TOPOS, TOPOLOGY OR TOPOGRAPHY?

A case study, utilising earthworks in the development of landscape architecture as a hybrid methodology

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Master of Landscape Architecture (Project)
Durable Visual Record
Rev. C - 18th November, 2002
Signed declaration

1. Julian Raxworthy certify that the work:
   • is entirely my own, except where due acknowledgment has been made (below);
   • has not been submitted in part or in whole for any other academic award and;
   • represents work undertaken during the period of candidature.

This Durable Visual Record is submitted in fullfilment of the requirements for the degree of Master of Architecture by Project.
Signed:

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The Personal

The roots of this project can be located in the difficulty I have had in appreciating the subtlety and difficulty of the landscape, from my very first contact with the discipline.

As an undergraduate student, I was always at least as interested in method as I was in form; fascinated by the things behind the things, rather than the things themselves. While I designed landscapes, more often than not I treated them as monolithic entities, and had this horrifying suspicion that I should have been an architect, yet had done all this time in landscape.¹ I came to realise that the inclusiveness of the landscape and its inherent differentiation had the monumental- ity and awesomeness that had interested me in architecture. I became interested in how the landscape provided a structure for everything. In the context of the larger, grander order of the landscape, detailed and minimal projects gained qualities of monumentality with which I could engage.

In my personal life, I have always enjoyed the Australian landscape as a place to explore and immerse myself in, through extended off track bushwalks with conservation organisations. Their mission mirrors an interest of mine in the landscape: how to create a meaningful, respectful and connected Australian identity based around the inherent qualities of the landscape in which we make our home. While undoubtedly colonial in its exploratory approach, I love the masochistic sense of negotiating the landscape actively with my body.² I find the fact that the landscape is not designed around the needs of people, in contrast to the city, contextually reassuring. Specific moments that exist within the un-designed, Indigenous space of wilderness amaze me in how they on the one hand exhibit generalised traits of the geography, but are also simultaneously localised and specific. Sleeping out on a bed of needles below She Oaks, beside a clear granite river (full of trout, admittedly weeds); the natural environment feels at least as specifically habitable as the city. These experiences have become a source for typologies and generalised configurations for the project, without actually mimicking them.

Apart from being a way of re-engaging me with my discipline, the investigation of topography is a vital one for landscape architecture as a discipline. This has been highlighted by the recent architectural interest in “topology” (understood here to mean a non-Euclidian surface geometry) which threatens to further marginalise landscape as a discipline, after it had already done such a good job through its own humble and mediocre practice. “Topography”³ (literally, the shape of the land) is important for landscape architecture because as a medium it synthesises the uniqueness of the discipline, referencing as it does to orders beyond the immediately formal, in contrast to ‘topology’, and thereby consolidates landscape as a design discipline that engages human occupation with ecological systems that are the podium for such occupation. In contrast, landscape architecture seemed to look to “land-art”⁴ for specialised investigations of topography, which operated as objects, while remaining entirely unaware of the fact that every moment of its own practice engaged actively with topography, whether articulated or not.

This seemed a reasonable start for a project.

Figure 1 - Analytical drawing over photograph, of quarry, from ‘Sunshine Ramps Exercise’ (author)

Figure 2 - Anthropomorphic ramp, from ‘Sunshine Ramps Exercise’ (author)
Introduction

This project comprises an argument about topography, developed through a series of exercises undertaken in practice, in the design studio and for the Masters itself. The project is interested in design and design methods and processes as its central focus. The outcome of the project is a CD with a virtual landscape of these exercises, shown in three views (Figure 57, Figure 58), which were also used as the final exhibition (Figure 59 and Figure 60). On the CD a tour through the virtual landscape based around the question of 'representation' in relation to topography is investigated. Finally, an exercise at the cusp of the completion of the project, a competition entry for Queensbridge Square, illustrates how these methods work when applied as a set, to propose a method for manipulating topography in a manner that seeks to overcome the limitations of conventional representation, and thereby produces landscape form outside the bounds of conventional compositional languages.

Landscape Architecture, Generally...
The desire to investigate topography has arisen through my interest in determining a ground that defines landscape architecture uniquely, as compared to its architectural and natural history bases. I have felt that it is the nature of its medias, flexible medias such as water, plant material, and here, topography, which makes landscape architecture a fascinating discipline at the edges of the arts and sciences. Correspondingly, this project deals as much with the key agendas of the discipline, such as experience, representation and form generation, as it does with topography specifically. Essentially topography in this project provides a case study for investigating the larger discipline of landscape architecture. The project is in this sense deconstructive, as topography is utilised as a subject to consider the premises at the base of the discipline. Topography as dealt with in my project has been 'curated' in such a way that it illustrates these key agendas (Figure 3 and Figure 4). To this end, the research question for this project is:

"Can alternative methods and tools be developed to explore topography as a subject, and in the process reveal different agendas of the discipline of landscape architecture, and the relationships between them?"

Topography specifically

Topography is the least immediately appreciable element in the landscape design palette due to the fact that its qualities are difficult to represent in formal terms. The following are my own examples of some key difficulties related to the nature of topography, experienced when attempting to represent its qualities, that if engaged with differently might allow for a more productive and interesting use of this medium:

Non-Euclidean geometry

Topographical form tends to be based around surface change that occurs between points of different elevation, and resultant grades between (Figure 5). This creates a surface that is undulated and changeable at any longitudinal interval, defying description in discrete Euclidian terms, which favours the extent of objects, or beginning and endings, rather than the continuities of the field.

Geomorphic/hydrological interaction

In an indigenous sense, topographical surfaces result from the interaction between a subterranean geomorphic condition, and terrestrial meteorological effects (Figure 6). The surface is the interface between the two, and manifests this by directing surface water, which in turn erodes it over time. All surfaces are affected by this process, and these two factors tend to, in some form or another, delimit the extent of manipulation. This means that any static representation is showing a finality that has resulted from these forces, rather than the flexibility, vector or trajectory of the change.

A depth rather than a surface

'Topology', which is interested in geometric surface description models, has been developed architecturally as a critique of the limitations of Euclidian representational conventions, and historically influential compositional formulas. For example, FOA attempt to use circulation and dynamic systems to overcome the static and fixed nature of conventional architectural types. While effective in terms of making complex the possibilities of topographical form, this model has at its root an interest in a 'thin' surface (Figure 7). This sur-
lace is separated from the range of other factors that come with notions of ‘depth’ such as geomorphology and development of the surface over time, whether through natural forces or cultural occupation. While a rhetorical critique, it is ideologically significant as it isolates the surface from the complex factors that make such surface description models possible.

Materiality is implicit with surface definition

Topography is continuous across varied materials, since it describes the shape of the land quite discretely from its actual materiality (Figure 8). While this is also true of the architectural object, there is some sense that the relationship of form to materiality in architecture is one of ‘rendering’ where materiality is applied to the surface. In this architectural context, if materiality is a central interest, it is in how that materiality constrains or is implicit with a formal outcome. In contrast, topography is nothing other than its materiality, and correspondingly the legibility of topography is delimited by its materiality. This effectively camouflages recognisable topographical form, unless it is divided into object components, each of which has distinct materiality.

