Mining the Urban Unconscious: The role of sound and light in the shaping of temporal spatial interventions

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Abstract: This paper exposes the themes explored and design outcomes produced from the 'Sound and Vision' Undergraduate Interior Design studio run in the second semester of 2008. The studio considered the dynamics of selected iconic spaces within Melbourne's Central Business District and asked how sound and light could be employed to expose the context, history and issues of a particular site, and in doing so, evoke moods and emotions that create a new reading of the space. The paper discusses the processes and perceptual sensibilities employed in the development of the design studio project.

The design brief asked for the proposal of an 'Urban Transformation' that would take place at particular site from the hours of twilight (5 to 9 pm) for one week. This task introduced the concept of designing in time as well as space and addressed the temporal/ time based dimension inherent within the use of sound and light. The project highlighted a number of techniques and strategies that may be used in addressing a design that alters space minute-by-minute, hour-by-hour and day-by-day.

In order to develop an intimate understanding of the conjunctive use of light and sound, the studio began with the production of a series of test rigs and experimental projects, which combined the application of specific technical knowledge with an appreciation of tangible physical affects. The construction and testing of these devices offered not only an insight into the phenomena and perception of light and sound, they also provided a guide in how to map the visual and acoustic properties of the intended sites and anticipate the affects that the designs would create. In manipulating these phenomena and the specifics of their perception the project offered a refined comprehension of the dynamics at play within the intersection of the senses.

The sites were carefully chosen to represent the civic values, historical periods, cultural institutions and corporate sensibilities that define Melbourne's character and architectural heritage. Sites included the Shrine of Remembrance, Immigration Museum, Federation Square, BHP House, Capitol Theatre and State Library. Collectively the sites and the students design interventions construct a portrait of the cities shared values, common beliefs and hidden desires. The projects encompass ideas on the construct of history, the nature of collective memory, the experience of duration and the resonance of the ephemeral and suggests how these may become key underpinnings for the development of an interior design.

Ultimately the project uncovered how light and sound can be used to augment and amplify the conditions of an architectural space and in doing so expose layers of interpretation, contextual reference and potential metaphors inherent within the urban realm.

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Introduction

Cities are not just constructs of asphalt, steel, concrete, bricks and mortar. Their character lies in the layers of events and histories that are embodied within the building typologies and the shifting functions of the city. Beyond mere physicality lays the city as experience; as memory; as imagination. By engaging with the tapestry of phenomenological, social, cultural and historical conditions that shape the city, a designer may conceive of urban spaces in ways that interweave the accretion of the past within a simultaneous present. In uncovering original approaches toward this kind of fashioning of the urban fabric, students involved in the 'Sound and Vision' Undergraduate Interior Design studio, considered the dynamics of selected iconic spaces within Melbourne's Central Business District and asked how the context, history and issues of a particular site, can be exposed through the use of light and sound, and in doing so, evoke moods and emotions that create a new reading of the city.

The design brief asked for the proposal of a spatial transformation that would take place within a prominent urban interior, from the hours of five and nine in the evening for one week, as part of the Melbourne Design Festival. This task introduced the concept of designing in time as well as space and addressed the temporal/ time based dimension inherent within the use of light and sound. Within the project, the manipulation of time was embodied through the exposing of histories, myths and memories of the city and through the development of spatial strategies that altered space minute-by-minute, hour-by-hour and day-by-day.

The sites were carefully chosen to represent the civic values, historical periods, cultural institutions and corporate sensibilities that define Melbourne's character and architectural heritage. Collectively the sites and the students design interventions construct a portrait of the cities shared values, common beliefs and hidden desires. The projects encompassed ideas on the construct of history, the nature of collective memory, the experience of duration and the resonance of the ephemeral and suggested how these may become key underpinnings for the development of an interior design.

The confluence of light and sound is a particularly powerful tool for the designer to explore. While these two most prominent yet separate sensorial stimuli seem to interact with and reinforce each other in many extraordinary ways it is a field that is only just being explored by artists and designers. In manipulating these phenomena and the specifics of their perception the project offered a refined comprehension of the dynamics at play within the intersection of the senses. The projects presented in this essay question how light and sound can be used to augment and amplify the conditions of an architectural space and in doing so expose layers of interpretation, contextual reference and potential metaphors inherent within the urban realm.

