Studies in
Material Thinking

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Volume 08
Experimental Arts

Denatured Contingency: The New Engine of Sustainability

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Abstract: This paper builds on the arguments which inform my city (Porosity) research, and develops the idea that we exist in the "Age of Contingency". I put forward the provocation that "denatured" or reconsidered and reframed "contingency" is the new engine of sustainable design and a counter position to Modernism in architecture. The new geometries associated with parametric design, and the revolution of being able to economically build a structure in which all component parts are different, could run hand in glove with the metaphor of complex decay or the city as a coral reef. My research prejudices interior space over the envelope of individuated boxes. Porosity recognises the need to create a more equal balance between public and private space beyond the limitations of what constitutes outside i.e. roads, footpaths, parks and public buildings. At the core of these ideas lies the need to use architecture as an armature for new ideas. The endless becoming of architecture is a new aesthetic: Denatured contingency is the new engine of sustainability and the dissolution of architecture into landscape via a new paradigm of aesthetics.

Keywords: Porosity, invagination, architecture, sustainability, contingency, urban infrastructure, public space

STUDIES IN MATERIAL THINKING
http://www.materialthinking.org

ISSN: 1177-6234

Auckland University of Technology
First published in April 2007, Auckland, New Zealand.
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STUDIES IN MATERIAL THINKING is a peer-reviewed research journal supported by an International Editorial Advisory Group and is listed in the Australian ERA 2012 Journal List (Excellence in Research for Australia).

Vol 08
Paper 07

Denatured Contingency: The New Engine of Sustainability

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When Ives Klein performed "The Leap into the Void" in 1967, from a brick wall adjacent to the street, he rendered the architecture impotent in relation to the act. In other words, architecture, although deemed solid and eternally strong is actually very weak and plastic by comparison with the idea as represented through a performance.

This apparent paradox has always underpinned the ideas, which I have labelled "Porosity" and which describe for me the edge condition of architecture in a particular way. Porosity is now a buzz-word and has its roots in urban thought as far back as Walter Benjamin. No previous articulation of the porous nature of architecture however, has ever conceived of or classified a type of architectural permeability, which has arteries of a new classification of space. This new type of space is between public and private (I have named "Chiastic Space" - found as it is within the crossover between public and private – hence Chiasmus). It is also well understood by city dwellers without a conscious understanding of its particularity and possible significance. This book seeks to reveal the significance of Porosity within the cities of the world and how it might be used to accelerate and inform the radical transformation of existing structure in order to three-dimensionalise public space systems in the city.

This emphasis on existing interior spaces, which generated new spaces of transformation ultimately led to the naming of city architecture as the architecture of Invagination.[1]

The following paper builds on the arguments which inform my city (Porosity) research, and develop the idea that we exist in the "Age of Contingency"[2]. In other words, I put forward the provocation that "denatured" or reconsidered and reframed "contingency" is the new engine of sustainable design and a counter position to Modernism in architecture.

It still finds its place at the end of every artist and architect's budget list: contingency 10%. The need to rethink this alienated concept ascribed to chance, to stop seeing it as "other" to successful and flawless process, is the basis for this paper.

The denaturing of contingency, as the territory of chance, the accidental and the incidental, comes at a time when the world is facing a new awareness of climate change and the threat of an ever increasing and demanding population. By this I mean that scientists are now united in large numbers in a chorus of blame in relation to the effects of increased amounts of carbon in the atmosphere as the result of human activity.

This has consequences which can be debated, however there is little doubt about rising sea levels and the consequences this will have on zones of large population by the sea, such as Indonesia. Add to this the effects of the aging of the Global population and you have a formula, which needs calculus.

At the same time we are witnessing the replacement of ideology with the politics of fear, and multiple technological revolutions. Fear's handmaiden "violence," now dominates our collective consciousness.

[1] Goodwin, R. (2011) Porosity: *The Architecture of Invagination.* Melbourne. RMIT Press. p. xiv.

[2] Till, Jeremy. (2009) *Architecture Depends*. New York. MIT Press. Contingency is discussed as a driving force behind architecture. "Mess is Law" is his famous quote.

