



CARTESIAN WELLS

Peter King

Although the techniques of Cartesian projection have long been the cornerstones of spatial description in the practice of Architecture and Interior Architecture we still lack, and it is unfortunate that we do still lack, a complete spatial study of Descartes', writing on the method¹. The method by itself is easy to spatialize, and the four ideas it involves are not really about people looking at space in advance. The metaphor for architecture is potent throughout Descartes' writing and it is on that study that the spatializing of the method should focus.

In Descartes we have cities turning into deserts. We have the idea that a building made by one architect is far finer than that made by a committee. There is nothing new in the city/desert equation as there is nothing really new in the elevation of the one architect. It refers to the *architectonike* in Aristotle² where the *architectonike* is the first and most basic of the arts; the master builder who employs all others. Even though *architectonike* is the first art it is also the last: it is the art that brings all the arts and sciences together and explains them. We would now call it epistemology—the thought of thought, the apprehension of apprehension, the comprehension of comprehension. (The curious thing about the phenomenologist or epistemologist, is that in order to think about a certain thing, they must think about every thought other than that which they are addressing.)

There are fragments of what Descartes writes about the method which move away from Cartesian space. He is making deserts, and in an astonishing passage, talks about the method as being a construct for a blind man, where the 'blind man can feel his way through'. This is a return to the haptic—the touching, not the seeing of space—and implies that Cartesian isotropic space must have other characteristics within it, rather than just being visually uniform. This would enable the blind man his capable passage.

If Cartesian isotropic space has the qualities of high and low, of left and right, of front and behind, these are almost aural or listening qualities. But if we continue the projection of Cartesian isotropic space (which I believe is not isotropic but subject to change), a mythical beast intrudes itself onto our vision and feelings and thought. In his description Descartes summons up a Chimera, a mythical monster. This monster cannot be dismissed. For Descartes it is the evidence of the mind speaking a particular kind of truth. However it is a censored Chimera: he only brings together the attributes of lion and goat, missing out the vital third element which is that of the snake. The snake was the nightmare lying in wait for Ruskin.

The 'truth' Descartes alludes to is present in a more domestic and schematic form in the work of doctors who observe and analyse hysteria. For example, according to Freud³, the hysteric experiences a state of paralysis which affects those parts of the body we know about in a non-scientific, non-medical and non-neurological way. A facial paralysis will not involve those muscles that physiologically cause the paralysis; the paralysis is actually conforming to the everyday popular notion of face. The seizure of a hand does not really involve those muscles which cause the hand to cease up. It involves what we in a popular sense see as a hand. The most important of such images of course, is the heart. We do not think of the heart as a scientific pump. We think of it as being, as the Chinese might say, 'the Emperor of the body', the ruler of feeling.

THE BOTTOM OF THE GARDEN Multi-Media Performance 1996

Peter King, Phillip Parlow, Kieron Meagher

The space of Descartes can easily be read by referring to the notion that humans possess a soul, while animals—which we are allowed to vivisect—are considered nothing more than automata. Cartesian space is seen as strictly scientific, automatic space where Chimeras and other monsters suddenly obtrude. It is as though the weight of the physical is somehow tied to that which denies the temporal (for Cartesian space is isochronic: happening all at once).

So we have two kinds of space. One space we can never live up to, which is if you like the idealised mechanical space of the Cartesian world. In that space is always the compromising ‘folk’, or ‘popular’ feeling. It is in the intersection between the mechanical and the popular that design and spatial manipulation occur.

For Descartes—an alchemist/chemist/barber/surgeon living in the early Seventeenth Century—matter, which is what we deal with most of the time in design, stood inert. Science has since explained that matter is to do with molecules and atoms moving at differing velocities, a shift in fundamentals which Architecture/Interior Architecture has yet to properly respond to. Many architects and designers have rushed out and grabbed what little they can understand of chaos theory—a scientific hypothesis—to use as a theoretical ‘hook’ on which to hang their mess. This is a very good modern example of the confusion between the purely scientific and the popular. One architect to achieve a transcendence through his use of matter is Mies van der Rohes, in for example, his Seagram Building or his New National Gallery in Berlin in which he locates speed, velocity and drama in glass.

The National Gallery in Berlin frames a view and perspective (which for the most part means ‘a way of looking through’). A one point perspective is a foreshortened grid. A two point perspective is another even more complicated foreshortened grid. The great streets of St. Petersburg in Russia—like the Nevsky Prospect (home to many a modernist novel)—have another meaning for the word ‘prospect’. The original Russian of the word ‘prospect’ actually means perspective. In the novel *Petersburg* by Andre Bely,⁴ the city becomes a square grid placed within the two concentric round dots—the standard cartographic way of representing a city. One character in the novel has an astonishing imagination through which he sees the entire globe encircled by the grid of St. Petersburg. A squaring of the circle; something that is absolutely impossible, but can at least be dreamt. In the novel there is a linear dream imagined, and a circular imagining. The linear becomes aristocratic space in the centre of the city, while the circular is made up of factories and work houses that encompasses it.

A similar split to the scientific and the popular can be seen in the optic (that which is seen) and the haptic(that which is touched). It is quite a potent thought; that the whole way of looking at space is constantly subject to revision. The trouble—and if you like the virtue, the grace and the beauty—with the revision, is that it always contains errors. An alteration is like a finger in a dyke, where a mass of water waits to break through or wash away. Every advance introduces a leaking: an aberration.

The danger in the practice of Interior Architecture and Design and of the departments work as seen in this publication, is what appears to be an emphasis on visual seduction or visual appeal. As though the only way to convey in book form is a mock-up or demonstrated desire for three-dimensional space in

two dimensions. One could argue that this is a long way removed from the architectural drawing. The architectural drawing according to Linfert,⁵ must not take the pictorial detour if it is to enable one to apprehend structures. So the lightweight lines traced over certain plans or sections are not there as the roses that strew the way to hell. They are in fact an abstraction of the whole.

Now abstraction, has alas, at least two meanings: one is of course the withdrawal of any desire from the outside world (a Freudian⁶ version). The other is the Hegelian⁷ abstract, where the abstract is a bit like the unconscious, often characterised as a dark rotting place beneath conscious; a place easily situated in that American invention, the subconscious. When we are looking at architectural drawing, we are getting (and it takes as Hegel suggests, a great deal of analysis to get what is going on) that which charges the entire building. I am not suggesting the architectural drawing is solely a work in its own right because it contains instructions on how things should be built or made or where things are to go. But somehow the pure architectural drawing takes us away from the popular view of the body and of space.

The architectural drawing is a perpetual strip-show in which finally even the skin is flayed off the building or the interior. It becomes a moment of revelation, a pleasure and a wrenching shudder (as Adorno⁸ describes it) not dissimilar from what we feel from the theatrical or the pictorial. Art that is termed great whether it be architectural or theatrical or pictorial will give you a shudder (a moment of ‘unpleasure’ as you are flayed in an act of removing your skin of only concerns of the self), but it is only when the work is keenly differentiated that we know what is the cause of the shudder. We almost return here to Aristotle,⁹ whose master architect with his secret diagram can put all the other arts and performance into play and information. We need not. One more and more becomes satisfied with the architectural drawing as a work adjacent to the building. An architectural drawing is a kind of moving mind operating throughout the design process. It is a diagram, not a literal representation of a brain but a topological diagram of a brain and how it wishes to perform.

The generation of spatial environments on the computer, I have suggested elsewhere,¹⁰ is probably the wrong for the computer. The critical problem with architectural computer programs is that they lack judgement. They lack discrimination. For the computer program, all information is just ‘stuff’; void is ‘stuff’ and solid is ‘stuff’, matter is ‘stuff’. We have yet to find the optimal artform for the computer. I think it has something to do with velocity, repetition and replay rather than anything visual. The computer is trapped as a rendering device. It is also not very thrilling as a rendering device; we have all been on those somewhat unengaging, agoraphobic walks-around-the-building. The computer flattens out the world, and this flattening is akin to the flattening out of vision that Freud endured in an experience he details in ‘A Disturbance of Memory on the Acropolis’¹¹. This reduced world is that which, perversely, the very flatness of the architectural drawing defeats. Computer flatness is us being disoriented. Architectural drawing is us being charged. The world will continue to turn flat as long as we continue to use screens as our major presentational tool. We have returned to a quasi-ancient, quasi-medieval world; the flat earth which we can fall off and the web, that great, almost Greek web of necessity that holds us all in place. Unless we are aware of references such as these (which may be totally hidden in the designers mind), we are condemned to continue making those mistakes.