Art and/or Design

In order to extend the conception of what constitutes interior design practice, the studio began with a review of the shared histories of art and design in the twentieth century and asked the students to begin to position themselves relative to these two distinct yet overlapping fields of endeavour. In order to take on the idea of a transformative urban installation, the students were asked to consider their attitudes towards the nature of art and design and more

specifically the similarities and differences between conceptions of Interior Design and Spatial Art.

Since the development of ideas on the 'expanded field' in sculpture in the nineteen sixties and the development of phenomenal and installation art practice the realms of (spatial) art and (interior) design have crossed and merged. Claire Bishop[1] attempting to differentiate the practices (in order to defend the art practice) describes the concerns of installation art as;

> *'a desire to activate the viewer ... and to induce a critical vigilance towards the environments in which we find ourselves. When the experience of going into a museum increasingly rivals that of walking into restaurants, shops or clubs works of art may no longer need to take the form of immersive, interactive experiences. Rather, the best installation art is marked by a sense of antagonism towards its environment, a friction with its context that resists organisational pressure and instead exerts its own terms of engagement'*

The studio sought to uncover the relationships between installation art and interior design through a series of briefs, which asked for the expression of ideas, and attitudes through both written manifestos and the production of conceptual art/design pieces. Through these projects, the intentions, commonalities and connections that lie between the two practices were interrogated. The common aesthetic, perceptual and technical bases that inform each practice were identified and the nature of the convergence of installation art and interior design was considered. Initially students saw designs role as having some practical purpose while arts role was to provoke; design was seen as a solution while art was thought of as a technique for questioning.

The students were not asked to formalize a definitive position toward the similarities and differences between artistic interventions and more normative strategies of interior design; we were not in search of a dogma. Rather, initial theoretical positioning was left to mature in the students mind as the project explored the perceptual and technical issues that surround the understanding of light and sound. In the latter part of the semester, and in light of each student's response to specific sites, the locating of their proposals relative to the continuum of art and design practice became a critical filter through which they would test their ideas.

During the latter stages of the projects design development it was noted that the students began to identify their proposals as either design solution (which were seen as long term enduring additions to the program of the building and its continued use or which fell into the more recognizable conventions of exhibition design) or as ephemeral spatial performance (that established 'a sense of antagonism with its environment' and manifest a particular emotive response to the issues surrounding the site). For many students this identification of the projects 'terms of engagement' as either art or design became an important juncture within the projects evolution and informed the shaping of the projects intent and the direction it took during its final iterations.

Learning Light
In introducing students to an appreciation of the qualities of additive light they were asked to consider the phenomena apparent at the twilight hours when the refraction of light in the atmosphere caused by the setting of the sun makes the sky dance with colour and interact with the spectacle of artificial light as it begins to rise from the city. For a short expanse of

time the qualities of natural light have a tangible reaction with the colours and surfaces of buildings. Opaque and reflective windows slowly become translucent and the lights from within seem to subtly change their colour and intensity as darkness descends. At the edge between darkness and light, the qualities of inside and outside, materiality and immateriality, colour and luminosity undergo a complete transformation.

To come to terms with such phenomena and the manipulation of artificial light students were asked to consider Goethe's postulations that 'light is the equal partner of darkness'. Goethe pictured that light and darkness relate to each other like the north and south poles of a magnet, and that colours arise at the borders where light and dark meet. In this thinking darkness can be seen to weaken lights power and conversely, light can limit the energy of the darkness. So it is possible to think of yellow as a light which has been dampened by darkness and blue is a darkness weakened by the light. [2] Between these two extremes lies the ideas of colour emerging from darkness and that colour can be manifest as a shadow within a field of light.

The students were also asked to consider the immaterial qualities of the modern city. The twentieth century has marked an era where structural and material technologies have transformed our approach to building. The imposing stone solidity of nineteenth century cities has been replaced by transparent and translucent cityscapes we know today. In unison with the technical breakthroughs, a philosophy and aesthetics of dematerialization has also been expressed in both architecture and art. In architecture, the influence of Mies van der Rohe's carefully proportioned planes of glass and their juxtaposition with the rich materiality of marble and granite through elegant minimalist detailing produced an aesthetic in which architectural elements seem to float impossibly on wafers of reflected light. More recently Jean Nouvel, in buildings such as the Cartier Foundation in Paris, reconfigured material substance so as to confound traditional notions of the building as definable object. Nouvel attempted to construct 'a space that works as the mental extension of sight,' performing a type of vanishing act that leaves the viewer wondering where the object went, the goal is to render ambiguous the boundary between materiality and non-materiality, between image and reality. [3] In the realm of art the use of transparency, reflection and illusion in the works of artists such as Robert Irwin, Dan Graham, Yayoi Kusama and Anish Kapoor destabilize ones preconceptions of the physical world and brings into question the relationship of the viewer in the completion of a work of art.

