Alexander Opper

Creating Meaning in Architectural and Furniture Design in a South African Context:

A Search for Inter-disciplinary Lessons between Two Disciplines

BIOGRAPHY

Alexander Opper is an architect and Senior Lecturer in the Department of Architecture at the University of Johannesburg. He is also a principal of Notion Architects, a Johannesburg-based interdisciplinary design practice established in 2007. He completed a Masters degree in architecture at the University of the Arts in Berlin in 2001. His work has been widely published, both nationally and internationally. He is currently involved in a range of collaborative exhibition projects. In his design practice and teaching he explores relationships across traditionally separate disciplines such as art, architecture and furniture design. His current artistic practice focuses on the theory and production of architecturally inspired installation environments.

→ In this paper, I examine the extent of a mutually informing dialogue between two traditionally separate design disciplines: architecture and furniture design. Case studies in the form of a building and a furniture piece (both conceptualised and realised in South Africa by myself) are discussed as a basis for the examination.

In the context of a young South African democracy there appears to be a strong desire, especially within the architectural profession, to establish a nameable South African style or identity. Inherited western-based modes of architectural (and design) teaching, often result in forced, artificial and somewhat naïve attempts at synthesising the multiple cultural presences in this country into over-ambitious 'Proudly South African'[1] style(s) of expression. As an alternative to the sometimes blind urgency of establishing an all-encompassing expression, I suggest that a more reflective attitude of observation and careful analysis of the existing situation may be beneficial as a point of departure in trying to address this complex challenge.

I show that many architectural ideas are transferable to the design of furniture: the notions of narrative; site-specific design; ways of drawing, façade and the tectonic qualities of realised things, are just some of the tools which can be equally relevant and revealing within and between both disciplines.

Introduction

In this paper I critically reflect on some of the meanings embodied in two recent projects designed and realised by myself.[2] These projects are situated within the disciplines of architecture and furniture design respectively. Within a site-specifically South African context, I explore potential models of interdisciplinary learning between the above-mentioned disciplines. This initial study serves as the basis for possible future, more substantial investigations into modes of making across various local design disciplines as a rich field of study into practice-led research. I do not argue here for a single South African design idiom or homogenous style of expression. Rather, I attempt to illustrate the advantages of emergent answers, possible responses – not solutions – that come from a careful analysis and interpretation of a complex cultural, ethnographic, socio-political and bioclimatic context. The factors influencing designers in South Africa are simply too numerous to be neatly summarised and easily digested. I see this multi-layered context as the locus of an ongoing challenge to designers – a challenge which, in my view, is only able to be addressed through a slow and considered 'becoming' of things, as opposed to striving for an instant identity fix.

As I attempt to demonstrate, emergent South African meanings and, by extension, a search for identity through design, do not call for definitive manifestoes. What is required is a framing of and working with already present visual and content-based 'dialogues' – with very little necessity to import into or subtract from various givens – in designing and (re)imagining this country's multiple socio-political, economical, cultural and physical environments. As an alternative to the sometimes blind urgency of establishing an all-encompassing expression of 'South African-ness', I suggest that a more reflective attitude of observation and careful analysis of the existing situation may be beneficial. In a hyper-diverse South African context, the above approach could serve as a point of departure in beginning to address the complex challenge of creating meaning within fields such as architecture and furniture design.

One way of making a building, or building a dwelling: The story of one South African house, or, in retrospect, how Gottfried Semper's ideas on making could be a useful guide to finding form, in the context of the South African built environment

Architecture and furniture design share an affinity with the ground plane. Some designed forms may appear to defy gravity but, by extension, all buildings and furniture pieces guide the forces and loads that reside *in* or rest *on* them, downward into the earth. It is not coincidental that the naming of the now world famous southern African geography, containing a large percentage of human origins on this planet, is referred to as the 'Cradle' (of Humankind). In this case, 'cradle' is used to describe a particular place situated within a larger and more general landscape; it suggests that one part of the land 'harbours' and 'protects' another. The referent to the relatively small and intimate scale of a piece of furniture – in the form of a cradle – is employed to invest this place with meaning. This metaphor talks about the relationship between a singular stretch of land and the larger landscape which 'shelters' it. In this paper I discuss the idea of landscape as a connector of – and mediating surface between – people and places; a continuous 'fold' of potential occupation and habitation – spatially and socially – in an attempt to reinforce the weighting of the land in the South African design context, as a critical aid to finding form.

In his essay, 'Semper and the Conception of Style',[3] dedicated to Gottfried Semper's ideas on the importance of the act and manner of making things (including buildings), architectural historian Joseph Rykwert outlines the most important tectonic rules defined by Semper[4] (1863) in his book *Der Stil*. Based on Rykwert's (1982:130) suggestion of a focal shift that addresses "some of our immediate [design] problems" Semper's guides retain their usefulness close to 150 years after he defined them.

Rykwert (1982:125-126) lists Semper's two primary rules driving human production: firstly, he refers to the

notion of necessity as a virtue and, secondly, to the materials selected for fabrication and the method by which these are assembled, via making, into something concrete. In the culturally varied South African context Semper's guides are tools to be considered in attempting to characterise – from within the aesthetic amalgam of a pluralistic South Africa – what 'thing' this country, as a 'nation-*place*', might become, and how its becoming might aesthetically reflect that new 'thing-ness'.

The *One Megabyte House* (Figs. 1-3), a permanent residence that I designed and realised in Cape St Francis in 2005-2006, addresses the anchors of Semper's thinking at various levels to achieve a place-making whole – from the considered situating of the dwelling on the site to the choices of building materials and their assembly. In an attempt to avoid overly wilful placements of form, the landscape specificities of the region and site are carefully

Figs 1-3: Exterior views of the *One Megabyte House*, seen from the north-west, north, and north-east (left to right), shortly after completion of construction. Cape St Francis. Photographs by Alexander Opper, 2005.

Fig 4: The *One Megabyte House* embedded in a re-established fynbos landscape. View from north-east. Cape St Francis. Photograph by Alexander Opper, 2006.

Fig 5: Typical example of the boulders, surrounded by fynbos, found along the immediate coastline. Cape St Francis. Photograph by Alexander Opper, 2005.

analysed – the characteristics of the locale, in a sense, inform possibilities for the morphology of the proposed dwelling.

At the scale of the structure to be inhabited, the project employs metaphor as the initial conceptual driver of architectural form. Its monolithic character (Fig. 4) derives from the ubiquitous presence of red-orange saline-oxidised boulders (Fig. 5) that are common along this stretch of South Africa's south-eastern coastline. These boulders are balanced by a soft fringe of verdant fynbos[5] – a condition echoed by the dwelling and its surrounding flora.

The formal abstraction of the chosen precedent into a clearly synthetic 'rock' is compounded by the name chosen for this project. Its name contains an additional narrative layer related to the Computer Aided Drafting[6] technology which was used to draw the house: *One Megabyte House* speaks of the intangible and 'weightless' virtual size of the dwelling. In its digital incarnation – as a drawing file – the design for the house measures slightly less than one

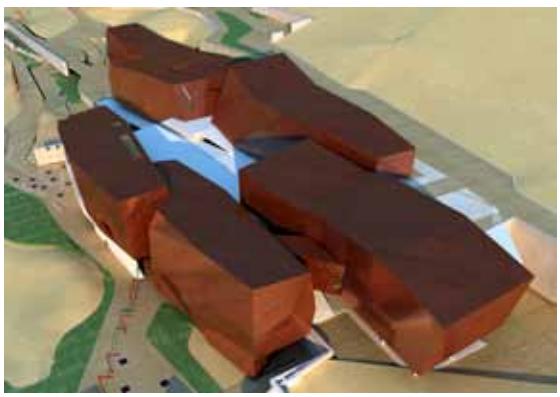

Fig 6: Computer visualisation of Freedom Park Museum, seen from the bird's-eye perspective. Courtesy Office of Collaborative Architects (OCA).