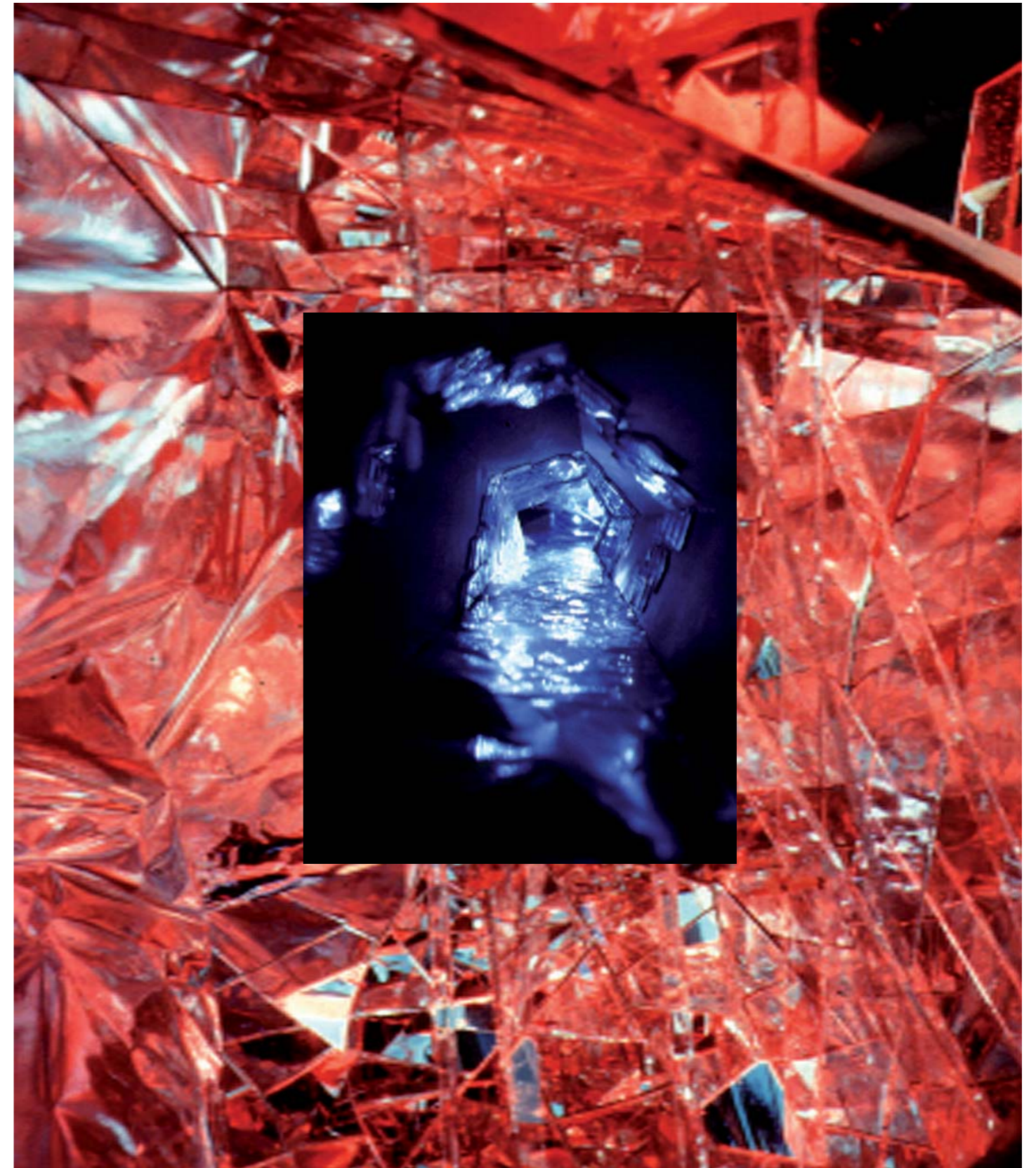
There has recently been some very good work done on what might constitute a space. Michel de Certeau¹² writes frequently about the flatness of the city and how our movements through it create a kind of jungle wilderness of gestures. The analysis and marking out of space, apart from that moving through, remain inert. A more active model is promoted in Henri Le Febvres' very important work, *The Production of Space*, in which he states, '[...] only an act can hold together fragments in a homogenous unity'.¹³ An image he uses in the creation of space is a fist clenched around sand. The sand is made up of components of space held together in the fist, where the fist is the absolute. Sand as space becomes very important (again we have an almost historical statement: although I am not ashamed of being a bit of an historicist), as one of the torments of medieval hell was attempting to make a rope out of sand.

This act of gripping and grasping, of space being held together by elements, is akin to the spaces delineated in the work of Maria Theodorou at the Architectural Association in London. In her work on the Iliad and the Odyssey, space (chorus) is generated by people immobilised in one set of activities. These activities might be two armies in battle or a couple playing ping pong. The space is generated by these positioned but moving figures and when we get into these spaces we find that we have a translation of matter, whether it be void matter or solid matter (or computer dilemma), into movement.¹⁴ Movement of matter (here I speak of matter as in new science and ancient epic) might harness or unharness techniques for the spaces architects and designers wish to make. However the act of translation into design is the important thing.

Once again the avoidance of pictorial detour has got nothing to do with representation. It may have something to do with presentification—the showing of something at its ultimate (with the absolute inside of it) which we cannot really achieve but can wish for. It has a lot to do with mathesis (participation), in which the space and what punctures the space drags us along, avoiding filmic or pictorial or even spoken representation, for these are all detours. The greater danger with this whole area is that we do become flayed, we do become punished and we do become hurt by these spaces. We become exposed, we become excoriated. But this is of course the danger foretold by the great German poet Rilke who says, 'We do not feel securely at home in the interpreted world'.¹⁵

So even though I support and follow Varborgian techniques of engaging with art history, which examine everything in order to find a moment of rapture, a moment of horror, or an engram attack where the subject is taken over by irrational forces willingly or seeks to avoid the take over by irrational forces (pushing away and embracing being performed in the same way), my bit of pain is that I am aware that open interpretation leads us into a white void—or in acoustic terms white noise—where so much goes on that we can distinguish nothing.

The architectures and the interiors that seem to be moving me most at the moment are those that avoid the textural or mechanical overkill without avoiding and perhaps invoking the shudder.



Light

Ross McLeod and Wayne Moskwa

'Colours are the deeds and sufferings of light, 'the deeds and sufferings of light with darkness' —Goethe'

'space emerges at the interface where material aspects dissolve' —Zen Proverb²

Light has fascinated mankind throughout history. From mythical interpretations of Chinese, Egyptians and Greeks, to the scientific and metaphysical proofs of Newton, Faraday, Einstein and Hawking, the elusive nature of light has been studied and theorised, deified and worshipped.

To the physicist, light represents a band of radiation wavelengths perceivable by the optic nerve. The spectrum (red, orange, yellow, green, blue, indigo, violet) is the specific identification of these visible wavelengths and frequencies ((mu) 800 -390). Our perception of the world is as a result absorbed and reflected light. A red wall is in fact everything but red. Its appearance is the result of all the colours of the spectrum being absorbed except red; these reflections of specific wavelengths create our visual understanding of the physical world.

Artists have concentrated on an analysis of light in differing and poetic ways. Painters such as Turner, Cézanne, Monet, Van Gogh, Van Doesburg, Kandinsky, Klee, Matisse, and Rothko each developed finely honed theories and approaches to the understanding and manipulation of light and colour. The visual color spectrum can be equated to various systems. However despite the various interpretations of light, no theory has exactly captured its essence. Modern theory has provided the ultimate conundrum in describing, through experimentation, that light behaves as both a particle and a wavelength.

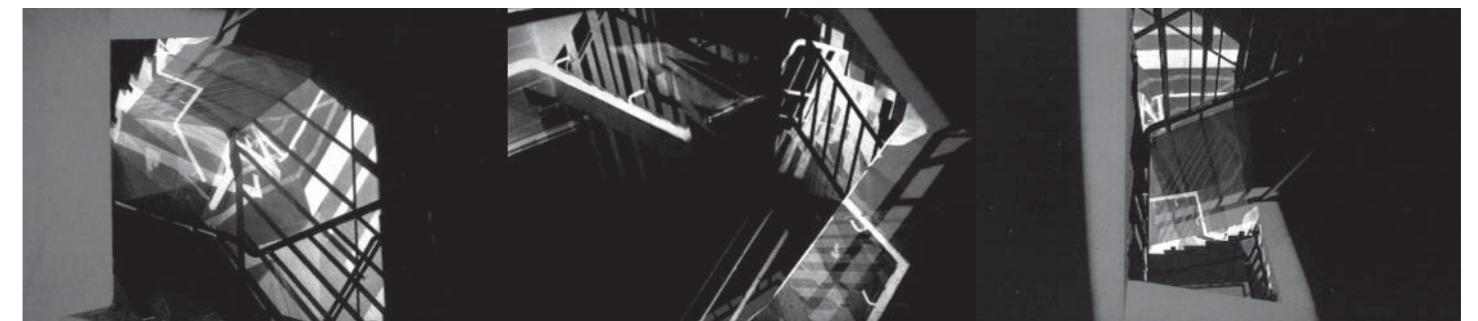
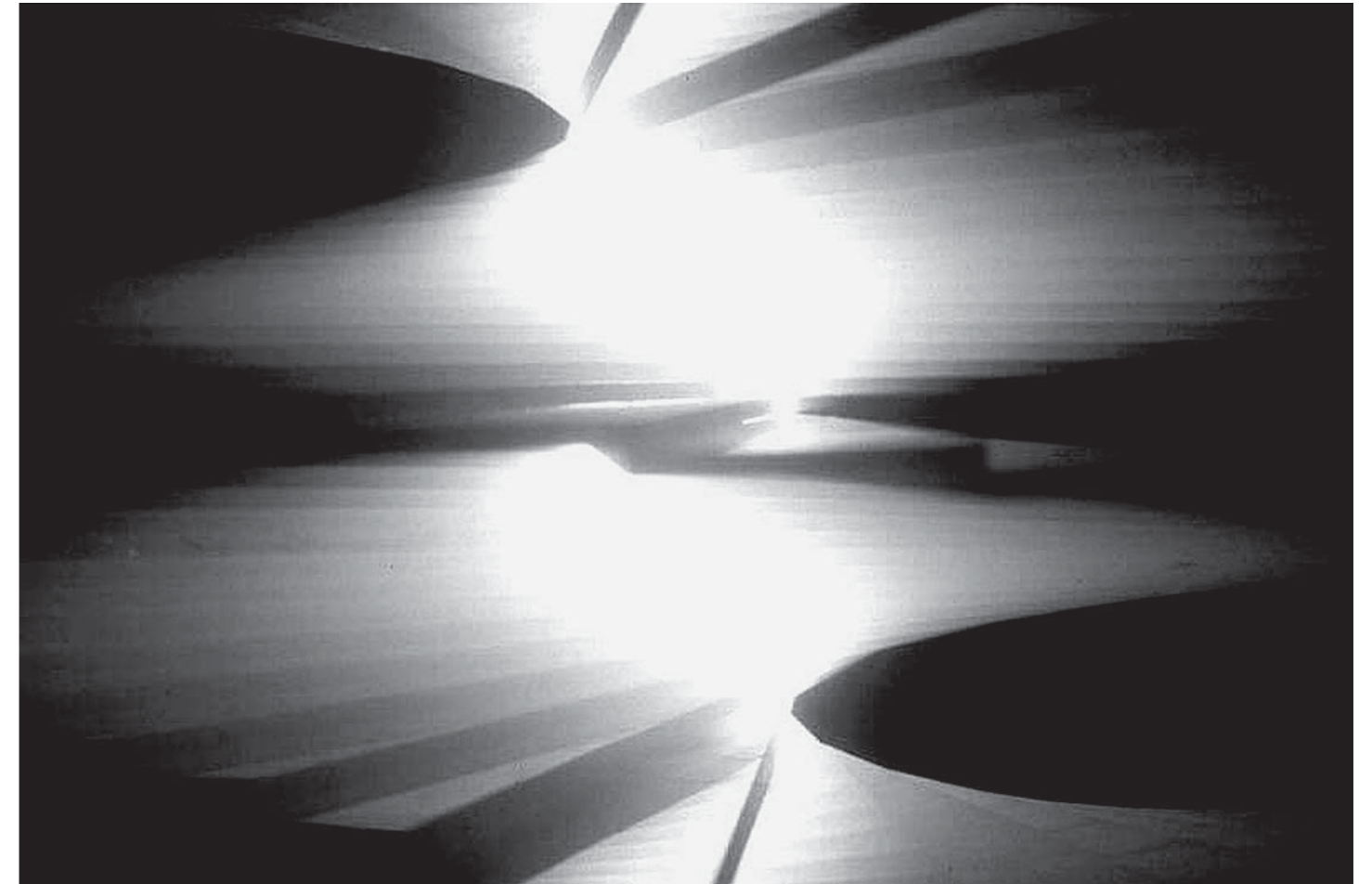
Through the exposure to these varying philosophical, aesthetic and technical codifications, and via meticulous personal observation and experimentation, we can engage in the sublimely difficult task of defining the world as light. By negotiating the boundary between darkness and light, concentrating on the interplay of natural and artificial light sources, one can attempt to convey the idea of form emerging from light. Seeking to catch the penumbra—the seeing of darkness as the equal partner of light, and in this way combining technical information with personal perception to manifest an intimate understanding of light and its conditions.