Another approach to dematerialization was explored through the medium of projected light and imagery within and upon architectural spaces, so as to utterly transform their apparent structure and volume. This overlaying of the geometries, texture and colour harmonies of a projected image onto the geometry of an existing space, needs to be carefully brought together through the precise placement of projectors, the use of appropriate lens ratios and the anamorphic correction of images to compensate for the angle of the projected light. The resulting affects dissolve and transform the existing architectural condition creating another dimension to an environment in which subtle meanings and spatial dynamics can be made apparent through the juxtaposition of image and space.

Sound as a Spatial Device
Introducing students to an appreciation of the realm of sound was undertaken initially through a series of guided walks through the city in which one student would close their eyes and be

led by another student through a series of carefully chosen acoustic environments. Through this exercise students began to develop critical perception of the acoustic qualities of particular types of spaces and how these qualities seemed to shape the spatial dynamic. The kinaesthetic awareness of the students bodily position in space was made more acute through the blocking of the sense of sight and began to expose the three dimensional qualities that sound brings to space.

The 'active' listening to specific spaces was further qualified through the students attempts to sonically reconstruct the spaces. This reconstruction required the identification of the layers of sound at work in the space, the reverberations made through volume and materiality and the understanding of the layering techniques that are used in the construction of movie soundtracks. In this approach to addressing sound, the acoustic mapping of a space became the subject for the introduction into the editing of sound scapes through audio editing software.

With these principles of sound as a foundation the students began to prepare sound scapes that would interface with their selected site. In concert with this exercise they were asked to build test rigs that would simulate the material qualities of the space and prototype the design and location of the resonant chambers that their design would employ. These test rigs revolved around the disassembly and reconfiguring of an inexpensive computer stereo speaker kit. The students wired up the amplifier and a combination of speakers so as to interface with their laptop or ipod. Through the construction of this simple device students gained a new confidence in experimenting with sound propagation and acoustic qualities, sound was demystified and became a media that could be explored in a responsive and intuitive way. Through these rigs students tested how different frequencies and amplitudes of sound reacted with different materials and volumes, how the construction of simple enclosures enhanced the performance of the speakers and how different arrangements and combinations of speakers relative to the listener achieved different levels of sound quality, clarity and spatial affect. The rigs became a developmental tool to both model the acoustic conditions of their site and test the potency of their sound scapes.

Re-imagining the Urban Void
With these primary investigations into the manipulation of light and sound as a base the students were then asked to bring the two mediums together to draw out a specific rendering of a public space within Melbourne. Each project sought to uncover the nature of the conjunctive use of light and sound so as to amplify our perceptual experiences. Approaches taken within the studio encompassed concepts such as synaesthesia, where colour and tone are worked into a system of corresponding resonances, and, notions of duration, where the rhythms of sound are juxtaposed with the shifting qualities of light so that a complex tension is established between the two media and each moment experienced acts to subsequently shape our perception of the next. The bringing together of sound and light within the context of sites rich with historical references and contemporary meaning highlighted the mnemonic potentials of the interplay between the phenomena to evoke mood, emotion and atmosphere and to transform interior space into a heightened dramatic and theatrical experience.

A number of the projects that were sited in large corporate foyers and public atriums used the concept of 'amplifying the everyday' as a strategy for the light and sound installation. Another typology of space that became apparent were the 'spaces of memory', in which the students

found, that through the nature of the program of the building, there was a compelling story that could be told through light and sound. In other projects students were challenged by the splendour of great buildings that seemed to hold deep histories and resonances within their interiors, in responding to these spaces the students often found narratives within the architecture from which to they could perform appropriate accompaniments to the existing order and beauty.

