The Recalcitrant Aesthetic:
Material and Critical Fabrications in the Design Studio

CHARLES WALKER
RACHEL CARLEY
University of Auckland

INTRODUCTION

This shop-based design studio and public exhibition formed part of a larger, ongoing research program exploring the potential for technical issues — here of material, craft, fabrication and scale — to creatively contribute to the development of architectural and educational theory. We also address how these might be concretely articulated and critically evaluated within schools of architecture, the profession and the wider community.[1] At another level, it sought also to investigate the often unstable and under-theorised relationships between technical and aesthetic *intention* (here, the aims and objectives of design studio pedagogy), *invention* (students' imagination, playfulness, artistry and execution) and *interpretation*.

More specifically, by attempting the full-scale, physical materialisation of speculative ideas, it set out to question a series of positions that have come to form a new orthodoxy in design studios concerned with materiality; including

• that explorations of material and construction serve to affirm or reinforce architecture's autonomy from other disciplines and modes of enquiry; or alternatively

• that a normative (and largely self-referential), architectonic *expressivity* constitutes the only *authentic* way forward for architecture

• that theory precedes, stands apart from, or provides rules for, practice; or conversely

• that theory has become irrelevant to practice, and thus;

• that studio projects concerned with 'integration' should seek to re-create or closely approximate constructional 'reality'

• that the success or otherwise of educational projects are evaluated strictly in accordance with pre-set criteria that support the 'seriousness' of professional or pedagogical agendas, or

• that technology is (or is not) socially-constructed and therefore should (or should not) be socially critiqued

Prior to formulating the studio program, we had begun to consider what alternative ideas and methodologies might be suggested by Boyer and Mitgang's call for

… a new….language driven by the conviction that the standards used to evaluate student work and program performance should be organised not so much around blocks of knowledge as around modes of thinking: the discovery, application, integration and sharing of knowledge…..''.[2]

In the schools, much of this discourse has boiled down to strategies for ''integrating'' various scientific, sociological and above all, technological, topics into the design process. However, experience has shown that simply introducing more information and/or knowledge into the studio does not, in itself, ensure ''integration, application or sharing of knowledge''. Nor good architecture. Neither do most of these educational strategies acknowledge the importance of *agency* and/or the possibility of diverse personalities, pre-dispositions, tastes, aspirations or motivations among students. Despite the importance currently ascribed to notions of 'technical competence', we here suggest that some form of *aesthetic motivation* is the key motivating

factor in individuals' participation in architectural education.[3] Moreover, while (admittedly, often superficial) aesthetic factors have been, and remain, key criteria for assessment and status within the general field of architecture, little detailed attention has actually been directed within the discipline towards the epistemological, ontological or transformative nature and potential of the *Aesthetic* as a constituent of that 'underlying condition we call reality'[4] and the implications of this for architectural education.

We are aware that these days the term *aesthetics* is colloquially, or pejoratively, defined as the theory or philosophy of art, often limited to the classification of artworks or styles and their 'subjective' perception. Our argument, on the other hand, is at least partly informed by alternative strands of research and an interest in *Aesthetics* as an alternative mode of philosophical inquiry into the *relationships* between knowledge, cognition, creativity and inter-personal ethics.[5] It also, we suggest, subsumes and illuminates related notions, such as Huizinga's *Homo Ludens* or Schon's 'artistry'; this latter term widely cited but little explored or developed in critical terms since its introduction.[6] Much recent work in aesthetics has emphasized the connection between art and (to use an old-fashioned term) moral understanding, a connection historically important but largely neglected during the last few decades, partly superseded by zealous attempts to define and defend the intrinsic value of architecture-as-art against an *instrumentalism* that locates value in its didactic, technical, commercial or ethical *effectiveness*.[7]

More pertinently, whereas previous usage generally referred to aesthetic *consideration* or *perception*, we are concerned here with the aesthetic as a motivating factor in the speculative *production* and *generation* of material artefacts (what a more didactic commentator might call studio 'outcomes') upon the continually-evolving, conditional field of contemporary architectural education. Equally pertinent, and potentially more provocative, following Semper's exegis (via Frampton), is that the *tectonic* itself also incorporates *ludic* aspects, of play and *performativity*.[8]

AN AESTHETIC AGENDA: AGENCY, AFFECT, ARTEFACT

In her book *The Body in Pain: the Making and Unmaking of the World*, Eileen Scarry suggests that the process of ''making'' is really an act of giving, where the pain and anguish of work is compensated by the joy of giving that which is made. This imaginative transfer — through technique — of *affect* to *artefact* is what links making with ''making up.''[9]

Our intentions were thus to explore;

• how architectural concerns might be addressed through consideration of material and detail

• the extent to which physically engaging with materials and fabrication techniques can contribute to an understanding of architectural *praxis* ;

• how sensory, emotional and aesthetic possibilities (that is, the *affective* qualities) of material, technique and (relationships of) scale are made meaningful to students

• how these realisations might be generated, communicated, disseminated, or appreciated. (In this case through public reception and critical interlocution).