Figs 7 & 8: Freedom Park Museum under construction. Tshwane. 2009. Courtesy of OCA. In these images the boulder metaphor is evident.

megabyte. This choice of name emphasises the physical size of a small building designed essentially for one person, barring two further spaces: one for a car and a modestly sized living area for visitors.

Size is relative and subjective in a South African housing context, but at 110 square metres of enclosed space – including the garage and guest section – this dwelling is small, especially when compared to the norm of the 'bathroom-for-every-bedroom' mentality present in most other newly built residential structures in the area. The excessive nature of the latter approach becomes even more obvious when one considers that most buildings in the area serve as holiday houses that are only occupied for a fraction of the year.

In his book of collected essays – as part of a critique of the rational post-war approach to architecture by his generation subscribing to the modernist language of the 1950s – Rykwert (1982:10) encourages architects to pay attention to the emotional potential of their work, which he advocates to be reliant on researched, 'referential' content. In the context of his appeal, the rock as a microcosm of the earth in compressed form would seem to offer a potent reference for the making of architecture, especially in a country as rich in diverse geologies and landscape resources as South Africa. The *One Megabyte House* is, of course, not made of actual rock but simulates a rocky bastion in abstracted form. The simulation is largely achieved through the careful volumetric arrangement and subsequent artificial red colouring of the commonplace bricks used to construct the bulk of the house. A short departure to another contemporary South African building is justified here: the Freedom Park Museum in Tshwane (Figs. 6-8), currently nearing completion, employs a similar metaphor to the *One Megabyte House* – in another context and at a larger scale – as it attempts to anchor itself in place and time.

Designed by the Office of Collaborative Architects (GAPP Architects/Urban Designers, Mashabane Rose Architects and MMA Architects), this public building uses the analogy of a group of boulders as the literal form-giver for the building's function. The simulation, in this case, is achieved by homogenously cladding a complex steel structure with copper material. This consistent 'skin' allows the museum to resemble a rocky grouping that will eventually transform from its initial red sheen to a mossy green patina, the result of time and weathering.

The potency of landscape as a producer of meaning in the current South African architectural context is evidenced by the recent local trend of the site-related naming of numerous contemporary buildings. This phenomenon

is amply illustrated in a recently published compendium[7] documenting examples of notable South African architecture realised since the country's watershed year of 1994. The following list of buildings reflects a strong urge amongst designers to link building and place: Baobab Toll Plaza, Diamond Hill Toll Plaza, Highveld Houses, Little Cliff House, Tree House, Weaver's Nest, and so on. Roger Fisher (2009:24) summarises the relevance of landscape(s) in South Africa as a powerful emotional catalyst, as follows: "South African architecture of distinction will always be emergent, generated at the threshold of the possibilities of locale".

Historically, at the scale of the site and the building's arrangement thereupon (Figs. 9 & 10), the *One Megabyte House* can be read as a continuation of a long genealogy of considered place-making. The project attempts to reinterpret and develop some of the climatically and culturally forged spatial relationships that have emerged from a long history of contextually aware design on the African continent. The merging of three clear architectural bodies,[8] or functions – main dwelling, garage and family/guest section – results in a spiral-like form which wraps around its negative inverse, in the resultant form of an L-shaped courtyard (Figs. 9 & 10). This spatial relationship could be read as a hierarchical reversal of the traditional home ensemble of the Tswana people (Fig. 11).

The *One Megabyte House* consolidates its cellular spaces into fluid and continuous form: in this project the low wall, which typically surrounds and defines the forecourt of the Tswana homestead, is appropriated and developed. This reinterpretation results in a paradigm shift: the architecture that emerges represents a more controlled spatial synthesis – of the 'free' wall planes and those walls which define the building's internal enclosure – than that achieved by the Tswana precedent. Even where the *One Megabyte House's* long 'Miesian'[9] wall (Figs. 12-14) extends southward across the site and into the tall dune, the wall plane is still intrinsically part of the architectural body of the dwelling. It assists in defining the outside 'room' of the courtyard. This open space is situated between the dwelling and the dune that, through its position relative to the building, becomes the fourth 'wall' of the courtyard.

The hierarchical reversal of the Tswana typology referred to above occurs as follows: the *lelapa* – the cleared and raked earth forecourt (Fig. 11) distinguishing a cultivated area inside from an undomesticated one beyond – is, in the *One Megabyte House*, spatially flipped to the rear of the dwelling (Figs. 15 & 16). The result is a more private realm, compared to the semi-public threshold that the courtyard space represents in the Tswana model. The 'tamed' earth

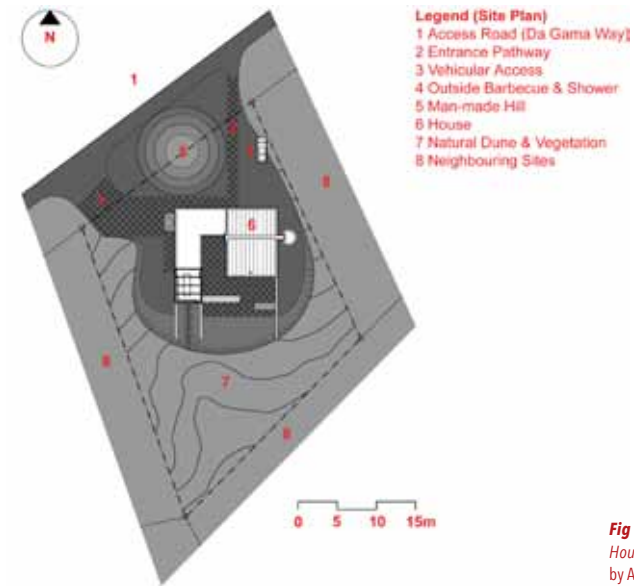

Fig 9: The *One Megabyte House*. Site Plan. Drawing by Alexander Opper, 2005.

Figure 10: The *One Megabyte House*. View from south, looking into courtyard, shortly after completion of construction. Cape St Francis. Photograph by Alexander Opper, 2005.

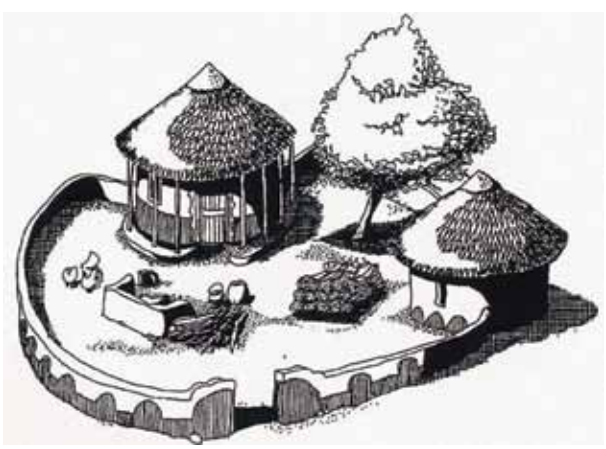

Fig 11: A Tswana dwelling consists of a configuration of separate huts housing various functions, often a shade tree, and an integral bounding wall around the *lelapa*, or forecourt. Drawing by Stuart Parker (Oliver 2003:158). Courtesy of Paul Oliver.

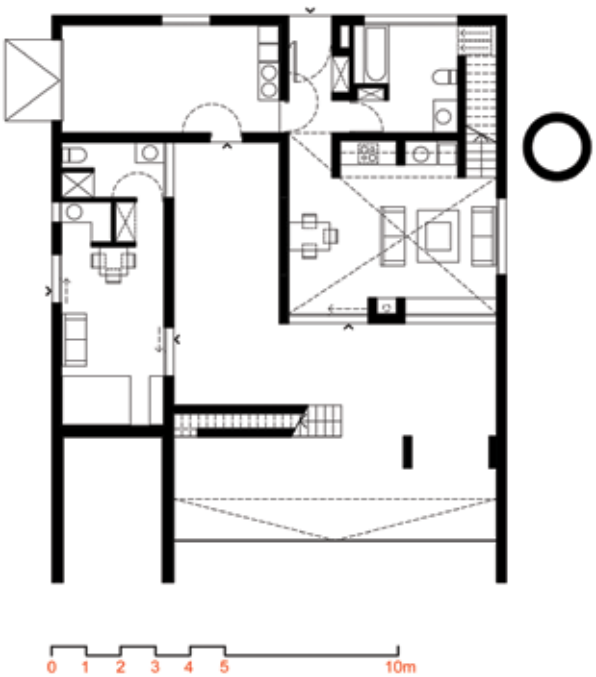

Fig 12: The *One Megabyte House*. Ground Floor Plan. On the bottom right of the plan, the long 'Miesian' wall extends southward into the nine metre high 'wall' of the existing dune. Drawing by Alexander Opper, 2005.

