOLOGY

INTRODUCTION.

This section introduces the Central Institute of Technology (CIT) as the chosen vehicle for design experimentation. It highlights CIT as a suitable building with an inherent potential to adhere qualities for experiential and influential transposition, actively engaging with its inhabitants.

Part one studied comprehensive theory in regards to the interrelationship between architecture and human emotion. Furthermore, the research discussed various precedents where opportunities for psychological effect and architectural influence were evidenced. As the theory cannot be a substitute for the direct experience of architecture, it can help to attain in Part two an appropriate and profound framework for exploring influential architectural imperatives.

Located in Heretaunga, Wellington; The Central Institute of Technology (CIT) – now abandoned, will act as the vehicle for design experimentation; exploring the integration of sacred and secular, architectural and theoretical opportunities for behavioural influence. The site comes with a certain historical significance given its past programmatic intent; a Post-Adolescent, Educational facility. Here an archetypal foundation of teaching and learning is present. The intention for the remains of the building is to instil within an opposing population group, who share an uncanny similarity; disenfranchised youths. The design proposes that a resurrection of its dilapidated state will provide some of the critical influences necessary for ‘rehabilitating’ the mind, to enrich and bestow a better quality of life among society – as a result of spatial inquiry.

The combination of site classification and intentions for resident groups references the boarding school as a prerequisite for programme and reinterpretation. The boarding school comprises of various adolescent age groups and offers features such as standardised teachings or military training; though such environments are likely to be repelled by the youth in these instances. Boarding schools do however have the innate capacity to establish fundamental social interactions, providing a multitude of isolated and Co mingling spaces; as to emulate the character of the home environment. According to Norberg-Schulz:

“In this space the ‘way’ becomes the most fundamental motive, the way towards a goal, the way between the ‘stations’ of life. The way is always directed from the known towards the unknown, but man always returns to the place where he belongs; he needs a ‘home’ which designates his point of departure and return.”¹

In this sense, the opportunities lie in the way in which CIT provides: the motive for residence, the ‘station’/threshold and goal for social belonging.

¹ Norberg-Schulz, C. "Meaning in Architecture" p. 224.

3. SITE ASSESSMENT

II. URBAN CONTEXTUAL STUDY - UPPER HUTT CITY, NEW ZEALAND

BACKGROUND - UPPER HUTT / HERETAUNGA.

Located in the lower North Island of New Zealand is Upper Hutt City – a satellite-town of Wellington City – which forms the northern basin of the Hutt Valley. Upper Hutt; north-east of Wellington, is centred on the upper (northern) valley of the Hutt River valley floor, which flows north-east to south-west on its way to Wellington harbour. Its expansive width nestled between Rimutaka to the north-east and the Akatarawa Ranges to the north north-west, contracts – narrowed by the Taita Gorge – separating Upper Hutt from the Lower Hutt. ²

The History of Upper Hutt Valley evokes the struggles of its pioneers, with dense forests cleared and rivers bridged, stop banks constructed (1900's); vulnerable to flooding, and its isolation eased by roads and railway. Since European settlement (1841) population growth has extended residential development to the top of the Rimutaka saddle and the Akatarawa Valley. Central to Upper Hutt is the suburb of Heretaunga. Located around its periphery are The Hutt Army Base and Rimutaka Prison.

HUTT ARMY BASE.

North of Heretaunga, The Trentham Army Camp occupies a large area. During the First World War the army built a large training camp, which was used again during the Second World War and has since become a permanent facility.

RIMUTAKA PRISON.

South of Heretaunga is the Rimutaka Prison. As New Zealand's second largest prison, Rimutaka Prison has a capacity to accommodate up to 942 male, minimum to high security prisoners. In 2010 it opened the country's first container-cell unit.³ The Prison has a single point-of-entry, called the gatehouse. Everyone entering the prison, including staff, must pass through the gatehouse. Getting prisoners to live offence-free lives once released is a key part of the Correctional work. To aid in achieving this, the prison runs a range of motivational, rehabilitative, educational and reintegration programmes.

² Maclean, C. "Wellington places - Upper Hutt" unpaginated.

³ Department of Corrections "Rimutaka Prison" unpaginated.

The Central Institute of Technology campus is sited at the heart of the Upper Hutt Valley.

Central Institute of Technology Campus

On the periphery of the campus is the residential area of Heretaunga. The Rimutaka Prison and Trentham Army Camp are also neighboring influences to the site.