This last was intended in part to address contradictions within the largely normative and self-referential discourse around the notion of technology that has emerged in the academy as a result of investigations into the tectonic during the 1990s and more recent comments on the purpose and quality of architectural education emerging from various professional and accreditation bodies. Much of this assumes a normative value system and an interest in the relatively straightforward re-production of technical norms on the part of students.[10] More particularly, we sought to explore notions of agency and affect, in both the production and reception of the work.

The ultimate pleasure of architecture is that impossible moment when an architectural act, brought to excess, reveals both the traces of reason and the immediate experience of space; the echo of a hall; …the pervasive smells of rubber, concrete, flesh; the taste of dust; the discomforting rubbing of an elbow on an abrasive surface; the pleasure of fur-lined walls and the pain of a corner hit in the dark.[11] (our emphasis)

Here, Tschumi introduces the evocative power of the particular to heighten our sensory awareness. This 3rd year studio program invited students to consider to what extent this notion of detail might also suggest the presence — or absence — of a greater whole. While the instructor's interest in the Aesthetic and its relationship to technique was deliberately left non-explicit in the program document, students were required to;

(Select) a material and/or technique and using this to invent and fabricate, at full-scale, a particular detail / element / component that you consider capable of representing an architectural concern or proposition. (In essence, in this studio you are being asked to describe

an architectural idea in terms of material possibility at a scale of 1:1, rather than through drawings or models at say, 1:100). An underlying intention is that this detail, in itself, may also describe and/or form an individual contribution to the greater thematic whole that is this studio and so may, conceptually, link the work of every person in the studio.''[12]

The notional *theme*, introduced in discussions at the beginning of the semester, was *Room* (after Kahn's ''Architecture comes from the making of a room''). This seemed to offer a rich and subtle range of material and psychological possibilities for representation of *particularity* (of architectural elements (threshold, window, etc); of *social ritual*; of *furnishing* (how we accommodate, relate or locate our bodies within an architectural space) — with more general notions of human *relationships* (hospitality, communality). While this insistence on a thematic whole hinted at the 'interestedness', in the Kantian sense, of architecture's *sensus communis* relative to other arts, such traditional notions of 'context' initially seemed irrelevant, or simply unfashionable, for many students. Nevertheless, an interpersonal ethical concern persisted throughout the studio, to the extent that students collaborated or assisted on each others projects to the benefit of the final exhibition as a whole.

Instead of the normal end-of-semester jury, the work of the studio was presented at an open public exhibition. The conception and realisation of this installation and the attendant work of editing, curating, lighting and cataloguing — as well as the organization of the opening reception — all to ''public gallery standard'' — formed an integral part of the project. Evaluation criteria included the articulation of the specific architectural concern, quality of the material interrogation, techniques for realisation, craft skill , as well as the ability to post-rationalize. The exhibition was installed within a 30,000 square-feet brick and timber warehouse, The Textile Centre, near the waterfront in Auckland, New Zealand. This venue was a late change forced by the sale of the 1,500 square-feet art gallery booked at the beginning of the semester. While the form of the exhibition might have been expected to be contingent upon the nature and quality of work produced earlier in the studio, and thus compromised by this new context, students worked extremely hard to develop and refine their work to address the re-presentation and relationship of whole to part(s) within this new, greatly-expanded field.
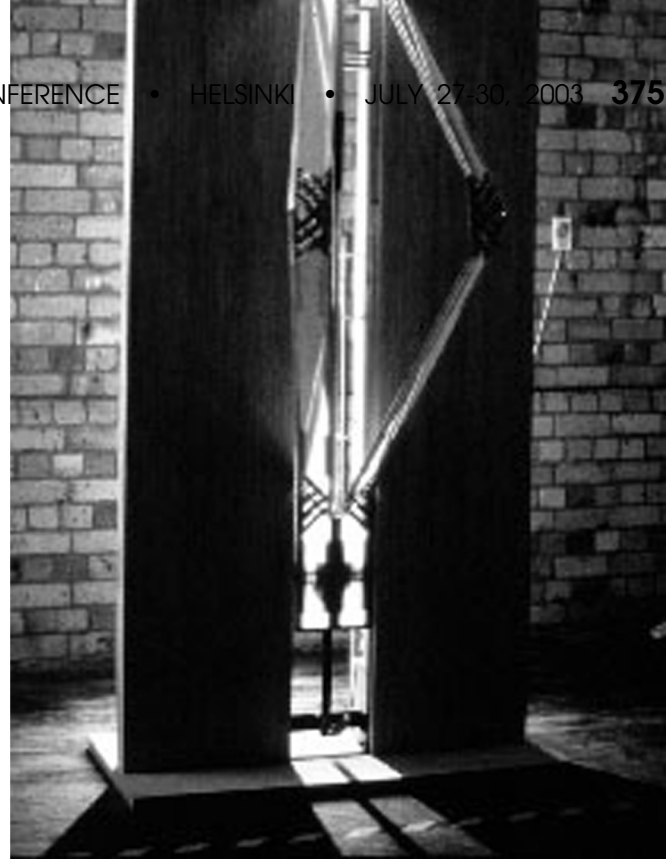
Student work that attempts concrete realisation can be risky; creatively inhibiting or liberating. Free from the normal procedures of the design-studio project, stu-