The study of light leads to the realm of colour. Following in the footsteps of the sixties 'OP' artists, the studio conducted a careful manipulation of the characteristics of colour and human perception. This knowledge was expressed via painted panels resonating with colour frequencies and spatial perception. The panels expressed a specific understanding of the dynamics of relative colour, composition and the manipulation of surface, texture and depth.

The *Velocity* project tested a simple hypothesis: 'if the speed of light is a constant, then material, form and space must have a "speed" relative to a light source'. In this way we are able to bring a light reading to all materials and perceive them as ethereal conductors of light rather than solid masses. These investigations led to the *Light Well* project, a group installation in which students manipulated light conditions within an enclosed stairwell. The projected light of additive colour (RED, GREEN, BLUE) and the subtractive colours of paints and surfaces (CYAN, MAGENTA, YELLOW) were used with subtle and knowing manipulation. The project sought a mix of colour between light and darkness, creating spectrums of light in the ether, dematerialising form while expanding our perception of space and light.

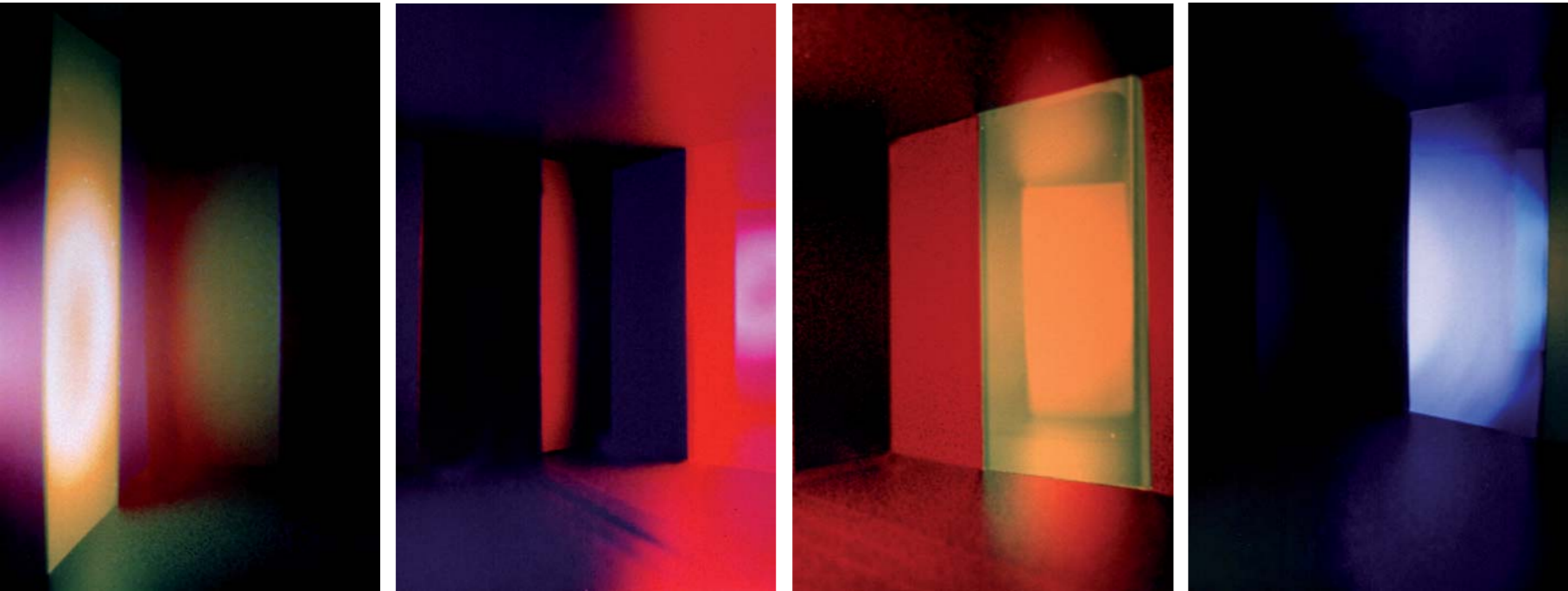
Architects, designers and artists have long responded to the moving light from the sun considering how it may be used to charge spaces. The *Cardinal Spaces* project reviewed the relationship of the earth to the sun, comprehending the movement of the sun through the heavens relative to specific latitudes on the planet Earth. In designing spatial transformations that take place by the manipulation of the natural light we must consider carefully the geometry of these spaces, the nature of their openings and apertures, the materials they are produced from, the colour which they catch and reflect and the effect that light has upon them at different points of the day. In addressing the realm of naturally lit spaces we address the passage of time. Relating the movement of the sun through the sky to rituals and moments of the day, our daily events can be intensified by architectural manipulation.

In response to these principles students designed four spaces, one corresponding to each of the four cardinal points of the compass—north, south, east and west. Each cardinal space was a subset of the whole suggested by a conceptual thread binding all four together. These proposals became archetypal explorations of the nature of architecture and natural light.



top: SPEED OF LIGHT Tania Bartucca

bottom: LIGHT WELL Claire Murphy, Amara Clarke, Pitikom



THE LIGHT HOUSE

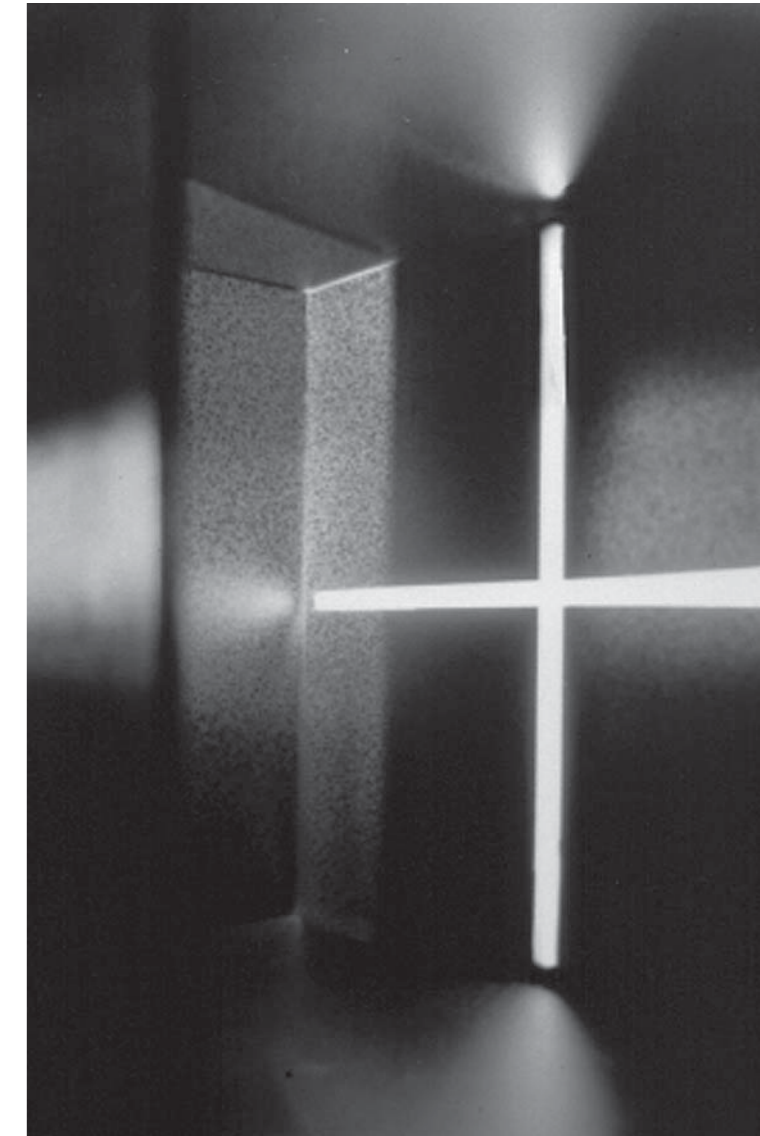
With the accumulated knowledge, perceptions and skills of the manipulation of light and colour, students embarked on a tracing of the historical developments in the understanding of light and its implications on civilization.