Extent, scale and continuity of surface

Any one piece of topography is at all times connected to every other piece of topography, particularly utilising the contour convention and, consequently, any piece of topography is an ‘instance of’ a larger topographic order. This connectedness makes every representation limited as any one representation effectively excludes the rest of the topography, disconnecting it (Figure 9). As all topographic moments occur within this larger system, they are also subject to the greater trajectories of the larger system. Consequently, while one instance may have an inherent directionality, it may actually be an aberration within the larger system that may have a completely different trajectory. This compression occurs at all levels and scales right down to the topography of a detailed element, which may again have a different trajectory. In representational terms, each disparate trajectory potentially confuses comprehension of the whole.

These difficulties provide opportunities and potentials that are the basis for the commencement of the investigation of this project.

Figure 8 - Different materials clad the surface making it difficult sometimes to fully comprehend the form of the landscape (author)

Figure 9 - Since the surface is continuous, it can be hard to isolate a specific object that is THE form (author)

Representation

Representation is the act of giving preliminary form to a proposition before it enters the world of concrete reality and is therefore a mediator in the process of manifesting ideas for designers. Consequently, where something is difficult to represent, it is also the point at which a design project either stops or continues: it is difficult to convince someone to build something if they cannot understand what they are seeing. Therefore representation is a finite limitation on what the potential of design might be. If it cannot be represented, it doesn’t exist.

Particularly relevant for this study of topography, however, is the related expression ‘visualisation’, conventionally utilised differently from the representation. Whereas representation suggests possibility and potential, and alludes as much to representing a design concept, visualisation is an almost technical term utilised simply to describe design form. Interestingly, and importantly for this project, topography seems to rest more in this technical arena than in that of the speculation of representation. The rise of ‘visualisation’ may be related to the development of software such as 3D Studio and Rhino, which both utilise iterative and incremental methods that separate the generation of form from the outcome of those processes. This suggests that topography is so difficult to formally understand that it must be done so technically rather than speculatively, creating a disjunction between conceptual design intention and formal outcome. The difference between representation and visualisation may be that the former is interested in qualities, while the latter treats qualities as if they were quantities.

All these exercises utilise the notion of ‘quality’ as the focus, and attempt to explore the representational standards of different media and methods, in an effort to develop languages that allow the inherent and unique qualities and characteristics of topography to be seen.

I, Robot

The first series of exercises in this project concentrate on exploring the language of visualisation of topography in relation to the utilisation of computer-aided design packages, notably AutoCAD, whose use of the ‘Digital Terrain Mesh’, or ‘DTM’, has been regarded as liberation for the appreciation of the difficulty of topography. These exercises, entitled ‘3DFACE Exercise’ (Figure 10, Figure 11 and Figure 12) and ‘REVSURF Exercise’ (Figure 13, Figure 14, Figure 15 and Figure 16), after the commands utilised to produce them, look at the way that various geometric surface descriptors, or topologies, bring forth different design qualities of the topographical form. The method of the DTM is about creating a uniform surface that clads or renders the qualities of a surface visible by creating a uniform surface pattern, which, through its distortion, makes visible differentiation. These exercises utilise the key command subsets of the DTM methods, and then ex-

Figure 10 - ‘3DFACE Exercise’: An unmodified 3DFACE mesh (author)

Figure 11 - ‘3DFACE Exercise’: Mesh with vertical edges hidden, emphasising width and continuity of slope (author)

Figure 12 - ‘3DFACE Exercise’: Mesh with horizontal edges hidden, emphasising the length and directional quality of slope (author)
Figure 13 - 'REVSURF Exercise': Unmodified REVSURF mesh (author)

Figure 14 - 'REVSURF Exercise': Mesh traced over horizontal edges, emphasising change of elevation of the bowl (author)

Figure 15 - 'REVSURF Exercise': Mesh traced over vertical edges, emphasising radiating quality of the bowl (author)

Figure 16 - 'REVSURF Exercise': Mesh traced over with Campidoglio pattern, displacing the shape of the bowl (author)

The computer taught me to draw

Considering the separation of form generation and its visualisation utilising DTMs, the following series of exercises seeks to compress these two together in the form of physical hand drawing, utilising the valuable aspects of the DTM graphic from the computer. They attempt to generate form in such a way that the form of the land is manipulated through the act of representing its surface qualities, in contrast to the way that the mesh on the computer disclad form after its generation. Since the use of the computer has been a refuge from drawing for me, these exercises were an opportunity to improve my drawing skills and at the same time test the extension of computer DTM methods into the realm of hand drawing.

Utilising a felt-tipped Fineliner pen, I have developed a method on two exercises, 'Transect Sketches' (Figure 17, Figure 18 and Figure 19) and 'Janefield Analysis Exercise' (Figure 20, Figure 21 and Figure 22) which extends the known mesh-based surface descriptor into a 'real time' method of drawing, by varying the orientation, density and emphasis of the mesh in such a way that it heightens the qualities of the form at certain moments. This method works by noting the rough shape of component forms, separated into almost platonic shapes, and then using the continuity of the horizontal and vertical vertices of the mesh to indicate the relationship to, and continuity between, these elements. In contrast to the computer method, these meshes have different densities dependent on the concentration of form in certain situations.
Like the computer, these drawings utilise a wide-angled camera perspective model, to allow depth to compress the mesh density and render the form. Extending this perspective model, the hand-drawing technique I developed utilises exaggeration to grossly distort the form into a type of signature. This allows topographical forms to be quickly understood as their qualities taken on those of recognisable but non-topographic forms: sausages, tongues, velvet throw-rugs and the like. This method resembles caricature, and aspects of this type of cartoon have been appropriated to further extend the evocative nature of the method. The caricature utilises a key characteristic that synthesises the form of something, in such a way that simply the rendition of that single formal characteristic brings to mind the entire complexity of that which is referenced.

For topography, whereas visualisation makes visible present but still indescribable qualities, the caricature allows the form to have a recognisable key characteristic. This can then be manipulated in design in such a way that even if minor, this characteristic can give the form an identity that can be recognisable despite subsequent smoothing and flattening. This method is utilised in the ‘Sunshine Ramps Exercise’ (Figure 23, Figure 24, Figure 25 and Figure 26) as a means to give identity to the nature of grade changes.

In the Sand Pit

The most immediate form of representing the manipulation of topography is undoubtedly the physical model, and indeed those projects that are regarded as milestones of topographic manipulation, notably Isamu Noguchi’s unbuilt playgrounds, all utilise the model as their representational mode. Generally these projects utilise a medium such as clay or plaster in order to simulate the plastic qualities of soil, as well as allude to the choreography of their construction process. While its effectiveness as a form of representation is probably the best of all those investigated, it is not the focus of the project, which is rather concerned with the ability of the two-dimensional to represent the three-dimensional, and the gaps and opportunities between the two.

