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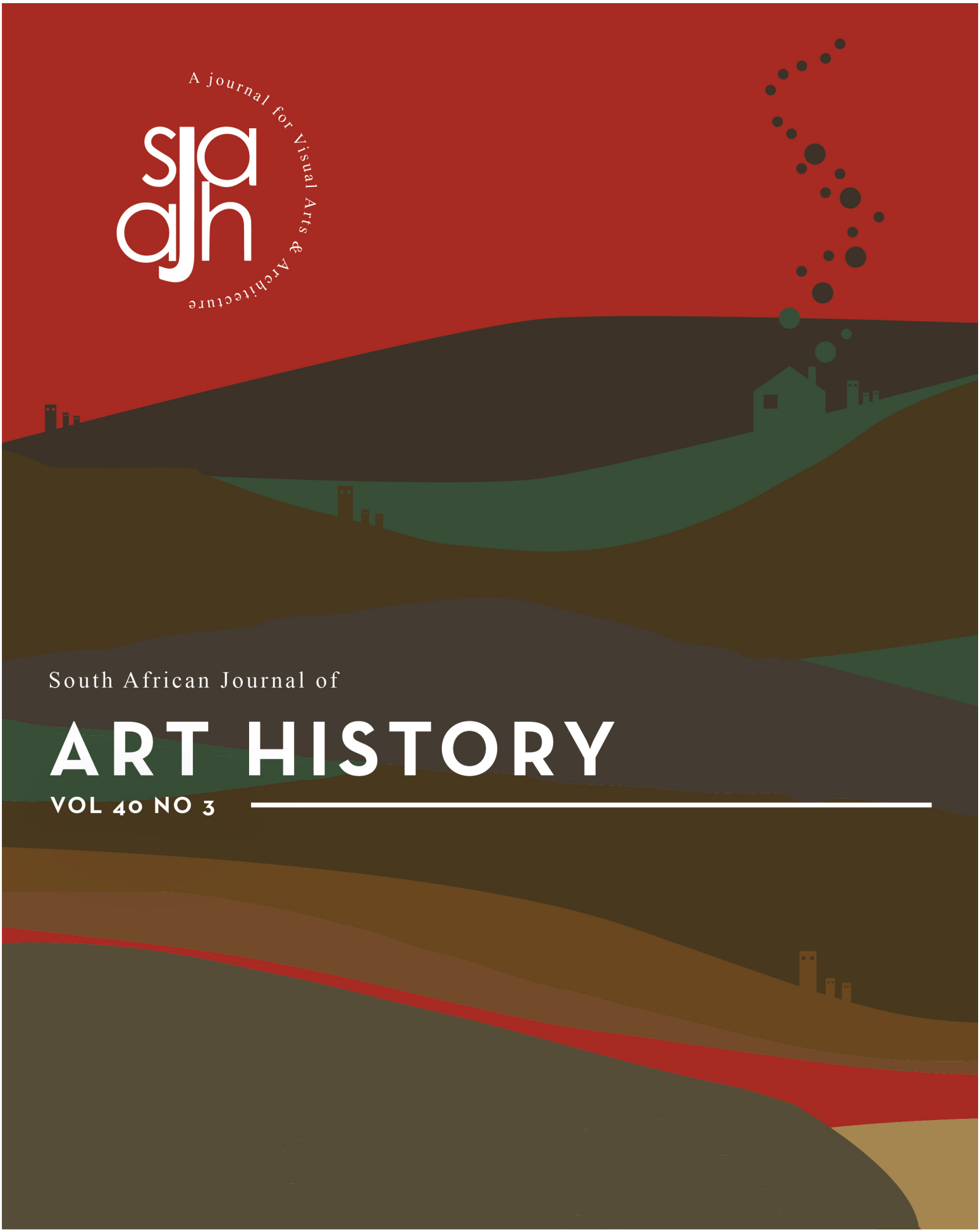