Amplifying the Everyday
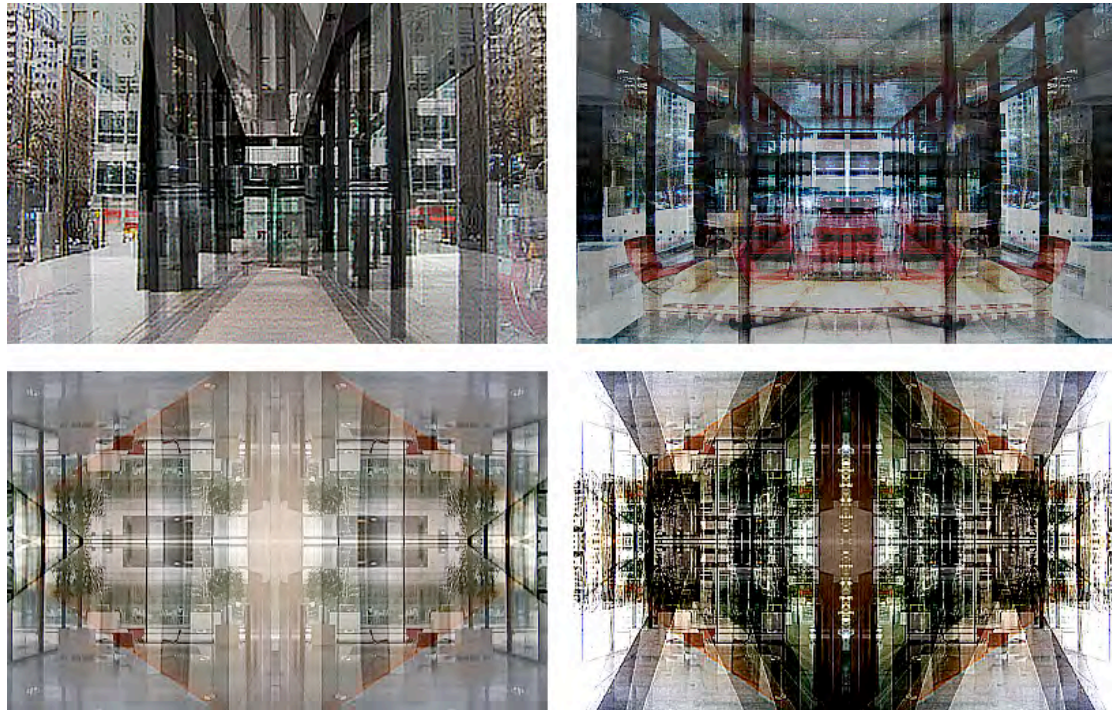
BHP House - Susan Melton

Susan Melton saw the former headquarters of BHP as a structure that represents the beginning of the Modernist Movement in Melbourne through a world of steel frame, concrete form and glass. The sound and visual installation created for the space was inspired by Jacques Tati's 'Playtime', a movie documenting the transition to Modernism and its impact on society. The concept of subtle surprise evolved for this project. The idea was to recreate the sense of shock and appreciation that first existed in the erection of Modern forms. This was achieved through accentuating the qualities of light and sound within the space similar to the affects used in Tati's movies. To this end, the floating glass windows that frame the foyer space and the box like forms of the interior mirrored planter boxes are manipulated using thin films of amorphous silicone to create distorted and dazzling reflections. This optical affect was reinforced through the playing of amplified everyday noises, such as the squeaking of the soles of shoes on a marble floor, the chime of an arriving lift or the sounds created when sitting in a leather chair. The resulting space became a surreal intensification of normal sounds and sights that sought to rekindle an appreciation of the peculiarities of modern life.

Kenneth Yuen's project addressed the foyer of the new BHP Billiton building. The space is the epitome of the modern corporate image, crisp and sharp and occupied by well dressed young executives, the space gives a sense of intention and the impression of strength and maturity.