- Heretaunga - Residential
- Rimutaka Prison - Correctional Department
- Trentham Army Camp - New Zealand Military

Neighboring suburban communities would have a direct influence on the campus.

Silverstream		Wallaceville		Pinehaven
Trentham		Heretaunga

Upper Hutt

The Hutt River

	Moonshine Valley		Craigs Flat		Stokes Valley
	Riverstone Terrace		Blue Mountains		

3. SITE ASSESSMENT

III. BUILDING ANALYSIS - CIT BUILDING

BACKGROUND - CENTRAL INSTITUTE OF TECHNOLOGY BUILDING.

In the suburb of Heretaunga, Upper Hutt lies an enormous and abandoned campus littered with dispersed large scale buildings, one of which dominates due to its more infamous Brutalist-style architecture: the Central Institute of Technology (CIT) Building. Designed in the 60's by Houghton + Mair (project architect, Chris Brooke-White) and completed in 1974, the CIT building was to be known as one of New Zealand's first technical institutes for post-primary teaching before closing in 2001.⁴

Sited west of the campus – facing north-east east – the main CIT Building's clustered design is broken up into a series of blocks, each block accessed via numerous intersecting access ways. In the north wing is the School of Science, the south the School of Engineering with further allocated space for engineering in the adjacent lower block. One of the building's main focal points would have to be its debated Brutalist-style lecture theatre block, referred to as 'F' block. This architectural element houses a three-tier (tongue and groove timber lined) lecture theatre within 'bush-hammered cement ribs', also marking the main public entry to the building.⁵

Above: Northern A block façade and Brutalist style F block

⁴ Leach, A. "Campus Confessions - Architecture and the Central Institute of Technology" p. 18

⁵ Ibid

Top: A block façade
Above: Northern Entrance to Campus

3. SITE ASSESSMENT

III. BUILDING ANALYSIS - CIT BUILDING

ELEVATIONS.

West Face Elevation (Rear)

North Face Elevation (Right)

3. SITE ASSESSMENT

III. BUILDING ANALYSIS - CIT BUILDING

EXISTING PLANS.

Lvl 2

Lvl 3

Lvl 4

Lvl 5

3. SITE ASSESSMENT

III. BUILDING ANALYSIS - CIT BUILDING

INITIAL BUILDING BREAKDOWN.

The existing structural system is an imperative of the building that will be considered in the redesign process. A lot of the decision making will be about what to retain versus what to remove, as well as what can be retained versus what can be removed. From the beginning one of the advantages of its structural system is its modularity. Within this given set of conditions; the repetitive module, the challenge will be to encourage and enable variation.

The existing interior configuration of the building reflects this structural system; established as a multitude of corridor separated rooms. This isolates spatial activities, limiting social interaction. As one of the project's focuses is to provide varying levels of social engagement and encourage collective activities, this generic rigid educational arrangement will inevitably be one of the challenges addressed in the redesign process.

Exterior Façade

Existing Internal Walls

Existing Internal Walls

3. SITE ASSESSMENT

III. BUILDING ANALYSIS - CIT BUILDING

EXISTING PROGRAMMATIC LAYOUT AND CIRCULATION.

The Central Institute of Technology is established upon a small number of dispersed large scale buildings, along an orthogonal axis, roughly situated north-south + east-west. From a central link Block ('E' block), the School of Science extends north and the Engineering South. A classroom block sits west of the link ('D' block); a lecture theatre extension ('F' block) faces eastwards. 'C' block; beside the Engineering block, contains workshops and laboratories. 'F' block is CIT's most distinctive architectural element; a formally expressive, Brutalist, three-tier lecture theatre block, its surface finished in bush-hammered cement ribs.⁶

⁶ Leach, A. "Campus Confessions - Architecture and the Central Institute of Technology" p. 20.