2025

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The *Die Es* painting – the house as an idea of the landscape

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An intriguing painting by Erik Laubser (1927-2013, South Africa) is installed in a remarkable Cape Town house designed by South African architect Gawie Fagan (1925-2020). The house is exemplary of "critical regionalism", the critical marrying of Western technology with sensitivity to place and culture. The painting is not just site-specific but could be said to symbolise the idea of the house. It is also unique to Laubscher's *oeuvre*. This paper aims to make public an artwork and a collaboration that would otherwise be unknown. It also discusses how Fagan and Laubscher's collaboration opens a new front for considering critical regionalism, as not just about the material culture, but also an openness to critical cultural thinking wherever that may arise.
Keywords: Gawie Fagan, Erik Laubscher, critical regionalism, South African visual art, modernism, South African architectural modernism

'n Intrigerende skildery deur Erik Laubser (1927-2013, Suid-Afrika) is geïnstalleer in 'n merkwaardige Kaapse huis wat deur die Suid-Afrikaanse argitek Gawie Fagan (1925-2020) ontwerp is. Die huis, *Die Es*, is 'n voorbeeld van "kritiese regionalisme", die noulettende samevoeging van Westerse tegnologie met sensitiwiteit vir plek en kultuur. Die skildery is nie net plek-spesifiek nie, maar kan gesê word dat dit die idee van die huis simboliseer. Dit is ook uniek aan Laubscher se *oeuvre*. Hierdie referaat het ten doel om 'n kunswerk en 'n samewerking openbaar te maak wat andersins onbekend sou wees. Dit bespreek ook hoe Fagan en Laubscher se samewerking 'n nuwe front open vir die oorweging van kritiese regionalisme, as nie net oor die materiële kultuur nie, maar ook 'n openheid vir kritiese kulturele denke waar dit ook al mag ontstaan.
Sleutelwoorde: Gawie Fagan, Erik Laubscher, kritiese volksboukuns, Suid-Afrikaanse visuële kuns, modernisme, Suid-Afrikaanse argitektoniese modernisme

From the street, what one sees of *Die Es*, is a long white wall that spans the property and, depending on the viewpoint, the unexpectedly wavy roofline. What one does not see is the house's elevation nor the view of Camps Bay, although the light let in by perforations along a part of the wall suggests the bright sea beyond. The house was designed by the highly respected South African architect Gabriel "Gawie" Fagan (1925-2020) for his family. In plan, it is a simple two-storey house, yet the layers that cover and reveal its design, hinted by its frontage, makes it complex.

Die Es also houses an intriguing artwork: at its "threshold" is a relief painting showing two abstracted landscapes. It was painted by the eminent South African modern artist Frederik Bester "Erik" Laubscher (1927-2013). With its dual aspect and the three-dimensionality of its support, it is a work unique in the painter's *oeuvre.* Fagan commissioned the artwork from his friend. The result of the collaboration is not so much a landscape as the idea of the house as a landscape.

In writing this paper, we have two objectives. One is to make public an artwork and its architectural setting that would otherwise be unknown. The other is to suggest that the architect and the artist collaboration adds to the architectural theory of "critical regionalism" by not just

focusing on the material end results, but also engaging with immaterial culture, that is, with wider critical cultural thinking wherever that may arise.

A description of the house and the painting

Die Es (The Hearth) is positioned midway on the steep slope of Camps Bay, a neighbourhood in Cape Town. The length of its living area lies along a contour (north to south), so that Table Mountain is to its back and the Atlantic, foregrounded by a verdant nature reserve, is to its front.

The entrance to the house is down a flight of stairs of roughly dressed sandstone. The descent continues unexpectedly inside in the hallway, as a gentle sloping path. The entryway is also paved with stones, now polished; it also perceptibly narrows, and the light is dim. It is like descending into a cave – albeit a refined one. Eventually the path levels out and light edges in from a single skylight and a source beyond. The entry sequence ends after a few more metres, where one arrives at a light-filled open living area. The vista of Camps Bay, hitherto hidden, is now revealed and completely fills the eye. We shall discuss the rest of the house in the next section but let us retreat a few steps back into the entryway, to that point where the path levels off and the light of the bay comingles with the dimness. This is where the Laubscher artwork is installed.