dents here embraced a playful iconoclasm that, for some, approached Derrida's ''inventive potential of non-knowledge'', often, discomfortingly, challenging the very legitimacy of (this) studio as a site of architectural knowledge production. More than once we were reminded of Croce's provocative suggestion that ''there are no *modes of expression* ..... for groups of arts display their philosophical emptiness when one tries to develop them into precise definitions''[13] One of the consequences of this — and the other issue largely avoided by pedagogic strategies based in syntactical readings of technical culture — is how the ensuing engagement of concept with craft, with all its idiosyncrasies, might be interpreted by others who might tend to expect (or hope for) architectural constructions that approximate the real thing. In noting the presence of Others, it is tempting here to draw out ethical issues implicit in the affective domain; questions about the (moral) value of material practices or the possibility of obligation(s) on the part of (emerging) architect and audience. Moreover, if the aesthetic imagination allows the freedom from imitating reality, the possibility emerges that architectural constructions, or any other inventions, take on a life of their own, independent of any generating idea or intention — or of any given/predictable communal ''meaning''. To what extent might this new (or secret) life in turn stimulate the fabrication of theory, of critique, and that architectural *skeleton-in-the-cupboard*, post-rationalisation?

At the opening reception, public comments were invited in different forms (including spoken and written visitor-responses). More considered evaluations and reviews were also invited from a group of peripatetic critical *interlocutors* drawn, not only from architecture, but also comprising artists, artisans and critics from related disciplines concerned with issues of material and fabrication. Students also acted as peer reviewers — drawing on expertise acquired through their own immersion in hitherto unfamiliar processes and their (often problematic) experiences of production. Some of the resultant critiques later appeared as exhibition reviews or commentaries in various art and professional journals. (14) These retrospective critical interpretations of the work, in turn, stimulated possibilities for further development, contributing to, confusing or perhaps, *fabricating,* the history or theory of the studio.

A CRITICAL INTERLOCUTION

Whilst the initial design instruction appears to insist on an interrogation of the constructional process — paradoxically, a process often deferred in architectural practice to other professionals — the studio encouraged

Hamish Monk and Dominic Glamuzina, Opening, *laminated ply, metal, glass, 2400 X 1200 X 100mm.*

the exploration of everyday materials and modes of assembly towards a critical redefinition of the contemporary architectural detail. The focus on the hand-made might well have led to the production of highly crafted works displaying a 'fetishisation of hard labour', that would eclipse an interrogation of the potential of new technologies. But this fear turned out to be unfounded. Many of the works exhibited forged a successful alliance between the *idea* of a detail (whether expressed conceptually or literally) and the *appropriation* of new or unorthodox materials and their inherent structural capacities to inaugurate innovative tectonic propositions. Many works seemed to 'couch the chasm' between art and architecture while their constructional integrity legitimized the performative nature of many of the propositions exhibited.
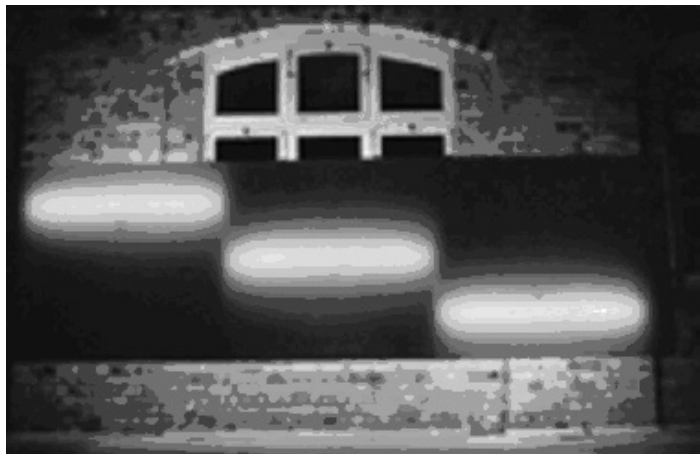
One such work was by Hamish Monk and Dominic Glamuzina that on approach appeared as an inert, door like element set in a dimly lit part of the gallery. It was centrally striped longitudinally by a metal filigree, set within ply that was glued together to expose its end sawn surface. It is this exposure of its composite materiality that should have lent me a clue to its architectural recalcitrance. From a distance, the work has an undeniably ecclesiastical nuance, filtered through the vision of Charles Rennie Macintosh. Behind these 'praying hands', light is visible — a minimalist inflection wrought by a Dan Flavin-esque fluorescent placed directly behind the metal strip. This light is set within a casing steeped in Klein blue which bleeds its saturated chroma around this etiolated bar. All is not what it seems. At the flick of a switch — or, more