This installation intended to subvert the daytime mood of the foyer by softening the hard surfaces and precise angles through the use of rich colours and soothing childlike sounds. A series of large frosted acrylic columns were placed in the foyer space. These columns were equipped with speakers and a changing LED light system. The columns transmit an ethereal field of sound upward towards the ceiling which is reflected throughout the space while the gently changing colours emanating from the tubes create a soothing coloured haze between them, as well as a multicoloured tapestry of colour reflected from the pattern steel wall surfaces that line the foyer.
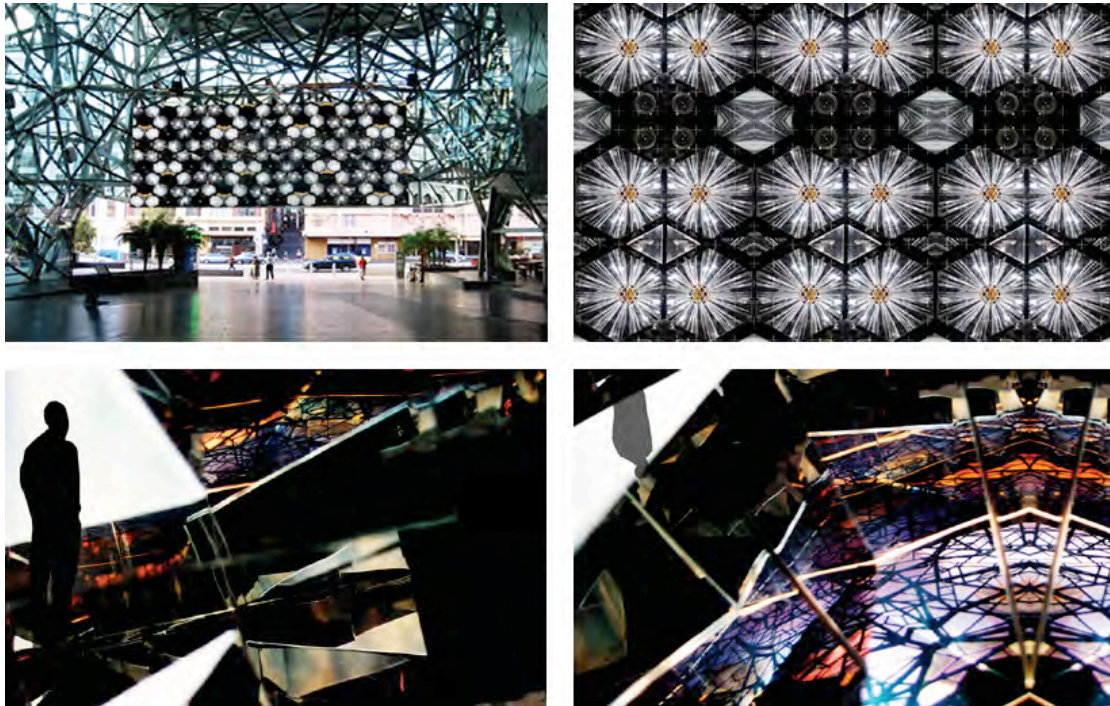

FEDERATION SQUARE - Samantha Villella

In Samantha Villella's' proposal for the Federation Square atrium, the enormous scale and complexity of the space was dealt with by making a smaller environment in the centre of the atrium which had intricate and highly reflective panelling on the inside. The small pavilion became a viewing device which would reflect the geometries of the atriums roof structure onto its walls, floors and ceiling. The resultant affect was extremely chaotic and intense, causing the viewer to become completely immersed in the intricate detail of the architecture above. The accompanying soundscape juxtaposed the sharp triangular geometry with sweeping crescendos of glass like chimes and harps.