The artwork is a painting in that colour is key to its language, but it is also a relief in that it is made from 20 battens of wood, triangular in form, spaced evenly apart. Each batten measures circa 7 x 183 cm with a maximum depth of 3.5 cm; they are spaced 2.5 cm apart, making the artwork's full dimension 184 by 183 cm (figure 4 is an analytical measured drawing). The point of the artwork's three-dimensionality is to separate two images. Descending the path into the house, one sees an expanse of ultramarine-blue, disrupted by ovoid shapes off-white in colour on the top half of the work and, on the lower half, ochre and grey. Although there is no horizon line, the impression is that of the "sky" and "sea", punctuated by clouds and stretches of sand, as shown in figure 1. When heading in the opposite direction, with the ocean behind and Table Mountain ahead, one sees "the earth". There is no one dominant colour but a colour field of burnt oranges, cadmium reds and yellows. If where the orange and yellow meet could be said to be the horizon line, then the ovoid shapes read as strata of rocks (figure 2). In both images, the "sun" and the "clouds" are constants. The "sun" also rhymes with the skylight which serves to gently light the artwork in the otherwise gloom of the "cave".

It is possible to look at the artwork straight on, as one would look at a traditional painting as shown in figure 3. However, that front-on image lacks the coherence of the dual facets, and the work merely looks decorous in a pleasantly abstracted way. It is therefore obvious that the artwork is meant to be seen in the context of that entryway and in perambulation.

