School of Architecture

Victoria University of Wellington

40 Year Anniversary 1975-2015

Global Architecture in the 1970s:
Science, Technology, Environment

Architectural Futures

Friday 18 March 2016

Global Architecture in the 1970s: Science, Technology, Environment

Architectural Futures

Lecture Theatre 1, School of Architecture, Victoria University of Wellington

Friday, 18 March 2016

PROGRAMME

- **9.00-9.30am** - Coffee

- **9.30-11.45am** - Global Architecture in the 1970s: Science, Technology, Environment
  Peter Wood
  Paul Walker
  Eunice Seng
  Tom Daniell
  Jonathan Massey

- **11.45-1.00pm** - Lunch Break
  (Nearby Cuba Street has a large range of options for lunch to suit all budgets.)

- **1.00-3.15pm** - Architectural Futures
  Anthony Burke
  Marc Aurel Schnabel
  Bige Tunçer
  Peggy Deamer

- **3.15-3.45pm** - Afternoon Tea

- **3.45-5.15pm** - Keynote Lecture
  Daniel Barber

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- **6.00-7.30pm** - Cocktail Evening
  The Boatshed – Wellington Waterfront

From New Hope to Awoken Force: 40 Years of Architecture

Peter Wood

Almost 40 years ago George Lucas made the most audacious architectural morality tale ever conceived. Hidden artfully behind a mask of science-fiction cinema, the first of the Star Wars films, The New Hope (1977), presented to a willing 1970s audience the spectacle of a great cultural discipline (architecture as Empire) under threat from internal elements ("Rebel" forces) and in the protagonist Luke Skywalker he unveiled an architectural anti-hero for the times. Seemingly chained to a desolate agricultural future, Skywalk rises above his proletariat upbringing to fulfill his destiny by destroying the most scientifically advanced architectural object ever constructed (the inopportunely named "Death Star"). Crucial to Skywalker's self-actualization - and the film's narrative climax - is the analysis of stolen design plans that reveal a systemic flaw in the Death Star's architectural logic which will bring about its demise. In a simplistic synopsis (and outside any moral dimension) the plot of The New Hope might read as a film in which a cave-dwelling boy of dubious extraction destroys great architecture thanks to an error in technical detail. This, I think, is an architectural film worth exploring further. To do so in the first part of this presentation I will be offering a reading of The New Hope with the aim of explaining the extent to which Lucas relied upon architecture to structure both the narrative and aesthetic aspects of the first Star Wars film (culminating in the failure of plans). In the second part I will turn my attention to the most recent installment in the franchise, the Force Awakens (2015). Four decades on it is timely to see if Lucas's vision, and the architectural figures it manipulates, still remain relevant narrative archetypes?

Peter Wood is a Senior Lecturer in the School of Architecture, Victoria University of Wellington.

McHarg, MacEwen and the Idea of "Crisis" in 1970s Architecture

Paul Walker

In retrospect, the architectural culture of the 1970s has come to be characterised in terms of the final demise of modernism and the emergence of the new stylistic orthodoxy of postmodernism. However, subtending the period in Australia and New Zealand were broader environmental concerns. While energy issues were given particular impetus by the events that followed on from the Arab-Israeli conflict of 1973, intellectually the environmental concerns of the 1970s were informed by lines of thinking that had less immediate origins. One of the most important of these was the ecological approach to urban and regional planning promoted by Ian McHarg, professor of landscape architecture at the University of Pennsylvania, most notably in his 1969 book Design with Nature. Another was the critique of the architectural profession and its design outcomes undertaken by Malcolm MacEwen, the editor of the Royal Institute of British Architects Journal 1964-1971, culminating in his 1974 RIBA-published book, Crisis in Architecture. Both MacEwen and McHarg had direct influence in Australia and New Zealand. McHarg presented at 1971 Royal Australian Institute of Architects conference, The Consequences of Today, on the theme of 'The Environmental Crisis', and during one of several visits to New Zealand presented on 'Human Ecological Planning' at the 1979 Auckland congress of the Australian and New Zealand Association for the Advancement of Science. Several of MacEwen's RIBA articles were reprinted in the New Zealand Institute of Architects Journal, and his book Crisis in Architecture was republished in an abbreviated Australian edition by the Royal Australian Institute of Architects. While McHarg characterised the crisis he saw as ecological, and MacEwen characterised his in sociological terms, both saw structural conditions of the design professions as impediments to change. In this presentation, the impact of McHarg's and MacEwen's ideas of environmental crisis will be assessed in relation to the growing awareness at this period in both Australia and New Zealand of their condition as essentially urban societies.

