

CHOREOGRAPHIES OF INHABITATION: an investigation into visual, auditory and spatial relationships

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Abstract: This paper investigates the notion of occupation as dynamic physical and multi-sensory relationships within architectural environments. Our study specifically focuses on the construction of myriad relationships between physical, visual and auditory articulations of space, and how these shape human activities and interactions. By drawing on literature from the areas of visual and acoustic ecology (Gibson, Truax, Schafer) we seek to frame the notion of human occupation as temporal interrelations between *acoustic arenas*, *soundmarks*, and *sonic events*, as well as their visual equivalents. Additionally, we use Brian Massumi's discussion of synaesthetic fusion, movement and sensation as a philosophical tool for interrogating these interrelations. For the design project we have nominated a site within RMIT University's city campus in Melbourne, Australia. The applied research methods include the auditory and visual capture of environmental data via video, still photography and stereo recording techniques. We subsequently produce a series of sound and video compositions, constructing new spatiotemporal and sensory relations from the material captured within Bowen Street. This approach serves as a technique for initiating a qualitative design proposition for the site that shifts modes of occupation through visual and auditory interventions. The paper concludes with speculations about the significance of interrelations between visual and auditory spaces in designing environments for human occupation.

Introduction

Interior architecture can be understood as being defined by physical and material boundaries, but it can also be conceived as a spatiotemporal practice, in which human inhabitation and sensory qualities form continually changing territories. The incentive for this project paper is to investigate interrelations between human activities and the environment with particular focus on visual, sonic and kinetic connections. Our approach to this research, as spatial designers from backgrounds of interior architecture and soundscape studies/music performance, is to explore the nexus between physical and sensory articulations of space mediated through design within an interdisciplinary practice.

Design briefs in interior architecture and interior design often require material, visual and acoustic considerations as a way of organising human activities and interaction. Material and visual designs usually need to meet certain functional requirements, but are also appreciated for their aesthetic value. After all, photogenic appearance is still highly significant for the communication and public recognition of interior architecture/design projects. The efforts made in the area of sound and acoustics on the other hand are mostly limited to using mathematical computation to eliminate unwanted sounds, or amplify desired ones. With the exception of concert halls and music performance spaces, there are few examples of interior architecture/design in which visual and auditory qualities are given equal importance in relation to human occupation. We have found some of the most relevant project references for our endeavour in short-term installations, exhibitions and performances that use a combination of visual and tactile displays, moving image, sound and light to produce multi-sensory encounters. However, such collaborative efforts in constructing highly considered dynamic and sensory environments have yet to find an impact on interior architecture/design discourse and

practice. In order to position our design project and paper within the broader context it is worth briefly elaborating on two recent references to inter-disciplinary collaborations, which investigate spatiotemporal relationships in regard to human inhabitation: the design installation {UI} *Occupation 1* (2008), and Lucy Guerin Inc's dance performance, *Corridor* (premiered 2008)¹. In the former example, the design research group Urban Interior {UI}² with academic practitioners from RMIT University in the fields of interior design, architecture, music, industrial design and fashion design collaborated on an installation project situated at a gallery space in Melbourne (Craft Victoria). The installation comprised a number of physical occupations of the site by different members of the group, each bringing a performative element to the use of the space (through film screenings, bicycle customisation workshops, concerts, video and sound installations, and so on) and each project interrogating the concept of *urban interior*. {UI}'s main research questions centre on ideas of exhibition as research, concepts of interiority and the relation between people and the urban condition.

Lucy Guerin Inc, an Australian dance company established in 2002, produces multi-media performances based on 'programmatic research into choreographic practice'³ of contemporary dance. One of their current works is *Corridor*, which investigates relationships between a stationary audience and the moving bodies of the performers:

"The audience sits in a corridor formation of two long single rows facing each other, effectively becoming part of the set. The dancers receive instructions through a variety of media including iPods, telephones, spoken word and written text which provokes a struggle between the finality of words and the dissident communication of the human body. Each viewer has a unique perspective of the work, with the performers seen at very close range, or at a distance as they move up and down the corridor. Close proximity to the performers creates a disturbing tension revealing a more personal reality than the controlled presentation of a public performance."⁴

Both of these examples explore concepts of spatial design that are based on temporary occupations, the use of multi-media, human activities and interpersonal relationships. Our research project work, *Choreographies of Inhabitation*, similarly investigates performative and ephemeral questions of occupation. The relationship between *viewer* and *performer*, or *the performed*, is a vital concern in our study in regards to concepts of movement and sensation.