Existing Circulation

Draughting Room	Workshop Spaces	Science Laboratories
Electronics Laboratories	Classrooms	Tutor Offices
Mechanics Laboratories	Store + Preparation Spaces	Bathrooms

Lvl 2

Existing Circulation

Lvl 2

Drafting Room		Workshop Spaces		Science Laboratories
Electronics Laboratories		Classrooms		Tutor Offices
Mechanics Laboratories		Store + Preparation Spaces		Bathrooms

Lvl 3

Existing Circulation

Lvl 3

Drafting Room		Workshop Spaces		Science Laboratories
Electronics Laboratories		Classrooms		Tutor Offices
Mechanics Laboratories		Store + Preparation Spaces		Bathrooms

Lvl 4

Existing Circulation

Lvl 4

Draughting Room		Workshop Spaces		Science Laboratories
Electronics Laboratories		Classrooms		Tutor Offices
Mechanics Laboratories		Store + Preperation Spaces		Bathrooms

Existing Circulation

Drafting Room		Workshop Spaces		Science Laboratories
Electronics Laboratories		Classrooms		Tutor Offices
Mechanics Laboratories		Store + Preparation Spaces		Bathrooms

Building Entrances

Vertical Circulation

- Lifts [E Block]
- Stairwell's

3. SITE ASSESSMENT

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EXPERIMENTAL DESIGN

4. EXPERIMENTAL DESIGN

I. INTRODUCTION

ESTABLISHING A SOCIAL BELONGING FOR DISENFRANCHISED YOUTHS.

The research design experiments illustrated and discussed in this chapter explore opportunities whereby interior architecture is constructively engaged as a mediator of influence.

This Chapter is divided into three sections; the first section exhibits preliminary design experiments as a methodological investigation of interior architecture proactively engaging with its inhabitants. It explores: what types of collective spaces are necessary, what types of collective spaces can participate in daily activities and how and what types of collective spaces can either physically, emotional or visually encourage social engagements.

The second section proposes and discusses one possible systematic design solution which explores opportunities for how proactive interior architecture can be instilled within a holistic architectural setting, becoming both a setting for the daily life of individuals – where they may for example sleep, bath, eat and play, et cetera – and a solution for reintroducing disenfranchised youths back into society.

The third and final section of the chapter serves as a conclusion for both the chapter and the thesis. It discusses how the research has met the intention of developing an architectural interior intervention for disenfranchised youths as mediator of experiential influence.

4. EXPERIMENTAL DESIGN

II. DESIGN METHODOLOGY

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[09] As an open roof concept, the idea was to create shaded multi-storied spaces that looked out to exposed activity spaces below as a visual means of engagement. [11] The lecture hall is a space which is used for instruction. Unlike a traditional classroom with a capacity for fewer people, the lecture hall enables larger collective groups of people to congregate. [12] The hall is challenged where multiple activities may occur at any one time, with each space with the ability to witness the other.

[04]

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[04] The concept explored the notion of ascending into clustered architecture where youths' could lose themselves, creating their own secret hideaway. [14/15] Collectively the concept stemmed from an idea to remove the existing roof of the site, so the intervention could act programmatically as a city exposed to the elements. This concept was also about challenging the notion of the prison wall and the representation of space within space.

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[++] *Path* became a crucial part of design exploration. One of the difficulties was to invite circulation space to also become a gathering space. [22/23] The Dovecot was one example that enabled the integration of both circulation/thoroughfare and gathering spaces. The essence of the Dovecot is that it allowed for individual identities to be revealed and framed, with sense of security, while visually engaging with those passing through.

[19]

[20]

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[27] Conceiving an intervention where circulation routes were prominent, prescribed too greatly a sense of control, lose of freedom and disorientation. A Labyrinth notion was thought to enable youths' with the preconditions to make spatial discoveries. Furthermore, the initial concept did not allow for isolated spatial hierachies or programmatic variance.

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[28/30] Within the core of what is the threshold point of the building, the concepts embraced the pyramid and triangle as navigational and boundary elements. The idea was to try and create an inlet that was easy to pass through and up from the ground floor, but to come back through created a physical sense of awkwardness. The idea was to challenge the gateway controlling entry and exit of persons.

[31]

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[38/39] The tenement like design was to be about the solemnness of the shadow being pearced by the natural light too create an invigorating and spiritually profound quality. The close similarity to the traditional prison cell was however too great. A sense of identity needed to come from a space that was essentially about the harbouring youths

4. EXPERIMENTAL DESIGN

III. EXPERIMENTAL DESIGN

INTRODUCTION.

The following design intervention illustrates both the process and the result of design exploration.

THE INTERVENTION.