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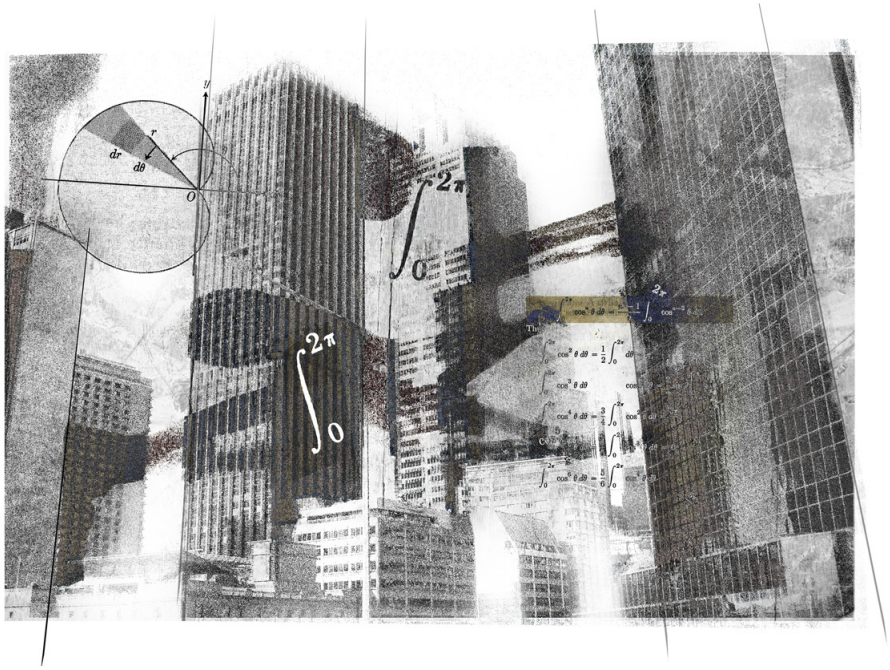

Sydney Transformation based on Porosity Research, 2005

Many major cities in the world today are comprised of historical centres, with a variety of lineages, and the bones of modernist interventions, including high-rise housing, industrial zones and commercial tower clusters. The vision of utopia, and control over so called “nature”, has only left an architectural honeycomb of despair, as urban planning fails to prejudice social construction over all else.

These bones need to be transformed rather than destroyed. To do so is to act essentially in a sustainable way. How can something be something else?

This idea embraces a dissolution of the physical manifestation of Modernism and capitalism i.e. cities. To develop the argument I will cite two texts. The first is the book “Violence” by Slavoj Zizek and the second is “Cyclonopedia: Complicity with Anonymous Materials” by Reza Negarestani. In the former, Zizek unpacks civilisation to reveal the cause of violence by looking at what he calls the post-political bio-politics of our age, while the latter helps to redefine “decay” as an integral part of survival rather than a final end point or return to nature.

The city can logically be seen as a decaying entity, much in the same way as the city of our body, as host to millions of organisms and processes, is decaying while we are living as well as after we are dead. The human response to personal contingency or ill-health, is usually to seek medical solutions, to change lifestyle or to attempt psychological transformation. The city does the same, while being simultaneously convinced of its immortality thanks to a capitalist market based ideology dependent on infinite growth. In most western cities today, this is endorsed by the utopian idealism of the now aging carcass of Late Modernism. Our own bodily immortality is taken care of by religion if we choose to have faith, or by a belief in the infinite life of atoms if we don’t.

The trouble with Modernism, Post, pure or Baroque, in the face of a threatening carbon “pollution” equation, is its preoccupation with “tabula rasa” and the designation of systems of overall, rather than local control: ie Utopian Models. The endless desire to “clean the slate”, prior to new work commencing on site, is coupled with an overly zealous heritage mafia around the world.

By this I mean that Modernism’s natural “modus operandi” is to eliminate the old and re-

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place it with the new in a pure form. The work of Mies Van Der Rohe and Le Corbusier never entertained hybrid forms, combining old and new in chimeric monsters, and yet today we see a legacy of modern intentions infused with old structures designed by leading architects. The Tate Modern in London by Herzog and De Meuron is a shining example of this form of transformation. The old power station is still remembered without sentimentality about its every patina and fitting, as has happened in many new adaptations trying to tell too many stories about past lives when the new life is clearly what matters.