Fig 13: The *One Megabyte House*. View from south-east, showing 'Miesian' wall – in the foreground – 'disappearing' into the dune-scape. Cape St Francis. Photograph by Alexander Opper, 2005.

condition of the Tswana vernacular's forecourt is texturally echoed and developed in the *One Megabyte House*: in the latter the mediating courtyard space is defined by a hard/soft surface of alternating chequer blocks of loose-brick paving and cultivated grass. This refined enclosure holds the *fynbos* wilderness surrounding the dwelling at bay. The separate and traditionally organically shaped functional spaces – grouped around the courtyard of the Tswana archetype – are, in the *One Megabyte House*, combined into a continuous rectangular configuration. As a result, the 'spaces in-between' – in the Tswana paradigm – are transformed into the 'space surrounded'.

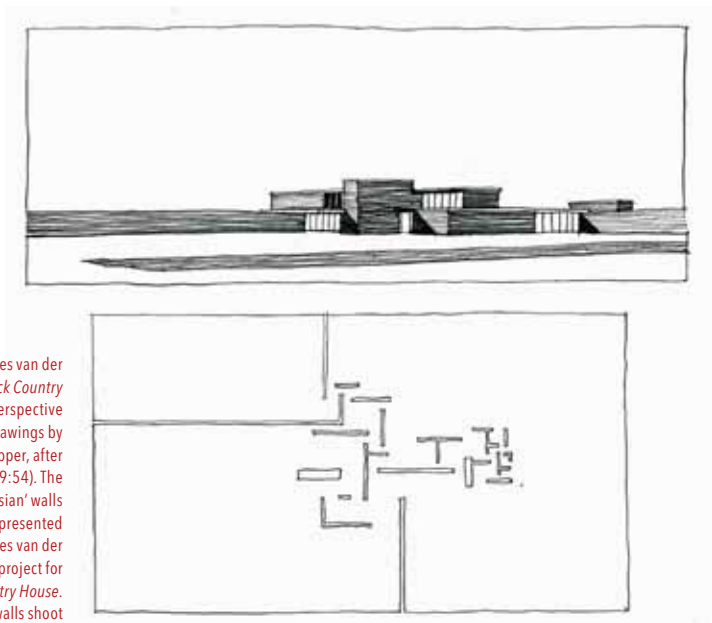

Fig 14: Mies van der Rohe. *Brick Country House*. 1924. Perspective and plan. Drawings by Alexander Opper, after Schulze (1989:54). The original 'Miesian' walls are iconically represented by Ludwig Mies van der Rohe's unbuilt project for the *Brick Country House*. Van der Rohe's walls shoot off the page into the universalising infinity of early Modernism, whereas the planar extension of the *One Megabyte House* is more corporeal, a limb, part building, part dune.

The L-shaped open space of the courtyard becomes a second 'dwelling' in the shadow of the red mass that houses the actual home. Although the spatial fluidity of the Tswana example is morphed here into a differently defined outdoor focus, its flow is not, however, lost. Since the first floor 'roofs' of the new typology are not roofs, as such, but traversable surfaces, the spatial fluidity of the single-storied Tswana precedent is simply elevated upwards, into and through the new dwelling. The result is an architectural promenade that fuses the continuous surface of the site with that of the rock-like building. In effect, the building becomes constructed landscape – a traversable artefact simultaneously buried in and sitting on the land. In a Deleuzian[10] sense the folding and, by implication, unfolding architecture of the dwelling form part of a mutually informative dialogue between landscape and architecture – a dialogue wherein one becomes the other.

Tectonically,[11] the skin of the dwelling is generated, in line with the import placed on such decisions by Semper, through the choice of materials and the methods chosen by the designer for their assembly. The external, load-bearing building envelope is made-up of inexpensive red clay-brick, laid by masons in a so-called stretcher bond[12] pattern. The

Fig 15: The *One Megabyte House's* version of the *lelpapa*, or contained courtyard, holding nature at arm's length. View from south-east. Cape St Francis. Photograph by Alexander Opper, 2007.

Fig 16: The *One Megabyte House*. Detail of the courtyard, looking east. Cape St Francis. Photograph by Alexander Opper, 2007.

Fig 17: The *One Megabyte House*. Detail of courtyard wall of guest section, illustrating 'woven' quality of brickwork. Cape St Francis. Photograph by Alexander Opper, 2007.

rock metaphor is heightened by applying a skin of red paint over the substandard clay-brick. The effect of this 'epidermis' is not a simple homogenising one. It results in a powerful material reference to Semper's position that some of the first walls constructed by humans, to differentiate space, were woven into textile-like screens from available materials. Kenneth Frampton (2002:146) – in his appraisal of Semper's important role in the appreciation of the tectonic crafts – mentions how "Semper cited sacred Greek architecture as exemplifying the persistence of certain symbolic motifs that had been transformed from a nomadic wooden framework with textile covering to the permanence of stone". In the *One Megabyte House*, the superimposition of the red colour onto the brick results in a texture that resembles softly woven material (Fig. 17). In the richly alternating light of Cape St Francis, this textile resemblance seems to deny the inherent weightiness of the actual building material – resulting in a thought-provoking oscillation between materialisation and dematerialisation of the built form. Further, the obvious imperfections of the not quite matching strata of successive brick layers – reflecting the process of manually laying thousands of elements to make up a whole – adds to the characteristic woven quality of the dwelling's 'skin'.

The use of colour and pattern-making in this project lend themselves to comparisons with established local traditions related to the defining and making of building 'skins' using colour and ornament. Ora Joubert (2009:9), in outlining the historical context of a South African architectural vernacular, goes so far as to posit the example of the Ndebele[13] people's (Fig. 18) colourful borrowings and applied reinterpretations – of the gable forms derived from Cape Dutch architecture and commercial iconography from urban centres – as "the most authentic example of a South African Post-Modernism, preceding Andy Warhol and Robert Venturi by two decades". (Ironically, the red colour chosen for the *One Megabyte House*, from the seemingly endless colour palette of a local paint brand, is called 'Warhol'). The dwelling in question departs from both the Ndebele approach – in terms of colour usage and symbolic arrangements – as well as from the static and formal qualities embodied in the symmetrical relationships inherent in older Cape Dutch precedents. In this coastal building the Ndebele's colour-rich and symmetrical mural art is simplified into a single colour choice – that of the red which links the boulder metaphor to its abstracted monolithic architectural translation (Fig. 19). This gesture is, of course, conceptually related to the reductive, universalising treatment of an earlier modernist architecture's programme of cloaking all its buildings in the favourite colour of the International Style – white. However, the local specificity of the colour choice for the *One Megabyte House*

Fig 18: An example of an Ndebele dwelling on Rondebosch farm, in the Middelburg district, in South Africa's Mpumalanga Province, that illustrates celebratory use of colour. The façade was painted by Betty Mahlangu. Photograph by David Goldblatt (Courtney-Clarke 1986:69). Courtesy of Margaret Courtney-Clarke.

Fig 19: The *One Megabyte House* demonstrating monolithic use of colour. View from north. Cape St Francis. Photograph by Alexander Opper, 2007.

Fig 20: An example of a Cape Dutch Homestead, Schoongezicht, in the Stellenbosch area. Drawing by Alexander Opper, after Goldblatt (1981:77) .

is diametrically opposed to the notion that architecture can be universal and employs colour as the locus-driven 'thresholding' mechanism to which Fisher refers.

