

bodies+spaces

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ABSTRACT

The underlying principle of the 'bodies+spaces' studio for first year architecture students is that the primary concern of architecture and other design disciplines is the relation of bodies and spaces. The studio sought to bring this to the surface and to allow the students, through a sequence of projects, to explore this relation. This paper outlines the studio, describes some practices and artifacts that transpired and discusses the positions on bodies and spaces that emerged.

INTRODUCTION

The body has been design's primary point of reference across history, not only because people like to fashion things in their own image but because functional objects come in close contact with our flesh, skin and bones. Humans invented technologies to supplement the inadequacies of the body's natural envelope. Chairs and jackets, cups and spoons, buildings and cars, serve to extend and support the body, compensating for its failures and allowing it to survive in a world that is largely inhospitable to human life.¹

This paper discusses a first year, first semester design studio in the undergraduate architecture programme at The University of Auckland. The studio took the relation of body and space as the primary context shared across all design disciplines and sets a course for students in which this might be explored, tested and critically examined. Edward S. Casey, in his discourse on the philosophical history of place contends that, '... there can be no being-in-place except by being in a densely qualified place in concrete embodiment. Indeed, how can one be in a place except through one's own body?'² This explicit bringing to the surface of the body as the location of spatial experience and knowledge was the primary focus of the studio.

As required by the Faculty, the investigations made in this introductory studio stemmed from an exploration of the conceptual realm in which architecture operates, making connections to the cultural, physical, formal, social, political and, we would add, the philosophical and theoretical considerations of architectural design. The contention was made that the primary concern of architecture should operate 'inside out'. Rather than setting out a course of study based on articulating an architectural object in space, the concern should be that of interiority; the phenomenological relation of the body to that which surrounds it and the inhabitation of space.

ADDRESSING STUDIO AS A MODE OF TEACHING AND LEARNING

The 'bodies+spaces' studio has been delivered twice, in the first semesters of 2008 and 2009. Each time it has been taught over an eleven-week period, involving eight staff and approximately 120 students. At two points in the semester invited critics responded to the work in formal presentation sessions, but other means of publicly presenting work were also pursued, such as demonstrating work in a public park.

In conjunction with what might be called 'design learning' it was acknowledged that part of the role of this first semester of an undergraduate program is to enculturate students into the studio environment. Acknowledging that modes of teaching and learning in secondary school do not include that of the studio, the course began by making studio the explicit subject of discussion. Rather than expecting students to 'pick it up as they went along' the first class session addressed the nature or *tikanga*² of the studio. Studio was articulated as both spatial and temporal; 'the studio' is a place, but 'studio' is also a time and a set of practices including those of thinking, making and talking. Crucial to the operation of studio are the actions of production and what we called 'bringing things to the table'. This acknowledges what Robbins says that, 'for a conception to be realized, the architectural project demands a generosity of interaction and communication'.⁴ Our expectation of the students in this studio was hinged around this 'generosity of interaction': without them offering drawings, models, ideas, personal experiences and precedent projects for discussion, there could be no teaching and no learning.

THE SCOPE OF THE STUDIO

The 'bodies+spaces' studio was divided into six separate but interrelated projects (outlined in Table 1), each establishing a specific area of enquiry in relation to the topic of bodies and spaces. Each project was also designed to introduce a bundle of design strategies (modelling, precedent projects, writing, forms and scales of drawing), supporting resources (specific texts, libraries, databases, museum collections, peers), and design experiences (collaborative work, workshop fabrication, material sourcing), whilst facilitating an experience of designing with close attention to aspects of the body and the bodily.

Table 1: bodies+spaces studio outline.