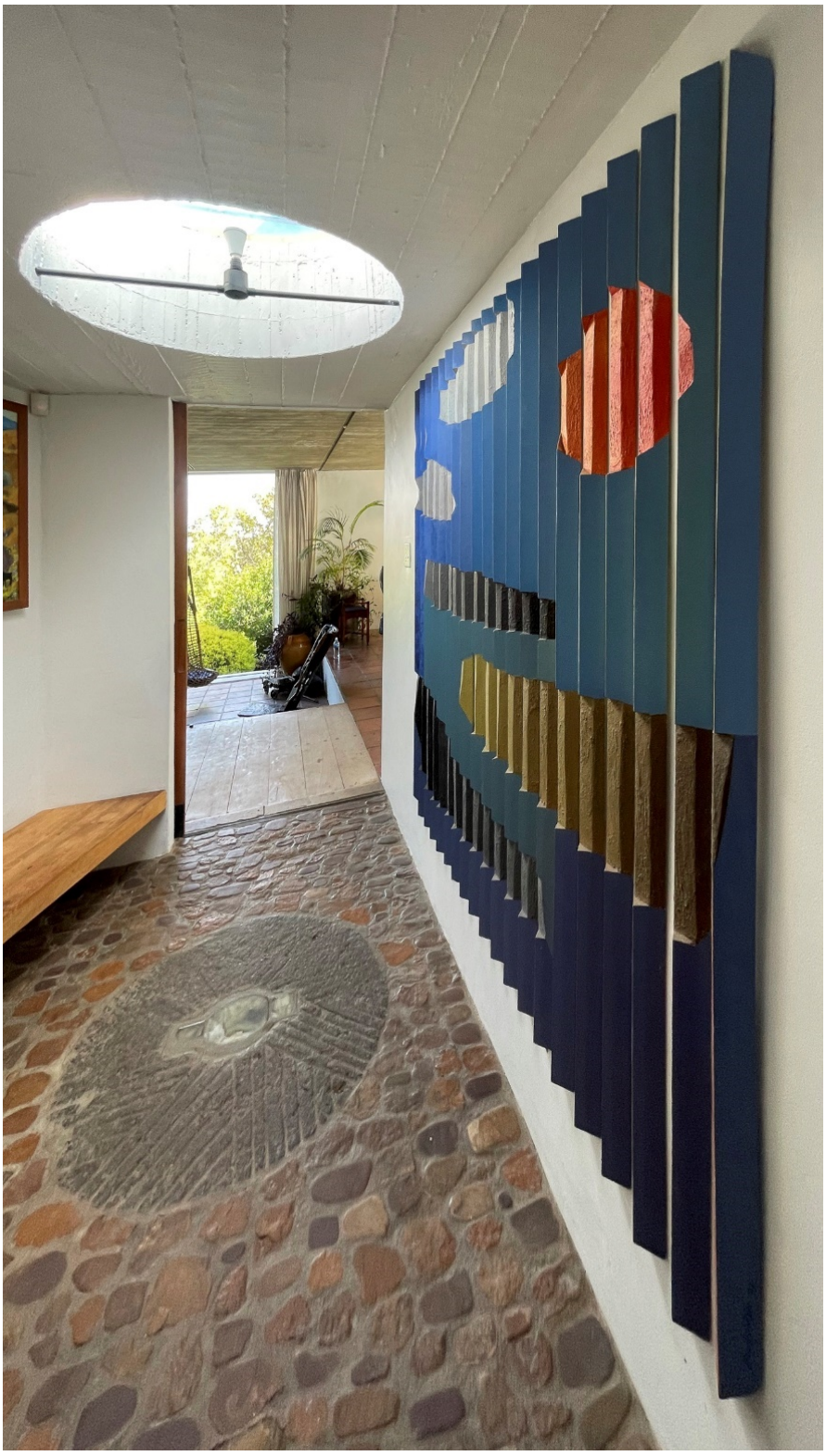

Figure 1
Erik Laubscher, *Die Es Painting*, c1970, mixed media, 184 x 183 cm, entryway of *Die Es* as seen heading in the direction towards Camps Bay (photograph by the author).

Figure 2
Erik Laubscher, *Die Es Painting*, c1970, mixed media, 184 x 183 cm, entryway of *Die Es* as seen heading in the direction towards Table Mountain (photograph by the author).

Figure 3
Erik Laubscher, *Die Es Painting*, c1970, mixed media, 184 x 183 cm, entryway of *Die Es* as seen straight on (photograph by the author).