The design studio ‘Terrain Ops’ (Figure 27 and Figure 28), which framed numerous exercises to investigate aspects of my Masters project, utilised soil, clay and sand models to investigate the relationship between the physical properties of soil, such as wetness, coherence and slump, and conventional formal typologies of landform manipulation including the biomorphic, faceted, naturalistic and orthogonal (discussed under the subheading ‘Form Generation’). It found that none of these configurations engaged with these characteristics, except in so far as they sought to mitigate them, through the utilisation of erosion control techniques and the like. In the ‘Sunshine Ramps Exercise’, a grid mesh was transferred onto the surface of a sheet of plastic that was then vacuum stretched over a contour model. This exercise sought to examine the similarly between a computer mesh and its physical equivalent. Ultimately the testing of quality is a question of experience, and representation investigates and develops the potential subtleties of this. All the representational methods I have investigated are plagued by some assumption or other about the location of the viewer and this location is an experiential one, not simply a camera. Quality is something that is felt, and as such the experience of topography is the subject of the next series of exercises.

Figure 27 - ‘Terrain Op’s Exercise’: Clay model studies, vertical scarification’s (Bonita Dingle)

Figure 28 - ‘Terrain Op’s Exercise’: Clay model studies, cracking patterns in different soil thicknesses (Bonita Dingle)
Experience

Topography is something that is experienced; however topography is somewhat different because it typifies the mystery and potential of unknown spaces, loaded as it is with allegorical associations. Notions of the horizon, grottoes, peaks and the like form foundational languages to understand levels of spatial enclosure. That said, however, there is no inside or outside to topography, as it is a continuous surface that changes form at certain points. If topography is a fundamental part of landscape architecture, then it may correspondingly provide the key to a type of experience that is unique to landscape, as compared to the finite inside/outside condition of an architectural container. While landscape is a romantic medium in terms of its allegoric and Arcadian qualities, alluded to above, there is a sense that the sublime is a latent force in all landscapes: whether through awesome scenic splendour or perhaps the threat of violence in the city, the landscape is the original site of the ‘unheimlich’. Needless to say the shape of the landscape is a major contributing factor in this, notably in terms of its creation of engulfing spaces. The surprise of spatial change in the landscape can be a profound experience that garden design has utilised consistently through the creation of garden rooms, hidden gardens and the like, drawing upon an expectation that the landscape will surprise or overwhelm us.

How to be in a drawing

The representation of landform utilises devices such as the mesh to allude to the qualities of a surface in such a way that we can appreciate or envisage occupying it and its consequent visual effect. Representation correspondingly implies certain experiential models, which can effectively tell us how to be in a drawing, by implying the location of the viewer and the subject, and what will be the foreground and the background. The following series of exercises seek to extend the representational languages developed in the previous exercises by linking these experiential premises to the qualities of the representational modes discussed.

In the first of these, ‘Big Slab’ (Figure 29, Figure 30 and Figure 31) I have developed a site-less ‘topographical megalomatrix’, an off-the-shelf template structure that can be placed in flat landscapes to create instant sublime. The structure comprises a uniform 1:1 (or 45 degree) turf slope, 100 metres square, climbed via a series of 1:14 grade ramps, with two metre landings every seven metres. In representational terms, a uniform 10 x 10 mesh describes the surface, with a filigreed edge where the ramps occur, created with 3DFaces in AutoCAD. Views of these emphasise the experience of standing on the edge of the ramp and viewing its monumental surface. This study recognises that the sheer regularity of the mesh suggests a regularity of surface, the uniformity of which can provide sublime qualities. The utilisation of modular ramps in a serial manner recognises that a monotonous entity can be sublime if it continues for long enough, like water in the sea. This exercise attempts to juxtapose universal access requirements, with grade changes of great magnitude, critiquing the inherent smoothing and simplification that the adoption of this standard has brought to public space.

These views have a viewer collaged into them, in the manner of Caspar David Friedrich, a model of representation heavily utilised in landscape representation to describe not just the view, but also to allude to the experience of viewing it. The role of this viewer is implied in all representational modes regardless of whether that view is shown or not, and the following exercise, seeks to explore how the way this surface is represented might influence one’s understanding of a space’s qualities of inhabitation.

Cartesian Envelopes

Hydrology and topography are inexorably linked via the fact that the shape of the land will determine where water goes, and that water in its own right wreaks havoc on the shape of places. Correspondingly, the determination of the shape of the land via the representational convention of the contour (a line linking points of equal elevation), is as much about the perpendicular movement of water across it, as it is the horizontal continuity of the contour graphic. For topography, the basic spatial division is the catchment: the high perimeter edge inside of which all water will run one way, while outside it will run another. In naturalistic terms, the reticulate hierarchy of basins, ridges and spurs creates a volumetric envelope that is immersive, in so far as its top edge will, from any point below it, be the horizon beyond which nothing can be seen.

For this project the notion of the ‘experiential catchment’, the form of which is described above (Figure 32), provided an important linkage between representation and experience, as the nature of successive contours down into valleys creates spaces that are immersive both spatially and environmentally, through the collision of the topography and aspect. These two work together via a process of defining space, with topography and then aspect providing the environmental qualities of that occupation, in terms of wetness and dryness, light and dark. This combination creates very specific microclimates in topographic enclosures that in turn lead to the sort of ambiences that have drawn garden designers to create spatially and thematically different garden rooms (Figure 33). This notion provides a spatial linkage that engages with the truism of Descartes that anything beyond the immediate cannot be assumed to exist.

In compositional terms, the catchment is manipulable as an object, and is a forceful design unit for the project that is consistently utilised in subsequent exercises, linking as it does the key agendas of this project: representation, experience and form generation.
Finessing the Foundations

The early colonisations of this country indicate the value placed upon catchments of certain microclimate as residential environments and the relationship between topography, aspect, microclimate and ambiance is the cocktail that street tree planting in contemporary subdivisions still seeks to stimulate. This clearly demonstrates a relationship between topography and domestic inhabitation. Considering that a core premise of the project is the relationship of design to topography, landscape spaces are typically ornamental features of doubtful utility and as such the park comprises a refined notion of an almost immaculate experience, in contradistinction to the city. This effectively transports self-conscious interest in topography to a picturesque or naturalistic sphere, rather than being something that is engaged in normal life. In contrast to this, the domestic provides a means to appreciate the unself-conscious experience of topography, an experience which may nonetheless condition how one understands the form of the landscape.26

In the ‘Sunshine Ramps Exercise’ (Figure 23, Figure 24, Figure 25 and Figure 26), this is explored through the notion of ‘finessing the foundations’ (Figure 34). This phrase alludes to the fact that much of the landscape is completely covered, yet its form still provides the tableau or base for the subsequent construction of the city (Figure 35). Correspondingly, one can conceive of a way of designing where the ground itself is manipulated in such a way that only certain types of construction can occur there. For this exercise, a series of sweeping road-ramps are created that establish interpretive and sensuous grade relationships that lead to terrace-style housing, with stoops from the door to the street, and then light wells from the street to the house, in the manner of terrace housing in Paddington, Sydney (Figure 36).