A group of key people, discoveries and philosophies that helped define the body of knowledge and perception of light were identified. The Egyptians, the Mayans, Socrates, Galileo, Newton, Goethe, Faraday, Einstein and Hawking were all included. Students chose one of these key figures and produced a short documentary. These short films sought to capture the spirit of each personality and the scientific, religious, artistic and/ or architectural climate that defined and was shaped by their specific knowing of light.

From this research the students made proposals for a 'light house'.

The *Light House* project was to be situated in a Museum of Art, Science and Human Perception. The conceptual basis of the project was to manifest a space in which we would experience a specific knowing of light via the mediums of light and spatiality. This exposition was to be spatial scheme that housed the assembled insight, knowledge and specific understanding of light of the particular subject.

The designed spaces attempted to create a physical manifestation of the subjects 'way of seeing' by focusing on the physical and phenomenological implications of their work and making their knowledge 'visible' in the surroundings. The assignment signalled a move away from oral, visual and text based knowledge, towards the realm of image and time—based spatial expositions. The information was presented as an experience; as a series of moments. The metaphors inherent in the image of a lighthouse as an isolated beacon, a reference point and ray of hope were to be exploited. Ultimately the project attempted to merge the medium with the message and expose the viewer to the entwined history of light and mind, by creating a space where light and enlightenment became one.



Minimal

Andrea Mina, Michael Trudgeon and Suzie Attwill

'Ultimately the question with minimalism is how long it will sustain its current appeal for the younger architects. Undoubtedly its flowering has been closely associated with the escalation of the world-wide economic recession and the steady growth of awareness of the need to conserve the world's resources if ecological collapse is to be avoided. In this context, minimalism as an architecture of restraint and limited means against over abundance and squander has exercised a deep appeal. On the other hand, the qualities and ideals of minimal architecture may prove to be enduring, for as life itself becomes increasingly fragmented, intangible and uncertain, the innate human desire for the calm space, the comfort of solid materials and the contemplation of slow-moving nature may become evermore powerful.' - Claire Melhuish

The image of cool, crisp elegance that so clearly identifies the aesthetics of 'minimalism' in architecture has become an increasingly popular presence in current design practice and ever more so in publication. There is a plethora of visual imagery that pervades every aspect of our lives, and given the dominant value that the visual is accorded above all other senses, the image adopts a powerful and influential status. Print, film and electronic media have made visual communication universal, and with this an almost equal ease to appropriate and reproduce. Mindful of this and the influence that fashion has on the interests and practices of the design community, the *Minimal* studio took a closer look at the 'ism' of 'minimalism' in interior architecture.

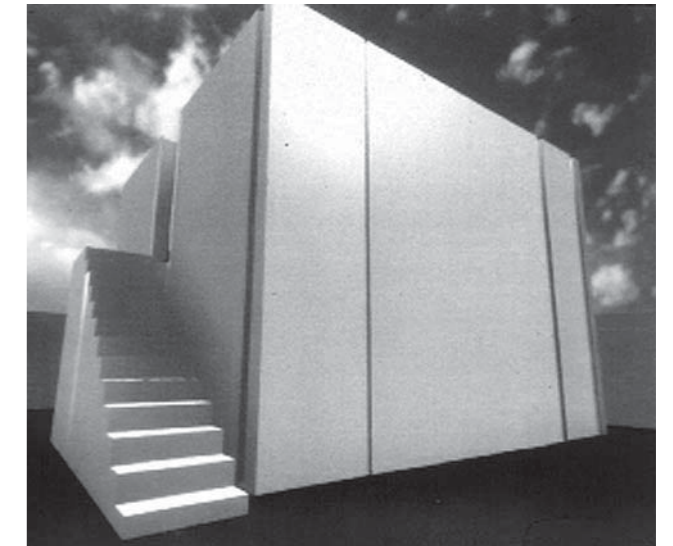
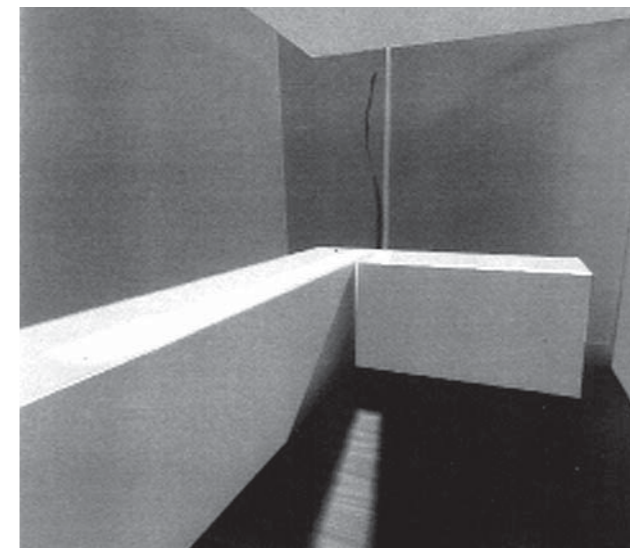
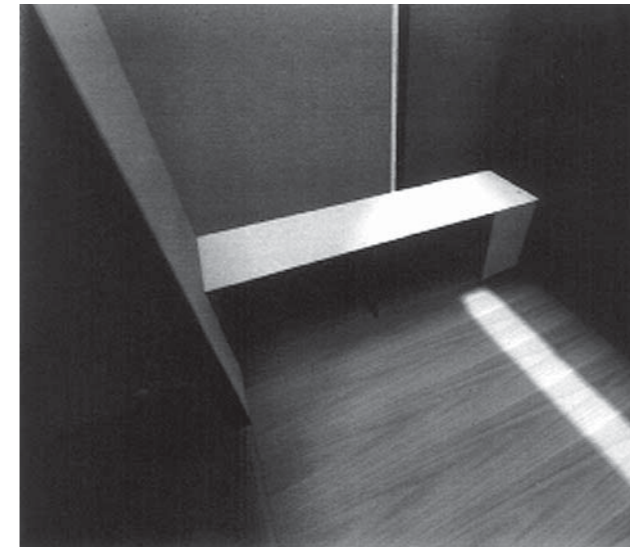
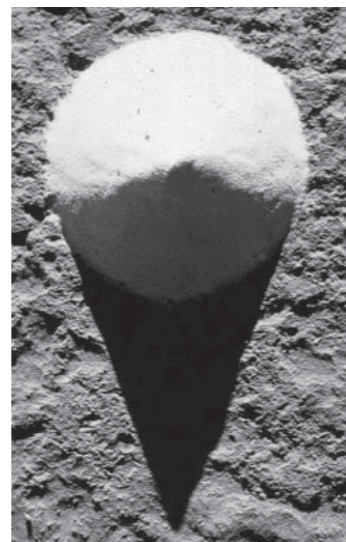
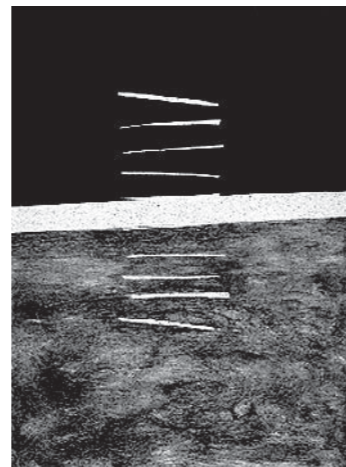
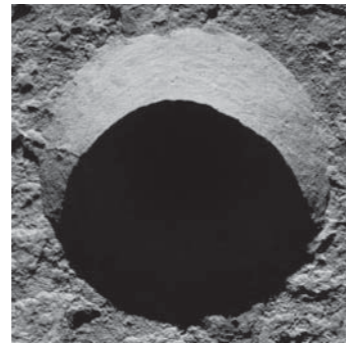
Our investigations began with the 1950s minimalist movements in art. With this as a point of departure, the students were encouraged to develop and explore their own practices, guided to produce work that concentrated on minimal rather than minimalism. The studio travelled to the interior desert landscape of Lake Mungo and camped on an escarpment overlooking the vast, shallow emptiness of the once prehistoric lake bed. We devoted ourselves to a week of intense work and pleasure in an environment embodying the reductive, minimal qualities that we were seeking.