Project	Bodies and spaces concerns	Design strategies	Project brief
<i>Between You and Me</i> (1 week)	Specific spatial, material and performative qualities of body and body parts, distance and locality, physical and virtual body.	Introduction to peers, drawing on prior learning, own knowledge and stories, collaborative processes.	In a group of three, make and fabricate a design that connects one person's spine, one person's left little toe and one person's right ear lobe.
<i>My Feet Can't Touch the Ground</i> (1 week)	Spatial qualities of a particular body, weight, mass, volume and gravity, balance, orientation. Theories of affordance, ergonomics and comfort.	Fabrication and workshop, material sourcing, collaborative processes.	In a group of three, design and fabricate a device for carrying your chosen body.
<i>Haptic Body</i> (2 weeks)	The senses and material properties (physical, tactile, acoustic, poetic), atmospheric properties such as humidity and temperature, the mobile body and psychological response to spaces.	Haptic mapping of site, iterative maquette studies, section drawing, light studies, material analysis, readings. ⁵	Design a spatial intervention for Fort Lane where the sensory/haptic experience might allow those passing through or stopping to experience this space anew.
<i>Skins and Bones</i> (2 weeks)	Relation of frame and membrane, envelope (porous, layered) ornamentation, surface, intelligent / responsive skin and interactive design, temporal change.	Location and presentation of precedent project, research skills, conceptual modeling, readings. ⁶	Using any methods explore your chosen topic and make some skins or bones. Widely research your topic, consider physiology, cultural meanings, processes.
<i>Emergency Dwelling</i> (2 weeks)	Nature of dwelling, emergency and the domestic. Arrangements of bodies, bodily provisions. Politics of bodies in spaces, intimacy, privacy, security and other psychological considerations.	Collaborative processes, writing of manifesto, developing own brief from close examination of formal production to date.	Work in pairs. Use your exploration of skins and bones to design an emergency dwelling for two people. The nature of the emergency and your position on the body should be articulated in your manifesto.
<i>Supersize Me</i> (2 weeks)	Emphasis on 'getting up close and personal' with the design, fine crafting of an architectural artifact, detailing, material specification, design, communication and presentation.	Critical discussion of modes of production (drawings, section, axonometric, film, 1:20 model, full scale prototype etc.). Fine crafting of design artifact.	Individually develop the project through one of the following modes: 1:1 drawing, prototype, digital model, physical model at 1:20, architectural film, orthographic drawings, 1:50 exploded axonometric drawing.

PRACTICES AND ARTIFACTS THAT TRANSPIRED

This discussion focuses on two pieces of work produced in the final four weeks of the studio, as part of the two final projects *Emergency Dwelling* and *Supersize Me*. In these projects the students worked in pairs to conceive of and interrogate the idea of emergency. They then proposed a dwelling for two people in response to this 'emergency'.

The emergency could be of the students' choice: literal and grounded, (two children in an earthquake) psychological and interior, (parent and child in refuge from abusive partner) or fantastical and of the imagination, (stylist and celebrity in red-carpet fashion disaster). The primary expectation was that the dwelling be considered as an interior condition for two people, with reference to their specific social, physical and psychological needs and desires in this emergency. In designing the dwelling the students were required to navigate the politics of these two bodies in this space, allowing for an exploration of intimacy, privacy, security, power relations, provision and resource in relation to aspects of the design specific to each emergency project.

The 'bodies+spaces' studio allowed for phenomenological exploration and focused on the body's sensory perception and integration of spatial and temporal experiences of the material world. Phenomenology, as expressed by Pallasmaa, suggests to us that: 'Architecture, as with all art, is fundamentally confronted with questions of human existence in space and time, expressing and relating man's being in the world.'⁷ The following two pieces of work strongly reflect the students' interpretation of the specificity of bodies and how we might perceive the interior in relation to these bodily conditions.

URBAN FABRIC

This design is a collusion of fashion and architecture. As Alberto Pérez-Gómez states: 'Architectural meaning, like erotic knowledge, is primarily of the body and happens in the world...'⁸ The students posited that one's personal space has become more particular and inflected with the rapid advent of miniaturised technology such as the iPod, mobile phones, and other personal digital devices, resulting in a more self-reliant and contained urban individual. The emergency dwelling in this project takes the form of two architecturalised pieces of clothing, (his and hers) acting as body protection whilst mediating the intimate requirement of personal space as an interior condition. (Figures 1 and 2). The 'emergency' is the negotiation of crowded urban conditions, in response to which, the students designed from the 'skin out' to emphasise the body as a unit of space in the world.