Normalisation or Up the Garden Path

Paths simulate a key aspect of the experience of landscape: the navigational negotiation between the inherent economy of the movement of body, and the interpretation of the shape of the landscape for this purpose. While this suggests a naturalism of experience, the influence of mapping and naming cannot be overstated, as terminology informs our expectation of how a landscape will be. Rough equals exhausting. These are the key ideas investigated in the ‘Katoomba Exercise’.

The role of the path is not dissimilar to that of the tectonic in architecture: it is the central formal mechanism for creating landscape space by choreographing how the landscape will be moved through. Importantly, again as distinct from architecture, the path emphasises that the surface of the landscape is a challenging one through which one must be guided. This can be clearly shown by noting that one does not put a path through the rooms of a building. The sense of movement in a building is completely generated from typological assumptions about occupation, tried and true after millennia of construction, with the floor immediately assumed to be completely trafficable, through uniform surface materiality.

This exercise is developed around the maps created by architect and conservationist Myles Dunphy, of the Kanangra Boyd wilderness in the 1920s.27 Dunphy mapped this wilderness via his own navigation and movement through it, with the density of the hachures used not just to suggest the relief of the place, but also their ease of movement. Over this was laid a network of names that drew from both the early Aboriginal names, as well as names derived from classical Greece. Together with the hachures, these became a dense and sophisticated typography that alluded to diverse qualities, making an almost impenetrable wilderness have the familiarity of a suburb. This exercise comprises the development of a path system that navigated one of the most interesting routes through the area: a track from Katoomba railway station to Kanangra Walls. Designs for this path react to this typography, both graphically and textually, that emphasise certain formal qualities, abstractly from the actual landscape of the place, after analytically drawing upon the associations with names (Figure 37, Figure 38, Figure 39).28 These places are navigated as a series of successive thresholds and horizons, investigating the narrative nature of the Picturesque path (Figure 40, Figure 41 and Figure 42).29
The role of association in the experience of landscape is inherently linked to representation because representation provides a link or reference for contextualising one's own experience, and conversely one is able to use experience to evaluate the truth of representation: is this in my own experience what its name or image (as a representation) would suggest? The next section deals with 'form generation' in relation to topography, the final agenda of this project. It comes after representation because the ability to design is conditional on one's ability to represent the qualities of form, and after experience, because the form that designers give to the land limits the possibilities of its experience (Figure 43).

Figure 40 - 'Katoomba Exercise': Expressing the dimension of the causeway (author)

Figure 41 - 'Katoomba Exercise': Announcing the ascent to a horizon (author)

Figure 42 - 'Katoomba Exercise': A spiral ascent to a mount (author)

Figure 43 - The relationship between the three component interests of this project, in relation to topography: 1. Representation; 2. Experience &; 3. Form Generation (author)

**Form Generation**

Representation and form generation are obviously complicit with the qualities of any design that may result, since how one represents something will ultimately determine what its resultant qualities will be, together with the wildcard of individual interpretation of that representation. In terms of representation (and according to this complicit relationship, form generation), establishing the difference between architecture and landscape is a fundamental tool for this project: defining landscape by what architecture isn't. Notably, this comes down to the difference between designing with field (Figure 45) rather than object based compositional systems (Figure 44). In terms of representation, this is emphasised through the hybridisation of the contour plan, as a mode of representation derived from geography, yet used with the will of architecture: a heady blend of the analytical and the propositional. By example, this disjunction can be noted in the fact that contour plan emphasises continuity (Figure 46), despite the fact that the 'action' of the landscape is actually perpendicular to its horizontally continuous graphic (Figure 47).

*Figure 44 - Compositionaly self-referential objects (author)*

*Figure 45 - Expansively connected fields (author)*

Camouflage and Definition

Topography is continuous across varied materialities, representing as it does the shape of the land quite discretely from changes in materiality that may clad that landform. While this is also true of the architectural object, there is some sense that the relationship of form to materiality is one of 'rendering'. Accordingly materialities are applied to the surface of compositionally separate tectonic elements, and if materiality is a central interest, it is in how that materiality informs a formal outcome, according to the 'truth to materials' argument of Modernism. In contrast, topography is nothing other than its materiality that effectively camouflages recognisable form, since the topography provides a continuous foundation onto which different programs with different materialities are applied.

The most common way of dealing with the difficulty of designing landform is through making the topography both physically and metaphorically, an 'object'. The isolation of objects from their context allows the utilisation of architectural notions of form and articulation (Figure 48). This isolation allows the object to be removed from the site for separate manipulation, and thereby removes the enormous responsibility to connect to the
context that can be overwhelming. The topographic object allows strict limitation and thereby an extent that is intelligible in design terms, simply though the act of being comprised of entirely closed contours.

Form versus formed

For landscape architecture, much of the precedents that have been drawn upon to articulate landform have been appropriated from sculpture practice, notably the work of Michael Heizer. While as a source of precedent this is reasonable, these art projects are also assumed to have a mystical relationship to the earth and it is also this aspect that is appropriated, despite the fact that much of the 'earth-art' drawn upon was developed with completely different conceptual art agendas. In my 'Terrain Ops design studio', students investigated a range of precedent projects to determine what conventions of manipulation were consistently utilised in projects said to be about topography. The resulting typologies were broadly based around the object-field distinction discussed above, where the former can be regarded as being 'on' the surface, while the latter is 'the' surface. This distinction could also be described as the difference between 'form' and 'formed', where the former suggests an autonomous final object and the latter a crafting act on a different subject. Topographic objects rely on their formal differentiation from the rest of the surface to gain definition, and are comprised of a single material to allow that form to have absolute legibility. These two approaches can be demonstrated by describing the typologies of 'the biomorphic', an approach to topographic objects, and 'the faceted', as an approach to field based surface manipulations:

Object: Biomorphic

This type is related to 'the naturalistic' in so far as it is comprised of minimised samples drawn from nature, most notably the 'dune'. In referring to the dune, these objects seek to simulate the process of accretion and weathering that causes such forms to exist naturally (Figure 49). These artificial dunes are often used in series, to aggregate enough objects to create a field, however they are designed as an element and then repeated, so the field is still a surface on which they are placed. Often these 'dune fields' have an inherent orientation and directionality that extends past a single form to the whole series, suggesting that a process has created them and perhaps that they are currently still in flux. Often they are orientated in relation to a compositional sense of the design, emphasising or juxtaposing the circulation system of the design. Their scale is very particularly determined to allow complete perception of their form from distance, yet to be immersive when immediately adjacent to them.