On returning to the city the focus of the studio shifted to the design of one of two spaces, a *Fish Restaurant* or a *Garden Box*. The sites were real, the briefs fictitious, engineered to raise issues concerning form, occupation and inhabitation. The set objective was to provide a vehicle through which the students could manifest and project the fruits of their research.

The *Garden Box* was to be a space in which two people could live and work; a study of duality, privacy and sharing. The *Fish Restaurant* provided an opportunity to refine the ritual use of an established, elegant place of dining.

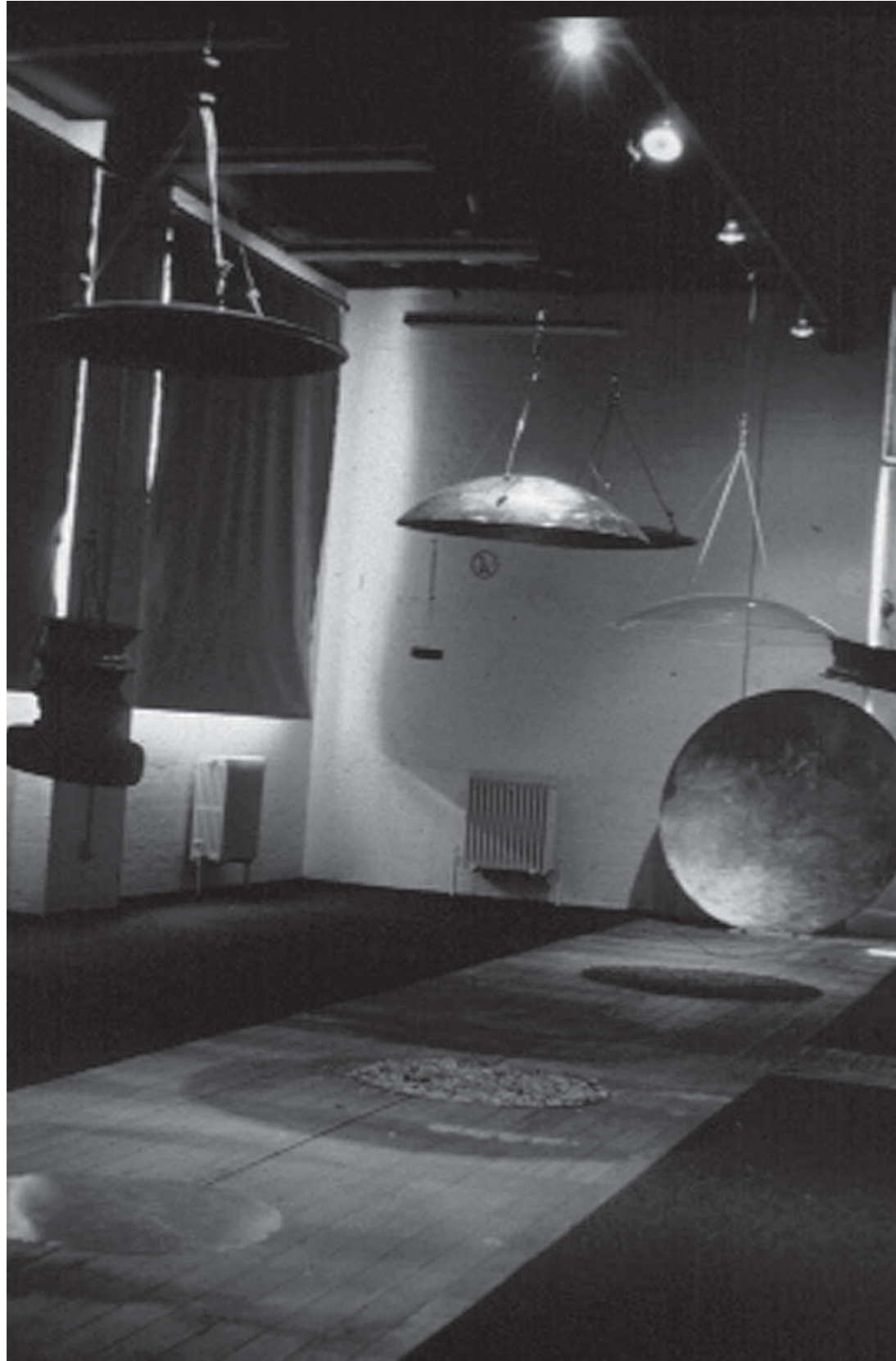
Both briefs demanded a close examination of the various rituals of occupation. In many cases it is through amplification of these isolated moments that design resonates with an explicit understanding of the interrelationship between form and inhabitation. Through sensing the quality of materials, fine tuning aspects of natural and artificial light and laboring over minute detail, the resulting schemes attempted to mesh technological imperatives with design aspirations; maximum tension with minimum means. The *Minimal* studio sought a seamless design experience, where rituals of inhabitation merge with spatial qualities and technical realities.

top to bottom: STUDIES OF THE MINIMAL Michael Hindon, Scott Walker, Michael Hindon



THE GARDEN BOX

Thilma Saechew



SOUND CORRIDOR

Sound and Space

Robyn Lines

'It is a curious fact that buildings continue to be designed for silence not sound, and that they treat the human voice as a secondary factor. Architectural acoustics remains largely a matter of minimising interference, of damping-down unwanted sounds, of rendering them as "dead" as possible.' —Paul Carter¹

Western culture generally and design culture in particular are dominated by vision. Vision is the primary sense, and the association of vision with knowledge is profoundly embedded in our language. The dominance of vision can be traced from early Greek philosophy, through the rise of Western metaphysics, particularly the work of Descartes and the empiricists who followed him. Challenges to the dominant visual tradition may be found in the work of some phenomenologists and in recent critical theory. In design, however, the visual tradition remains effectively unchallenged.

The practice of design has been described almost entirely in visual terms. Donald Schön, in his paper titled, 'Kinds of seeing and their functions in designing', described the process of design as follows:

'A designer sees, moves, and sees again. Working in some visual medium [...] the designer sees what is "there" in some representation of a site, draws in relation to it, and sees what has been drawn, thereby informing further designing.' —Schön²

The critique of design schemes both within and outside the academy proceeds primarily in visual terms. Design courses spend a great deal of time and effort in ensuring that the students develop an 'eye'. Very little effort is spent developing an 'ear'. From this starting point, the *Sound and Space* studios explore ways in which sound may be used to create spaces which invite a radical rethinking of the quality of spatial experience.

A second key area of investigation in these studios has been the nature of collaborative practice in design. Design with sound resists small scale modelling. As a consequence all the studios have been designed to generate full scale sound environments involving collaboration or consultation with experts from many fields including architecture, interior design, landscape architecture, building and construction, economics or industrial design. In all cases, collaboration has been investigated both in terms of professional roles and as a means of inquiry.

The need to develop a design, construct it, evaluate its success and take responsibility for it, provided the third major theme for all of the studios. The practical constraints of budget, codes, construction and installation processes, project management to a fixed time-frame and communication with the client and public provided a further focus.

ACOUSTIC CONSTRUCTS

Acoustic Constructs built upon an earlier interdisciplinary design studio led by Jonathan Mills. Jonathan entered the life of the faculty as composer in residence and his presence created the opportunity for staff to reconsider ways in which we engage with, or fail to engage with, sound in the practice of design. One of the first explorations to emerge from this environment of enquiry was an interdisciplinary studio which asked students to generate propositions for spaces or objects which exploited the potential of sound to enrich the experience of place or object.

An enormous variety of fundamentally differing potentials for sound were revealed. These included the use of sound to reconnect building users to the external world, the use of sound to evoke memories, the provision of a range of differentiated sound experiences to provoke listening in a population increasingly inured to the aural environment, and the use of sound to herald functional changes in spatial use.

From these initial series of design proposals and through a process of building elements of selected designs the studio set out to test the acoustic, experiential and aesthetic foundations of each.

Instruments for an Enclosed Aerial Walkway in Hong Kong

This design required the development of a number of tuned, wind-driven musical instruments placed above a walkway with transducers transmitting externally generated sound into the internal space. In its built configuration, the project results in four tuned string instruments mounted in the stairwell, driven by fans, transmitting sound to an adjacent space. Its intention is to reinvest the almost entirely internal navigation of Hong Kong with a rhythmic, gentle reminder of the external environment.

Sound Bridge

The Sound Bridge was developed for a small creek crossing in a bush setting. The passage from one side of the creek to the other is marked by pure chime tones activated by a foot mechanism. The Bridge installation existed in a noisy exhibition site between sets of borrowed stairs.

Sound Corridor

The generating idea for this installation was a series of acoustic experiences of enhanced reverberation, focusing and muffling of sound to be located in a city laneway. The built installation concentrated on extending the idea of focusing sound using steel and plastic dishes of various sizes and a variety of ground textures. The dishes were mounted on a pulley system allowing each dish to be adjusted to the listeners' height in order to focus the sound generated.

The studio revealed the technical aspects associated with the production of particular sound, and the difficulty of creating delicate, tuned sounds rather than overwhelming noise. It became clear that the use of acoustic (rather than electronic) sound in designed environments required further research into the area of instrument making. It was also clear that the notion of design with sound for specific sites and purposes required a more detailed investigation of the idea of acoustic intentions and the way they might emerge in relation to an imposed brief and site.

top to bottom: INSTRUMENTS FOR AN ENCLOSED AERIAL WALKWAY, ACOUSTIC FIELD, SOUND



SOUNDWAVES

Soundwaves was the first of a series of design studios undertaken in conjunction with the Next Wave Festival—the biennial festival of youth arts in Victoria. The commission from Next Wave was to provide a public space intervention in the forecourt of the Victorian Arts Centre for the two weeks of the festival. This opportunity was exploited in order to pursue our investigations into sound and space.