precisely, the cautious tilting of a mercurial trigger — the central window element begins to cleave apart from head to toe on an elaborate electronic pulley system. (The work can also be activated by heat or motion). It prizes open and seems to gnaw at the space in front of the viewer, its cross-hatched digits now approximate the grizzly incisors of some sort of Kruger-esque *vagina dentata* ready to devour its prey. It becomes an architectural menace, which seems to articulate the anxiety of working between tectonic and surface.
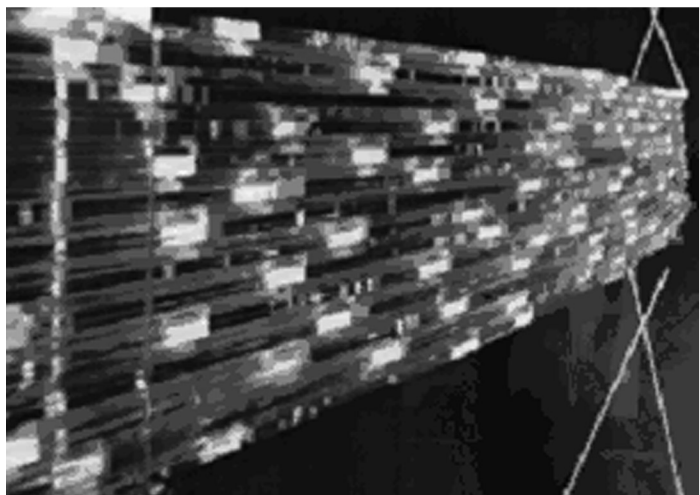
Perhaps the most immediately 'architectural' response was evident in a piece by Jamie Robertson. The surfaces of this work, constructed in recycled timber, was carefully planed back to approximate a fine grain. Yet on closer inspection we discern the 'truth' of this obsessively re-constituted surface — the morphing together of floorboards, the evidence of torn-out nails, stiletto indentations not quite sanded away. The whole work turns out to be glued together. A series of Papa, Mamma, and baby-bear clamps are left on the piece, holding it together and evoking the temporal nature of construction — in this case the setting time of pva adhesive. Its base is set above ground by a series of erratically placed breeze blocks that seem to betray the absolute exactitude wrought throughout the project. Spaces between joists are lined with a series of objects — smooth river stones, a bundle of miniature brackets, Japanese telephone cards — fragments laid out in Cartesian troughs that speak of an elsewhere and recall the aesthetic employed by the *Muji* stores that peddle Japanese no-frills designer-comestibles in the

global High Streets. This seems to be a proposal that surrenders a meta-narrative rather than a partial interrogation through the analysis of singular architectural details, which nevertheless re-present themselves in the objects carefully freighted into this tectonic vessel.