(examples of this type include: Hargreaves & Associates, Guadalupe River Park, California, 1988; Manuel Ruisanchez & Xavier Vendrell, Parc del Poblenou, Barcelona, 1991 & Lapena & Torres, Parque de Jinamar, Barcelona, 1998)

Field: Faceted

The faceted type results as much from changes in technology, notably the use of meshes on computers to describe surfaces (Figure 50). This model operates by generalising areas of landform into triangular plates of certain grade (three points is the minimum number required to define a uniform surface), created through interpolating corners of faces the grade surface of which is simply constant between. This type utilises a tectonic analogy from continental plates, and like them emphasizes the resulting tension along the edge where two plates meet, which becomes the place of greatest articulation and correspondingly the technical energy of their design centres on maintaining a perfect and sharp edge. To enable this to occur, this type is mostly comprised of hard masonry surfaces, since the type also relies on a uniformly consistent surface on the plates, again to emphasise the edge. Perhaps of greatest interest, however, is that the resultant surface is designed around geometric rather than experiential criteria, so that these surfaces are extremely flat. In relation to the critique of normalisation of experience above, this makes the type significant in so far as it offers a paradigmatically different type of experience, as one is forced to navigate it. This aspect leads to a super-sensitivity of movement and thereby existence, in the manner of the work of Richard Serra, by disturbing the expected consistency of ritualised, self-conscious patterns.

(examples of this type include: Fenster, Valverde & Figueras, Botanic Gardens, Barcelona, 1995 &; Carme Piot, Fossear de les Monres, Barcelona, 1989)

Both of these types to some extent are drawn from analogous relationships to natural phenomena, suggesting the intractable influence of nature as a governing precedent for landform manipulation: the primacy of 'topographical archetypes'.

Archetypal Topographies

'Type' is a well-established and heavily utilised component of architectural methodology, effectively being the palette of architecture itself. Discussions in landscape about typology however have been relatively new, despite a long, methodologically native, usage of association. The associative model operates by utilizing legible benchmark references in designs that either allude to literary or painterly allegories, historically, or to personal experience of natural landscapes, in Australia (Figure 51). For landscape, this process has manifested itself in strong 'topographical archetypes', and these types have gained a Platonic perfection in terms of definition, from which there is not a great deal of flexibility for paradigmatic change. Correspondingly, the base types of landscape space are 'natural', and this naturalness is driven, for topography, by hydrology and the logic of water running down hill, through erosion over geological time (Figure 52).

Due to this hydrological logic, a slope must be keyed into a ridge and a valley, and correspondingly a hierarchy is developed that must refer to a natural order. Landform structures of any sort become generalised into valleys, and ridges. This order cannot help but cause any manipulation to refer to the interlinked component types found evolved in nature, even if they are then abstracted, association then often causes designs to revert to these archetypal definitions, potentially threatening the original formal intention which may have had no relation to this order (Figure 53). This basis of naturalism has been adopted by landscape architecture in a manner similar to the idea of 'the Hut' as an
extension of ‘the Cave’, as an ‘original language’. This may happen simply because this natural order comprises the only available language.

Type, according to this model, becomes a consistent series of topographic trends, via configurations of contours that become a graphic emblem for the type (Figure 54). Particular contour arrangements, spacings and directionalities (as a series of contour lines) become references to the archetype, and this understanding is also utilised to refine form that may result from other conceptual interests. Consequently, forms generated with the contour plan never quite separate from the archetypes to which they are rooted. At the same time however, while the naturalistic has been the house style for park design for the last 100 years, rather than engaging with the sublime qualities of natural species that might bring to bear their magnitude and grandeur, post-Picturesque landscape practice has tended to smooth and mitigate the extremes which make these types interesting in the first place (Figure 55).

This section has investigated topography in relation to two critical areas of design practice, ‘representation’ and ‘form generation’, and their implications for a third area, ‘experience’. It has not sought to provide a new design process as such, but rather suggest both additional considerations, as well as new methods for insertion into conventional modes of office-based practice, notably the ‘concept design’ and ‘design development’ stages. Above all, the investigation has sought to develop a self-consciousness of the use of topography in landscape architecture, as well as expand the available languages that might allow more sophisticated design propositions using topography. The following sections test this in two final exercises, ‘Topodisney’ and ‘Queensbridge Square’.

1. Please insert attached CD into drive;
2a. If you have Adobe Acrobat Reader installed, double click on file entitled “Start_Here-2.pdf”
2b. If you do not have Adobe Acrobat Reader installed, double click on file entitled “Acrolead.exe”, to install the reader, then open file, as above
Interlude

The ground of this project speaks widely. Every movement is another moment, DVIEW, as the camera attempts capture of my subjectivities. The context is only ever interpretation, and we struggle to speak the lingo of the earth, diverse and meaningless, mined by discourses screaming significance in expert notation. Do you see what I see? Text is one form that can sustain many images and evocations, while still only ever being text, ultimately. And the ground? A representational surface clad to invisibility with elements, screaming, 'I am the focus, I will not be subsumed by what is around me'. Striations and collages ask us to net understand but to persevere, and allow our movements, aching tendons, to become devices for reading levels.

Mists stretch and we yearn for edges. The foreground and the background suggest an object between, which is only ever a change in density. I visualise to confirm the truth of my interpretation, as the earth is out of control, careering and sloughing form caught only for a second by a section.

But this space is the whole world, and its edges horizons that may speak of others but do not always. This place is unique but familiar — mounds are ridges and walls, escarpments. I could conceive of difference if I could represent it, but am forced to blanket with visualisation.

Change is a trend in something, but what if the something is only ever charge? Must we build to claim firmly our interpretations? Monoliths are nice because they are unambiguous, and are designed to both dwarf, and when occupied, to be dwarfed by, me. Things must have extent to be perceptible.

Regardless of topology, the landscape is not a surface but a depth. It is a material that cannot help but be made of parts despite discourses, messes between beliefs, form and science that are appealing for their complexity. Invisible but deterministic, foundations speak.

Topo-disney

A topographical theme-park

As a means of placing the various exercises of my masters in context with my overarching argument about topography, I have developed a virtual landscape entitled 'Topo-disney' (Figure 57). It is laid out in such a way that it is blatantly discontinuous, suggesting a theme park, a collection of diverse topographical forms, in line with my discussion of 'camouflaged' landform, above. Exercises are allocated to zones of the virtual landscape in such a way that together they simulate a geography, where aggregations of projects exhibit trends in terms of the key interests of the project ('Representation', 'Experiences' & Form Generation), a type of 'site specificity' for projects. By collecting them on this landscape they are forced to reference and interact with each other, thereby allowing each to inform the others through their own senses of scale and suggested experiential nature. In general terms, the first view seems to suggest a mountainous, sublime entry, leading onto a desert of arid line-work in the second, and finally a densely urban, 'people scale' landscape in the third and final view. This emulates my interest in looking to the sublime qualities of natural spaces and determining principles that can be brought to bear on a reduced scale in the city.

An interactive interface

On the CD, attached to the durable visual record, this landscape is moved through over three successive views, areas of which link to detailed discussion of the individual exercises (Figure 58). While not truly flexible in terms of 'real time' operation, this interaction does allude to the nature of moving through the landscape, and uses this navigational metaphor to help the user investigate my project.