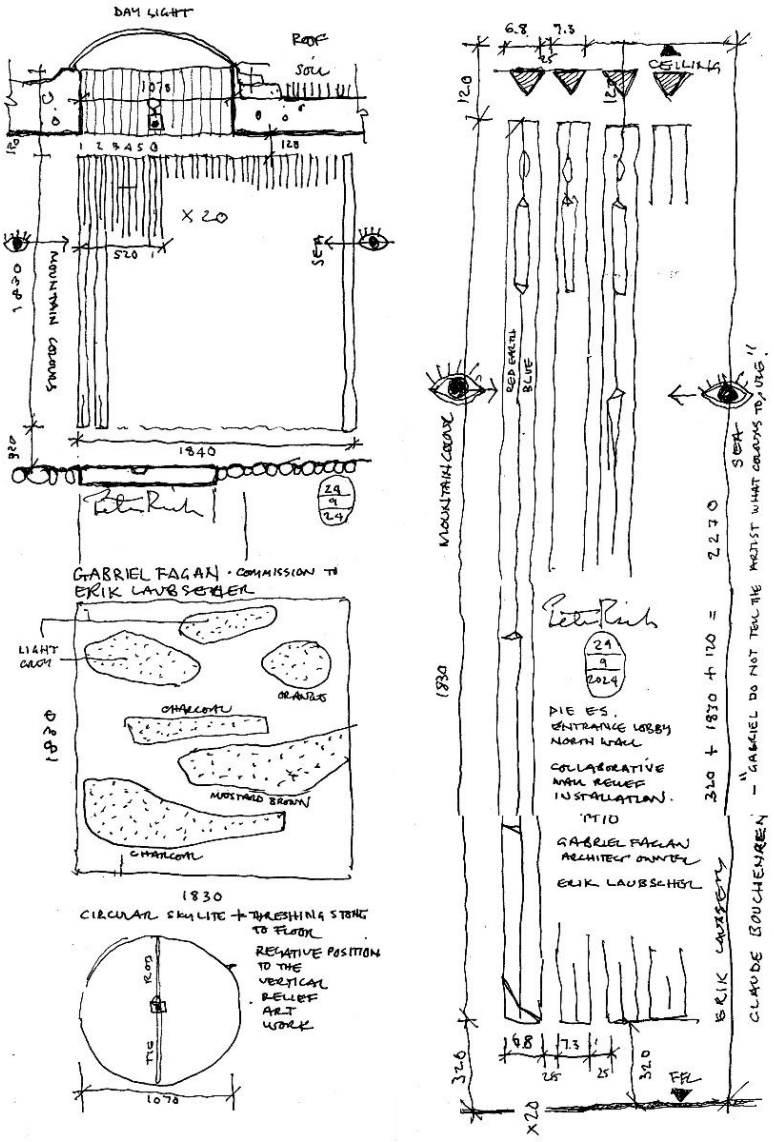

Figure 4
Analytical measured drawing of *Die Es Painting*
(source: courtesy Peter Rich).

Fagan's design and critical regionalism

Fagan studied architecture at the University of Pretoria, graduating in 1952.[1] His lecturers included Norman Eaton and Helmut Stauch: Stauch studied in Germany under Johannes Itten who taught the *Vorkurs* (the equivalent of present-day foundation course) at the Bauhaus. Under their influence and while setting his own values, Fagan's work engaged with "critical regionalism".

The term was first coined by Alex Tzonis and Liane Lefaivre (1981) in reference to the work of Dimitris and Susanna Antonakakis to refer to an emerging body of work in which elements of local architectural culture are brought into a framework largely determined by the

[1] For a biography of Fagan, refer to the obituary by the University of Pretoria by Arthur Barker (https://www.up.ac.za/news/mourns-passing-of-architecture-doyen-and-alumnus-gawie-fagan).

then already international orthodoxy of modernism.[2] Kenneth Frampton then took up the concept with explicit reference to Paul Ricoeur's *Universal Civilisation and National Cultures* (1965) to propose a dialectical relationship between the popular vernacular of regions and nations and the universalising liberatory intent of the enlightenment project. The local is intended to undercut the alienating hegemony of the universal but, equally importantly, the universal is meant to undercut the parochial, narrow, self-satisfied and regressive tendencies of regionalism. This was the "critical" in critical regionalism. It is a position critical of its orthodox Marxist grounding, in a manner akin to Marshall Berman's (1982) validation of the potentials and freedoms which come along with its tendency to undermine traditional cultural practices.

One could say that Fagan was already engaging with critical regionalism before this time when one considers some of his earlier work, for instance whilst resident architect from 1952 to 1963 for Volkskas Bank. His work for the Montagu branch, photos then and now shown in figures 5 and 6, show a building that is clearly modern, but made from the soft brick and plaster work of local building craft which gives it the vernacular Cape "soft edge" (as opposed to the typically crisp edges of European modern buildings).