The work of Ian Blanshard and Alex Fryer was described by the designers as a 'surface of potential'. Multiple milled and polished strips of interlocking perspex allow the work to slot together and create vertical surfaces that have the potential to register varying degrees of undulation. This work explored tension, compression and, most compellingly, flexibility and tactility — people pushed and pulled this beautiful project all night. Directional lighting sears the crenellated edges of the piece so that it appeared to be lit from within. It resembles an eel caught in the trappers' torchlight and is a successful prototype for use as spatial dividers that allow occupants some degree of control over their internal space.
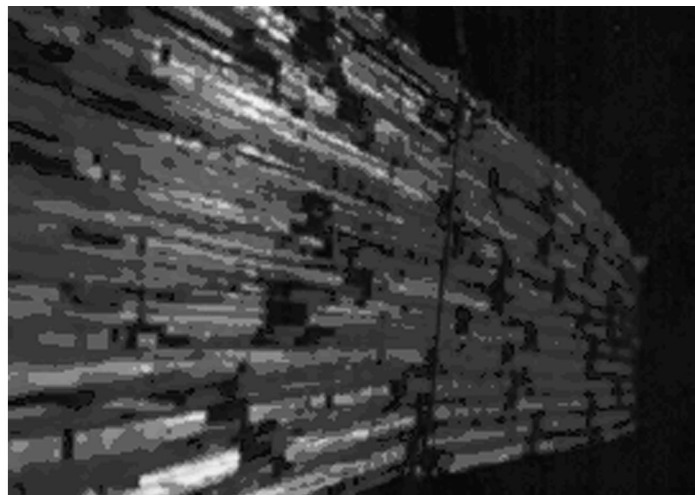

Michael Mason Light.Screen *6000 X 1800 mm.*

Michael Mason's elegant meditation on light-as-synthetic-landscape is exquisitely situated within the exhibition space. White vinyl is stretched across an intricate tensile armature and bound to the floor by a series of tensile wires. Behind this surface three fluorescent tubes are staggered horizontally across the work. Activated by visitor movement, these etiolated wands register an auratic glow on the front face of the screen and are punctuated by the silhouettes of 6 beauty spots, trace-referents of its structural supports. It is a work that invites circumnavigation in its placement away from the gallery wall — offering itself up for inspection, surrendering its constructional genesis. There has been no attempt to conceal an intricate network of power cables that connect the piece to a concatenated national grid. Natural lighting amends the works potential hermeticism, as the fenestration of the existing structure can inscribe its antique impression on the work and almost belie its apparent 'specific object' intentionality.

In contrast, Alice Hammond presented two works, which seemed steeped in a material nostalgia. Her primary construction material is the architects *ground zero* — paper, a medium which is being rapidly replaced by the virtual space of the computer. The structural module is a folded paper surface — the flattened template of a children's game. Hammond's tectonic folly relies structurally on the primacy of the overlap, the fold that burrows beneath the visible surface to marry the modules together. The module used to construct this work is counter-pointed at intervals by paper with fragments of text gleaned from disparate sources — we glimpse university letterhead, mathematical equations rescued from a rubbish bin and one refractory piece that articulates the fold in the opposite fashion. The works appears as a mosaicised elegy that evokes the figurative. The sugar-cubed edges of theses quilted reams twist and turn as they flutter from floor to ceiling

Ian Blanshard and Alex Fryer 'Surface of Potential' *laminated perspex on wire, 4800X300x40 mm.*

Ken Yeung, Wax Curtain Wall, *wax, cotton thread, plastic suction caps, 3600 X 3200mm.*

Alice Hammond, Paper Towers, *3400 mm and 2700mm high, folded A4-size paper.*

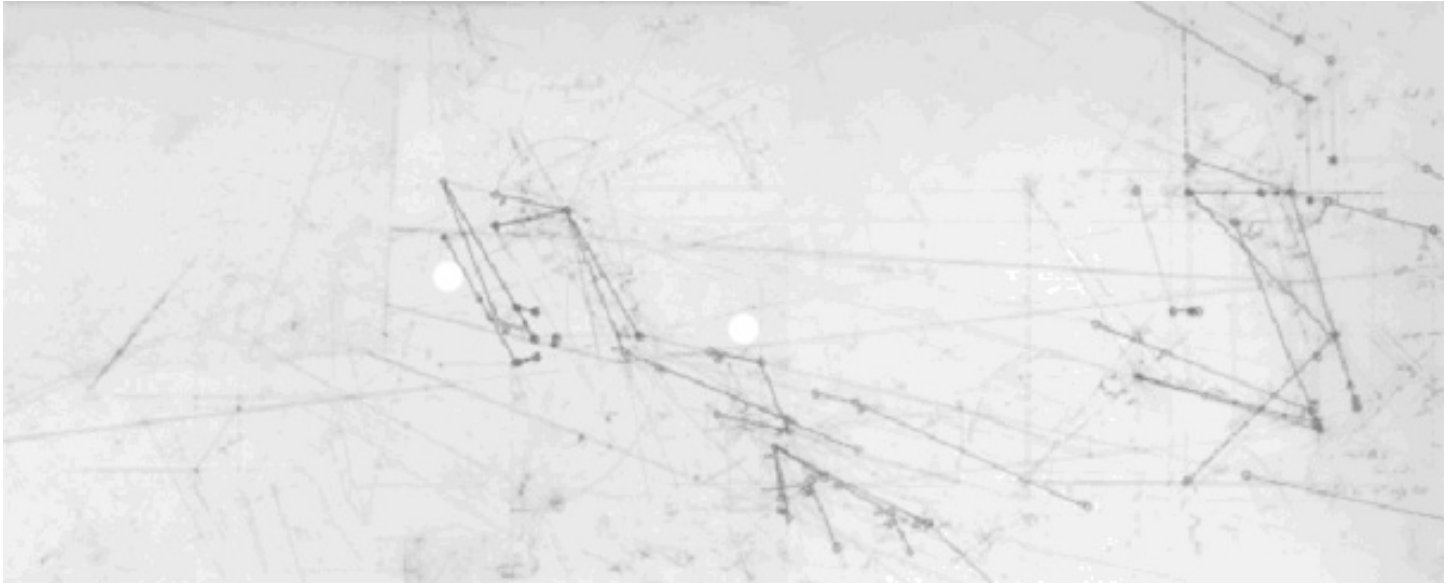and — recalling a less obdurate Giacometti — register a subject in morselated profile.