This sets up the following key issues for interrogation in this paper:

- How does human occupation occur in the designated project site physically, visually and aurally?
- What are the spatial interrelations between the dynamic, auditory and ocular qualities?
- How does a series of design experiments enable new sensory and spatial connections and temporary changes in the modes of occupation?

The theoretical framework for this design research draws from literature on visual and acoustic ecology as well as from Massumi's discussion of synaesthetic fusion, movement and sensation⁵. Ecology, as defined by the *Collins English Dictionary*, is 'the study of the relationships between living organisms and their environment'⁶. Hence, the fields of visual and acoustic ecology examine these relationships mediated by ocular and auditory systems. Gibson's *Ecological Approach to Visual Perception*⁷ has inspired our approach to the interrogation of time, change and bodily movement in the project.

We engage the work of the acoustic ecology movement as a means to implement design research methods for the creation of a number of spatiotemporal design compositions. By drawing on Truax's notion of the 'communicational approach to acoustics'⁸ we focus on qualitative relationships within a soundscape (rather than a *signal energy transfer* approach), and how this enables or produces particular choreographies of occupation within a site. Similarly, R. Murray Schafer's terminology for defining acoustic typologies through understanding *soundmark* and *keynote*⁹ are useful in identifying the connections between visual and auditory articulations of space. Blesser's notion of *aural architecture*¹⁰ and Augoyard's systematic categorisation of terminology common between sound design, music, architecture, and sociology¹¹ have explored these interrelations extensively.

In the three subsequent parts of this paper we will be introducing and discussing the selected project site, our design process and the insights we have gained from the applied research methods. Finally, we conclude by outlining a design brief based on the experimental design works, and with speculations about the interrelations between visual and auditory spaces in designing environments for human occupation.

2. Spatial dynamics within Bowen Street

2.1 The Physical Site



Figure 1. Bowen Street, RMIT University, Melbourne Australia.

Bowen Street is a central square and pedestrian thoroughfare of RMIT University's city campus in Melbourne, Australia (see Figure 1). Multi-storey buildings along two sides, and multi-lane streets at either end, frame the site. The site provides a link between several buildings and facilities as well as connections to urban infrastructure. Due to its central city location, university students, staff and visitors mix with construction workers and the general public. Bowen Street is divided into two main areas: a private street for delivery trucks and construction vehicles only, and a pedestrian/recreational zone, providing a number of services to students, staff and the general public including outdoor seating, barbeques, a basketball court and access between various multi-storey university buildings. The design intent and resulting physical infrastructure of Bowen Street are multi-functional. RMIT University designates the site as a leisure and lunch area in which a basketball half-court is positioned at the Franklin Street end. Nearby is a small planting of deciduous trees that delineates the resting areas, and contains ubiquitous timber picnic tables, slated benches and polished bluestone planters with seating. The site's situation between major multi-storey buildings means that pedestrian traffic is at times high. Similarly, the site's public accessibility and vehicle access by service trucks and contract personnel have required that the entire site is uniform in its topography. The predominant horizontal and vertical materials in Bowen Street

are hard, visually opaque and aurally reflective surfaces. Varying paving materials such as concrete, pave stone, cobblestone and tarmac demarcate different areas within the site. Key factors in the selection of Bowen Street as our project site were the dynamics of continual movement and change within this environment, as well as the site's open public accessibility and its multi-functional layout.

2.2 Research methods

We approached the site investigations of Bowen Street in three stages: firstly, through observation and listening sessions; secondly, through a number of visual and auditory recordings of the site; and thirdly, by means of the reviewing and manipulating captured sound and image. In initial site visits to Bowen Street we examined different modes of occupation, and investigated the visual, auditory and physical dynamics of the spatial environment through observations and sketches. In the second stage we captured user activities and spatial relations through video and soundscape recordings. Our initial observations of site users informed our decisions about position, framing and points of reference for the recordings. In the third stage—the production of video and sound compositions—the project moves away from the original physical site context and produces new non-physical sites through the manipulation and editing process of the original recordings and observations.

2.3 The Auditory Occupation

The methods of auditory data collection favoured by the acoustic ecology movement were utilised for the recording of environmental invariants within Bowen Street. We used a cardioid shotgun microphone pair with an ORTF (Office de Radiodiffusion-Télévision Française) setup of approximately 17cm microphone separation and 110-degree displacement. Information was captured at stationary points, as well as on soundwalks through the site over the course of 3 weekdays between the hours of 10am and 3pm in November 2008.