The unveiling for each designed block of the building is discussed addressing architectural, symbolic and experiential effects aimed at each of the building's three primary inhabitants: the Youth, the Teacher and the Community. Each of which undertakes a unique voyage journeying through the intervention. For example:

THE YOUTH

is primarily discussed as inhabiting the lower levels of the holistic intervention, beginning in the dormitory quarters of 'A' block. The youth then moves across the threshold of 'E' block, into 'B' block. From within the domain of 'B' block the youth learns and socialises before entering into 'C' block where he begins his engagement with the outside community.

THE TEACHER

begins his/her journey in the upper levels of the intervention in 'A' block. The teacher then moves to integrate with the students in 'B' block before fully engaging with them in the eatery of 'C' block over a meal: the ritual of dining.

THE COMMUNITY

as visitors to the building, enter from beneath 'F' block (the existing Brutalist style lecture theatre). They then move through into the threshold space of 'E' block into 'D' block, established as an environment whereby the community can begin to interact with the student. Challenging the traditional classroom convention 'D' block is the place where youths can be reunited with their family or close friend.

ARIAL PLAN VIEW

DESIGN NARRATIVE.

The research objective has been to explore how interior architecture can be designed to positively influence human behaviour. Based on this exploration, the research aims to challenge how interior architecture can be utilised to enhance the sense of self-esteem, integration, and social belonging of disenfranchised adolescent groups. As the following design aims to engage with these occupants with an experiential response based on these objectives, the design employs the constructs of the 'home' and of a ritualised day as a narrative to programmatically arrange the functions of space within each of the buildings five blocks. According to Pallasmaa:

“Home is not merely an object or a building, but a diffuse and complex condition, integrating memories and images, desires and fears, the past and the present. A home is also a set of rituals, personal rhythms, and routines of everyday life. A home cannot be produced at once; it has its time dimension and continuum, and it is a gradual product of the family’s and individual’s adaption to the world.”¹

By arranging space based on the home and of the rituals of daily life, the act of experiencing space becomes both spiritual and autobiographical, thereby contributing to the process of place making.

¹ Pallasmaa, J. Encounters: Architectural Essays, “Identity, Intimacy and Domicile” p. 115.

TRANSITION OF SPACE

Each intervention is established to enable differing levels of social engagement as well as being chronologically ordered whereby they are to be experienced in a systematic sequence. This is exemplified by the youths and the teachers, that while vertically segregated they continually engage the same axis, shadowing one another as they go about their daily routine: 'A' to 'B' to 'C'.

The interior intervention has been conceived whereby axial domains and shifts are prominent, inferring varying levels of social engagement, depending on the axial voyage of the inhabitant. For example, 'A' and 'B' block are the domains of the Youth and the Teacher: below the Youths and above the Teachers. As they journey from North to South their level of social engagement is encouraged and more intimately applied.

Transitioning from blocks 'B' to 'C' as well as 'F' to 'E' and then 'D', East to West, the intimate unity of the 'in-house' inhabitants becomes more exposed as it invites a greater level of social interaction extending out to the periphery of the surrounding community.

NORTH EAST PERSPECTIVE

SOUTH EAST PERSPECTIVE

SOUTH WEST PERSPECTIVE

NORTH WEST PERSPECTIVE

SYMBOLISM OF THE CIRCLE.

Symbolically the circle plays a significant role for both the youths and the project. The circle embodies a combination of three symbolic concepts: the horizon, the timepiece and the compass, all aimed at the rehabilitation of disenfranchised youth.

Establishing both a symbolic boundary and offering metaphoric protection, the circle also opposes the notion of the prison wall. The antithesis of the physical barrier of the prison wall, the circle symbolises the threshold whereby youth retain the choice to draw upon the rehabilitation and nurturing environment offered by the "institution". It is from within the confines and safety of the circle that the youth look out towards a new horizon, a new sense of hope and beginning; however, unlike a prison wall, they retain the choice to cross the threshold towards the horizon and grasp at a new beginning on their own volition.

As they look towards the future, the symbolism of the circle evolves to include that of a timepiece. As a timepiece the circle enables the building to be viewed as a harbinger of growth and maturation, a physical symbol of the journey over time of the youth towards salvation. In addition, the wear and tear of the circle serves as a physical manifestation of the passage of time further reinforcing its symbolic status as a timepiece. The architecture evolves over time through the interactions of the inhabitants, for example by graffiti and vandalism, into a celebrated and familiar space, almost an alternate realm from which the youths are able to express themselves freely, a kind of locus amoenus.