The man's jacket responds to a desire for acoustic and visual privacy: talking on a mobile phone, having intimate conversations with another person, the separation of oneself from the crowd

by turning the outside inward. While the iPod and earplugs are contemporary technologies which achieve this goal, we can consider a more traditional example where train commuters read an open newspaper to create a structured, privatised space around the body, particularly at the level of the head and shoulders. The students identified some important gender differences in relation to their bodies. With the jacket they identified that men tend to carry loads on their shoulders, so the form of the garment accentuates the spatiality of the shoulders by lifting and widening them.

The jacket is made as a sculpted, tailored piece of clothing. The darts around the waist are sewn to expose them on the exterior, accentuating the structural, rib-like quality of the jacket and its relation to the masculine body. The industrial zip is fixed to the outer layer of the jacket and acts as a delineator of space: with the zip lowered, the head and face are exposed. With the zip taken to the top of the jacket, it provides complete isolation of the head within a clothed interior space: the only view is the sky above. In this way the body, and in particular the eyes, are either engaged with the surrounding environment or shut in, maintaining an interior world. As Pallasmaa observes: 'Vision places us in the present tense, whereas haptic experience evokes the experience of a temporal continuum'.⁹ This emergency dwelling mediates the public and private space of the mobile, urban body by modulating the sensory organs of eye and ear.

The second Urban Fabric garment is a woman's skirt. It was observed by the students that women tend to carry loads on their hips, therefore this demanded that the accentuation of the body in this garment be at the hips. As with the jacket, the response in this garment is to the 'emergency' of crowded urban space and personal mobility in western cities. The skirt is designed as a padded and pocketed object that would enable a woman to carry her high-tech belongings with her, her life-objects being readily accessible within the oversized pockets of the skirt. By wearing her belongings on the outside, in plain view, the design produces an image of autonomy and mobility. The skirt protrudes from the body thereby further extending the

usual zone of the body, giving the wearer more personal space in a crowd. The thickened, padded roll over the genital region acts like the bumper on a car, deflecting bodies and objects that come too close to the wearer. This piece of clothing reverses the current trend of the idealised feminine body as one of extreme thinness by giving the wearer an even greater, more pronounced body form.

The material considerations for both garments were that they should act as structural skin, supporting the structural requirements of the piece without the addition of secondary ribs or hard structural elements. The jacket uses vinyl as the exterior layer, which makes reference to the rain-protecting qualities of the skin, whilst the lining and padding have the effect of being an interior soft furnishing. The skirt uses stiff denim as its exterior aspect, giving it a youthful and contemporary quality of everyday wear. Both pieces have interior linings of bright orange felt with a middle layer of spongy, insulating fabric. The orange interior, exposed in flashes of colour, serves to give the clothes the visual sign of emergency, of warning. Some edges of the garment materials were left exposed to make a visual reference to the layering of the body: skin, fat and bones, as well as to the layering process of architectural construction.

These two garments engage with specific, gendered, mobile, urban bodies and the politics of the city and street. They provide for security, privacy and intimacy through their design and materiality, and they are shaped by a strong investigation of the particular body and space relations set out by the students.

FAT HOUSE

The premise for this 'bodies+spaces' design is that two morbidly obese brothers live together in a State House.¹⁰ Due to their large body size, the 'emergency' for these inhabitants is that they are incapable of moving freely within the interior and they do not venture outside. The two students started with the plan and elevations of a standardised, 1950s New Zealand State House. Their objective was to re-design this ordinary housing typology



into one that was appropriate for the two fat brothers, and the modulation of the interior became the obvious focus of the design. The floor plan of the existing house was assessed with very blunt criteria: Eat, Sleep, Shit. The project explored the physical and psychological requirements of these two men in achieving these functions with dignity. The students asked how these basic and necessary bodily functions could be addressed

through a rigorous interrogation of the existing plan and the proposition of a new interior arrangement.

Pallasmaa makes a clear relationship between the body and the home: 'There is a vivid and unconscious resonance, correspondence, and identification between our images of the house and of our own body with its sense organs and metabolism.