Initial walk-through and listening sessions revealed a particularly static soundscape throughout Bowen Street, but one that is nevertheless articulated by two similar keynote sounds. These sounds emerged from two large circular structures (nearly identical looking) that housed exhaust fans for the nearby building. With a mesh opening, the sound of quickly moving air is distinctive. Located within 20m of each other, their respective sonic content was a constant mid-high frequency rich drone that penetrated the surroundings and caused two distinct auditory zones for the site. Additionally, the periodic auditory alarm for the raising and lowering of the street bollards to allow vehicle access to the pedestrian street becomes a rhythmic soundmark of the site, as do the auditory alerts for reversing trucks. The height of the buildings that define the edges of the Bowen Street, and their hard reflective surfaces allow for a degree of separation from the active city noises occurring at both open ends of the street, while similarly providing a containment area for the soundmarks and keynote sounds occurring within the site. There is a certain amount of occlusion from the city within the street, though occasional traffic noise tends to reflect off the high walls.

Pedestrian traffic and the sounds of people conversing, meeting and playing basketball within the site have little impact on the keynote sounds present, especially when one is within 5m of the exhaust fans. But because of the higher frequency content and rhythmic fluctuations in birdsong, birds active around the seated areas and in nearby trees provide a dynamic soundmark that permeates throughout the space. To explore the range and dispersion of these keynote sounds, and the other qualities of timbre inherent within the streetscape, various

recordings were made at different locations. Additionally, soundwalks that circumnavigated, or moved between the two exhaust fans revealed how the *acoustic arenas*¹² of Bowen Street are relatively fixed by these keynote sounds. Any flux in amplitude or sonic texture is inevitably a result of the human occupants and their ephemeral occupations of the space. Apart from the soundmarks of the bollards and the birds, the soundscape of the site is rarely articulated in a diverse fashion by a large palette of higher frequency timbres.

By using stereo recordings of Bowen Street we were able to engage in a qualitative analysis of the key elements of the soundscape: what are their traits in terms of regularity, timbre, pitch or amplitude? Our approach to understanding the identified auditory qualities of this site is further developed through soundscape compositions, which draw on the trends, auditory zones and rhythmic content mapped within Bowen Street. By exploring the auditory materials of the site through a design process, the act of composition becomes 'research through design', where the auditory predilections recorded within the site are transmediated into an abstract soundscape composition to inform a new soundscape proposition for the site.

2.4 The Visual Occupation

The sense of occlusion is not limited to the auditory space of Bowen Street. Visually, the multi-storey buildings along its two sides set clear impenetrable boundaries. This resulting form of enclosure focuses the attention from the broader architectural (macro) context to the environment at human scale (micro). At this scale, sightlines change according to the respective position of the occupants. From the longer distances spanning the entire depth of the site to the shorter distances of the immediate surroundings, the respective position of the occupants creates a series of visual juxtapositions in which scale becomes malleable and relative to the immediate environs. Trees and large plants defining the designated seating areas, as well as two previously mentioned cylindrical structures housing the exhaust fans, are the main fixed elements interrupting an otherwise uninhibited visual connection through the spine of the site. Dynamic visual qualities within Bowen Street are introduced by variations in human occupation (pedestrian flows, cyclists, car traffic), lighting conditions, air movement (visible in trees and the movement of debris, such as plastic bags) and the activity of a variety of birds. Human activities observed in the site included walking, resting, conversing, talking on the phone, reading, writing, meeting, watching, smoking, eating, cycling, carrying, running and jumping. The continual flow of pedestrians, bicycles and vehicles is particularly noticeable during lunchtime and mid-afternoon.

The visual recordings were taken in the site over a period of one week in November 2008. We used digital video cameras to capture temporal qualities of occupation within the site and digital still cameras to take snapshots of specific activities at different times of the day. Video recordings were taken from stationary locations as well as from moving handheld perspectives. Following Gibson's view that 'we perceive not time but processes, changes, sequences'¹³, we concentrated our video recordings on activities, processes, changes and sequences at human scale. In order to capture activities in standing, walking and seating positions the camera was set up between average eye heights of a sitting and standing person. The recordings were framed to focus on flows and activities of people in the foreground, as well as in the background, as a way of exploring the spatiotemporal relationships between moving bodies.

The approach of using video recording to document occupation in the site highlighted the variety of human activities, bodily movement and interaction, which consequently inspired

explorations of choreographic, temporal and relational concepts in three video compositions that will be discussed in part 3.