As the design of the *One Megabyte House* develops aspects of Tswana and Ndebele predecessors, it also reflects on, challenges, and develops the characteristics of another accepted – and often poorly imitated – original South African vernacular: Cape Dutch architecture (Fig. 20). The *One Megabyte House*, in its formal resolution, subverts the Cape Dutch model at various levels. The Cape Dutch style's axial, frontal and symmetrical disposition is redefined into an ambivalent architectural body, calling the parochial spatial disposition of the manor house type into question. Although an axis of approach is retained (Figs. 9 & 21), the frontal directness of the Cape Dutch main dwelling (as well as the frontal, ill-considered street relationship of most single-family homes in the area and elsewhere in suburban South Africa) is reinterpreted by angling the architecture in relation to the line of the street (Fig. 9).

This simple move achieves a number of things: on a practical level, in terms of privacy, the twist results in the largest possible distances of the dwelling's own edges to neighbouring sites; climatically this orientation of the dwelling optimises the north-facing aspect, thereby capitalising on welcome shade in the south-facing courtyard during typically long and hot summers. Visually, the twist lends itself to a multiple-perspective, cubist-like (mis)reading of the dwelling, the envelope of which represents, again, more of a Deleuzian fold than the easily discernable front, back and side elevations, or so-called major and minor facades associated with the Cape Dutch type. Rather than the representational characteristics that relate the ornate central gable of the Cape Dutch model to the head of the family it houses, the architectural 'head' of this Cape St Francis home is abstracted into a squared-off sheer 'pediment'. This reinterpreted 'face' of the building holds a deep but unassuming alcove (Figs. 12 & 22) signifying an anti-ornamental entrance, achieved via subtraction. Further, the side 'gables' of the architectural head, in the case of the *One Megabyte House*, represent a subversion of the secondary gables of the older typology. In the new type, the prominent upward thrust of the Cape Dutch gable(s) is subjected to a downward push (Fig. 23) – a spatial implosion of the gable idea. The subsequently inverted 'ridge' line of the *One Megabyte House*, seen from east and west, is off-centre, further destabilising the predictability of a traditional symmetrical gable-end. In its context this 'anti-roof' has the additional advantage of containing the scale of the building and allows the dwelling to balance with the scale of the landscape, not compete with it.

One of the advantages of my being on the site of the project every day during its construction, over a five-month period (a rare opportunity for any architect), was the following: apart from the obvious necessity to define the broad outline of the building's spaces, the material choices and ways of thinking and making the building's more flexible components could be dwelled on at length and refined to a great degree of clarity and deemed appropriateness. The making of the balustrade, for instance, illustrates the above advantages. Returning briefly to the tectonics of weaving, the 'woven' brick of the cave-like base of the dwelling is crowned with a light Semper-like wreath[14] of a balustrade (Fig. 24). This edge consists of bent wattle, literally woven into a softening 'collar', which invests the upper reaches of the rock-like building mass with a hovering, nest-like quality. The same method is employed in the making of the shade-giving canopy of the pergola (Fig. 25) – the 'tail' of the dwelling – which balances the strong and heavy 'head' of the building at its other extreme.

The choice of the wattle laths as a building material, and the experiments that led to the way these were used and combined as elements to physically make the balustrade, serves as an example of how Semper's second rule, referred to earlier, led to the concrete production of knowledge through making. I constructed a scale model (Fig. 26) using thin dowel sticks to simulate the properties of the wattle laths and to test the possibilities of that material being used as a means of making a novel balustrade. When presented to the carpenters on site, the idea elicited interest but little faith in its possible success at the scale of the more or less three metre wattle lengths that I proposed to be used for the production of the actual railing. However, after a short demonstration of my intentions, by weaving single wattle lengths alternately around the Eucalyptus uprights that had been installed to receive them, all scepticism was put aside with the team of carpenters eagerly following suit (Figs. 27 & 28). The laths are held in tension by their inherent elasticity in relation to the frequency of their curvature – no additional aids such as nails, screws or glue are necessary to keep them in place once woven, tugged, or nudged, into the correct positions. On the more publicly exposed edges of the building the balustrade consists of a dense weave (Fig. 29). However, on the courtyard side every second wattle lath is absent (Fig. 30), resulting in a more veil-like and permeable 'edge'.

As I have already hinted, this dwelling represents an interpretation of furniture or artefact at the scale of building – a monolith to be traversed, leaned on and against and so forth – as a result of its dualistic and 'mutually desirous'[15] relationship with the landscape it occupies and shares. This relationship unfolds from the building's envelope and varying internal and external 'skin' conditions. Outside, in the courtyard, a masonry and concrete table (Fig. 31), relating to the cave-like base of the dwelling, 'grows' from the generative plane of the aforementioned 'Miesian' wall. Its material qualities are abstracted by a layer of smoothing

Fig 21: The *One Megabyte House*. Illustrating the retention of an axial approach, minus the symmetrical trappings of the Cape Dutch type. View from north, shortly after completion of construction. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 22: The *One Megabyte House*. Demarcation of the entrance via subtraction, versus the celebratory extravagance of the gabled pediments typical of Cape Dutch dwellings. View from northeast, shortly after completion of construction. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 23: The *One Megabyte House*. Profile of the 'anti-roof'. View from south-east. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 26: A one-to-fifty scale model, simulating the weave intended for the actual wattle laths which make up the balustrades of the *One Megabyte House*. Model and photograph by Alexander Opper, 2005.

Fig 24: The *One Megabyte House*. The woven balustrade. View from west. Cape St Francis. Photograph by Alexander Opper, 2006.

Figs 27 & 28: The *One Megabyte House*. The carpenter team making the balustrade by applying the weaving principle at the scale of architecture. Cape St Francis. Photographs by Alexander Opper, 2005.

Figure 25: The *One Megabyte House*. The same woven tectonic is applied to the making of the pergola. View from north. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 29: The *One Megabyte House*.The denser weave of the balustrade facing street and neighbours. View from north-west. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 30: The *One Megabyte House*. The sparser weave of the balustrade towards the courtyard. View looking north-east. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 31: The *One Megabyte House*. The 'heavier' tableau in its grounded courtyard setting. View from west. Cape St Francis. Photograph by Alexander Opper, 2007.

plaster and compounded by a thin layer of the homogenising red colour used elsewhere. A second communal table (Fig. 32) literally unfolds from the red-stained timber decking under the canopied condition of the wattle pergola. Its materiality and tectonic nature link the second table to the lighter, nest-like quality of this upper space, where building and sky 'touch' along the pergola's veil-like plane. Both these sites for gathering rely on numerous precedents of the traditional use of sheltered outside spaces and shade-giving trees – part of the make-up of various South African vernacular histories.

Conceptually and formally, at a slightly larger scale than that of the tables, two further occurrences of 'furniture' occupy the more untamed periphery of the house. These can be read as conceptual splinters of the building's main mass, containing secondary functions. Viewed from its short side, the red shape (Fig. 33) adjacent to the access path has the same proportions, in positive, as the negative reveal of the entrance to the building. This form contains an external fireplace, for cooking purposes, with an adjacent work surface, as well as an outside shower, out of public view, at its rear. The home's street number is architecturally integrated into this object (Fig. 34) since the area that the dwelling is located in, for the most part, does not employ boundary walls (the traditional carriers of street numbers in the South African built environment). The second piece belonging to this loose family of external 'furniture' constitutes a cylindrical shape (Fig. 35) adjacent to the east-facing 'gable'. Here the negative or inverted roof receives positive expression – a commonplace, off-the-shelf water drum is simultaneously disguised and expressed employing the 'woven' red-painted brick used elsewhere in the project.