Ken Yeung's hand-cast sheets of wax with their delicately curling edges pinned down by threads and plastic suckers were exquisite and fragile — another work evoking the particular quality of the hand-made and relying on a detail with all the tension of the story of Icarus.

A piece by Graeme Cunningham and Elvon Young fashioned carbon fibre — a material with an extraordinary strength to weight ratio — to interrogate the way a drawing might become a three dimensional object. To form this enigmatic architectural in-between, the floor plan of the gallery space was manipulated perspectively and employed to assist in generating the three dimen-
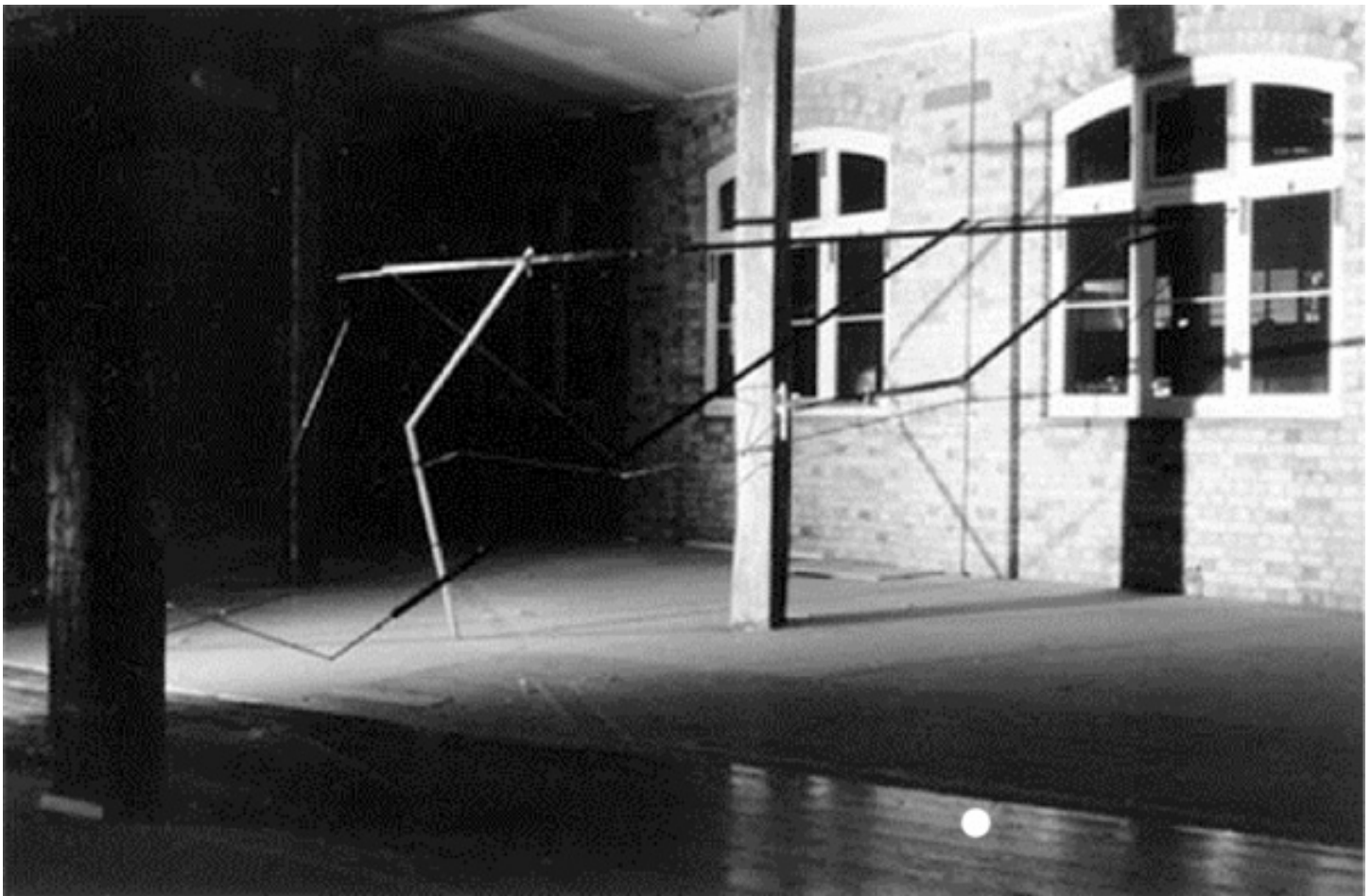
sional structure. The work was also influenced by the construction of a three-point perspective that referenced the golden section. The work indeed touches the ground at only three points — by a parallel hinge, a fixed point and a scribe — and was installed within the gallery where an old wall once existed. The piece also employs an existing column, as the work tries to site itself as a drawing, employing the parallel hinge to project its rotation point to the centre of the column. It was tempting to read the piece as a purely theoretical pursuit but the three-dimensional object they have garnered from their research is extraordinarily beautiful. It reads as a constellation that charts its course with both a light and sleight of hand. There are some representational shenanigans at work as they document a space between the drawn and the built as they objectify their tectonic proposition. The casting of carbon fibre components attempts to erase mass from the work. Having a negligible footprint and volume it might be suggested it resists the foundational and the