2.5 Visual, Auditory and Physical Relationships in the Site

Occupation in Bowen Street happens in form of multiple visual, auditory and physical relationships. These relationships define temporary territories through human activities and produce visual and auditory zones, which overlap, intersect expand and contract in dynamic ways. The physical infrastructure of the site is suggestive of particular modes of occupation. The seating offers places for resting, eating, meeting, conversing, observing, reading, and so on, whereas the basketball court provides an area for running, jumping and playing. The open parts of the site and the paths leading to front doors of the University buildings encourage free flows of movement for pedestrians, bicycles and motor vehicles. The physical site seeks to structure and divide Bowen Street into designated sections of movement and respite. The visual and auditory zones of occupation however do not follow this spatial organisation. Their zones/arenas are contained by the architectural design at macro scale, yet the territories they form within the site are far more dynamic in their volumes and relationships.

At micro level—which refers to activities and events at human scale—the site operates in various ephemeral, dynamic zones of activity, which accentuate the slow-changing visual and auditory macro environment at the larger architectural scale. At macro level the most prevailing visual and auditory qualities are the result of a utilitarian design brief. The building facades form a visual backdrop to the activities and events at micro (human) scale. Similarly, the two circular exhaust fan ducts produce a constant background (keynote) sound, which is punctuated by ephemeral sound marks in the site. The exhaust fan structures are prominent advertising surfaces, acting as visual landmarks within the arena, yet not producing an aurally equivalent soundmark (rather producing a drone like keynote sound). The strong or weak sonic identity of such arenas and the "uniqueness or singularity of local sound in relation to those of other city settings"¹⁴ helps define the acoustic typology of Bowen Street.

The analysis of our video and soundscape recordings has shown that the physical, visual and auditory spaces within Bowen Street each have consistent qualities that are related to the macro architectural context as well as dynamic qualities that occur through occupation, movement and change in the site.

3. Design Compositions

As an exercise in the qualitative analysis of the ephemeral visual and aural occupation and inhabitation of Bowen Street, we devised a methodology in which the spatial information captured from the site via video and sound recordings, would serve as the basis for six short compositions: three as sound works, and three as moving image. These pieces were compiled and composed independently, then juxtaposed to allow for the accentuation of commonly identified spatial predilections. These predilections arise in the design exercises as observations, manipulations or amplifications of spatial relationships active within the visual or auditory space of the site. Further to this process is the production of an abstracted or projected site in which Bowen Street and its spatial relationships are transformed and situated within the two-dimensional viewing frame of a visual editing software or screen and the digitised aural space of headphones or a playback device.

The six design compositions use both auditory and visual investigations into the spatial predilections observed within the site in order to explore how we construct new spatial and temporal interrelations between them. We recorded the moving image and soundscape in the same site context, but designed the compositions independently of each other in order to eliminate an imposed narrative that might arise from a deliberate synchronisation of image and sound. The parameters we set ourselves were to produce three sound and three video pieces, which only use manipulated recordings from Bowen Street and are three minutes each in duration. These six works are then indeterminately combined in nine different versions. The design process arose from initial site visits and the methods and devices used for the recordings. The process of selecting and manipulating footage to become the final six pieces was a result of filtering, organising and focusing our visual and auditory observations from the site.

3.1. Three Soundscape Compositions after Bowen Street

The most audibly prominent features present during the recordings at the site were the previously mentioned keynote sounds of the exhaust fan ducts. Due to the nature of microphones to act as aural microscopes, the stasis in these sounds predominates many of the soundscape recordings. The presence of these sounds sits within a large spectral range, giving them an aural resemblance to white noise. Because of their pervasiveness within the soundscape, the periodic and pitched interjections of the soundmarks (that is, aural alert signals of the bollards, the birds and reversing truck warnings) provide points of departure for the three soundscape compositions.

As a design exercise, and one that aims to highlight or manipulate the predilections of the soundscape, each of the compositions focuses in varying degrees on the periodicity of the soundmarks, and how this periodicity can be dismantled, reformed or echoed. Additionally, a micro-examination of the keynotes sounds (Figure 2, s02) is used to turn *inside-out* the static nature of the exhaust fans. By altering the pitch, changing the tempo and removing noise in these sounds through filtering, a remnant to the original sound remains, though its context and qualities are significantly transformed. This same technique is also explored in s01 (Figure 2, s01), this time as a means to transform the keynote sounds into soundmarks. By altering and transposing the fundamental pitch frequency content, a *stretto* effect (in which successive sounds are literally piled on top of each other) alters them to produce a far more varied unfolding of pitch and rhythm. Finally, a technique for the complete deconstruction of the keynote sounds is presented in s03 (Figure 2, s03) where site samples are layered together, filtered then repeatedly convolved. By combining this process with pitch transformation echoes of the discretely pitched soundmarks, a newly constructed soundscape is suggested in which the timbre palette of the site is considerably widened.