Lastly, the circle further embodies the idea of a compass, both moral and experiential, a compass that provides direction to the disenfranchised youth by way of the rehabilitation offered within the confines of the circle. The circle also accentuates the architecture expanding out into the landscape almost like the hands of a compass, pointing the way towards the horizon and the promise of salvation and re-integration with society.

4. EXPERIMENTAL DESIGN

III. EXPERIMENTAL DESIGN

A BLOCK.

Held within 'A' block are the contained rituals of sleeping and bathing. For both the youth and the teacher the block symbolises the start and end of the day, as a part of life's daily ritual. For the youths, 'A' block provides the privacy of the toilet, the semi-privacy of the shower and the twin-share bunk bedroom, where the boy never has more than two people in which he is engaging. Collectively they are about being independent, being left to their own devices.

SYMBOLISM OF THE DATUM

The datum aids to sequentially prescribe the daily routine. Like Hertzberger's 'Street' concept, the datum runs through the centre of 'A' block enabling inhabitants to place themselves on and off the grid of social opportunity. Consistent throughout the design, while enabling youths to move from one environment to another, symbolically the datum shares a relationship with the rites of passage for growing up by providing the youths with a variety of spatial environments which they must proactively confront when they reach adulthood – as productive members of society.

Exploding the contained core of its design reveals regularity in the way that sleeping is engaged. The lower levels of the dormitory introduce structure to the youth's life. Conceiving a module that is much like the home unit, the intention is to create a space shared intimately by a few, rather than a mass opened area dominated by 20. The youths' home invites them to personalise their newly claimed territory, even to spatter it with paint or graffiti, enabling individual expression to exist within the formality of architectural form.

SYMBOLISM OF THE MODULE

The module is a prototype of the single home; its slanted roof is reminiscent of home without being home, as well as its modularity reminiscent of institute without being institute. As the building is established upon a modularised structural grid, 'the module' – rather than trying to disguise or make itself subservient – is about ensuring that it is read by inhabitants as a regulatory device, as a structuring device, providing order to the experience of the youths.

Within the context of this perceptual order lies an invitation to find personal identity, so that the two co-exist, similarly to the interior of Corbusier's La Tourette composed of two opposite forces – freedom and restriction. Structural order is a symbolic mechanism for providing continuity to the life journey. The experiential variation within that order is the means by which individual identity can be celebrated.

Raised above and contained, the adult unit is about sole occupancy and individualisation, with less furniture built in to accommodate personalised items. Cantilevered over the units of the youths, the symbolic notion is of hierarchy (maturity) and evolution (growth). Crouched below, the youths' units are open as to invite a dialogue with the outside world. Recessed entries instead of doors aim to challenge traditional connotation associated with the prison cell e.g. imprisonment. Inhabited by four youths, this is the place they can call home; it is the module that is home. Together, the module and its five companions creates a family. As the identical module they are amenity.

“...we see it to contain objects in a structured relationship and perhaps in the firm expectation that there is something for us to find there.”²

While the front facing façade of 'A' block is about the ritual of sleep, the backside prescribes the ritual of bathing and cleansing – the tranquillity of falling water. Mimicking the sleeping modules, the below bathing area of the youths is shadowed by the sequential bathing and lavatory spaces of the teachers above.

“...the most essential auditory experience created by architecture is tranquillity...An architectural experience silences all external noise; it focuses attention on one’s own very existence. Architecture (...) makes us aware of our fundamental solitude (detaching) us from the present and (allowing) us to experience the slow, firm flow of time and tradition”³

4. EXPERIMENTAL DESIGN

III. EXPERIMENTAL DESIGN

B BLOCK.

'B' block is conceived as the collective gathering space which provides versatility in ways in which individuals choose to come together. Within the wing are opportunities for encouraging larger more fully integrated collective groups, as well as smaller more intimate and discreet nooks as hideaways for individuals.

The north face of 'B' block consists of three primary spatial environments. On the ground floor, large open planned spaces allow for more populated collective games and activities, encouraging social comingling. Relieving smaller groups of the densely populated ground floor – ascending to the second floor – transparent glass walled spaces provide separation while visually enabling a shared connection with both below and neighbouring spaces. Lastly, atop 'B' block on the fifth floor, are the 'dovecots'. These spaces allow for one or two persons to escape the communal spaces of below to engage in conversation in solitude.