Above left

Figure 1: Urban fabric. Photo Lloyd Thomas and Marina Karetina

Above right

Figure 2: Urban fabric. Photo Lloyd Thomas and Marina Karetina

The house is a metaphor of the body, and the body is a metaphor of the house'.¹¹ The challenge was to re-design the interior of the house as determined by the spatial conditions of the bodies of the grossly fat brothers. The students investigated, through model making, the idea of expansion and contraction as a reference to the body's ability, evidenced through obesity, to expand (or contract with a loss of weight). This concept was melded into the scheme in the approach to spatial arrangement, movement and programme.

All interior full walls and doors were removed and replaced with partial walls and wide unfettered door openings. A continuous, curved, spatially expanding wall was inserted into separate aspects of the programme: bathing, cooking, sleeping, relaxing. In this way physical movement around the house is not impeded by the opening and closing of doors which normally requires the body to move forward and backward in space. A mini railway-like line was inserted into the floor, running from the exterior garden, through the kitchen along the bench area, through the bathroom, and in line with the bedrooms. Two wheeling chairs were attached to this mechanical line, which enabled the brothers to move throughout the house without walking any great distance.

The kitchen was constructed as a continuous bench space that curves around the interior walls of the house. The bench is lowered to sitting height to support the railway-line chair arrangement so that the preparing, cooking and eating of food can be done whilst sitting down. The bathroom is an open wet area for showering and toilet use. There is no standard toilet; it has been replaced by a drainage hole with body leaning posts and hand rails. This makes excreting and showering a more hygienic procedure: if you can't wipe, you can hose! The bedrooms have been filled with 'bed', so the entire room exists purely as a surface for lying down. The expansive 'bed' reflects the constantly expanding nature of the brothers' bodies as a cushion of fat and stretching skin forcing itself to the limits of its spatial containment: the growing interior allowed by an expanding exterior.

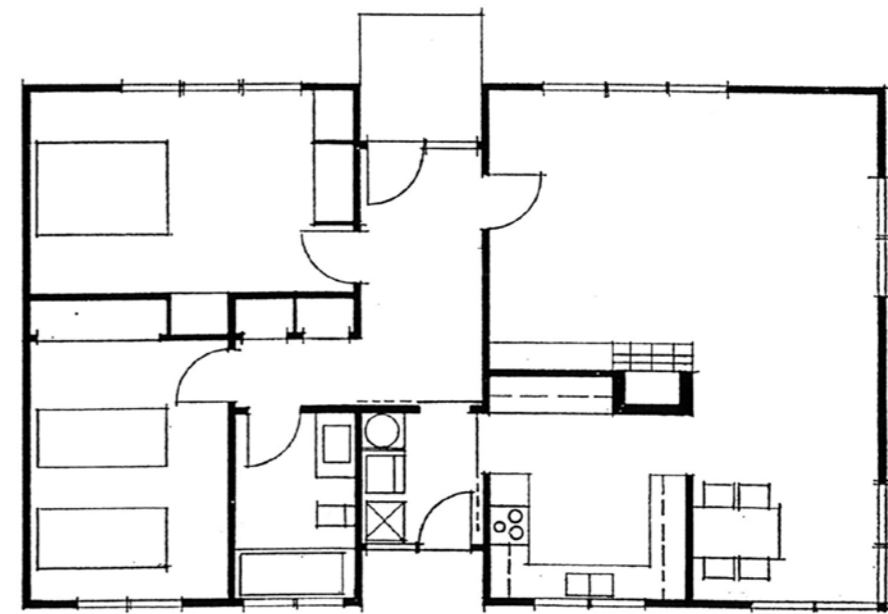
The existing exterior cladding of horizontal weatherboards has been rearranged and made vertical as a way of intimating an upright, lengthening of space. With consideration to the fast pace of the outside world, long narrow vertical windows were inserted into the exterior wall facing the street and pedestrian edge. In this way the brothers could look out upon the activity of the world yet maintain their privacy, and if someone looked back into the house the brothers' bodies would be seen only as slim segments, thus maintaining an exterior appearance of verticality and slimness, reducing the image of ridicule.

The concept of expansion and contraction was interpreted as openings in solid space and in a progressive widening of spaces in relation to each other. In subtle opposition to each other, the interior was expanded and exposed like obesity, whereas the exterior was re-oriented vertically, giving no indication of the horizontal spread of the interior condition.