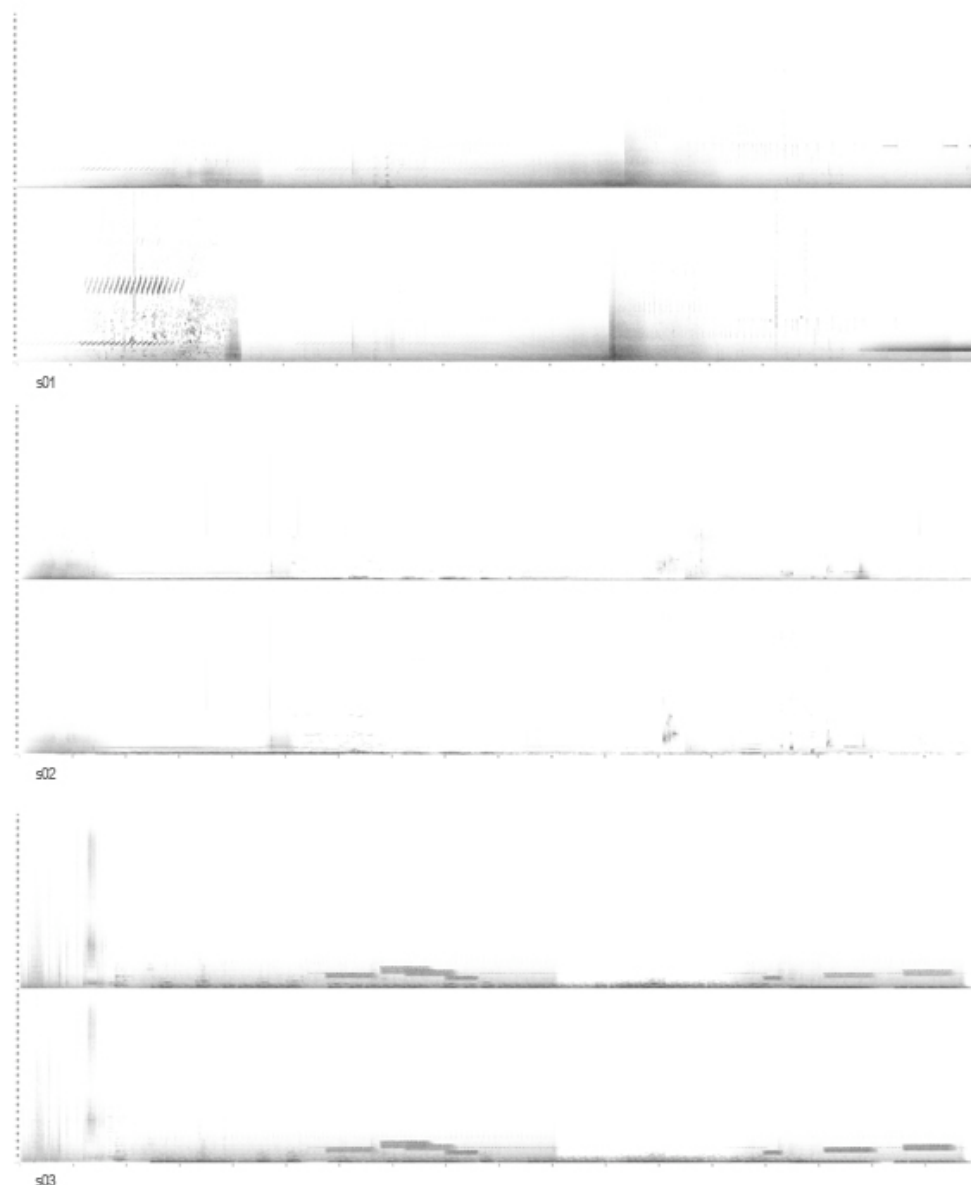


Figure 2. Sonograms of soundscape compositions *s01*, *s02* and *s03* mapping frequency vs. time.

3.2 Three Video Compositions after Bowen Street

Based on the observations and recordings in Bowen Street, the three video compositions explore visual concepts of choreographic movement, temporal variation and spatial relations. Video pieces *v01* and *v03* use material filmed from different stationary positions, whereas in piece *v02* the recordings are taken from a handheld moving position (Figure 3). The colour, brightness and light-dark contrast have been manipulated in all three compositions with the aim to focus viewers on the relationships between movement and the spatial environment. Through this visual manipulation the identities of individuals are obscured and the broader site context becomes less definite.



Figure 3. Freeze frame from visual compositions (left to right): v03, v01 and v02.