Such projects are however, very difficult to have passed by planning authorities, who in my experience, usually endorse modernist practice by completely separating old and new. Please excuse the generalisation but in my case it comes from 30 years of practice and I have yet to find an exception. Over protective of the old and any transformations, which physically transform these structures, heritage architects resist the natural tendency of old cities to eventually transmute and transmogrify.

The net effect is to render adaptive interventions of old structures very difficult to get approved by urban planning officials. There are no sophisticated licenses or legal instruments in place, to my knowledge internationally, to encourage radical transformations, which will help the carbon problem.

How does this help the carbon problem? To envelope space has a building and carbon cost. To re-use as much enveloped space as possible, as a city grows, has an effect on this equation and deserves consideration when planning new structure.

By way of example, Renzo Piano's building at Aurora Place in Sydney is clearly a desirable addition to our collection of city towers. It is elegant, intelligent and sympathetic as a design and well equipped as a tectonic machine. However, it was built on the site of the former State Office Block towers, a NSW government building complex, which was demolished in 1997 in order to make way for Renzo's vision. The highly esteemed, Ken Wooley designed towers were clad in bronze plate. Of course their fittings and design were out of fashion in a superficial sense and here would no doubt be many self-serving reasons why they would be difficult to renovate. But they should have maintained these buildings for reasons of sustainable design.

No amount of sustainable technologies fitted within the new building can balance the carbon equation necessary for the complete rebuild of viable original structures.

The argument is not against Piano, but against the use of this particular site. Clearly one of the greenest things developers and architects can do is to radically refurbish old structures where possible or seek different sites. What is the use of a city where only 5% of its buildings are perfectly designed as sustainable entities, while the remaining 95% are carbon greedy?

Only by conceding boundary, height and amenity constraints, in return for significant improvements, to social construction and carbon neutrality, can old architecture viably form new architecture. Specifically, the transgression of some boundaries or exceeded height restrictions may be necessary in order to attach new solar collectors, windmills or above ground pedestrian bridges and/or transport services.

For Modernists the idea of a responsive and reactive architecture of organically derived geometries, which does not conform in some way to the ideals of minimal functional solutions, is still unthinkable. Through the Modernist's tired lens these new geometric forms, which may fill the gridded interstices of our existing urban fabric, can only be symptomatic of a new and grandstanding expressionism. Hence the animosity is directed at pioneers such as Frank Gehry.

Let's change the lens.

Change and flux are superficially read as messy, like decay. Yet so called nature is only decay. Trees are an elaborate form of mould.

Architecture and urban planning which allows for radical transformations, with unlimited typologies, naturally leads to more complex environments. The rectangle has been very useful, but perhaps its time at the centre of design practice is past. How about we build on it like a coral reef?

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Denatured Contingency—the dissolution of architecture, 2011

Fundamental to the metaphor of a coral reef type of city growth, and its attendant transformations, is a city of even greater complexity, equal in some ways to the complexity of slums. As with the low-rise slums of Mumbai, by way of example, the architecture born of social interaction and collective work in pottery, recycling waste and textiles manufacture, the physical shape of spaces and streets follows the demands of conversation and interaction. When converted to poorly built high-rise approximations of Corbusier's city dream, as has happened in parts of Mumbai, the isolation of poor people within their units, cut off from direct interactions, has led to catastrophic human conditions. This conclusion is based on my own experience and observation.

We need to learn from the social construction of slums and to also make clear observations of our own cities. This is the method of my Porosity Research, made possible by the Australian research Council and the College of Fine Arts, UNSW. It leads hopefully to cities, which embrace an eclectic mixture of styles and ages of construction and the continual licensing or designing of new public spaces within private precincts. This focus on adaptation, transformation and social construction, creates cities, which grow according to conversations, like a coral reef free of utopian control.

The aesthetics of the new hybridity and complexity can be linked to the mathematics of chaos and parametric geometry, already putty in the hands of young practitioners and university students. The complexity of the new mathematics renders it possible to describe the imperfect orange surface as easily as the Euclidean geometry describes the perfect sphere. The old aesthetics aspire to or perceive the perfectly spherical orange as more beautiful than the lumpy, slightly mouldy orange. But what happens when the imperfect orange is easily transported into a mathematical model and its rough surface can be scrutinised at different scales or in different materials. Its complexity can be represented as easily as its pure cousin the sphere. Arguably, in these circumstances, our aesthetic depth is extended and changed. The ideal and impossible reality of the perfect sphere is replaced by a formula for each real shape. This organic truth will surely change aesthetic ideals.