In Yolanda O'Mara's proposal, the business tenants who moved through the101 Collins Street were considered reminiscent of John Brack's painting '5pm Collins St' in which sepia toned Melbournians with grim faces move in neat lines down through the city. The installation proposed to intensify the drab nature of office existence through the installation of low-pressure sodium vapour within the foyer space where people accessed the lifts. The LPS lamps would drain colour from the foyer, rendering everything illuminated by them to hues of yellows and browns. This dispiriting colour field would be accompanied by a soundtrack of the working of a great engine relentlessly grinding and clanking away.
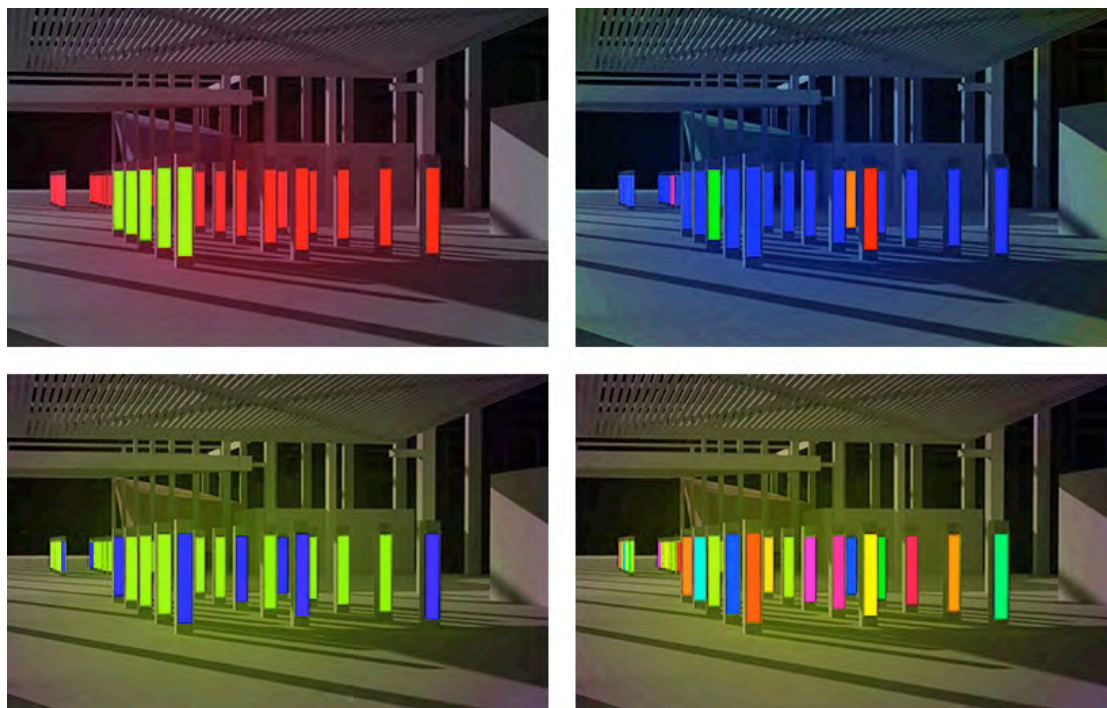
Spaces of Remembrance
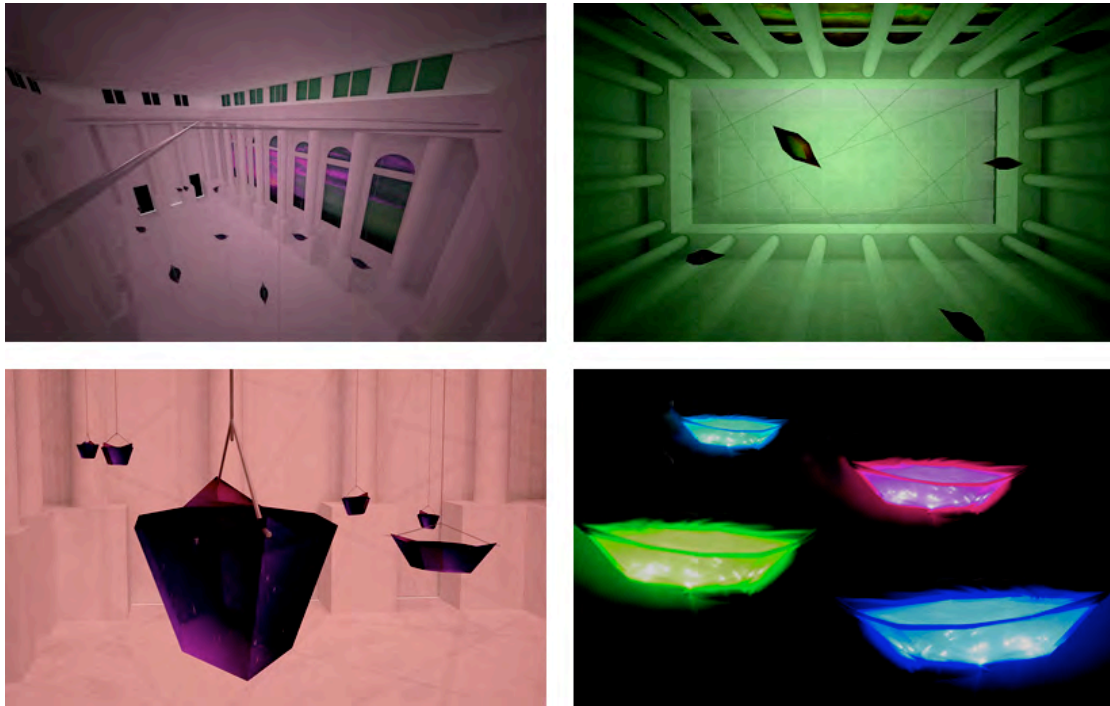
IMMIGRATION MUSEUM - Mann Chi Ng

Ng Mann Chii saw the Immigration Museum as a dynamic space in which stories of the past are unfolded as a celebration of Victoria's multicultural history. In response to the idea of history unfolding, the design proposed that an array of illuminated paper boats that housed small speakers were hung from stainless steel wire attached to the ceiling. These boats would seem to float at head height through the space and would be subtly changing colours, altering the overall mood of the space. As people walked through the space they would become aware that the 'sea of boats' were emitting voices, in languages from all over the world, of people talking about their experiences of migration from the past until today. The overall affect imbued a sense of the complex tapestry of backgrounds, nations and stories that define Australia's identity.