The first piece *v01* explores choreographies of movement using techniques of repetition, reverse motion and the manipulation of speed. Deliberate disruptions in the visual continuation emphasise the rhythmic structure of the composition, while variations in the visual field of depth and the framing of the moving image question the spatial relationships between viewers and performers. Video composition *v02* similarly investigates visual and bodily connections between viewers and 'performers', this time mediated through a moving viewpoint. According to Gibson "a point of observation is never stationary, except as a limiting case. Observers move about in the environment, and observation is typically made from a moving position."¹⁵ By slowing the moving image and using long transitions between the different parts, this piece examines a changing *motion perspective*, as well as the compressing and expanding of temporal qualities. Composition *v03* focuses on interaction and occupation in relation to continuity and change. The frame zooms in and out of the scene at times drawing attention to particular visual details, yet does not change its original position. Again, techniques of long transitions are used in this piece to achieve effects of translucent layers, which exaggerate and contrast modes of occupation and the movement of bodies.

3.3. Nine Coincidences of Juxtapositions

As a means to examine the relationships within and between the resulting sound and video pieces, we have determined a framework that contains four overarching concepts: *structure*, *texture*, *rhythm* and *continuity*. These concepts assist our quantitative and qualitative investigation into spatiotemporal modes of occupation. Structure is used as a quantitative measure to describe the division of the whole into parts, or how proportional relationships occur within the unfolding of the work. Texture refers to the thematic qualities of colour (timbre), scale (reverberation), intensities and the juxtaposition of events. Texture is also used to define different sections within the structure of the pieces. Rhythm is understood as pertaining to event activity at micro-scale, frequency (occurrence) and periodicity. 'Continuity' relates to the temporal relationships inherent within structure and is a means to assess the macro-structure of rhythm. In using these four terms we explore the visual and auditory interrelations of the pieces with the objective of developing a set of design parameters for an installation proposal in Bowen Street to further investigate the concepts formed in this paper.

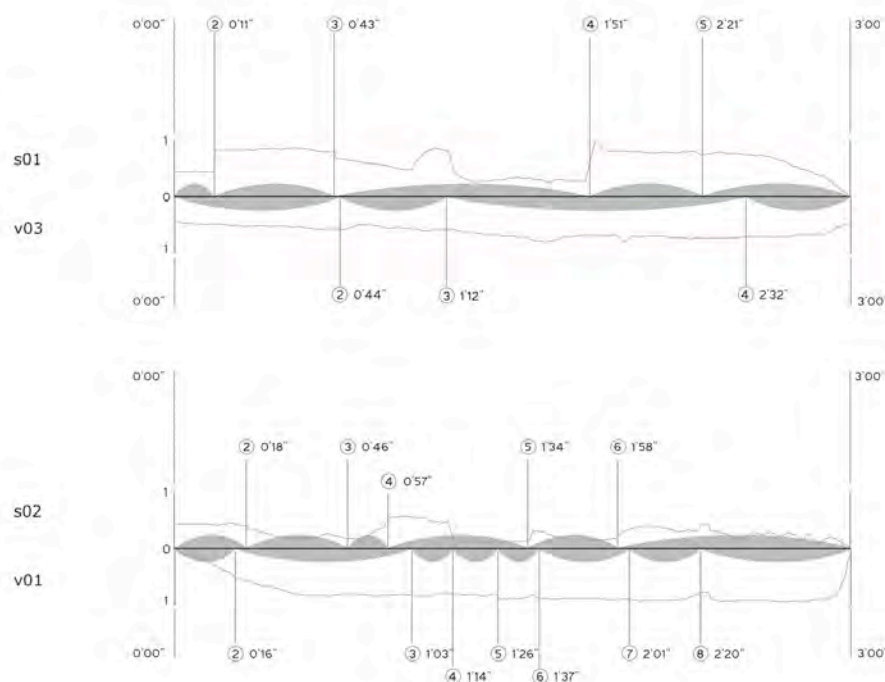


Figure 4. Comparative diagram of the quantitative *structure* (shaded arcs) and qualitative *rhythm* (mapped between 0=static and 1=agitated), of *s01-v03* and *s02-v01*.