The new geometries associated with parametric design, and the revolution of being able to economically build a structure in which all component parts are different, could run hand in glove with the metaphor of complex decay or the coral reef. To quote Negarestani:

Decay is an artificializing process that is promulgated on the substratum of all modes of

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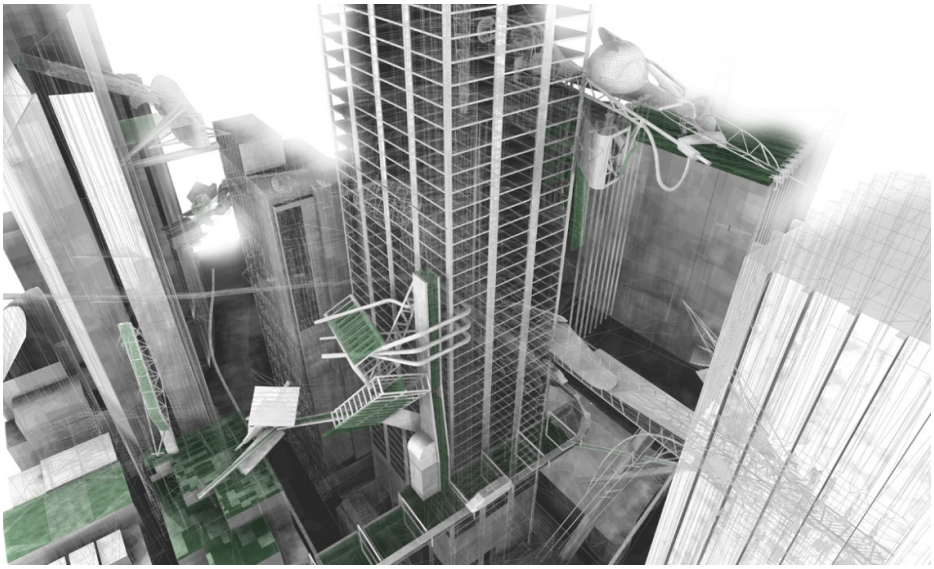
> survival (beings). In other words, decay - unlike death - is not external to survival, for it perpetuates itself on the substratum of survival, in order to indefinitely postpone death and absolute disappearance. In decay, the being survives by blurring into other beings, without losing all its ontological registers. In no way does decay wipe out or terminate, on the contrary it keeps alive. This is where the process of decay - despite all apparent connections - separates itself from the transgressive war machines of termination, annihilation, tragedy and violence.[3]

This reveals a link between Modernism and violence. In the book Cyclonopedia, Negarestani is talking about the Middle East as a life-form or entity, subject to this decay and as he calls it an “undercover softness”. It is therefore compelling to make similar parallels to the city and its architecture and art within our current predicament. Negarestani continues: “In line with paramechanics, decay perforates the formation of power to no end, and by doing so prevents power from investing in the consolidation of its formation.” [4]

The embrace of continual or perpetual radical transformation of existing structure, as opposed to complete demolition and reconstruction, is a type of “decay”. The process is clearly more sustainable than the “tabula rasa” approach of Modernism. Why? Because these voids are holes in the social construction of the city and because they are later filled with building that represents control over nature.



Porosity: The Architecture of Invagination, 2005

Violence can be associated with the voids left by demolitions in the city in the name of Modernism. Alternatively decay, and its characteristic processes of continual transformation, is the natural antidote to power structures seeking control. Each system has its own geometry and each of these sends signals to its users, whether they are artists or architects. These signals prescribe both the language and its usage in the form of design outcomes. Already we are seeing built manifestations of the new mathematics in the form of designs by Frank Gehry, Herzog and DeMeuron, and Zaha Hadid. However it is too early to find examples of cities,

3 Negarestani, R. (2008) *Cyclonopedia: Complicity with Anonymous Materials.* Melbourne. Re.press. p.182

4 Ibid, p.182

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which are dominated by structures, built on top of the existing urban fabric and synthesizing with it to form a new paradigm. The only manifestations of this model in the form of a premonition of things to come can be seen in the slums of cities like Delhi.