Paul Walker is Professor of Architecture in the Faculty of Architecture Building and Planning at the University of Melbourne.

Habitat, c.1976: Transnational Technologies, Modern Domesticities in Singapore and Hong Kong

Eunice Seng

The success stories of public housing in Singapore and Hong Kong have been well circulated by their proponents and scholars, to the extent that public discourses on housing in these cities overshadow any other imaginations of domesticity, configurations of habitation, and the participation of professional and private enterprise. This paper begins from the position that housing development in Singapore and Hong Kong are inextricably intertwined, and marked by the constraints and opportunities of a determinate historical situation. Focusing on the 1970s in which the narratives of success were consolidated at home and globally, this map recasts housing in a transnational network of knowledge, technologies and affiliations as a tentative and provisional model that departs from previous comparative analyses on housing in the two city-states.

On May 30, 1976, twenty-four international experts signed the Declaration of the Vancouver Symposium on the occasion of the Habitat: United Nations Conference on Human Settlements, demanding for government policy to focus on community and environmental planning. Of the 135 country participants, there was an overwhelming presence of representatives from developing nations. Singapore designated Toa Payoh, its first and largest new town, as a demonstration project for delegates passing through the city-state after the event. In contrast to the images of slums, "Habitat" in Singapore and Hong Kong began taking on very different aesthetics and meanings by 1976. Clean, planned and futuristic, the projects were instead advancing middle-class ideas on community and technology attributed to projects like Habitat'67 in Montreal.

Whereas the United Nation's Habitat offered the technocratic framework to community planning and housing design, the other Habitat provided the formal and aesthetic sought by the state authorities in the next lap of their modernization. In interrogating the interconnectedness, this ongoing research hypothesizes that the production, representation and circulation of housing and its discourses vis-à- vis international and regional symposiums, exhibitions and trade publications, were integral in consolidating architecture's role in the image and imagination of a modern Asia from the 1970s.

Eunice Seng is Associate Professor and Chair of the Departmental Research Postgraduate Committee at the University of Hong Kong, and founding principal of SKEW Collaborative, Shanghai-Hong Kong.

The Rise and Fall of URBOT

Tom Daniell

Within the historical trajectory of Japanese architecture, the 1960s and 1970s are practically polar opposites. Whereas the 1960s was a period of totalizing urban visions predicated on the need to rebuild Japan's war-devastated cities and the availability of seemingly unlimited resources to do so, the economic downturn of the 1970s, exacerbated by escalating environmental damage and political protests, split the Japanese architectural world's formerly unified sense of mission into innumerable personal obsessions. The point of inflection occurred in 1970 at the Osaka Expo, which was taken as an opportunity to present a radically futuristic image of the nation through experimental architecture, immersive media art installations, information technology, and robotics. It was also the apotheosis and swansong of Metabolism, the Japanese avant-garde design movement that used biological metaphors of growth and transformation in the design of radically new types of architecture and cities. Among the general public as well as architects, the Osaka Expo triggered a backlash against megalomaniacal utopianism in favor of themes that were more humble, mundane, pragmatic, and plausible. This entailed a shift from radically systematized urban plans to introverted private houses, from the imitation of the language of Western modernism to the study of non-Western vernaculars, from the ruthless demolition of historical urban fabric to the collection and documentation of overlooked buildings and objects, from rigid authorial control of cities and buildings to user participation in the design process, from industrialized prefabrication to ad hoc self-build projects, from strident manifestos to a proliferation of iconoclastic 'alternative' publications, from the rationalization of society and industry to the celebration of difference and idiosyncrasy. In short, 1970 marked the end of modernity and the beginning of postmodernity in Japan.

Tom Daniell is Head of the Department of Architecture and Design at the University of St. Joseph, Macau SAR (China).

Reflexive Modernism:
Designing Environmental Risk

Jonathan Massey

Since the 1970s, environmental risk has become increasingly central to our concepts of globalization and of architecture. Thinking the global through discourses of climate change and the Anthropocene, we pursue designs that manage environmental risk through strategies of sustainability and resilience.