Graeme Cunningham and Elvon Young, Construction drawing.

Graeme Cunningham and Elvon Young, Constructed Drawing, *8000X3000 X 2000mm (in progress).*

primacy of the plan in modernist architectural pursuits. It might seem to afford a view of the three dimensional possibilities that are accessible through computer mod-elling, albeit this is a work whose mode of production lay firmly in the realm of the laboriously handcrafted. It is a piece difficult to locate as it expresses a perspectival

analytique in three dimensions that secrets its enigmatic key at the centre of a pre-existing column in the existing gallery space.

Elsewhere, abjection insinuates itself into the discussion of the detail with a piece by Jeremy Bennett. This student initially designed an enamelled circular shower trough with a plughole at its centre from which the surface sloped away. A crudely modelled resin ball with an opening at the base was cast with human hair binding fibres held above the pristine white disc by copper tubing, in turn secured by the gallery columns. *Dettol* was poured into the shallow trough and when ingested with the toxic resin created a heady fragrance, both antiseptic and repellent. The exquisitely wrought white tray had strong resonances with the work of sculptor Robert Gober and an uncomfortable relationship with the bulbous enclosure above it. The referencing of the corporeal as a binding agent was an interesting one but the degree of exactitude displayed in the base model might have been used to execute this shower housing. It was a piece that epitomised the transgressive nature of many of the design proposals displayed. Many works challenged the opaque nature of the architectural detail and contested the immediacy of its reception. The viewer was often able to circumnavigate the pieces to allow not only the normative sectional view, but a multi-faceted appraisal of each propositions composite materiality. The constructional detail was allowed the privilege of making a spectacle of itself and many of the works embraced this in a highly successful feat of exhibitionism. Finally, the installation/ exhibition event — attracting a full house — forced a rethink not only of how students might realise their conceptual schemes but also how they — or we — might celebrate them.

NOTES

[1] See for example Walker, C. and Hrisafovic, S., ''Weighing up the Competition; International Student Design Competitions as Benchmarks of Quality'', in *Geography, Identity, Space*: Proceedings of ACSA Annual Conference, pp. 326-331, Istanbul, Turkey, June 15-19, 2001; Walker, C. and Hrisafovic, S., ''Building Design Knowledge through Materials Research: ACSA student design competition entries for a Wood Research and Educational Facility, with an emphasis on engineered wood products.'' in *New Zealand Timber Design Journal*, Vol.10, No.4, 2001,pp.12-18; Walker, C. and Hrisafovic, S., ''Wood and Weathering: Designing with Climate; a review of ACSA student design competition entries exploring innovative timber construction in the design of a Meteorological Research Station,'' in *New Zealand Timber Design Journal*, vol.8, No.3, 1999,pp.15-25; Walker, C.,'(Re)-Presentation: Design, Science and Technology in Japanese Schools of Architecture'', in *Science and Design: Opportunities for a cooperative spirit in the creation of architecture*, Proceedings of the 32nd Annual Conference of the Australia and New Zealand Architectural Science Association, Victoria University, Wellington, New Zealand,1998 pp. 251-257; Walker,