Ka Man Cheang's proposal for the impressive domed space of the La Trobe Reading Room within the State Library utilized the library's extensive collection of books on Australia's history. The installation used sound and light to create a spatial event that magically enabled the books to become 'active' at night time and tell the stories of Australia's history. Warm incandescent lights created a mood and feeling of the past. Simulated candlelight shone beside the books, as voices from days gone by filled the libraries majestic void with unusual tales of familiar places.

Brenda Yap's proposal for the Melbourne Museum, viewed the building as a place which is abundant with contemporary technology which is used to communicate a sense of history, past and culture. A lively space in the day, but dead and lonely at night, the forecourt of the museum provided a backdrop in which to manifest the 'ghosts of the past'. Moving away from the traditional concept of 'bringing the past to the viewer' by viewing exhibits in glass cases, the installation worked with the idea of 'bringing the viewer to the past' to experience a

journey. The installation employed thirty rectangular bollards rigged with lighting and audio technologies that transformed the immense portico of the building into a sensorial voyage. The space would be washed by sounds of the collections of the museum; aboriginal music, the calls of prehistoric animals and rare wildlife and stories of eras past waft through the space as the lighting units subtly bathe the space in rich and emotive hues of colour.


MELBOURNE MUSEUM - Brenda Yap

In Shahrizal Mohd Ismail's installation in the Hall of Columns underneath Melbourne's Shrine of Remembrance he attempted to expose the visitor to how the war veterans may have felt during battle. Flashes of red and white light interrupted an enclosing darkness, creating a forbidding atmosphere. The sound of rain and thunder were a constant condition, a heartbeat would intermittently speed up or slow down or stop, while sudden bursts of gunfire, bombs and urgent radio voices made the space feel like a war zone. The overall affect was one of disturbing reality where the visitor would be thrown in to the heart of battle and it's terrify and claustrophobic conditions. Far from glorifying war and its aftermath the installation intended to engender a new respect for the soldiers, as ordinary men placed in horrific situations in distant lands.

Constructed Narratives
In researching the history of the foyer of 333 Collins Street, Sella Bustani discovered that the buildings massive domed space was inspired by the geometries found in Islamic Mosques. Her proposal entailed the projection of patterns from Christian cathedrals and Islamic mosques onto the dome so as to merge with the existing patterns. The accompanying soundscape was a mixture of Gregorian chants and contemporary world music inspired by the Alhambra. The music was combined with sound effects of church bells to accentuate and enhance the acoustic potentials of the dome. The resultant sound and light scape sought to transform the foyer of the building into a space where disparate cultures are combined harmoniously within a common architectural heritage.
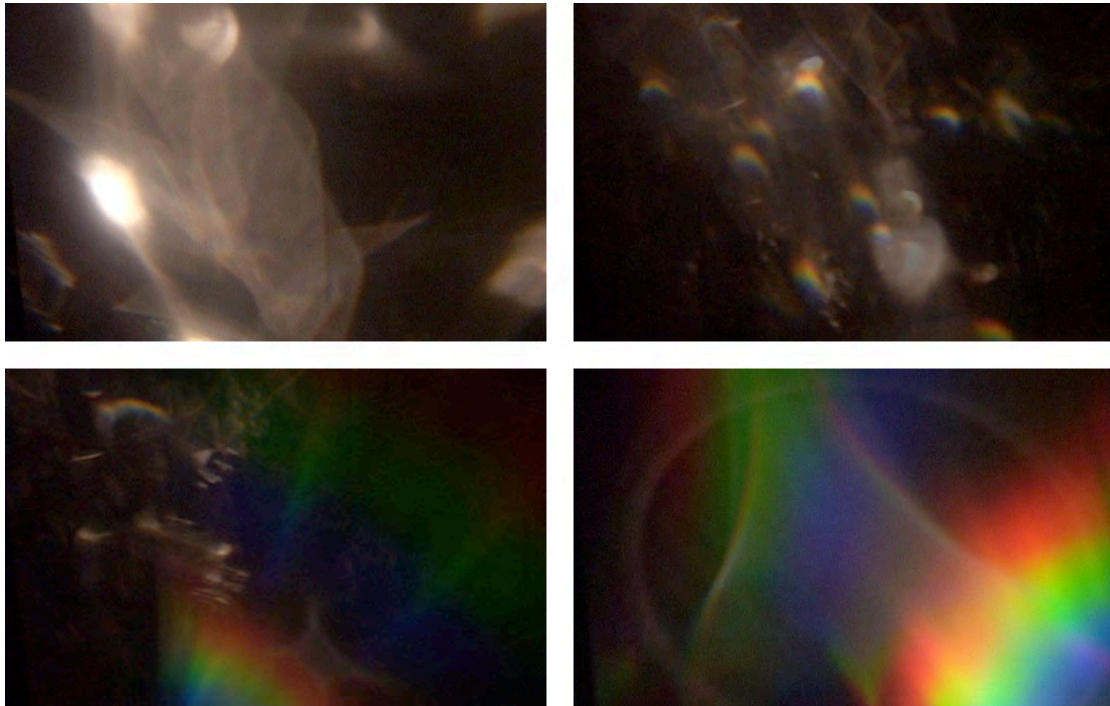
CAPITOL THEATRE - Lisha Corcoran