The *One Megabyte House* embodies the notion that 'empty' space can be conceived of as a malleable 'body' out of which generative spaces may be 'folded' and 'twisted'. The main plan (Fig. 36) and section (Fig. 37) of the building illustrate how spaces, and their adjacent surfaces, have been manipulated by a folding and unfolding of the building 'skin'. The result is a holistic merging of architecture and furniture, as represented by the general enclosure and, specifically, by the core of the main dwelling. Semper's rule as to the definitive importance of the choice of materials and the manner in which they are combined applies as much here, internally, as it does to the outside of the building – the so-called inside and outside are in fact continuations of one another. The central core (Fig. 38) of the main dwelling is painted red in order to emphasise the extension and inward folding of the external building skin – part of the endless Deleuzian fold discussed above. This nucleus fulfils a dual function: below, it serves as a

sculpted masonry and concrete kitchen and storage space, addressing a double-volume living area; upstairs (Fig. 39) the core is literally twisted the other way, creating a low- and high-walled masonry niche, which acts as a study and clothing-storage alcove respectively. The mezzanine occupies a spatial condition somewhere between 'cave' and 'nest' – thus its material treatment relies on a mix of masonry edges and timber floor surfaces. The space houses custom-made, built-in plywood furniture.

Looking back down into the void of the 'cave', the south wall (Figs. 40 & 41) of the living space contains, within the varying thickness of this wall, a choreographed composition of masonry shelving and view-related fenestration. This solid/void arrangement revolves around the house's hearth, located more or less centrally in the composition. The practice of integrating furniture into the internal skin of the dwelling – as a means of economising space – has a long history in the building traditions of many South African peoples. Some of the most poetic and inventive of these can be found in the architecture of the Sotho people (Figs. 42 & 43).

In summary this first part of the paper demonstrates how the *One Megabyte House* attempts to be an experimental link in a long and powerful lineage of Southern African place-making. At the same time, it stands as a protest against a built environment, within the context of the South African landscape that generally refuses to engage with the richness of the ground it borrows to build on.

Fig 32: The *One Megabyte House*. The nest-like locus of another table that unfolds, in this case, from the surface of the raised timber deck. The table is made of the same material and is stained to match the red colour of the deck's surface. View from north. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 33: The *One Megabyte House*. External 'furniture' piece adjacent to entrance path. View from north. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 34: The *One Megabyte House*. Detail of street number integration into the 'skin' of the object. View from west. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 35: The *One Megabyte House*. Cylindrical drum – housing a water cistern – adjacent to east-facing 'gable'. View from north. Cape St Francis. Photograph by Alexander Opper, 2005.

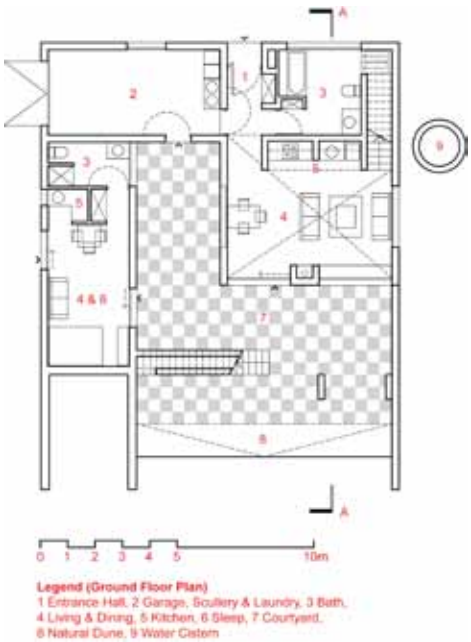

Fig 36: The *One Megabyte House*. Ground Floor Plan (horizontal cut). Drawing by Alexander Opper, 2005.

Fig 37: The *One Megabyte House*. Section A-A (vertical cut) through main dwelling. Drawing by Alexander Opper, 2005.

Fig 38: The *One Megabyte House*. The core of the main dwelling is the manifestation of an inward and upward (un)folding of the building's external skin, into a more internal condition. Cape St Francis. Photograph and collage by Alexander Opper, 2005.

Fig 39: The *One Megabyte House*. In its upward thrust, the core twists its folding dynamic by 180 degrees, to define the private landscape and more nest-like character of the sleep/work space upstairs. Cape St Francis. Photograph by Alexander Opper, 2005.

Fig 40: The *One Megabyte House*. Large meditative picture window – part of the furniture/fenestration composition of the main dwelling's south wall. Cape St Francis. Photograph by Alexander Opper, 2007.

Fig 41: The *One Megabyte House*. Monolithic shelving – part of the solid/void composition of the main dwelling's south wall. Cape St Francis. Photograph by Alexander Opper, 2007.

Figs 42 & 43: Basotho architecture. Ornately moulded and coloured walls, animating and skilfully serving the spaces adjacent to them. Eastern Orange Free State. Photograph by Alexander Opper, 2008.

Furniture or architecture? A counter that looks like a building ... : One way of addressing a 'simple' brief for a reception counter for a Johannesburg art gallery – a retroactive view on an intuitive response

German architect Ludwig Mies van der Rohe is well known for his one-liners, most famously on the notions of 'less' actually being 'more' and, in another, not far removed from Semper's fascination with how materials are assembled, of 'God' being 'in the detail'.[16] Van der Rohe (cited in Stern [sa]:[sp]) is also famous for stating that it is substantially easier to design a building than a chair.[17] However, this opinion relies on a particular definition of a chair, in reductive terms. On the one hand, this philosophy led to the invention of some very elegant solutions for sitting by van der Rohe and his modernist contemporaries – the Wassily Chair (Fig. 45), by Marcel Breuer, is probably one of the most iconic examples of this way of thinking and fabricating a chair. On the other hand, the thought context within which these early modernist designers framed their work, and in which they operated, was limiting in that it excluded many other ways of 'seeing' or 'feeling' what a chair might be, or as an equally famous but possibly more contextually sensitive twentieth century architect, Louis Kahn, might have put it: what a chair might 'want to be'.[18] The image (Fig. 46) next to Breuer's famous chair shows another, but equally relevant, way of seeing a chair (or 'throne', in this case) as an idealised version of the ground plane – referred to earlier in this paper – being the all-connecting 'fold' joining all 'things'.

Apart from highlighting design's general bias towards a western focus, the above passage also serves to elucidate a long and established history, world-wide, of architects engaging in design outside the realm of actual building. This practice has its roots in architecture's general fascination with form and its inherent desire and duty to solve design problems – from the smallest to the largest scale. The promise of interdisciplinary lessons between design disciplines – in this case architecture and furniture – would be the value of pursuing the above tradition within the emergent situation of a design-driven search for meaning and identity in a post-1994 South African context.

Fig 45: *Wassily Chair*, also known as the *Model B3 Chair*. 1925-26. Design: Marcel Breuer. Collection of the author.

Being confronted with a brief to design, for lack of a better word, a 'counter' (Fig. 47) – for the reception area of an art gallery – I was faced with challenges regarding how to bestow spatial meaning onto the given piece in its Johannesburg-specific but simultaneously generic exhibition context. I regarded this project as site-specific, in the same way an architectural site would be considered as being charged with clues as to what a built interpretation of it might look like, or be. However, there was no escaping the aura of the white cube of the gallery belonging to a pedigree of many uptight – at least about their self-conscious purist identity – white cube-like gallery spaces. As this design was executed intuitively – drawing consciously and unconsciously on a multitude of hybridised cultural and visual sources – it is impossible to unpack its end result into an easily digestible formal reason for being. The process that led to the counter's emergent form is non-linear and non-chartable and invites an analysis or unfolding, in a Deleuzian sense, of what emerged, as an example of a non-deterministic 'Afro-pean' (Joubert 1991:71-77)[19] design synthesis.

My intention in this paper is not to post-rationalise the essentially functional product of a pragmatic brief. Rather, I attempt one reading of the hybrid formal and symbolic qualities embodied in the piece, based on the layered multi-cultural South African design context it is situated within. This becomes an exercise in revisiting, and at some level exorcising, the biases of a western-based architectural design education, and, at other levels, reinvesting that same education with relevant and new meaning in a local context.