Decay has complex and organic geometries, which remain open ended, indeed which resist containment. Negarestani invites us to register this complexity as a lack of resolution: "Through decay, the solid entity is taken over neither by integrated life nor death, but by irresolution". [5]

The definition of denatured contingency can be linked to the acceptance of irresolution as a characteristic aesthetic and to the need for open-ended growth. It is therefore defined as an "organic" phenomenon. Contingency is an organism, a landscape and a site. It is nature as a system.

If we look carefully at the city, we can see it as an organism. The natural evolution of city infrastructure has brought this phenomenon about. If in fact it is a type of evolution, then the only problem is speed, or the lack, of in order to avoid a collision with climate change. It can be argued that the politics of "fear", perpetrated post 911, is defeating democracy.

The violence associated with these fears is now seen around the world. The long feared third World War is happening, in a radically untidy form, echoing what Slavoj Zizek calls the "Post-political Bio-politics," of today:

> That is to say, with the depoliticised, socially objective, expert administration and coordination of interests as the zero level of politics, the only way to introduce passion into this field, to actively mobilize people, is through fear, a basic constituent of today's subjectivity. For this reason, bio-politics is ultimately a politics of fear, if focuses on defence from potential victimisation or harassment.[6]

The politics of fear is also gating off communities with more "Berlin Walls" than we could have ever imagined possible post WWII. The walled city and gated community are identical to the pristine modernist tower structure, with its minimalist pretensions of style, and massive security system preventing access to city pedestrians beyond the pavement. The progression of this drive for security has seen our cities become less porous to public access. This impermeable tendency is the subject of my research under the name Porosity. It also forms the political barrier between the old systems of Modernist control and the age of contingency. Porosity as a philosophy acts as an agent for change, promoting and facilitating the embrace of contingency as a way forward in design process.

The Porosity[7] research study prejudices interior space over the envelope of individuated boxes. In response to this embrace of contingency, Porosity recognises the need to create a more equal balance between public and private space beyond the limitations of what constitutes outside i.e. roads, footpaths, parks and public buildings. All the data gathered in this process of analysis, via the Porosity Index, results in three-dimensional representations of possible connections to other buildings – as described in "What a Building Desires". As a result this body of work drives architecture from the inside out. Deformations of interiors become exteriors in a confusion of surfaces, which bring to mind the Klein bottle.

This single surface idea about architecture, driven from the inside out, is thus a type of invagination penetrating through the phallus-centric vertical stacking of layers of conventional building typologies. This system invites complexity and radical transformation via chance. The term "invagination"[8] and its relationship to the "Klein Bottle"[9] model also create

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[5] Ibid. p.182

[6] Zizek, S. (2008) *Violence.* London: Profile Books. p. 34.

[7] *Porosity* refers to Goodwin's research into public space within the city.

[8] Ibid.

[9] *Klein Bottle* refers to the single surface, theoretical (mathematical) bottle, which describes the development of the *Mobius Band* into a form which continually penetrates itself as the neck of a bottle, which folds into the body of the object.

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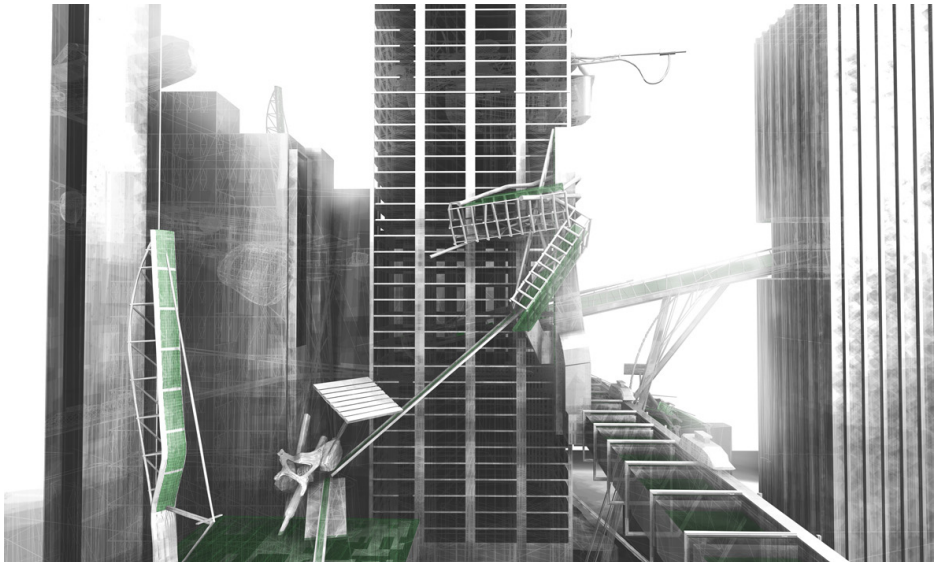
representations of the inside on the outside of architecture as part of the overall expression of the architecture. One can argue this already happens. The simplest examples of this extension of the inside function spanning through public space are the bridging structures which encase pedestrian movement between structures. These commonly link department store buildings and co-owned buildings with the same program with bridging While these examples display a convenient connection in answer to existing commercial pressure, Porosity seeks to transform underutilised pathways within existing architecture that can be used in the project of reorganising people movement above and below ground and in enriching the social construction of the city by actively creating new types of public space. The architecture of invagination favours the permanent transience of public use over the singular architectural object and places material construction itself into continual becoming.