Proposals were made for an installation on the site and presented to a professional panel including representatives from the Next Wave festival. One design was chosen for development by the whole group.

During the design phase, a detailed aural site analysis was undertaken, in addition to the more visual and use-oriented investigations. The sound mapping work of Murray Schafer was used as a basis for the work of recording keynote sounds and events.³ The site was overlaid with an imaginary grid and sound level recordings taken at each point 22 different times of the week. A method of visually representing the loudness of the site was developed using AutoCAD. This technique provides a means of recording one attribute of sound in a visual form useful to designers.

The selected design concept, generated by Jasmine Wong, drew on concepts of the festival developed by Roger Caillois, 'In contrast with life that is regular, busy with everyday work, peaceful, caught inside a system of prohibitions, taken up by precautions, where the maxim *quieta non movere* keeps order in the world, is the ferment of the festival'.⁴ Commencing with one of the most ubiquitous sonic keynotes of the Melbourne streetscape, the tick of a pedestrian button at traffic lights, the forecourt was transformed into a strangely inverted streetscape. Signage and sounds were used to licence, not prohibit actions.

The installation consisted of two sets of working pedestrian traffic lights, 70 signage poles (17 of them with recorded sounds concealed in simulated pedestrian buttons), four telephone booths modified to ring when passed by a pedestrian and if answered to provide a recording of sounds from the inside of the Arts Centre, and four bus shelters.

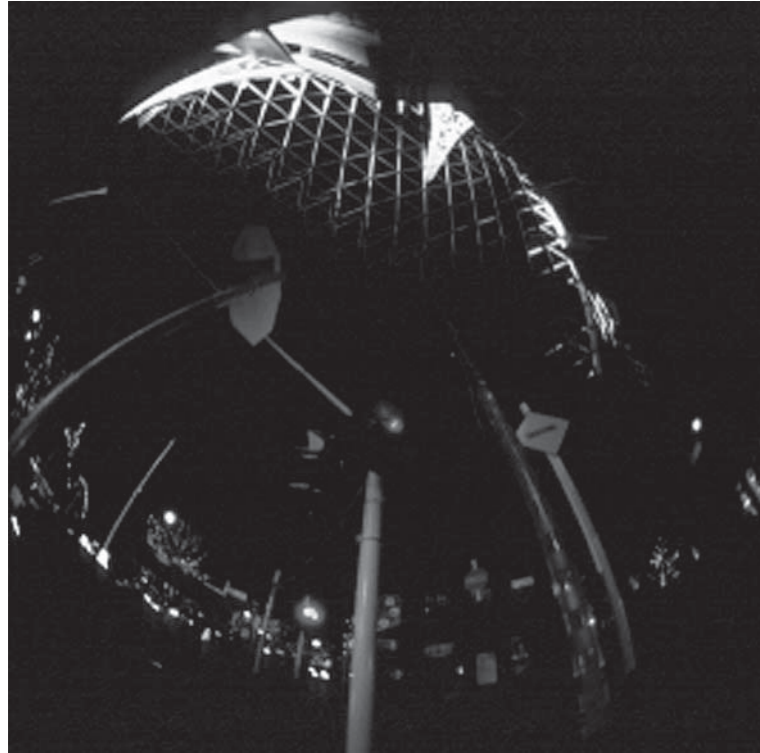
The festival space created with these elements was understood as a space for performance: a space which might encourage dialogue. Through the anarchic distribution of everyday elements which regulate and control one's everyday life, their usual effects were subverted. Their contradictory collection created a world of excess: a space with so many rules that none of them could be followed. A space therefore, without rules—inviting the invention of performance.

The poles incorporated the recorded sounds of Melbourne: sea gulls, jackhammers, buskers, paper sellers etc., and deployed these sounds throughout the site to create overlapping sound fields when activated by pedestrians. The sound composition responded to human presence, fragmenting, collaging, concentrating, amplifying and transforming the sounds of the city.

The installation also attempted to subvert the linearity of recorded sound, a phenomenon of our time, where sound is separated from its source, amplified, multiplied, sequenced and transmitted across time and space through the creation of an ever changing sound field embedded in the drone of the site.

Questions which arose from working with a large urban site included the need to develop processes for mapping and recording sound environments in ways which could be usefully integrated into the largely visual practices of design. A further observation related to the dominance of visual traditions in design practice when located in a familiar context of defined brief and site. There was a tendency to consider mechanisms for making sound but to fail to consider the sound desired. The development of acoustic intentions relies upon a number of discipline areas currently underdeveloped, such as the ability to listen to and critique spaces for sound and an accessible history or body of exemplary practice, showing how designers have worked with sound.

The identification of the gap in our understanding of how designers work with sound generated a research project to investigate the ways in which practising designers utilise acoustic knowledge when designing. This research led to the identification of six categories of acoustic knowledge called upon by designers and three fundamentally different approaches to integrating acoustic knowledge into the design process.



SOUND WAVES INSTALLATION Jasmine Wong



PERFECT FORM Nick Banner

PERFECT FORM

The *Perfect Form* studio was the second studio undertaken as a commission from the Next Wave Festival to design and construct an installation in the forecourt of the Victorian Arts Centre. Sound was to be a primary generator for the design which also needed to engage with the idea of the perfect form.

The investigations in the studio were underpinned by a consideration of the role of the modern arts festival and the need to consider linkages between the Next Wave's promotion of emerging arts practices and the conservative 'Arts City' location of the work. Site investigations were informed by the mapping work developed for the *Soundwaves* studio on the same site.

As in the *Soundwaves* studio, each student proposed a design for the installation and one was selected for development and construction by the whole group. A wide variety of ideas was developed in the original sixteen proposals. Once a design was chosen, teams of students were set up and required to address all aspects through design development to detailed resolution and budget reconciliation to complete the project.

The design chosen was proposed by Nikk Banner and responded to the only significant permanent feature of the forecourt, the bronze sculpture, *Standing Figure*, by Willem de Kooning.

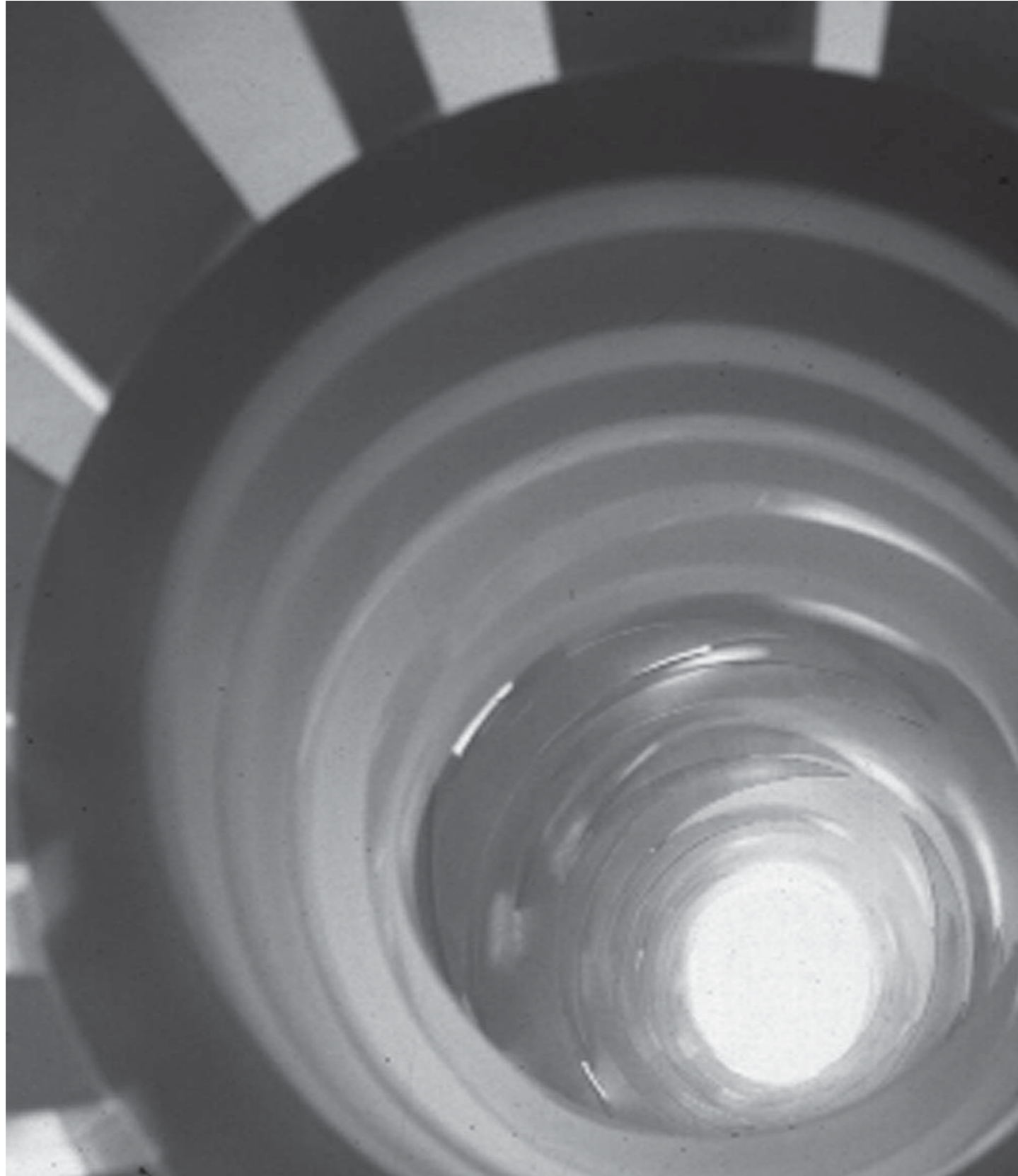
The design consisted of two very large percussion machines, with a variety of mallets, driven by electric motors through a system of cogs and chains. The instruments and sculpture were encased in a large, mesh cage of simple cubic form. The mallets had a variety of heads and were designed to strike the sculpture at specific points to produce sounds from a low frequency resonant boom to a relatively high pitched, clear ring.