C., ''Architectural Education for International Practice: A comparative study of educational paradigms in New Zealand and Japan.'' in *Asian Architecture in 21st Century*, Proceedings of 2nd International Symposium on Architectural Interchange in Asia, pp.115-18, Kobe, Japan, September 8-10, 1998; Walker, C., ''The Relationship between Design Education & Construction Practice: An Educational and Research Agenda for the Information Age,'' in *Construction, Education, Modernisation*: Proceedings of CIB Conference, Beijing, China, October 1996,CD ROM-format; Walker, C., ''The Aesthetics of Development: Design, Technology and Cultural Identity,'' in People, Place & Development, proceedings of IAPES Symposium, University of Newcastle, U.K. December 1-4,1995, pp.629-640.

[2] E. Boyer and L. Mitgang, *Building Community: A New Future for Architectural Education and Practice*. (Carnegie Foundation, Princeton, NJ. 1996, *pp.* 65-66).

[3] Walker, C., ''Them and Us? A survey of educator intentions and student interpretations of technology courses in schools of architecture,'' in *Re-integrating Theory and Design in Architectural Education and Practice*: Proceedings of European Association for Architectural Education (EAAE) Conference, Gazi University, Ankara, Turkey, May 23-26, 2001.

[4] Wolfgang Welsch, *Undoing Aesthetics*, (London, Sage Publications, 1997, p.5)

[5] See for example Steffen Gross, ''The Neglected Programme of Aesthetics'', (*British Journal of Aesthetics*, 42/4, 2002, pp.403-414) Robert Root-Bernstein ''Aesthetic Cognition'' (*International Studies in the Philosophy of Science*, 16/1, 2002, pp.61-77), Francis Sparshott, *The Future of Aesthetics*, (Toronto, University of Toronto Press,1998), Marli Huijer, ''The Aesthetics of Existence in the work of Michel Foucault' '' (*Philosophy & Social Criticism*, 25/2, 1999, pp. 61-85), H-G. Gadamer, *Truth and Method*, (London, Sheed and Ward, 1989); Richard Kearney *Poetics of imagining* (Edinburgh, Edinburgh University Press, 1998), Richard Shusterman, *Pragmatist Aesthetics: Living Beauty, Rethinking Art*, 2nd edition, (New York, Rowman and Littlefield, 2000).

[6] J. Huizinga, *Homo Ludens: A Study of the Play Element in Culture*, (trans R.F.C. Hull, London: Routledge and Keegan Paul, 1969), D.A. Schon, *The Design Studio: An Exploration of its Traditions and Potential*, (London, RIBA Publications. 1985)

[7] Nevertheless, there are many who argue that the pursuit of aesthetic ideals has been too influential in architectural education — to the detriment of technical proficiency, managerial competence, academic rigour, research productivity or the knowledge base of the discipline in general. The opposite view has been just as strong, but, for reasons to which we shall return, has been much less articulated in print. While those in the middle ground have tended to assert, with varying degrees of success, that some form of 'integration' (of the various components of the curriculum) is both desirable and possible, they have struggled to articulate educational principles that might allow anything more than piecemeal application of specific techniques. See for example A. Oak ''It's a Nice Idea, but it's not actually Real: Assessing the Objects and Activities of Design,'' (*Journal of Art and Design Education*,19/1, 2000, pp. 86-9), Matthew D Ziff; Exploring Pragmatics and Aesthetics in Design Education, (*Journal of Aesthetic Education*, 34/2, 2000,pp.27-36), Joan Ockman, (ed) *The Pragmatist Imagination: Thinking About ''Things in the Making''*, (Princeton Architectural Press, 2001) Richard Schusterman (*op cit*)

[8] Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in 19th and 20th Century Architecture*, (Cambridge, Mass., MIT Press1995).

[9] Elaine Scarry, *The Body in Pain:The making and unmaking of the world,* (Oxford University Press, New York 1985)

[10] Walker, C., *Them and Us?(op cit.)*

[11] Bernard Tschumi, ''The Pleasure of Architecture'', in *Architecture and Disjunction*, 1997.

[12] Walker, C., Studio topic outline, Auckland School of Architecture

[13] Benedetto Croce, *Aesthetic as Science of Expression and General Linguistic*, (Noonday Press, New York, 1956/Macmillan 1909)

[14] Jeanette Budgett, ''1:T(w)o:ONE'', (Architecture New Zealand, May/June 2001 pp.19-21),