The trends observed within the juxtaposition of the works reveal an expected difference in their structure, rhythmic content and overall continuity. We found that the visual compositions contain more sections than the sound compositions, though identified more rhythmic variation within the sound pieces. The visual compositions contain a higher level of structural continuity, and unlike the numerous small linked sections within the visual compositions, the sound compositions contain medium-to-long sections. When a contrasting short section appears, it is in the context of two longer parts. This characteristic creates a continuum for the juxtapositions between the quasi alignments of *s02-v01* (Figure 4), to the non-alignment of *s03-v03* (Figure 5). In regards to texture, the nine juxtapositions act in concert to create a new ephemeral and dynamic materiality. They are exaggerated through a simultaneous rhythmic language operating on the micro-scale, that consequently creates a dynamic structure (on the macro-scale) because of the contrasting sections of varying length. Because of the similar uses in editing techniques between the sound and visual compositions—for example, layering, repetition, manipulation of time, scale (reverberation), and colour and contrast (timbre)—the resulting texture of the nine juxtapositions is suggestive of a series of projected spaces that co-exist, collapse, conjoin and expand seemingly at will, though occasionally through a synchronised choreography. This abstracted spatiality of juxtaposition is a dynamic one. It is in constant flux, driven through temporal articulations, the movement of sound sources and changes in volume. The spaces produced between the visual and auditory compositions are qualitative, only suggestive of a scale, sometimes indeterminate and ambiguous, and not readily measurable.

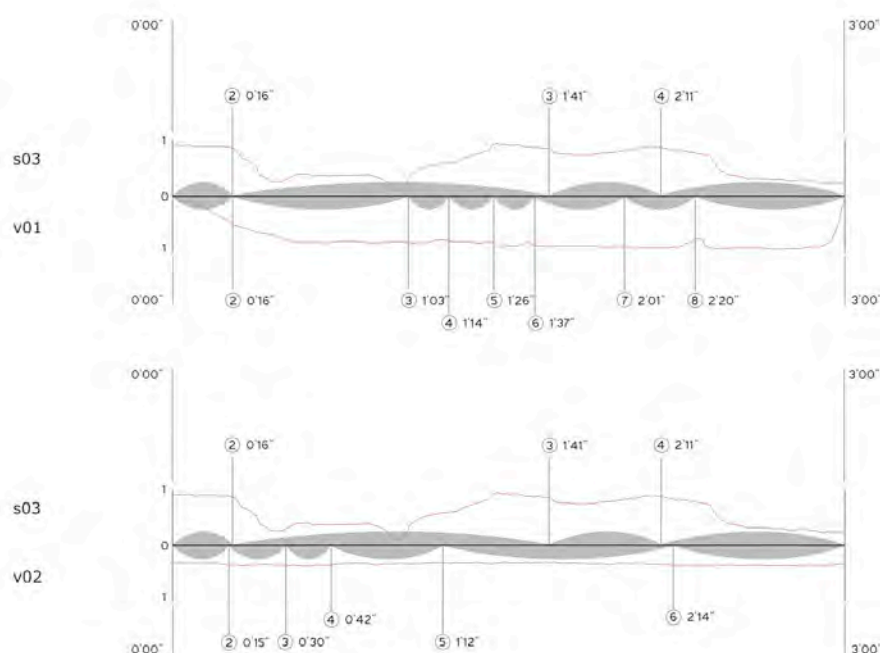


Figure 5. Comparative diagram of the quantitative *structure* (shaded arcs) and qualitative *rhythm* (mapped between 0=static and 1=agitated), of s03-v01 and s03-v02.

Our investigation of human occupation through sound and video compositions refers to questions of sensation and perception in relation to the body and movement. For Massumi, there is an 'intrinsic connection between movement and sensation'¹⁶ that is inseparably tied to his concepts of change and the body. Massumi distinguishes between perception as 'segmenting and capable of precision' and sensation as 'unfolding and constitutively vague'.¹⁷ Our indeterminate combination of video and sound compositions prioritises *intensive* qualitative encounters of sensation over quantifiable object-perception. Yet both concepts are inherent in our exploration of visual, auditory and spatial relationships through our attempt to *make sense* of the works. We understand the sound and video compositions as modes of non-physical occupation and removed from a physical site context. The discussion of such approach relies on the theories of a synaesthetic interconnection of the senses, and 'that all the sense modalities are active in even the most apparently monosensual activity'.¹⁸ Even though not manifest in the material world, the compositions mediate multi-sensory and spatial experiences through texture and movement.

4. Conclusion

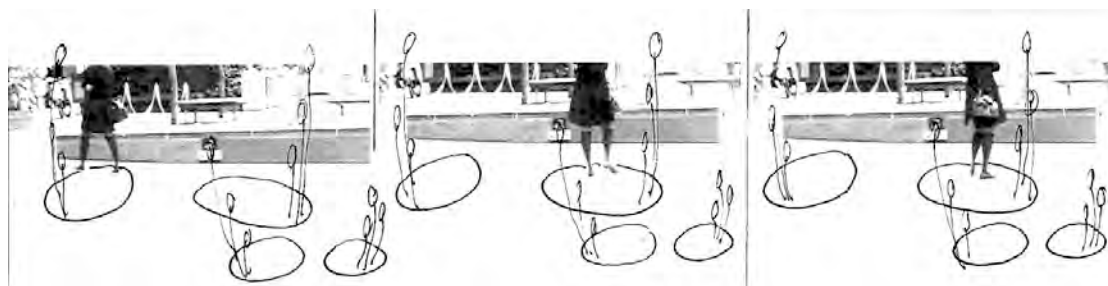


Figure 6. Conceptual sketch of the design proposition for Bowen Street.