Fig 46: A 'chair' as expansion, versus van der Rohe's and the modernists' method of reduction. Johannesburg. Photograph by Alexander Opper, 2006.

The counter is in itself a formal amalgam – a collection of functions housed in an architectural skin: lectern; display; bookcase; precious book storage; work-surface; welcoming device; threshold; barrier. As a design that, chronologically, comes after the *One Megabyte House*, it could be interpreted as the same diagram of linked spatial containers – in the case of the counter, however, a row of containers rather than a spiral arrangement. The end-result is as reductive – in its cubist formal terms, as well as in the unifying cloak of its maplewood veneer – as its corporeal, red-skinned predecessor. At some level, by association, it wants to be the proud carrier of one (or more) of Van der Rohe's one-liners. However, it is exactly this modus of reduction that disallows a single reading and invites multiple readings – or becomings – of this austere object, in its specific context of a gallery space in Johannesburg.

Like the dwelling, the counter has a name. The subjective choice of a name, *Reclining Figure*, becomes the key to revealing one reading of what is there. The need to name this object (prompted by having to refer to it as some-thing, for possible publication in a local magazine) was far more rational and considered a move than the intuitive process which led to the conception of the object itself. A string of visual and historic associations arose simultaneously at the thought of this name, in no particular order: Tiziano Vecellio (better known as Titian) and other master painters of the human figure (Fig. 48); Henry Moore (Fig. 49); my own grappling with representations of the human figure, as a young student of architecture (Fig. 50); Theo Van Doesburg's analytical studies (Fig. 51 & 52); the work of South African artist Joachim Schönfeldt (Fig. 53 & 54); and lastly, the very heavy and volumetric bodily archetypes of cattle in a Southern African landscape (Fig. 55).

As I have playfully referred elsewhere (Le Roux 2007:64-67) to the *One Megabyte House* as a dog chasing its tail:[20] the *Reclining Figure* – clearly in a more composed manner – also constitutes a 'head' and a 'tail'. In the reductive genealogy of 'cave' and 'nest'[21] used as two ways of 'seeing' the South African landscape and in the situating of things along its fold, *Reclining Figure* clearly belongs to the heavy, geological version of the former category. At an atavistic level, the application of the maple veneer as a continuous visual surface – a skin across the 'head', 'thorax', 'abdomen' and 'tail' of this

Fig 47: *Reclining Figure.* Counter for *Gallery Art on Paper*. Johannesburg. Design by Alexander Opper, for *Notion Architects*. Photograph by Alexander Opper, 2008.

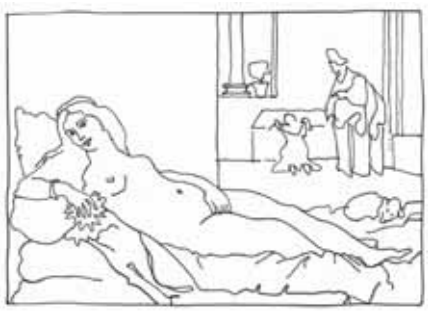

Fig 48: Titian. *Venus of Urbino*. 1538. Oil on canvas. 165cm x 119cm. Alinari/Florence. Drawing by Alexander Opper, after Goffen (1997: xiv).

Fig 49: Moore, H. *Reclining Figure*. 1945-6. Wood. Drawing by Alexander Opper, after Read (1964:169).

Fig 50: Opper, A. *Reclining Figure*. 1991. Pencil on paper. Collection of the author.

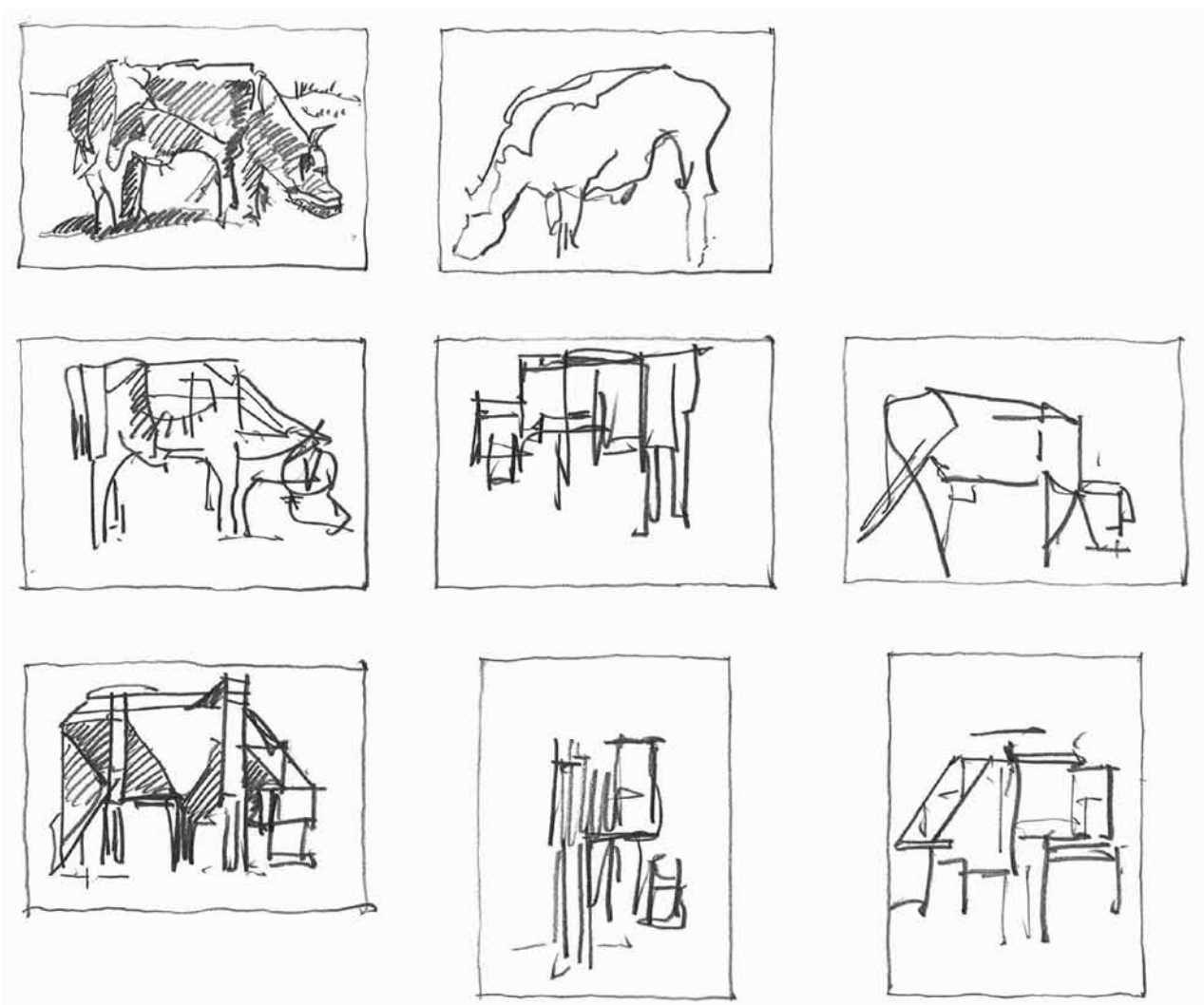

Fig 51: Van Doesburg, T. *The Cow*. 1916-1917. Series of eight pencil drawings. Nos. 1, 2, 4, 5, 6, 7: 11.7cm x 15.9cm; nos. 8, 9: 15,9cm x 11,7cm. Collection of the Museum of Modern Art, New York. Drawing by Alexander Opper, after Russell (1975:308).