Lisha Corcoran's proposal for the Capitol Theatre responded to the unique extravagance of the theatres crystalline plaster ceiling and the thousands of coloured lights which can interact in different ways with the ceilings geometry to create a magical light show. With such an overwhelmingly beautiful and stunningly designed space to work within, the proposal focused on the stage area and the performance of a grand operatic sensorial experience. Using Goethe's theory of light and colour as a guide, the performance enacted a battle between opposing forces, a war between darkness and light, good and evil, heaven and hell. However the performance was conceived as an immersive sensory experience in which the audience would mount the stage and be awash in a sea of sound and light as they looked out into the spectacle of the grand theatre.

Georgette Forbes's proposal for the extraordinary Underground Carpark at Melbourne University sought to make the most of the hyperbolic paraboloid concrete shell roof structure, which, along with the grand gothic entrance, has inspired the carparks nickname as 'The Bat Cave'. The proposal was for the creation of an Orphean underworld in which, through the projection of gently moving images across the curvaceous interior, a labyrinthine and continually shifting atmospheric journey would unfold over the course of an hour within the expanse of the vaulted and columned space. A soundscape, comprising of primal sounds such as ethnic vocal chants and Tibetan bells, would reverberate through the space, heightening the dreamlike play of light and dark.

MELBOURNE UNIVERSITY UNDERGROUND CARPARK - Georgette Forbes

Conclusion

The success of the studio relied on students becoming intimately involved with their particular sites and the qualities that defined their identity. This interrogation of the potential metaphors and readings of urban spaces delved deeper than an identification of program and building typologies. In developing briefs and responses that sought to elicit an emotional response the students were asked to find a poetic core to the site and to expose these hidden qualities through the act of spatial manipulation.

In introducing the subtleties at play within the manipulation of light and sound, the studio sought original forms of engagement with urban spaces. Mastering the technical manipulation of light and sound and then using them as both an interpretative device and medium through which to profoundly affect the qualities of space brought with it the development of a refined sensibility toward the phenomena that define our sensorial experience. In synthesizing these concerns into a vernacular that can transform our perception of existing architectural space the projects embraced concepts from the worlds of installation art, architecture, cinema, literature and philosophy to suggest a plethora of potential urban spatial experiences.

In identifying the commonalities and differences between the practices and intentions of interior design and installation art and allowing these concerns to infiltrate and inform each other the studio and its resulting projects uncovered a rich vein of creative license. Beyond the strained categorization of whether a work is art or design, and even beyond the now familiar concept of cross disciplinary collaboration, the studios outcomes allude to the potential for new forms of trans-disciplinary practice to evolve.

Ultimately the studio brought the sensibilities of contemporary art practices to architectural spaces and in doing so expanded the scope of what constitutes interior design. The practices

of light and sound art were taken as mechanisms for the temporal occupation of urban interiors, these occupations sought to draw, from the fabric of the city, a trace of its essence. By summoning the ghosts and allusions, which a building embodies, the project suggested the foundations of a city in which its spaces can subtly expose a simultaneous confluence of past and present, memories and potentials, aspirations and dreams.

Endnotes

[1] Claire Bishop 'But is it installation'

References

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