The rigid rectangularity of the State House plan was 'unfolded' and made to wrap around itself, accentuating a nurturing and encompassing relation of architecture to the body. This allowed for the development of intermediate spaces which responded to the need for a reintegration of interior and exterior. With this design the students (remembering they are in their first semester of first year) explored a brave re-development of the pragmatic concerns of domestic inhabitation whilst maintaining the dignity of the occupants, resulting in a successful reinterpretation of an often neglected housing typology. They took the obese bodies as the primary occupants and gave them a home.

CONCLUSION

The 'bodies+spaces' studio asserted a position on architecture as operating 'inside out'. The aim of the studio was to wrangle with the prevalent view of the first year students, that architecture is concerned primarily with the arrangement of aesthetically pleasant objects and surfaces. The studio resulted in a plethora of projects that negotiated space, the body, temporality, movement and socio-cultural conditions through the design of an emergency dwelling. In many instances, the nature of the emergency as an area of design enquiry allowed for discussions of the body politic to emerge. As students identified an emergency condition to work with they confronted issues of contaminated bodies, (swine flu), displaced refugee bodies (migrant workers in central Africa) and compromised bodies (victims of physical and sexual abuse). The students asked, 'Under what



Above
Figure 3: Typical State House plan, Angela Park and Holly Yumeng Xie

conditions do bodies become disciplined and contained, what are 'normal' hierarchies of intimacy, privacy and materiality, and when do these break down?"

While experimenting with various modes of making and strategies of design production, the students interrogated the body as a social, cultural, physical, material and spatial entity. In many instances what resulted were generic 'pod-like' designs, modulated through the material condition and interior lining in such a way as to provide for the specific bodies chosen by the students. In the more rigorous projects, such as those described here, the particular spatiality of the bodies (young and mobile, obese and immobile) and a consideration of the body politics of the inhabitants has resulted in a specific and inflected design where exterior form has been presupposed by the interior and bodily condition.

The strength of the 'bodies+spaces' studio is that it resulted in projects where morphologies, interior and exterior conditions, and material selection and manipulations have been derived through an engagement with a phenomenological examination of the body in space and a critical reading of the body and spatial politics.

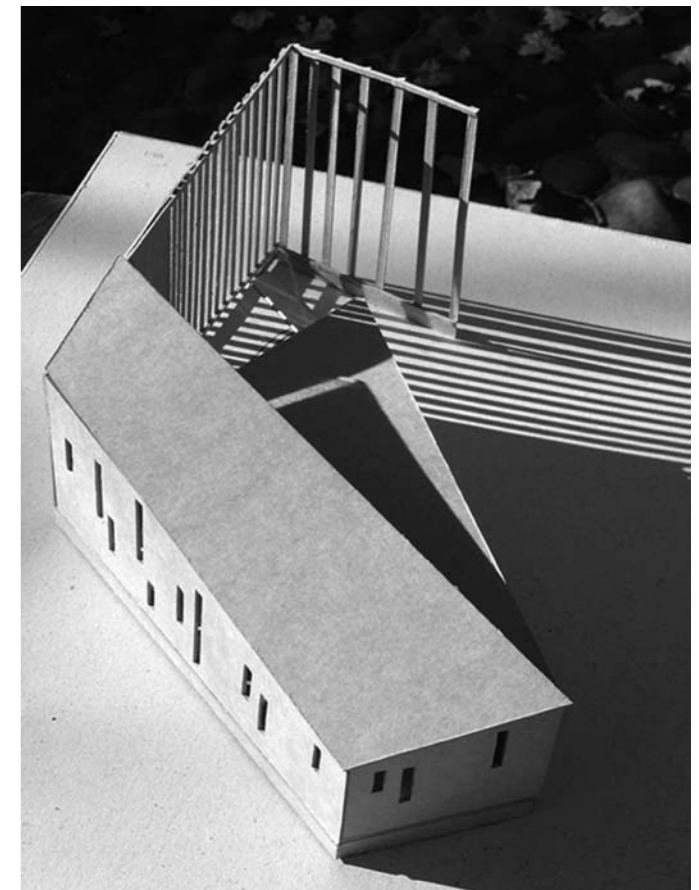
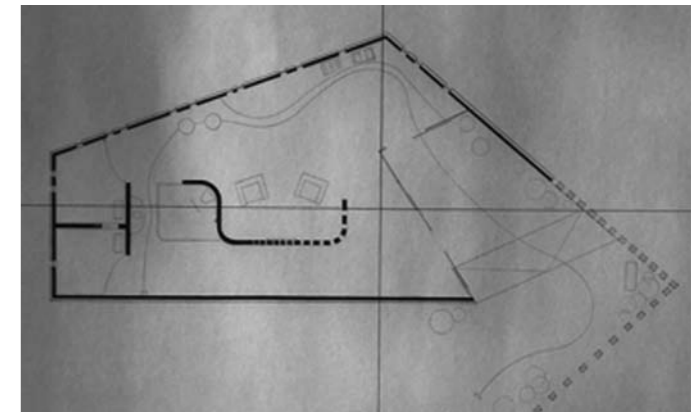
NOTES