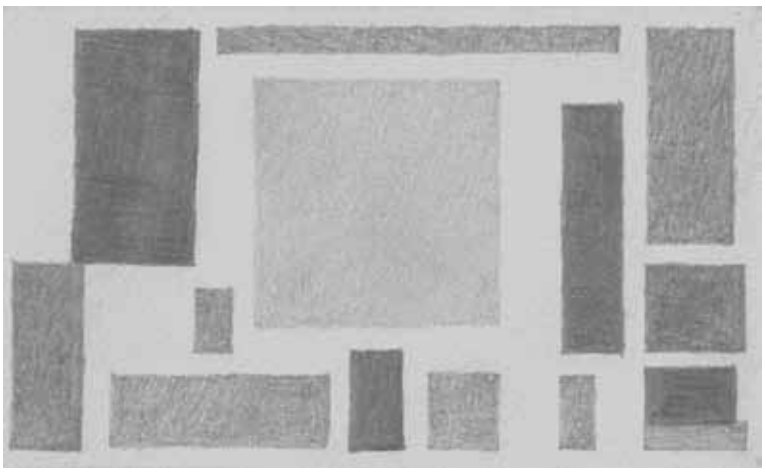

Fig 52: Van Doesburg,T. *Composition (The Cow).* 1917. Oil on Canvas. 37,5cm x 63,5cm. Collection of the Museum of Modern Art, New York. Drawing by Alexander Opper, after Russell (1975:308). Note: The image as depicted in the source is upside down. Here it is shown the correct way round.

Figure 53: Schönfeldt, J. *Drawing 14.* c1989. Pencil on paper. 32cm x 45,5cm. Photograph by Wayne Oosthuizen. Courtesy of the artist and Gallery Art on Paper.

Fig 54: Schönfeldt,J. *Maquette 5.* 2008. Wood, oil paint, varnish, sealing wax. 74,8cm x 47,6cm x 40,6cm. Photograph by Wayne Oosthuizen. Courtesy of the artist and Gallery Art on Paper.

Fig 55: Voigt, L. *Jambludi, red beast at rest.* Oil on canvas. 50.5cm x 60cm. (Poland & Hammond-Tooke 2004:94) Courtesy of Leigh Voigt.

functional 'body' – is crucial to its possible oscillating reception as a figurative and, or abstract thing.

In terms of placement (Figs. 56 & 57), or rather place-making, the floor surface of the gallery space is viewed as an abstracted site. The challenge becomes to allow the piece of furniture to come to rest where it is simultaneously most visible (to the visitor) and least obtrusive (to the spatial flow and multiple possibilities a gallery requires to function effectively). As an architectural exercise of placement that borrows from Rem Koolhaas's unrealised project for 'Melun-Senart',[22] it becomes an exercise in where not to build, or where not to position an architectural body (Fig. 58). At the micro-scale of the gallery space it represents a wave to Koolhaas's obsession with the void – here, in the famous architectural dual between positive and negative, the 'empty' space around the counter is clearly of greater consequence than the furniture's physical presence, the physical body simply being a by-product of what happens around it. Just as the lay of the land and its careful consideration and interpretation produces the morphology of the architectural body in the case of the *One Megabyte House*, so the body of the *Reclining Figure* is produced by a careful understanding and appraisal of the site it inhabits.

Conclusion

In closing, I reiterate the important role of the (South) African landscape as one of the referential 'bigger pictures' connecting architecture, furniture and other forms of making, into an interdisciplinary weave. The notion of the weave would suit Semper, but perhaps at the scale of a country or even continent, the Deleuzian fold is a more relevant paradigm – as exemplified by the collaged image of a cave of mythical proportions situated on the Salpeterkrans farm in the Eastern Orange Free State (Fig. 59). This natural space is said to represent the largest rock overhang in the Southern hemisphere.

This powerful space represents 'architecture without architects'.[23] It embodies artist Robert Smithson's

Fig 56: Site-specific drawing used to ascertain where *Reclining Figure* might 'recline' most comfortably. Gallery Art on Paper. Johannesburg. Photograph by Alexander Opper, 2007.

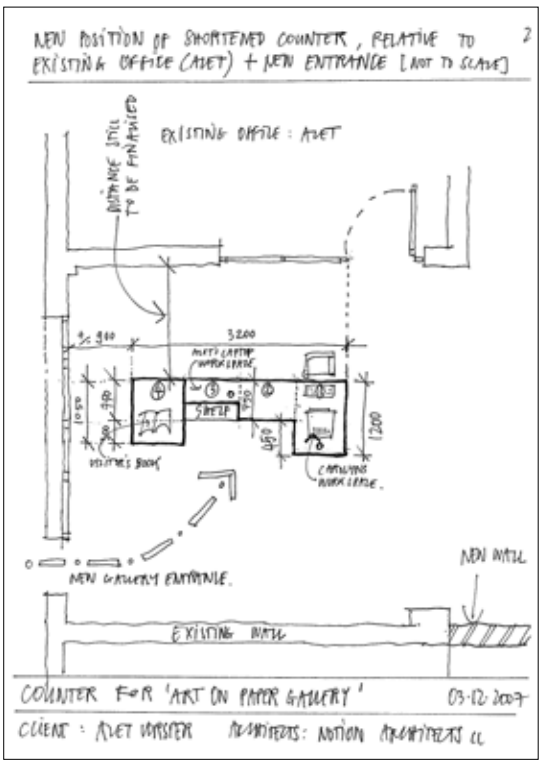

Fig 57: Architectural drawing used to determine the exact position of *Reclining Figure* via a site appraisal of where not to build. Economic factors – higher rent and smaller available floor space – suddenly and unexpectedly become part of the where not to build approach. Drawing by Alexander Opper, 2007

(Müller 1996:256-258; Sky 1996:301-309) entropic notions relating to material shifts: the cave roof has collapsed; in collapsing, its earlier form becomes a mound of the same volume previously possessed by the roof; the former canopy has become a wall to the cave mouth; nothing has been added or subtracted. The shifted matter of the earlier cave roof is reconfigured – both by inhabitants of the space and pilgrims visiting the site.[24] This transformation results in a visually and symbolically rich spectrum of sub-architectures, 'furnitures' and artefacts, all housed under the natural roof of the cave (Figs. 60 & 61). The power of these subtle primary (the collapse of the cave roof) and continued, incredibly considered, secondary material shifts over time, are breathtaking. Ultimately, they are the result of a long and patient process of becoming. This situation seems an appropriate metaphor for not being in too much of a hurry to discover overly decisive and finite iterations of 'South African-ness', and a marker for a slow and very considered exploration of its experimental unfolding.

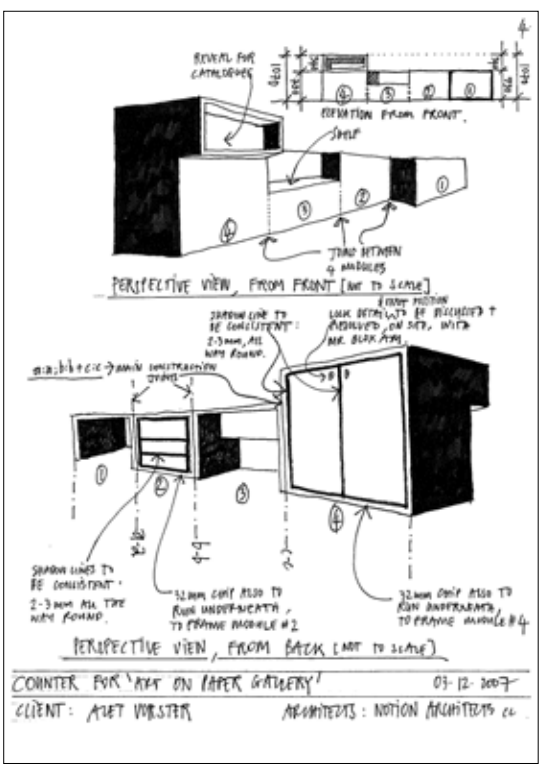

Figure 58: Architectural drawing of a 'counter' that looks like a building. A hierarchy of front, side and rear façades is evident, although, from certain vantage points also ambiguous. Drawing by Alexander Opper, 2007.

Fig 59: Cave phenomenon on the Salpeterkrans farm. Overall impression. Eastern Orange Free State. Photographs and collage by Alexander Opper, 2008.