An exhibition

In the exhibition of the project, I similarly utilised these three views, each at eye level hanging, suspended in front of the other, 3 metres in length, allowing one to move between in order to examine them (Figure 59, Figure 60). The exhibition was designed in such a way that the successive sectional profiles of the top edges together imply a surface between planes when viewed from the entry to the gallery (Figure 58).
Application

This final exercise was undertaken in association with Kerstin Thompson Architects (Nick Murray, Project Architect) and Jason McNamee, and comprised a limited competition entry for Queensbridge Square, a proposed ‘city square’ between Southbank and the Casino, Melbourne (Figure 61).

The brief called competitors to deal with significant differences in level across the site and with this in mind, it seemed appropriate to use the competition as a test of my research. Methods were developed to allow maximum exploration and intuitive manipulation of topographic form, in the light of my critique of trends in the representation, form generation and experience in my masters. These were utilised as a ‘Tool Box’, notably to extend the thesis from a definition of topography that suggested a park like setting, to the problem of a highly standardised urban landscape. The methods of generating form for this topography were distinctly haptic, comprising drawing and model making, rather than topologically driven software, such as Rhino or 3DStudio.

From the outset the team took the following position on relation to key aspects of the brief:

The ‘new city square’

The model of the city square is not typologically appropriate for the Australian cultural landscape, much of which is centred around either ‘strips’ of public space, or expanses of open landscape or bush. In terms of my masters, while not specifically related to urban typology, I feel that there are assumptions about urban spaces as automatically level surfaces, and that this correspondingly reinforces the disjunction that I have consistently noted as unproductive: that only the park is topographical. This also seemed like a useful opportunity to propose an urban surface that refuted the ‘normalisation’ of urban experience, adopted by clients as a ‘line of least resistance’.

The landscape is the focus

The surface of the landscape should be the foreground, not the background, for the architectural context. This role of the background has consistently forced landscape to be ornamental and therefore indulgent, and this in turn has stifled design investigation, as landscape architecture has searched for other functions to justify its relevance. We determined therefore that the landscape must ‘speak for itself’ and have its own ‘will’. As noted in this project, articulation is easier for forms that are based around an object paradigm, and the relegation of landscape to background is the result of this. Correspondingly we sought to use the dynamism and differentiation of the ‘surface field’ to become central in its own right.

Connection mania and a single surface

Traffic-ability and connection are the central programs for public space, often diagrammatically producing the form via a subtractive process. The brief suggested an absurd range of things to connect to and we chose to let this absurdity drive our design. When combined with the difficult levels, these circulation routes became three-dimensional ramps crossing over each other defining a structural frame over which the surface is draped. By making the surface a single material the form of the field is able to be the focus for the design, rather than the collection of objects usually associated with city landscapes.

Process

The following is the process utilised to develop the form, and represent it. As much as possible, one representation was worked with until it seemed unable to express the inherent trajectory of our design investigation, then another was chosen that seemed more appropriate, and in this way the process of form generation was compact with that of representation. I self-consciously attempted to utilise the entire range of methods I had investigated in my research.

1. Establish Constraints

As mentioned above, a ‘constraint as opportunity’ model of site analysis and brief interpretation was developed, which in itself is conventional landscape practice. However it was utilised in a three dimensional, rather than a two dimensional version of ‘build the analysis’ (Figure 62).

2. Connectivities

A series of desire line paths were developed, indicating trafficable routes, to link all the required adjacencies together, to create a series of ‘directionalities’ which, when taken together, comprised a multi-fingered form, spanning the site.

3. Meeting Levels

For each of these ‘fingers’ starting and finishing grades were developed, together with a sense of the required and desirable grade change along them, to effectively make the path a ramp.

4. Volumetric Axonometric

From these 2 mappings, a solid volume was created that gave a notional three-dimensional form to the resultant diagram (Figure 63).
5. Freehand Caricatures

Over the top of this axonometric, a series of drawings in the manner of caricatures were developed that sought to distort the obviousness of the diagram into a dynamic form that seemed to flex and mutate according to the inherent ridiculousness of the 'connect everything' utopia of the brief.

Several iterations were used to develop this form, from the sketchy (Figure 64 and Figure 65), through to a more precise rendition of the form as a series of sensuous pistes (Figure 66 and Figure 67).

6. Clay Models

Clay models were utilised to fine-tune the caricatures, again in several iterations. These worked from the act of placing the clay initially in masses that related to ramps (Figure 68), locating the key desire line paths (Figure 68), disturbing them by locating adjacent topographic masses (Figure 70), then reinforcing them to create microclimates, smoothing transitions between them (Figure 71). Surface patterning was inscribed onto the model to test the three dimensional effectiveness of the representational surface (Figure 72 and Figure 73).

7. Vacuum Form Models

From the clay models, Vaco-Forms were taken (Figure 74), to render the entire space in one material and smooth out changes. The pattern was transferred onto the plastic sheet that was then stretched over the clay model (Figure 75 and Figure 76).

Figure 70 - Clay models: distorted landforms displace desire lines (author)

Figure 71 - Clay models: masses smoothed to graduate grade change (author)

Figure 72 - Clay models: surface patterning to exaggerate topographic trends (author)

Figure 73 - Clay models: detail of patterning (author)

Figure 74 - Vacuum form models: clay model reinforced to survive multiple iterations (author)

Figure 75 - Vacuum form models: model from clay model, with plan transferred (author)

Figure 76 - Vacuum form models: detail (author)
8. Digital Photos
Digital photos of models were taken throughout from a range of heights, both plan and view, to test the effectiveness of the proposal as it proceeded.

9. Renderings
The digital photos were used as the base to render visualizations (Figure 77), using the shadows and detail as a form to guide the rendering, in contrast to a computer model and rendering framework, which is the norm (Figure 78 and Figure 79 and Figure 80).

Key Conceptual Relationships
The forms generated were further developed with some of the key notions and ideals of my research, in such a way that they could be consciously tested on a constrained project. Further, aspects of my thesis which seemed discontinuous in retrospect were forced into a relationship, as this project sought to combine aspects of urbanism and my topographic interest. To some extent, this inclusion of urban design allowed normative programmatic and formal development to provide a critique, and then linkage, on the basis of experience and inhabitation, since the types that constitute urban space have these more strongly built in. When combined with my topographic research, this urban emphasis allowed me to articulate some important relationships that in effect clarified aspects of my research, below (Figure 81).

Topographic Form – Representational Surface
As discussed throughout, the cladding of land surface can effectively camouflage the shape of that land, as diverse materials adopt forms less to do with the shape of the land than the typological elements associated with that landscape type. Correspondingly the shape of the topography is often exaggerated to compensate for this invisibility.

In the Queensbridge Square project, the notion of a ‘representational surface’ was developed to compensate for this effect. From studies into representation of surfaces, a palette of devices was developed, ranging from the contour to the hatchure, that formed the paving pattern of the surface, to exaggerate these forms, even if they themselves were less dramatic. An example of this is the utilisation of a line runs up the slope of a ramp, with artificial perspective, to emphasise its length and sweep.