1. Elen Lupton. *Skin: Surface, Substance, and Design*, (New York: Princeton Architectural Press; Cooper-Hewitt National Design Museum, Smithsonian Institution, 2002) 29.
2. Edward S. Casey. *The Fate of Place, a Philosophical History*, (Berkeley, Los Angeles, London: University of California Press, 1998) 204.
3. *Tikanga* is a Maori word and concept. It is translated as 'correct procedure, custom, habit, lore, method, manner; rule, way, code, meaning, reason, plan, practice, convention'. This definition <http://www.maoridictionary.co.nz> (accessed 10 June, 2009).
4. Edward Robbins. "Why Architects Draw," in *Drawing and Architectural Practice Revisited*, (Cambridge, Mass.: MIT Press, 1994) 300.
5. Required readings for the 'Haptic Body' project included: Michael Benedikt. "Environmental Stoicism and Place Machismo." *Harvard Design Magazine*, no. 16 Winter/Spring (2002): 21-27. Karen A. Franck *Architecture inside Out*. Chichester: Wiley, 2000. Kenya Hara. "Events on the Skin." In *Designing Design*, (Baden, Switzerland Lars Muller Publishers, 2007). Juhani Pallasmaa, *The Eyes of the Skin, Architecture and the Senses*. (Chichester: Wiley, 2005).
6. Readings required for the 'Skins and Bones' project included: Brooke Hodge. *Skin + Bones: Parallel Practices in Fashion and Architecture Essays by Brooke Hodge and Patricia Mears*. (Los Angeles, New York & London: Los Angeles Museum of Contemporary Art and Thames & Hudson, 2006). Ellen Lupton. *Skin: Surface, Substance, and Design*. (New York: Princeton Architectural Press; Cooper-Hewitt National Design Museum, Smithsonian Institution, 2002). Peter Wood. "Sticks and Stones: Skins and Bones." *AD* 73, no. 2 (2003): 65-68.
7. Pallasmaa. *The Eyes of the Skin, Architecture and the Senses*. 16.
8. Alberto Pérez-Gómez. *Polyphilio, or the Dark Forest Revisited: an erotic epiphany of architecture*, (Massachusetts: MIT Press, 1992) xxvi.
9. Juhani Pallasmaa. "Hapticity and Time: Notes on Fragile Architecture," in *Encounters: architectural essays*, Peter MacKeith, (ed.) (Helsinki: Rakennustieto, 2005) 324.
10. The State House is a term used to describe houses leased to lower socio-economic tenants by the New Zealand Government. While the houses owned and operated under this scheme vary in typology and scale a large number were

built to generic plans and from standardised materials in the 1950's. It is these typical detached, timber bungalows that are referred to here.

11. Pallasmaa. "Stairways of the Mind," in *Encounters: architectural essays*, MacKeith, (ed.) 60.

Students: Urban Fabric by Lloyd Thomas and Marina Karetina. Fat House by Angela Park and Holly Yumeng Xie
Course Co-coordinator of First Year Design Studio: Kathy Waghorn
Tutor of design projects – Urban Fabric and Fat House: Ross T. Smith



Above top
Figure 4: Fat House Plan, Angela Park and Holly Yumeng Xie

Above bottom
Figure 5: Fat House mode, Angela Park and Holly Yumeng Xie