“The relationship between the educational experience and the architectural context was, and is to this day, understated...The notion of designing a children’s environment, such as a school, which does not facilitate a degree of imaginative interpretation, or one which does not allow children to develop their own spontaneity, chance meetings and interactions with peers, may fail to engender interest in education amongst the pupil body. Child-only spaces...show children that they too have their own identity and value. These spaces are complementary to the more traditional fixed feature spaces such as the classroom, the gym or school yard.”⁴

⁴ Dudek, "Architecture of Schools: The New Learning Environment" p. 10.

For the teachers – like the ‘new generation’ prisons – ‘B’ block encourages a greater degree of social contact with the youths. As a result of teacher-youth interaction, positive relationships can be formed, aiding in the process to establish a sense of belonging, socialisation and equality.

Facing northeast these spaces receive the morning sunlight, with secondary communal gathering spaces in the southwest receiving the sun’s rays in the afternoon. This enables the curriculum of the school to be introduced architecturally, whereby spatial activities and their duration are mediated by the course of the day. Holistically this is an intervention that is not trying to set itself out in bold primary colours; pigmented concrete walls continue to invite the inhabitants to bring colour into the space in their own way.

4. EXPERIMENTAL DESIGN

III. EXPERIMENTAL DESIGN

C BLOCK.

Symbolically 'C' block represents the back door. It is the viewing station where within the youths can most readily observe the community without necessarily being infiltrated by it. The existing exterior walls are broken down to become symbolically reminiscent of a built ruin, while enabling it to act programmatically on the level of a playground. By opening and revealing the interior intervention up and out to the outside environment, individuals are provided with the opportunity to walk through the grass of the campus and lay under a tree, reinvigorating the emotional, psychological and experiential relationship of the boys with nature and the landscape outside.

Whereas 'B' block encouraged a sense of social collectiveness, it did so with a sense of protection within the parameters of the building. 'C' block however begins to remove those protective boundaries – those physical walls – inviting inhabitants to venture out with self-confidence, challenging the stability of the rituals and reality of daily life.

To further emphasise the threshold of crossing into the outside world, the twisted element in the mid-section of 'C' block creates a crack symbolising the order of the building becoming disrupted by nature and the cacophony of society. Experientially it is about seeing the outside community while not necessarily venturing out to witness the qualities of the outside. While these qualities may not be threatening, they are challenging the stability of the rituals of the reality of life, a confrontation which we face. Therefore the design moves from the most ordered to the least and then back again as the youths return to go back to sleep as a part of their daily routine.

“Emotions deriving from built form and space arise from distinct confrontations between man and space, mind and matter. An emotional architectural impact is related with an act, not an object or visual figural element. Consequently, the phenomenology of architecture is founded on verbs rather than nouns. The act of approaching the house, not its mere facade; the act of entering, not the door; the act of looking out of the window, not the window itself; or the act of gathering around the hearth or the table more than these objects themselves—all these verb expressions seem to trigger our emotions.”⁵

4. EXPERIMENTAL DESIGN

III. EXPERIMENTAL DESIGN

E, D + F BLOCK.

Whereas 'A', 'B' and 'C' block have been designed for the youths and the teachers – established upon the ritual of daily life – 'D', 'E' and 'F' block are more community focused. Collectively they enable public figures of the outside to inhabit the architecture and share an influential dialogue with the youths.

“...the traditional community shapes its habitat with its collective memory. Tradition is a centripetal force that prevents both the committing of errors and individual divergences. Through tradition, the overall interaction between physical conditions, a way of life and psychological needs are developed towards a balance.”⁶

'F', 'E' and 'D' block collectively make up the short axis of the building. They are a point of counterflexure where they are less responsive to the wings of 'A' and 'B' block as they are to 'C' block, in which they lie in parallel. Held within the intimacy of the circle they are protected while 'C' block extends beyond, growing out with a sense of gallantry.

⁶ Pallasmaa, J. Encounters: Architectural Essays, "The Place of Man" p. 73.

4. EXPERIMENTAL DESIGN

III. EXPERIMENTAL DESIGN

D BLOCK.

One of the most important factors in a youth's successful return to society is to facilitate and encourage the social and emotional support that can be given by family and friends, et cetera. 'D' block is arranged to invite multiple opportunities for such community engagements. For the youths who are ready to meet with community members, open and contained spaces are provided enabling them to do so. The design of 'D' block echoes the intervention as a whole, utilising the datum line as a circulatory pathway, off of which multiple opportunities for engagement exist.

E BLOCK.