Figure 82 – Topographic form (author)

Figure 83 – Representational surface (author)

Figure 81 – Schema of the relationships between key project concepts (author)
Topographic Archetypes – Urban Typology

The range of topographic experience in the city is limited both by the inherently orthogonal nature of construction, and the normalisation of surfaces for safety and access purposes. That said, most urban landscape typologies have some notion of elevation change built in, mostly through characteristic views, even if those are only assumed to be eye level.

In order to avoid the simple contrast of inserting ‘nature in the city’ while still wishing to insert aspects of this type of experience, we sought to morph understood urban types with those natural ones with which they could be stretched to be equivalent to. By doing this, we sought to make the radical difference of the proposal somewhat familiar in terms of experience, as well as utilising their programmatic associations. By example, the inherent linearity and enclosure ‘Boulevard’ is not dissimilar to that of the ‘Gully’.

Topographic Form – Microclimatic Effect

Key to the masters project was the desire to investigate experience in relation to topography. In conventional terms this is referred to as microclimate, sitting somewhere between the discourses of meteorology and behavioural psychology. In reaction to this association with the mysticism of behavioural naturalism, the view has been utilised in design discourse as an empirically measurable way of understanding experience, however in doing so it loses the inherent subjectivity that IS experience. In urban discourse, this concentration on the view is augmented with wind and aspect studies, however similarly, it is their relationship to each other in terms of ‘pleasantness’ that is the key to appreciating landscape experience.

In this project the combination of topographical form and archetype from nature was utilised as a device to understand what a space is like, since the inherent romance of nature allows one to be significantly more articulate about landscape experience. By example, the space in the project referred to as the ‘Saddle’ (Figure 82 & 83) is characterised by exposure on 2 sides, yet is contained on the other 2, and when facing north as this one does, provides a bright freshness throughout the day, as one would expect for its urban cousin, ‘the City Square’.
Figure 89 – Renderings of proposal: View from Southbank (author)

Figure 90 – Renderings of proposal: View from Queens Street (author)
Conclusion

The root of this project is an attempt to provide sophistication to some base design languages in landscape architecture, namely topography. In that respect, in relation to architectural criticism, it may seem naïve, however that is because architecture has had its founding manifestos to which it can react. While landscape architecture too has these, they tend to either emphasise the ontological or come from a cultural studies base. Design investigation is distinctly lacking and when discussed it tends to regard form generation as being about ‘inspiration’. Correspondingly, this project has attempted to take on topography as a base design language of landscape architecture, an incremental investment in the discipline. In doing so it has fought an internal battle between topography as its subject, and landscape architectural practice and conventions as a context. It has attempted to use the subject of topography to inflect back onto landscape architecture generally.

In summary, this project has attempted to:

- Refute the invisibility of landscape as a background for architecture, or as a collection of objects when the foreground, by developing languages for dealing with the implicit;
- Be a case study in field based design investigation, expanding on notions from Rosalind Krauss and Elizabeth Meyer.
- Develop topography as a design language in landscape architecture, by exploring conventions of representation, examining the way in which the form of topography is generated and investigating the particular type of experience that landform offers;
- Develop ways of seeing or reading topography, by exploring the nexus between geographical and architectural modes of representation, and testing these through exercises that critique the notion of visualisation;
- Develop tools for dealing with topography with more design sophistication, by expanding a paradigm, the earth object, to diversify and articulate a broader range of design potentials;

In undertaking the project, I have been constantly struck by the difficulty in separating the analytical from the propositional, and have come to the conclusion that the role of landscape architecture is fundamentally interpretative, and its mandate is to provide ways of allowing people to engage and read the world. This role is buried deep in the discipline, and resonates in any design act. The natural science conjunction with architecture makes landscape architecture a negotiator and translator for human occupation of the planet. While I recoil from the naivety of this statement, my research has consistently revealed it as true.

By examining topography as a unique aspect of landscape architecture, I have attempted to assert the role of fundamental investigations of my discipline. There are many others and I believe that notably plant material, time and hydrology are also up for similar re-considerations. Ultimately also, landscape architecture needs to gently move away from the architectural paradigm to establish modes of representation and practice that allow it to be a choreographer of the world.

Figure 91 - Pro ‘Topo-Disney’
Landform (author)
Notes

1 This was also the view of my lecturers. It was my collaboration with Kirsten Bauer, with whom I have worked on many of the projects illustrated here (credited) that made me realise the real scope and potential of the landscape, and subsequent professional practice with ASPECT has consolidated this.

2 Although not so much as an asthmatic smoker.

3 Topology is defined by the OED as: "The branch of mathematics dealing with the properties of figures and surfaces which are independent of size and shape."

4 Topography is by the OED defined as "The surface features of a place or region collectively."

5 John Beardsley, Earthworks and beyond : contemporary art in the landscape (New York: Abbeville Press, 1998). This book was a major source in popularising the earthworks artists to a landscape architecture audience and correspondingly, this usage of the term refers to the manner in which conceptual art projects involving large scale earthworks have been appropriated by landscape architects as a form of program-less expressionism.


15. Bronowski notes, on the relation of the arts and the sciences: "The scientist looks for order in the appearances of nature by exploring such likenesses. For order does not display itself of itself; if it can be said to be there at all, it is not there for the mere looking. There is no way of pointing a finger or a camera at it: order must be discovered and, in a deep sense, it must be created. What we see, as we see it, is mere disorder."

7 Mark Wigley, The Architecture of Deconstruction: Derrida’s Haunt (Cambridge, Massa- setts: The MIT Press, 1993), 217. As Wigley notes: "The discipline of architecture is more than the disciplining of the space. Before that, it is the disciplining of a certain thinking about "space", or, more precisely, it is a set of institutional practices that maintain that thinking can only ever be "space" which is always detached from the space it addresses." 8 Rosalind Krauss, 'Sculpture in the expanded field', from Hal Foster (Ed.) The Anti-Aesthetic : Essays on Postmodern Culture (Seattle: The MIT Press, 1983). The utilisation of "field", in contrast to "object", throughout this essay refers to Krauss's establishment of an "object/field" paradigm. 9 FOA, 'Exploiting foreignness (a conversation with Farshid Moussavi and Alejandro Zaera), El croquis Spanish architecture (5) (1995). The work of Foreign Office Architects, notably the Yokohama Port Terminal project, has actively explored topological surfaces and their potential for architecture.

10 Elizabeth K. Meyer, 'Landscape as modern other and post-modern ground', from H Edequist and V Bird (Eds.), The culture of landscape architecture (Melbourne: Edge Publishing, 1994), 21. Meyer notes of her idea of "the figured ground", that 'in lieu of an idealist, abstract horizontal surface, we recover a particular topography with a deep structure'. This notion is important for my masters project, as is Meyers essay generally, which sets the conceptual frame for much of my thinking on landscape.