Porosity: The Architecture of Invagination, 2005

Porosity research operates primarily from a location between boundaries, in particular, the boundaries applied to public space and corporate architecture. This can be paralleled to the distinctions between psychic and somatic or inside and outside as previously discussed.

Derived from the position of “flaneur” (Walter Benjamin) as opposed to Corbusier’s idealised “modulor” man, the perspective of the Porosity researcher is that of the tourist.

The “settled”, the native, the “belonging” are no different from the estranged, rejected or homeless, only they do not know it yet. One needs strength to bear loneliness. It is “the belonging ones that do not have such strength and this is precisely why they run away, from the tale of the self-construction into the deceitful shelter of imagined membership.” [10]

Endlessly this era’s machinery and space are rendered obsolete or in need of repair. This rotting hulk is also haunted by the voices and imagery of its virtual other, the world-wide web of the internet, the psycho-babble of modern thinking. As we stumble away from pure Modernism, post-Modernism and late Modernism, we are left in the shadows to ruminate about a huge global armature of leftover architecture and machinery.

[10] Bauman, Z. (1991) *Modernity and Ambivalence.* Cambridge: Polity Press. Pp. 187-188

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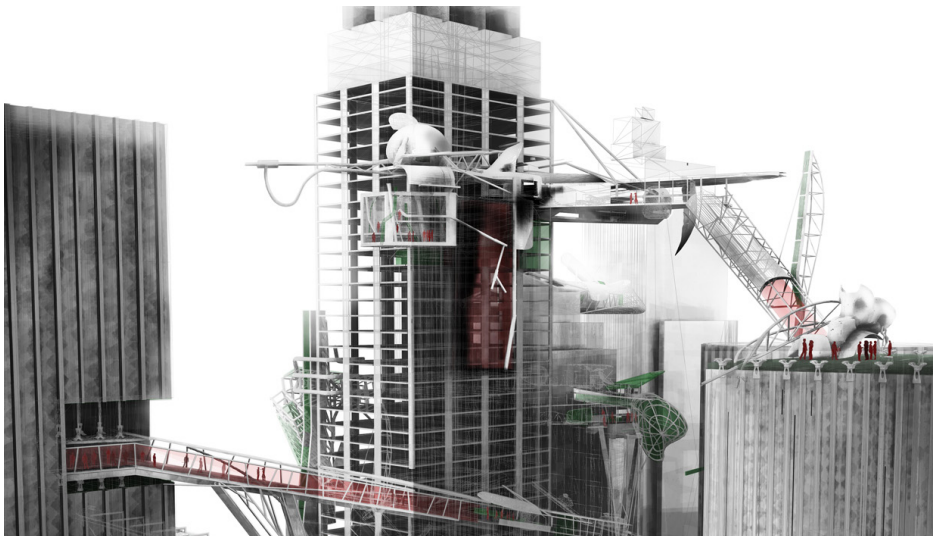
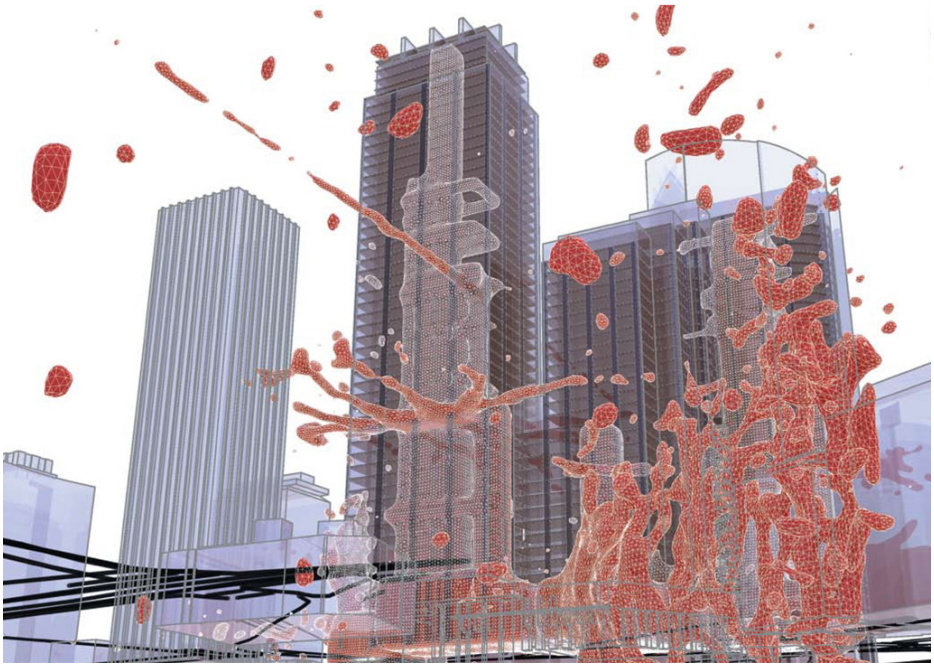