With an environment that needs to have a certain amount of control, 'E' block – like the prison with a single point-of entry – symbolically represents the 'gatehouse', regulating the cross flow of persons venturing in and out of the building . As a transition space, a cross threshold space, 'E' block becomes a crucial part of the journey made by its inhabitants, engaged both morning and night. As an important aspect of the healing process, walking past the front door presents its accessibility as an outlet to the community as well as an invitation for the community.

4. EXPERIMENTAL DESIGN

IV. CONCLUSION

The primary intention of the thesis was to establish a social belonging and integration for disenfranchised youth through the use of interior architecture. Disenfranchised youth typically lack social acceptance and their resentment of this neglect may result in destructive and anti-social behaviour that impacts negatively on the community. Fundamental to this is often the lack of self-esteem among the youth. The chosen program – an educational, living and rehabilitation centre – attempts to overcome the disengagement of the youth by using the fundamental constructs of the home and a ritualised day as a vehicle for behavioural influence.

The independent and aversive tendencies that have been incubated by the personal circumstances of these youth required an innovative design concept that enabled spatial variety and the provision of choice in the daily engagement of the youths. Precedents of school and prison buildings have been researched where traditional notions of design reform are being replaced by more socially sensitive environments. In particular, Hertzberger's school building designs explore spatial openness challenging isolated units and corridors in order to establish greater social cohesion. Similarly prison architecture has fundamentally explored new avenues for encouraging social interaction as a result of 'new generation' prison designs, reducing psychological tension associated with the loss of freedom. The culmination in the development of these two typologies has been the behavioural implications as a result of encouraging social interactions with the articulations of spaces for individuals or smaller groups.

In typical institutionalised architectural approaches for schools, great emphasis has been placed in the past on the traditional subject matters of mathematics, science and the arts. Spaces are partitioned and there is a lack of cohesion in design planning. Such design mechanisms form fragmentation of social cohesion and is now recognised to be counter to the role of schools as vehicles of positive social change and development. Drawing from the experience of the evolution of prison design, a similar problem arises with encouraging the reengagement of the individual with the community setting. The institutionalised 'forcing' of people into either individualisation or collectiveness, coupled with an institution's isolation from other communities, is not seen to resonate for a large number of people and therefore is not desirable.

Locations for an educational, living and rehabilitation centre need to be carefully considered in relation to local community influences. For the experimental design study the site for the centre was located in an area where close connections with

the community could be enabled, where youths need to establish their closest ties. As a result of site selection, the design explored various opportunities to not only develop an interior architecture that instigated opportunities for spatial variation as well as communal and individual integration, but to also enable the study to explore the revitalisation of an abandoned Post-Adolescent educational facility.

As an active participant in the experimental design, interior architecture has been engaged to articulate the importance of integrating daily ritual stages. This idea is most prevalent within 'A' block, where the ritual of sleeping and bathing becomes synonymous with the start and end of the day, a fundamental part of life's daily routine used as a regulatory device to bring order to the experience of the youths. Furthermore, the design explores the importance of spatial diversity, where 'B' block has been explicitly designed to enable social interactions across two hierarchies of collective gathering spaces, from more fully integrated collective groups – which are about total immersion – to smaller more intimate spaces which visually endow participation.

One of the difficulties in designing an educational, living, and rehabilitation centre for disenfranchised youths is that when dealing with a community of individuals, it becomes problematic to create a single institution that can meet each individual's needs. Future design concepts may wish to explore an architectural translation of hierarchy and mentorship within the youth community. By encouraging the development of proactive leaders among the youth, rehabilitation may be expedited by providing inspiration and an example to follow. Further, the present experimental design response could be seen to impose a "Euro-centric" ritual of daily life and social interaction. New Zealand, and Wellington in particular, is fast becoming a multi-cultural population and future studies may benefit by responding to this demographic and sociological change. Lastly, future work may explore the efficacy and design of a city campus to cater for better re-integration of disenfranchised youth with the urban environment after their initial rehabilitation within the current sub-urban environment. Further benefit may be derived by the youth with a more progressive exposure to the cacophony of society within a more dense city environment prior to their "graduation".

In conclusion, this thesis has explored various architectural constructs and methodologies to improve engagement and the rehabilitation of disenfranchised youth. Adoption of these innovative concepts may further enhance the development of multi-purpose and institutionalised buildings.

4. EXPERIMENTAL DESIGN

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