The sound in *Perfect Form* was intended to temporarily transform the sculptural object into a sound field, overlapping the existing aural environment to create an uncontrolled and indeterminate sound work of juxtapositions. The development of the precise sound composition to be created with the instruments drew on the work of John Cage. In his early work, Cage explored the use of percussion as a means of liberating the spirit inside objects. He said, 'I never stopped touching things, making them sound and resound, to discover what sounds they could produce. Wherever I went, I always listened to objects'.⁵ The perfect form of the object was revealed through sound and vision.

The major 'compositional' element for the sound of the installation was duration, both the resonance of each sound that could be produced from the sculpture and the desired time between the sounds. The 'composition' was achieved by manipulating the drive sprockets, disc sprocket sizes and disposition of striking blades to order the sounds produced by different mallet types striking different parts of the sculpture. Once the machines commenced playing, however, the composition was determined by the physics of circular motion and the uncontrolled, everyday sound events of the site itself.

Perfect Form generated much heated debate around the issue of the moral rights of artists and notions of ownership and authority over artworks. The National Gallery of Victoria required that the work be removed prior to the end of the festival as they believed it infringed the moral rights of Willem de Kooning. The installation generated thirteen articles in the popular press and reviews and editorials in an art journal. It was featured in an ABC television and radio interview.

The importance of learning to listen was emphasised in this studio, developing an approach to 'thinking in sound' rather than the mechanisms for making sound. The complexity of working in a site with a pre-existing dense sound field raises issues of how to 'embed', 'overlay' or 'interrupt' that field, and the legitimacy of each approach.



Immensity and the Void

Justin Condon

'When the dreamer really experiences the world immense, he sees himself liberated from his cares and thoughts, even from his dreams. He is no longer shut up in his weight, the prisoner of his own being'—Gaston Bachelard'

Expressive and emotive qualities are often attributed to architectural forms. It is in the voids defined by these architectural forms that we exist. As living beings, we are capable of perceiving volumes of space. As sensual beings we perceive volumes of space as possessing expressive qualities that affect our emotional response. The investigation of how the perceived dynamics of architectural form can induce a distinctive field of energy within the void enables the designer to conceive a particular expressive quality for a void, conducive to its purpose, and to design the architectural matter accordingly.

THE VOID IN NATURE

'At the sight of nature's sublime vistas, a sensitive man is transported and experiences that magnificent ecstasy, that happy enthusiasm'—Etienne-Louis Boullée²

In order to design Interior Architecture where the visual dynamics generate tranquil voids of repose, I refer to nature. The grandiose spectacles of nature captivate us and elevate our thoughts. As we absorb the view from a mountain top or immerse ourselves in the wind-blown branches of a tree, our eye freely moves through space, the focus of our vision moves outward and upward and our sense of body space is expanded.

It is through the ever changing, temporal qualities of a natural environment that we are enlightened by the present moment. It is also through those precious, ordinary events in a day that we become aware of and are happy to exist in the present. Every instant has the potential to be special. A sunset for example, is a constantly changing visual stimulus performed by light. These temporal qualities of light can be used to celebrate the moment in an interior environment.

Great spectacles overawe mankind. The immensity of the sky, the great expanse of the earth or of the sea ... transporting our soul and elevating our thoughts. Who among us has not enjoyed on a mountain the pleasure of discovering all that our sight can embrace? A vast expanse with a quantity of objects that their multiplicity renders incalculable.

The image has touched the depths before it stirs the surface.

It is through these grandiose spectacles of nature that we become liberated from our grounding concerns and are free to dream. If landmarks in the external environment are very close to us—like a nearby wall for example—we perceive our body as having shrunk. If we are oriented to an opening in a great space however, we perceive our body as having expanded.

Eltin explains that a feeling of liberation is achieved in; 'architecture that permits viewers to anchor themselves through a sense of expanded body self that relates to the human figure, while the scenes multiply and the view extends endlessly outwards'.³

The exterior spectacle helps intimate grandeur unfold.

VOID SPACE Justin Condon

From a mountain top the eye roams freely through deep space, resting on a peak in the far distance or close by. This sense of immensity gives us freedom to imagine and project ourselves into space. Taking this to an extreme of unfathomable immensity, where there are no objects to draw comparison to, the emotional effect is one of helplessness. Extreme emptiness is experienced where there are no objects at all. In darkness, on the ocean, or in outer space, the absence of all points of reference and orientation, the lack of attraction and repulsion, the undefined distances, can cause extreme terror.

Therefore in order to experience exaltation when confronted by incalculable immensity there needs to be a multiplicity of objects separated by intervals of space. If an object appears colossal it may tend to dwarf our sense of body space. Yet where the proportion of object space is overcome by that of the void then the feeling is one of exhilaration. There is a release from the sensation of confinement.

So too if the immensity of a void or object is incalculable, the feeling may be one of exhilaration as the comparison of self to the scale is rendered irrelevant. If a vast space above us can never be filled with physical bodies, it may always offer the potential for a sensation of liberation as the viewer takes possession of it and makes of it what they will. When viewing a landscape which has no signs of human intervention one can imagine the freedom to possess it and roam through it at whim.

This engagement with an implied or actual immensity of landscape generates a feeling of liberation in space. Both conceivable and inconceivable immensity in built form can generate exhilaration, similar to that in nature.

THE VOID IN ARCHITECTURE

In architecture we are nearly always in contact with a floor surface, sometimes with vertical surfaces, and rarely with a ceiling. We are always moving through what is defined by surfaces and objects; space. All of these visually perceived surfaces can have certain expressive qualities attributed to them. Most of us, when walking through the streets, are affected in one way or another by the look of the buildings we pass and their arrangement in space.

In creating interior environments, the arrangement of space can affect our perception of expressive and emotive qualities and how spaces with particular qualities are orchestrated by the architecture. Arnheim discusses how the spaces in and around the architecture cannot be considered empty. Instead these spaces are pervaded by visual forces generated by the architectural structures and determined in their particular properties by the size and shape of their generators. He refers to this space as 'active perceptual fields'.⁴

Paolo Portoghesi metaphorically compared the voids in his architecture—and that of the baroque—to fields charged with electrical energy. Portoghesi, particularly in his Church of the Holy Family at Solerno, uses repeated concave and convex forms to create an apparent echoing field of energy. Similarly, the multiplication of ornamental profiles in baroque architecture generates a sense of vibrating energy field.

Arnheim explains that if one uses the model of an interior space as a mould and makes a cast of it for determining the visual character of the hollow form it will not give any indication of the perceptual characteristics of the space. Instead he describes how the visual dynamics (the combination of verticals, horizontals, diagonal and curves etc.) of the architecture create visual characteristics of the invisible field.⁵

Arnheim also refers to Gestalt theories of closure to describe how a field of space can be partially defined by a surface such as a concave wall. The complete volumetric form is suggested as the mind makes up the rest.

For my purposes I use the term 'field', when referring to a perceived, dynamic energy generated by the visual characteristics of one or more surfaces. When speaking of a 'void', I am referring to a more defined, perceived volumetric sense of space, with dynamics also generated by the surfaces and the enclosures.

A further explanation as to how architectural matter can generate the expressive quality of a void can be understood by observing how the eye traces the linear and planar dynamics of form and then continues on to travel into space.

A sense of definable void can be strengthened or weakened by the objects in space. As the void in the areas within which we physically exist are subjected to such variables as loose furniture, the character of the field may fluctuate. Lefebvre suggests how monumentality, normally associated with institutionalism, sobriety, politics and in this case industrialisation, can serve to exemplify an everyday event. Any object—a vase, a chair, a garment—may be extracted from everyday practice and suffer a displacement which will transform it by transferring it into monumental space. The vase will become holy, the garment ceremonial, the chair a seat of authority.⁶

The effect of light and tonal variation on architectural forms can emphasise the void. Natural light can define and change the quality of space, transforming the ordinary moment into the precious, enriching the quality of the experience. The way light enters the architectural void and creates subtle shifts of tonal variations on surfaces can be crucial to defining it.

The type of surface also gives character to the void. Streaks of light and shade on a stainless steel surface move with slight changes of angle, giving the impression of a 'fast' void. A textured surface however, has a multitude of shadows trapped in crevices and is perceived as 'slow'. Light can be used to create a sense of deep space by alternating vast pools of shadow with areas of illumination.

The void above head height is where the eye, mind and imagination are free to roam. When one's focus is directed upwards, the mere action of lifting back the head and allowing the eye to roam with the dynamics of form and into space, liberates us from grounding concerns.