Porosity: The Architecture of Invagination, 2005

A simple equation hovers above this conglomeration in neon lights. “Make me into something else.” If we accept the mess and redundancy of the urban environment, as a landscape of opportunity, we must also accept architecture as malleable and in continual flux. This approach is predicated on the idea that structures are not pulled down and that the greenest thing an architect can do in most cases is to rethink the existing architecture beyond the boundaries of current defining urban texts, to find a balance between public and private space, not as a utopian vision but as recognition of our human needs which must be addressed. We could converse. We could embrace. We could argue. We could fall in love.

The philosophy behind Porosity is that everything must be done in order to accelerate this as a practice. This includes the embrace of new structural ideas for old buildings. Unfortunately the current practice of heritage architecture enslaves buildings in a practice that fetishises building particularities and demands restoration, involving rebuilding. The result is a kind of botoxed finish denying its wrinkles and props of the aging process by categorising them as type of vandalism. It is far more respectful to juxtapose the old with new even as it forms a prosthetic or replacement part of something old.



What a building Desires, 2005

Encouragement and financial incentives need to be given to transformations, which upgrade technologies in return for perhaps increased floor space ratios and/or building heights. The license to increase program and to make programmatic shifts could also be offset by the addition of low carbon power generation systems, which add to the grid of the city.

At the core of these ideas lies the need to use architecture as an armature for new ideas. The endless becoming of architecture is a new aesthetic: Denatured contingency is the new engine of sustainability and the dissolution of architecture into landscape via a new paradigm of aesthetics.

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Richard Goodwin is Professor and founder of the Porosity research group at the College of Fine Arts, UNSW. His work ranges from gallery exhibitions to “parasitic” architecture / public artworks, urban infrastructure design and the international Porosity Studios. His prizes include: The National Sculpture Award 1985, The Sculpture by the Sea Water Prize 2003, Helen Lempriere Award 2004, The Blackett Award Australian Institute of Architects 2004, Urban Design Commendation, AIA, The Wynne Prize for sculpture 2011. He is the recipient of two grants from the Australian Research Council for his Porosity research. His artwork is held in major collections including the Art Gallery of NSW, the National Gallery of Victoria and the Nuremburg Museum. Major exhibitions include: 2 Venice Architecture Biennales 2008, 2010, 3 Australian Perspecta Exhibitions, 3 Australian Sculpture Triennales, The National Sculpture Award NGA 2001, The Third International Drawing Trienniale Nuremburg 1985, *Innensiete* a Satellite of Documenta 10 in Kassel 1997, *Distance* Tokyo 1995, and Beijing Architecture Biennale.

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