11 I recognise that this is a simplification based on the interest in modern architecture in 'truth to materials'.

12 Elizabeth K. Meyer, The Post-Earth Day Conundrum: Translating Environmental Values into Landscape Design, from B Michel Conan (Ed.) Environmentalism in landscape architecture (Washington, D.C: Dumbarton Oaks Research Library and Collection, 2000), 204. Meyer notes: "Landscape architectures, unlike architects and artists, work with a medium that is also their subject and their canvas."

13 Representation is described by the OED as "an image, likeness, or reproduction in some manner of a thing" and further as "the act or process by which the mind forms an image or concept."

14 This discussion of representation in relation to design is based around premises established in architecture by Andrea Kahn (Andrea Kahn (Ed.), Drawing/building/text: essays in architectural theory (New York: Princeton Architectural Press, 1991)), and in landscape by James Corner (James Corner, 'Representation and landscape drawing and marking in the landscape medium', Word and Image 3 (8) (1992)). In dissent to this model, however, Peter Connolly notes 'Corner would say this also, however I would disagree. Representation may make visible the invisible, but more importantly it allows a relation to what is invisible' (Personal communication).

15 While not specifically related, it is worth noting that 'visualisation' is a potent interest of landscape architecture, particularly in relation to "visual assessment" in landscape analysis, which deliberately utilises the assertion of an objective view as a means of establishing empirical measurement mechanisms. This supports the assertion that visualisation is considered an objective version of the subjective notion of representation.

16 The utilisation of CAD at RMIT University effectively renewed a discussion of landform as a subject, as the technology was struggled with. A sense of this liberation can be gained by examining Chris Sawyer's article entitled "The Smart Landscape" (Chris Sawyer, 'The Smart Landscape', Kerb 2 (1995)).


18 This is reminiscent of Peter Connolly's assertion that 'animals are good to think with' (Peter Connolly, '101 ideas about Big Parks', Kerb 1 (1995)).

19 Noguchi's 'Contour Playground' of 1941 is inevitably referred to as an icon of landform manipulation, and this designation is synonymous with his vocation as a sculptor (Dore Ashton, Noguchi: East and West (Berkeley: University of California Press, 1992)).

20 As noted by Peter Connolly, my interest in this subject, while abstract, nonetheless is in the instrumentalism of design practice in the real world, and its deductions and tools ideally should have utility in the office (Personal communication).

21 Wigley considers the role of architectural metaphor in language, after Derrida and Heidegger, as a fundamental structuring mechanism for western thought (Mark Wigley, The Architecture of Deconstruction: Derrida's Haunt).

22 James Rose, 'Freedom in the garden', from Mark Treib (Ed.) Modern landscape architecture: a critical review (Cambridge, Massachusetts: The MIT Press, 1938 (reprinted 1993)). Rose attempted to develop an interstitial model of landscape experience around the discontinuous and transparent aspects of the landscape design palette.

23 Gary Shapiro, Earthwards: Robert Smithson and art after Babel (Berkeley: University of California Press, 1995). Shapiro notes, in relation to the work of Robert Smithson, that 'something is sublime because it defeats all our desires for comprehensive and ordering perception'.

24 Anthony Vidler, The Architectural Uncanny (Cambridge, Massachusetts: The MIT Press, 1994). The 'uncanny' is a notion built on that of Freud's, 'the un-homely', which suggests that the environment represents a particular fear of the unknown, in reaction to which civilisation and habitation have developed.

25 In another exercise, not discussed here I examined the work of the 'New Brutalists', notably that of Josie Candile and Woods, and how their architecture utilised landscape hierarchies and associations to create structure and experiential scale.

26 The term 'universal access' refers to measures utilised in the development of public space that allows access by people with disabilities, notably wheelchairs.

27 H.H Arnsen, A history of modern art (London: Thames and Hudson, 1988), 20. Arnsen notes: 'In the landscapes of Friedrich, filled with mysterious light and vast distances, the human beings, when they appear, occupy a subordinate or parley contemplative place'
26 Rene Descartes, Discourse on method and the meditations (Harmondsworth, Middlesex: Penguin Books, 1968), 19. (‘Descartes) detaches the act of doating from reference to anything external to itself, and in that way cuts the ground from beneath the feet of scepticism. For doubting is thinking, and is therefore linked to his existence, he cannot perceive that he thinks without at the same being certain that he is’.

29 David Leatherbarrow, 'Leveling the Land', from James Corer (Ed.) Recovering landscape : essays in contemporary landscape architecture (Sparks, NV: Princeton Architectural Press, 1999), 171. As Leatherbarrow notes: ‘...the platform is a primary topic in the sort of site occupation that envisages inhabitation’.

30 The term 'rectonic' is used here as Frampton does to describe the inherent formal trajectory of typological elements, such as the wall, the roof, etc.

31 Myles Dunphy, Myles Dunphy : Selected Writings (Sydney: Ballagairin Press, 1986).


33 As Spim notes, 'telling a story by designing a path and the elements along it is a common narrative technique, particularly in religious and political landscapes where the path represents the "way" (Anne Whistlon Spim, The language of landscape (New Haven, Conn.: Yale University Press, 1996).

34 Walter Gropius, Principles of Bauhaus production (Dessau), from Ulrich Conradi (Ed.) Programs and manifestoes on 20th century architecture (Cambridge, Massachusetts: The MIT Press, 1971). Gropius stated in 1926: 'An object is defined by its nature. In order to design it, then, one must study its nature. This research into the nature of objects leads to the conclusion that by relative consideration of materials, forms will evolve that are unusual and surprising'.


36 John Beardsley, 'Entropy and the new landscapes', from Steven Hanson (Ed.), Hargreaves Associates: landscape works (Tokyo: Process: Architecture, 1996). Referring to Hargreaves, Beardsley notes: 'His designs, as he puts it "are natural, but not natural looking"'


39 Some contemporary landscape designers utilise allegorical association to draw upon the garden history, such as Dieter Kienast in his Garden E, Uetliberg (Dieter Kienast, Kienast = Götter = gardens (Basel: Birkhauser, 1997), which comprises a handrail made up of the words 'et in arcadia ego', and Ian Hamilton Findlay (John Beardsley, Earthworks and beyond : contemporary art in the landscape), uses signage in his own garden, asking visitors to 'hear Poussin, see Lorraine'. Both of these annotations are used in the foreground of a view to frame how it will be seen.

40 Much of the greatest landscape architecture in Australia from the 1970s, such as that of Harry Howard and Bruce Mackenzie, is effectively comprised of collections of archetypal landscapes 41 Vincent Scully, Architecture : the natural and the manmade (New York: St. Martin's Press, 1991). This theoretical extension is articulated by Vincent Scully, in talking about foundational premises of the discipline, in terms of an anthropological evolution of shelter 42 Jacques Derrida, Of Grammatology (London: John Hopkins University Press, 1974). Derridq coins the term 'sous rature' to note that we have to use the available language even if we do not subscribe to its premises. 43 Anne Stephen (Ed.), Artists Think : The Late Work of Ian Burn (Sydney: Power, 1998). This text is modelled on that of Ian Burn, who utilised a form of analytical and speculative prose as an overlay on artworks for which he was providing a critique.

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Topographic Architecture