In this talk I outline a political-economic framework for understanding contemporary efforts to manage environmental risk through design. Drawing on the concept of reflexive modernization associated with the risk society hypothesis, I describe what we might call "reflexive modernism" in buildings and urban propositions that redesign risk exposures. If risk society emerges from modernization that transforms its own prior achievements in order to address their unintended side-effects, such as pollution and climate change, then green building and resilient design promote political change through ecological modernization. From high-profile projects such as London's Gherkin and New York's Dryline to mundane practices of mitigation, abatement, and remediation, reflexive modernism makes uncertainty manageable, marketable, and politically actionable by designing risk.

Jonathan Massey is Dean of Architecture at California College of the Arts in San Francisco and a cofounder of the Aggregate Architectural History Collaborative.

The Innovation Imperative:
From Projects to Practices

Anthony Burke

It is widely recognised that the founding hallmark of innovation is the centrality of creativity. We might then ask, how is architectural education innovating or "where is the creativity in education?" To the extent that education is a precursor to practice, this paper explores the implications of an evolved innovation agenda on schools of architecture and the graduate skills delivered by a naturally conservative education framework and an equally conservative practice environment.

In 1982 Gerd Block, founding Dean to the School of Architecture at the Victoria University in Wellington, wrote of the pressures of a changing practice landscape for architecture and the difficulties in preparing students for it. While many of Block's predictions did not come to fruition, many of his concerns for the future of architecture remain 40 years later; diminishing professional fees, competition for services from other industries, the erosion of the authority of the architect, the value of quantity over quality, and the impact of media on students and the discipline as a whole. While Block tended to paint a troubled picture of industry change, one that was an issue of "survival" for architecture, this paper reflects on the opportunities of changing practice contexts through the lens of innovation frameworks today and how the notions of innovation have changed.

Echoing Block's concerns in 1982, this paper asks again if architectural education is preparing students adequately for future practice, and argues that education should be the first site of innovation. While most architect-designers would consider themselves innovators, the OECD however recognises design as only a small fraction of the innovation value chain. Architecture is not an island although its governing structures tend towards protection and isolationism rather than connection and collaboration. All innovation literature notes the value of highly networked practices and the more networked practice becomes to the context surrounding architectural work, the better architects advocate for and deliver positive change for the built and natural environments. To do this however requires non-traditional skills that bridge architecture into the financial, social, technical and environmental contexts in which architects work; a raft of soft skills that are almost absent from architectural education today.

Anthony Burke is Head of the School of Architecture at the University of Technology Sydney.

Digital Design Realities and Futures:
Architectural Teaching, Learning and Praxis

Marc Aurel Schnabel

Architectural technologies have already moved beyond CAD, BIM, parametric design, and digital fabrication. These methodologies have fundamentally altered the "how" and "what" of architectural design, especially in the professional context. Both, the "how" of how we make, and the "what" of what we make have changed. Digital instruments, processes and methodologies transform the way we make architecture. How architectural education evolves to reflect, interpret, translate, or challenge modes of contemporary practice presents a variety of opportunities as well as risks to educators and practitioners. The possibilities afforded by computational design technologies have directly affected not only "what" we make with them but also "how" we educate architects. Integrating digital media into the way students are educated subsequently shifts thinking about the generation and definition of architecture, design, its communication and the context in which it is placed. New definitions have been developed, not based on the abstract theories or assumptions of the past, but instead on emergent data based in systems of simulation and information management. As the conventions of communication and representation of the past were determinant factors in those architectures, the new conventions have proposed new architectures that can be seen worldwide. Subsequently the future of architectural production moves beyond traditional practice and its drawing-centric model into a dynamic process/component oriented model for digital practice and the subsequent re-definition of professional services and contractual deliverables. Only an architectural education that embraces these new conventions will be able to challenge innovatively the architectural design product as much as the architectural design process. The consequences of digitally driven processes and thinking on architectural education are profound. The underlying premise for design processes, fabrication and construction will increasingly challenge the historic relationships between architecture and its means of production leading to new demands of the profession on education to adapt and prepare students for digitally enabled integrated practice. Academia must completely revisit the curricula to imagine a system that acknowledges the obsolescence of the how and what of that which is taught in today's schools of architecture. Digital design realities have already shifted thinking that calls large segments of contemporary architectural education into question and engages in aspects of computation that co-design our built environment.

Marc Aurel Schnabel is Professor in Architectural Technology and Programme Director of Architecture at Victoria University of Wellington, New Zealand, and a Visiting Professor at the School of Architecture, Sheffield University, United Kingdom.