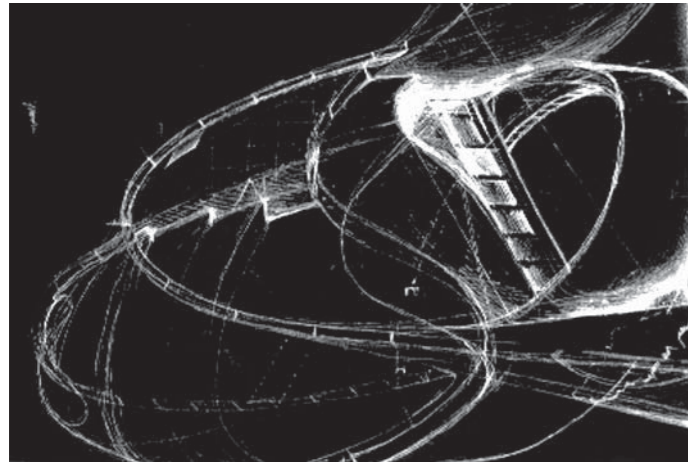
It is a curious and paradoxical fact, that while spaces dedicated to sensual delight have existed, they are few and far between. What agencies have informed social demands and commands? The answer is much more likely to be commerce, exchange of power, productive labour, renunciation and death, rather than enjoyment and rest.

It is difficult to find an Australian historical or contemporary predecessor to draw comparison to.

The Capitol cinema in Melbourne was conceived as a temple dedicated to national spirit, an expression of the collective genius and will of an entire community. The architects Walter Burley Griffin and Marion Mahony envisioned this building as a place of polar assembly. The inner space of the Capitol would suggest the possibility of oneness; it would offer, above all, a place of psychic repose and resolution.⁷

The difficulty in designing such a space without a culturally understood building title, is that people may initially feel apprehensive about what they are meant to be doing there. William Whyte, who studied small urban spaces in New York over a seven year period, noted that 'supply creates demand. A good new space builds a new constituency; it stimulates people into new habits. And what attracts people most it would appear, is other people'.⁸





Museum Of Spaces

Cassandra Fahey

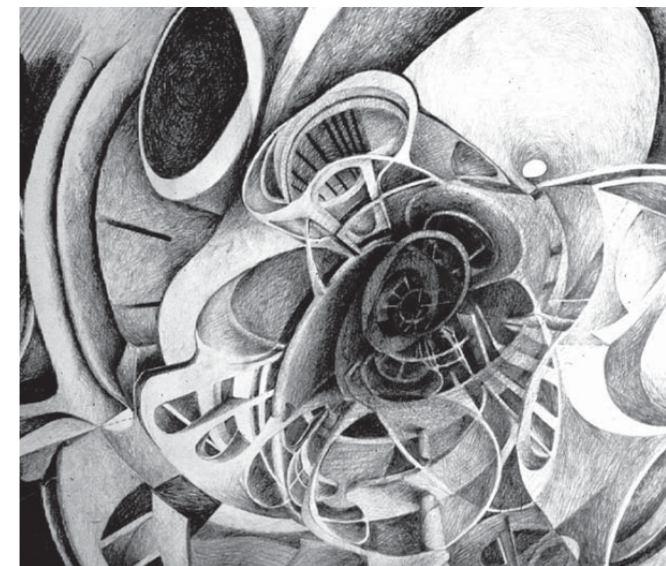
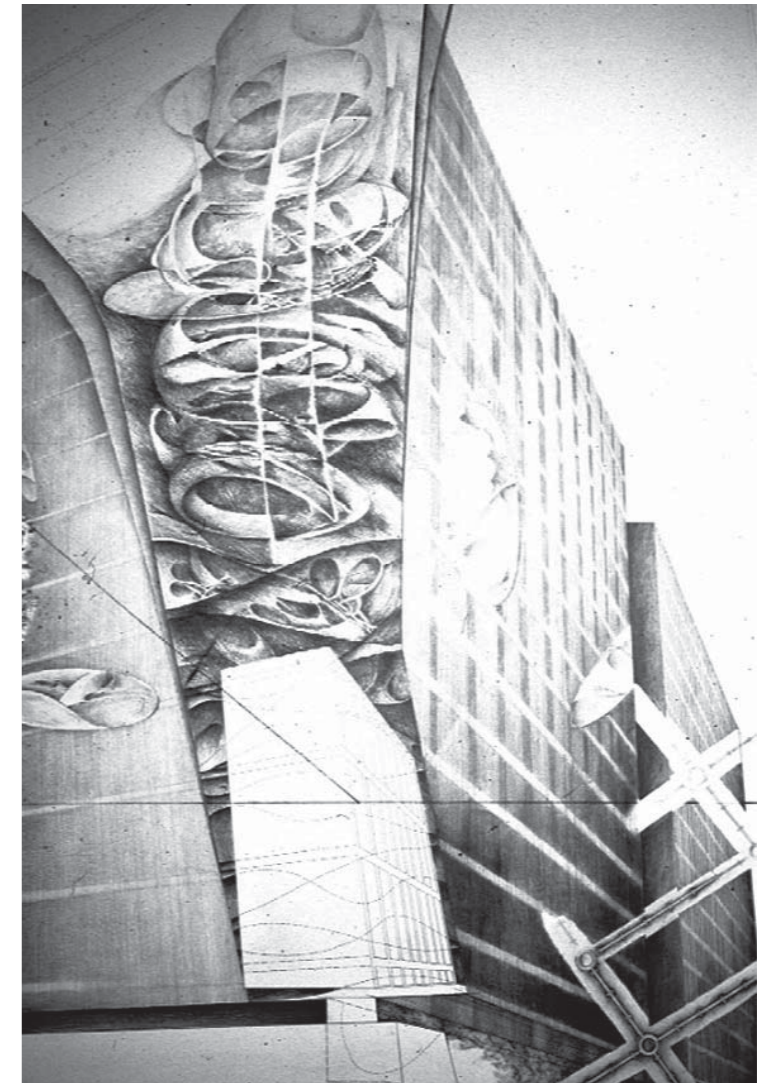
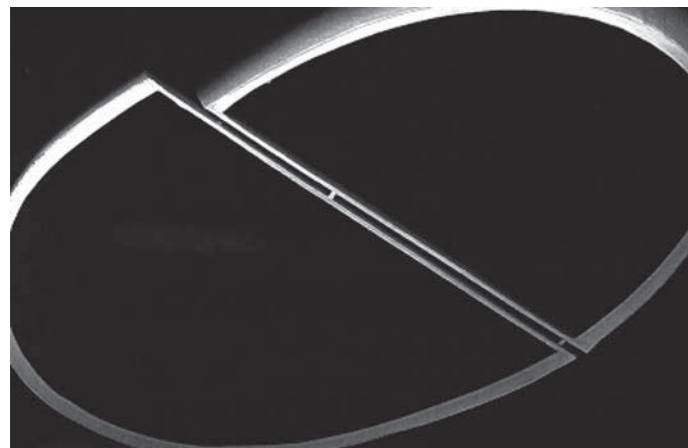
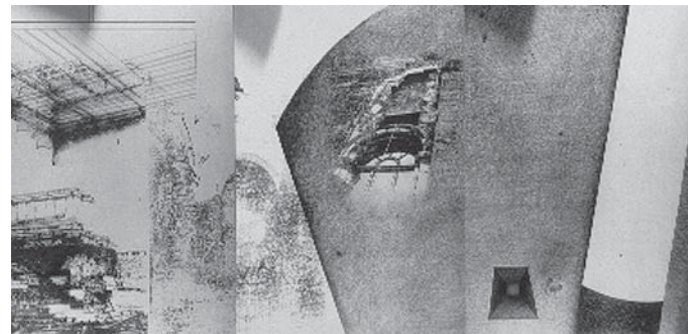
The *Museum of Spaces* project is a vehicle for the projection of ideas about an unseen world. It attempts to reawaken our subjective awareness in a way that suggests the importance of architecture in shaping our society.

The interior design of the project intrudes into the Gas and Fuel towers in Flinders Street, Melbourne.* The image of the Towers is stunted—a physical emblem of the state of many obsolete buildings within the centre of Melbourne today. The *Museum* addresses the extinct nature of the towers as a presence within the limitless images impacting upon us that are often deliberately blocked out. It relies on the rational, modern nature of the towers to provide an orthogonal contrast to the otherwise Arabesque non-Euclidean forms.

At ground level the *Museum* remains in keeping with the eclectic fabric of the city itself, while the forms (columns, benches, chairs) mirror the rational nature of the towers. These spaces are free of exterior walls, creating vistas right through. The ground level is essentially a red and metallic open space framing Melbourne's gardens across the river. Careful structural placement captures light from above and whilst distributing it between each floor, sends it down as an invitation—as relief from the bombarding imagery of the city.

Ultimately the spaces are left vacant. Shells for occupation. Why then describe the space as a museum? The nature of the spaces are inherently interesting in themselves; the building ventures to distance itself from dictated hierarchies often prevalent in the display of art and cultural items. This museum addresses the world as ever changing and pluralist, an image of the daily life that takes place within and around it. Clouds roll over its apex, narrow openings in the ceilings allow the sky to dictate the amount of light within the building. The *Museum of Spaces* adopts such measures in order to enhance time, change and motion. It is the antithesis of the hermetically sealed shopping centre or contemporary high rise building. The exterior works as an index, revealing moments of the interior to the public outside.

**(The Gas and Fuel Towers have since been demolished to make way for the Federation Square Project)*





Centre for Contemporary Sculpture

Genevieve Spittle

In this project the South Melbourne Town Hall is converted into a Centre for Contemporary Sculpture.

The *Centre* does not exhibit a permanent collection. Exhibitions are temporary and often conceived for specific sites within the gallery; the program is dedicated to the development and promotion of sculpture.

By its own extensive definition, sculpture extends from small, intensely concentrated pieces to gigantic compositions. Spaces have been designed to define small environments as well as large volumes. The project aims to provide the spatial and technological framework for sculptural installations of every imaginable character.

The essence of the original building is enhanced by the insertion of large planes of white acid-etched glass which screen and intersect the existing walls, superimposing the minimal modernist gallery space with the 'ghost' of the classified building.