Based on the investigations of our experimental design compositions and preceding elaborations, we are developing a design brief and proposition for a future installation project in Bowen Street. The design concept seeks to enable new spatial choreographies of sound and movement, curate more dynamic auditory soundmarks and articulations within the site and shift the current definition of areas in relation to movement and rest. We propose an interactive installation using touch sensors that are integrated into rubber mats and positioned in clusters in different locations on the ground and on seating around the site (Figure 6). The sensors are connected to strategically placed loudspeaker cones, which reproduce sounds derived from the processed local soundscape (in a similar manner to the transformations used in the soundscape compositions). The connections between touch sensors and speaker cones will be indeterminate in order to achieve a highly dynamic auditory occupation of the site. Occupants can walk, jump, sit or tap on the mats, which triggers a user-enhanced soundscape that expands and contracts the acoustic arenas within Bowen Street. This installation project will allow us to explore how the sound and video compositions have enabled a different approach to a visual, auditory and spatial design for the site (Figure 7).



Figure 7. Conceptual visualisation of the design proposition for Bowen Street.

Our use of design compositions (both as auditory and ocular experiments in spatiality) has facilitated a method through which the spatiotemporal qualities of a site can be mediated and analysed in order to develop a design brief. This project has highlighted that relationships between visual and auditory qualities within the built environment function in a like manner to the juxtaposition of the video and sound compositions produced in this study. Although often apparently unrelated and without a coherent narrative, there is nevertheless a cohesion and occasional synchronicity between visual and auditory events as they occur in close spatial and temporal proximity. The significance of such interrelations, and the constant play between visual auditory spaces has been identified through our project work as an unexplored dimension for spatial design praxis.

In our project we define interior architecture and interior design as spatiotemporal practices, in which human inhabitation and sensory qualities form continually changing territories. By

approaching the discipline as such, it becomes one involved in the ephemeral articulation and/or organisation of space. Spatiality and occupation are not merely defined by physical typologies, but emerge through interrelations, in expanding and contracting arenas and zones, are multi-layered and multi-sensory.

Endnotes

- ¹ Choreographer: Lucy Guerin, Set Design: Donald Holt, Holt Clifford Design, Melbourne. Website: www.lucyguerin.com/lucyguerin.php (accessed on 28 February 2009).
- ² Urban Interior {UI} website: www.urbaninterior.net (accessed on 28 February 2009).
- ³ Lucy Guerin Inc website: www.lucyguerin.com/lucyguerin.php (accessed on 28 February 2009).
- ⁴ Lucy Guerin Inc website: www.lucyguerin.com/lucyguerin.php (accessed on 07 March 2009).
- ⁵ Massumi, Brian. (2002) *Parables for the Virtual*.
- ⁶ Collins English Dictionary. Fifth Edition. (2000) Harper Collins Publishers, Glasgow, UK.
- ⁷ Gibson, James J. (1986) *The Ecological Approach To Visual Perception*.
- ⁸ Truax, Barry, (2001) *Acoustic Communication*. p11.
- ⁹ Schafer, R. Murray. (1977) *The Soundscape: our sonic environment and the tuning of the world*. pp. 9-10.
- ¹⁰ Blesser, Barry (2006) *Spaces Speak, Are you Listening?*
- ¹¹ Augoyard, Jean François, et al. (2006) *Sonic Experience a guide to everyday sounds*.
- ¹² Blesser, Barry. (2006) *Spaces Speak, Are you Listening?* p26.
- ¹³ Gibson, James J. (1986) *The Ecological Approach To Visual Perception*. p12.
- ¹⁴ Southworth, Michael. (1969) 'The Sonic Environment of Cities'. p52.
- ¹⁵ Gibson, James J. (1986) *The Ecological Approach To Visual Perception*. p.66.
- ¹⁶ Massumi, Brian. (2002) *Parables for the Virtual*. p1.
- ¹⁷ Massumi, Brian. (2002) *Parables for the Virtual*. p259.
- ¹⁸ Massumi, Brian. (2002) *Parables for the Virtual*. p140

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