Informed Urban Design

Bige Tunçer

The use of data in the building and urban design processes is not new, as design is a highly data and information driven and complex process that entails many relationships and interdependencies. Furthermore, many actors and disciplines contribute their specific knowledge and information in these processes. Designers must consider a large number of issues belonging to a wide spectrum, including spatial, aesthetic, functional, formal, economic, political, user comfort, and changing requirements. Technology is more than ever available for providing designers with real-time data and information about many aspects of our environment, with the potential of being used in design processes to improve our built environment. The term "smart cities" has become widely familiar in the last years among designers, planners, and engineers. It portrays a cheerful vision of a city that employs wireless and internet enabled technologies to promise good performance and effective use of resources. Smart cities are considered by their advocates to foster new knowledge-based economies that are environmentally and socially sustainable, well governed, and resilient. However, technology itself can't automatically transform and improve cities and the lives of their inhabitants. In order to take smart cities further, the Informed Design Group (IDG) at Singapore University of Technology and Design uses these technologies to foster evidence-based design, and translate the rich and varied information sources to design support means. Our goal is to use these technologies to increase public participation in decision making in a meaningful way, taking subjective perceptions and opinions of users into account. We aim to take advantage of new and abundant forms of data, sensing technologies, and possibilities for interaction among people, communities and their physical environments. In this paper, I will describe and discuss the current research of the IDG on this subject, and focus on multi-modal data collection, analysis, and information visualization within design and decision support platforms for improving livability of neighborhoods and cities.

Bige Tunçer is Associate Professor of Architecture at Singapore University of Technology and Design.

Future Detail

Peggy Deamer

This talk will look at how architectural details, where the designer most clearly expresses an ethos of construction, are read in light of new digital technologies. The argument will be that the romanticization of the single, sensitive, dweller-reader of the authentic world promoted by phenomenology hinders an understanding of the complex set of relations and multiple actors that produce architectural work. This complexity has not only been overlooked in theory, but has increasingly been the cause of reactionary pronouncement aiming to prevent the "instramentalization" of architectural production, the authentic construction detail being equated with the hand, the smell of the wood, the warmth of the brick. In 2000, the technical forces making the absurdity of this view were glaring: digital fabrication, global outsourcing, supply chains, product specs, etc. But in 2015, the issue is even more complex, as grasshopper, BIM, integrated project delivery, robotics, and ideas of bio-architecture are integrated into design and construction processes. It is now impossible to hold onto the view that the single architect has an unmediated connection with the materials and processes of construction. This talk will examine why we should not lament the loss of a supposed intimacy of design but rather investigate the potential of these forces to celebrate an alternate reading of design and detail.

Peggy Deamer is Assistant Dean and Professor of Architecture at Yale University.

The World Solar Energy Project: Alternative Architectures in the 1940s, 1970s, and Today

Daniel A. Barber

Architecture has long been an important arena for experimentation with possible futures. Since the end of World War II, when concerns over resource depletion first surfaced, energy and environment have been important components in some of these experiments. Solar architectures in particular have both developed compelling design methods for exploiting alternative energy sources, and have also been an important discursive locus for discussing, and building, new ways of life.

The talk is divided into three sections. The first will discuss the little known interest in solar house heating, largely in the U.S., right after the war. These houses were at the center of a surprisingly dense network of interdisciplinary conferences, publications, competitions, exhibitions, marketing campaigns and policy proposals examining the challenges of resources limits. Solar energy first addressed concerns relative to the expanding American suburb, and then, by the early 1950s, became an important aspect of U.S.-organized technical assistance programs in the global south.
Although many of these mid-century experiments were ineffective on technical terms, they helped to establish a technological framework and an organizational structure for articulating global environmental concerns in subsequent decades. They also established a cultural trajectory emphasizing how new kinds of architecture could transform relationships between human and natural systems. The second section will examine some experiments from the period surrounding the global oil crises in the 1970s – in the U.S., the U.K., and New Zealand – that returned to the technical means of the 1950s, while directing them towards new cultural ends.

A third section will jump to the present, and examine how some of the new forms of collective organization around energy that formed in the 1970s have a legacy in contemporary practices. Parameters will be proposed for how different architectural expressions of energy anxiety play out in the apocalyptic present.

Daniel A. Barber is an Assistant Professor of Architecture and the Associate Chair of the Department of Architecture at the University of Pennsylvania