Figs 60-61: Cave phenomenon on the Salpeterkrans farm. Some examples of structures erected by inhabitants and pilgrims beneath the shelter of the cave roof. Eastern Orange Free State. Photographs by Alexander Opper, 2008.

Endnotes

1. The name given to a South African initiative, launched in 2001, largely as a catalyst for job creation and economic growth. It was set up by a combination of labour, government and community bodies, with the aim of linking the notions of pride and nation-building with the support of locally produced, quality-approved products and local companies. For a more in-depth background, see Proudly South African (2009).
2. Although I am the sole designer of the two principle designs referred to in this paper – the *One Megabyte House* and the Reclining Figure – I practice design under the banner of Notion Architects, a design firm which I head with my business partner, Amir Livneh. The partnership was established in Johannesburg in 2007.
3. See Semper and the Conception of Style (in Rykwert 1982). This essay – by Joseph Rykwert – is a developed version of a paper that he read in 1974 in Zürich. The essay also forms part of an earlier publication (see Vogt, AM, Reble, C & Fröhlich, M (eds). 1976).
4. Rykwert (1982), in his essay, quotes from the second edition, which appeared in Munich in 1878 and 1879.
5. *Fynbos* – literally 'fine bush' in Afrikaans – constitutes one of the world's six floral kingdoms. Containing a rich variety of species – many of which are endangered – it occurs in a coastal belt which begins roughly at Clanwilliam, on South Africa's west coast, and extends to Port Elizabeth on the southeast coast (Fynbos [sa]).
6. This is the terminology used – within the architectural industry – to refer to a range of software applications or packages used for drafting purposes. These are typically and collectively referred to as CAD (Computer Aided *Drafting*, or Computer Aided *Design*) applications.
7. See Joubert (2009).
8. The use of the word bodies here draws on its common corporeal use – in the description of architectural figures, volumes, or masses – within the German language. *Baukörper* (Aydogan, Keichel, Khonsari, Lochocki, Pechardscheck & Steinhöfl 2002:364), translated literally, means 'build[ing]-body'. It is virtually impossible to accurately translate these bodily aspects – of architectural structures or enclosures – into English. For a much broader use of the term than is aimed at in this paper, and for some attempts at its translation into English, see Baukörper (2009).
9. For an understanding of what is meant by 'Miesian' wall, see specifically two projects by German architect Ludwig Mies van der Rohe: his unbuilt project for a *Brick Country House* (Schulze 1989:54), the drawings of which were first exhibited in 1924, at the Great Berlin Art Exhibition; and his Barcelona Pavilion (Schulze 1989:79-87), Van der Rohe's realised design for the German Pavilion at the International Exposition held in Barcelona in 1929).
10. For a thorough reading of the importance of the fold in Deleuze's thinking, see Deleuze (1992). Gilles Deleuze's (1992) thoughts and writings on the fold – via Gottfried Leibniz and the baroque – serve as an aid for seeing the surfaces of building and site as one: in the case of the *One Megabyte House* project, a mutual (un)folding of the building into and out of the site occurs, resulting in a potentially endless process of one becoming the other. In a South African context, where the landscape acts as such a vital form-giving surface, Deleuze's reading of the world as an infinite folded body is a useful mediator for an ongoing process of architectural becoming.
11. Tectonics is employed here in the way that historian Kenneth Frampton (2002) frames it – that is, architecture as a constructional craft. Frampton's position, in the context of modern architecture, places structure and construction on an equal footing with the notions of space and abstract form. This view is helpful in analysing ways of making and the creation of meaning in an emergent South African context.
12. In masonry, a bond describes the pattern in which bricks are laid relative to one another. In a stretcher bond (also known as a running bond) the long side of the brick faces outwards and successive courses, or rows, of bricks alternate, instead of being stacked directly on top of each other. This is a conventional way of building a brick wall, as every brick overlaps the one above and below it by half a brick's length, providing a simple and effective bond.
13. The Ndebele (also referred to as Matabele) are a sub-group of the Zulus. Their existence was the result of a split from King Shaka, under the leadership of Mzilikazi, in the early 1820s. The Ndebele of South Africa – the northward migration in 1838, of some Ndebele people, resulted in another group in Zimbabwe – are well known for the application of colourful designs to the outsides of their homes. The office of architect Peter Rich (2009/11/10) has carried out extensive research into Ndebele architecture, in an attempt at understanding its spatial models and decoding the uses of the stylised ornament and colour it employs.
14. The wreath (and the knot) are central figures in Semper's investigations and iconographic recordings of the act of making.
15. Sarah Calburn (2009/11/13), a Johannesburg-based architect, employs this phrase to describe the critically important, interdependent relationship between architecture and landscape which is evident in much of her work.
16. In full: 'God is in the details', or, in the original German expression: *'Gott steckt im Detail'*. It is widely accepted that van der Rohe used this dictum as a way of encapsulating his rational approach to architecture.
17. In an interview given by van der Rohe in 1930, the year after he designed the Barcelona Pavilion – referred to earlier in this paper, in connection with the 'Miesian' wall – van der Rohe (cited in Stern [sa]) said the following: "The chair is a very difficult object. Everyone who has ever tried to make one knows that. There are endless possibilities and many problems – the chair has to be light, it has to be strong, it has to be comfortable. It is almost easier to build a skyscraper than a chair". These reflections on the difficulties attached to designing a chair can be read as a distillation of lessons van der Rohe learnt – via the design process which led to the birth of his famous *Barcelona Chair* (1929) and, by implication, the chair designs which preceded it.
18. The American architect Louis Kahn (Louis Kahn Overview [sa]) often personified buildings in his thinking and lectures on architecture, hence the probing question: "What does the building [actually] want to be?". His insistence that a building's inherent identity must be derived from its context and programme has very strong links to the notions of being and becoming and the generative potential harboured in a given site. Kahn's design ethos was driven by a strong desire to fuse architecture, landscape and urban design into a perfectly balanced ensemble. For a good overview of his vision of buildings as living, organic things, see McCarter (2005).
19. I consider the term Afro-pean (coined by Ora Joubert) as a useful way of expressing a mutually informing dialogue – and potential synthesis – of African and European design influences, experiences and forms.

20. This comparison is documented in an article on the *One Megabyte House*, in *Architecture South Africa*, the bi-monthly journal of the South African Institute of Architects. This journal serves as a useful starting point for research into a range of past and current iterations of architecture in a South African context.
21. Both these terms have been used extensively – as spatial analogies for the making of architecture in an African context – by Durban-based architect Andrew Makin (2009/11/13), of Design Workshop. The specific context of these references was a week-long Architectural Master Class (which I attended). The event, hosted by the Cement & Concrete Institute of South Africa, took place at the Cradle of Humankind in early 2009.
22. Melun-Senart is the locus of an urban design proposal for the last of the *villes nouvelles* around Paris. In 1987 OMA (Office for Metropolitan Architecture) – headed by Koolhaas – developed their design for competition submission. The brief called for a new town to be built on an unspoilt landscape. To preserve as much as possible of the quality of the undisturbed site, Koolhaas posits the advantages of emptiness as a crucial counter-balance for the chaos embodied by (built) architectural form. Based on this attitude, the design of the 'voids', or the un-built parts of the new town are invested with proportionately more energy than the built parts. Consequently, the built zones simply become the 'residue' resulting from the design, position and form of the empty spaces (Koolhaas 1995:972-989).
23. See Bernard Rudofsky's (1974) book, first published in 1964, *Architecture Without Architects: A Short Introduction to Non-Pedigreed Architecture*. The book was the result of an exhibition at the Museum of Modern Art in the same year. Its focus was to showcase the perfection embodied in 'non-formal, non-classified', or 'vernacular' architecture across the world. The book can also be read as a critique of a parochial western bias in the perception of what constitutes 'good' architecture. Despite its age the research contained in Rudofsky's study remains relevant in the richly layered context of an emergent 'South African' architecture.
24. The site of the cave, close to the South Africa-Lesotho border, is a highly significant pilgrimage site for the Basotho people.

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