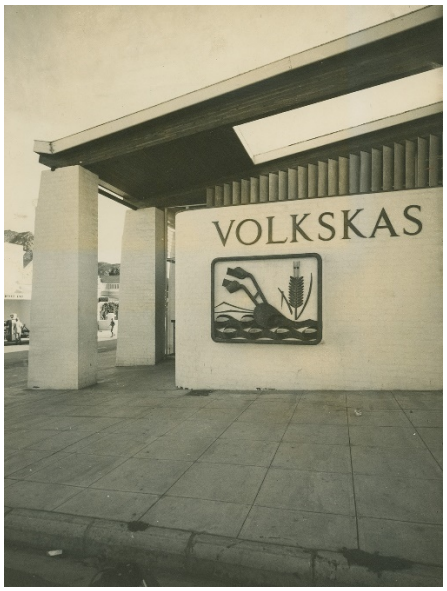

Figure 5 (left)
Volkskas Bank branch in Montagu (photograph presumed to be by Gawie Fagan; source: courtesy the Fagan family).

Figure 6 (right)
Michael Tymbios, Montagu 27 July 2020 from the *Bank Story* series, 2020 (source: courtesy of the artist).

[2] Tzonis and Lefaivre, in their essay *The Grid and the Pathway* (1981), warned against adapting regional in architecture in a superficial manner, for rather than leading to reform and liberalism, it could lead to cultural repression; they argued for critical self-consciousness or "critical regionalism"

After he left Volkskas Bank and started his own private practice, Fagan built *Die Es*, and it is exemplary of critical regionalism. To begin, let us consider the influences of Western modern architects. An obvious debt is owed to Frank Lloyd Wright for the device of passages transiting from dark to light, and low to high spaces, when the dim narrow entryway leads into a light-filled living area where the spectacular vista of Camps Bay is finally revealed (figure 7). The staircase that leads up to the second floor of bedrooms also borrows from Wright's 1951 Glore House.

Figure 7
A view of the living area of *Die Es*
(source: Fagan 2005: 38-39 image 2).

The wavy roofline (figure 8) may have been inspired by Anton Gaudí. The peaks accommodate additional high windows in the bedrooms which let in light even when the main windows are shuttered. The dips correspond to the placement of bathrooms, and the subtle lowering of the ceiling creates a greater sense of enclosure in those intimate spaces. The building's use of concrete married with the wavy-contour roof line makes the building "gently" brutalist. Figures 9a and 9b show the plan of the house.

Figure 8
A view of the living area of *Die Es*
(source: Fagan 2005: 40-41 image 2).

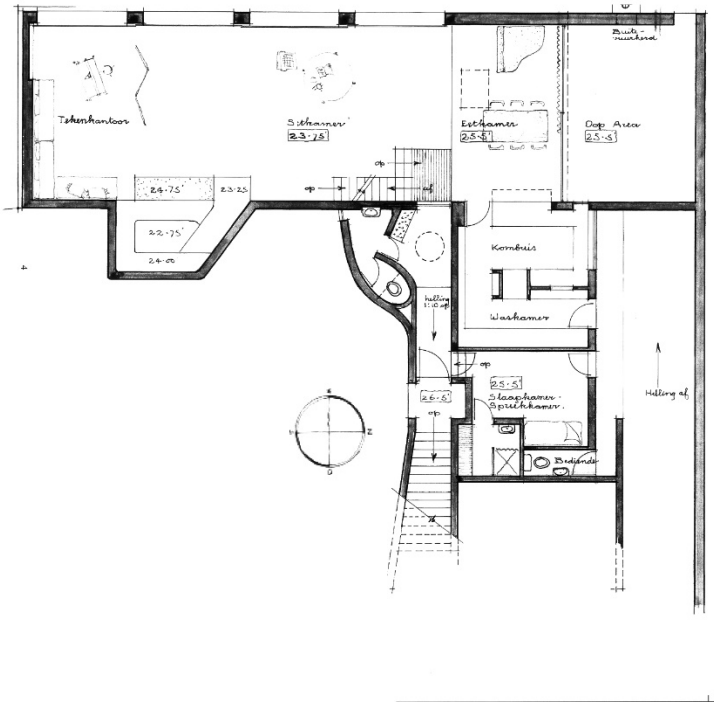

Figure 9a
Plan of the lower ground floor of *Die Es*
(source: Courtesy of Fagan Architects).

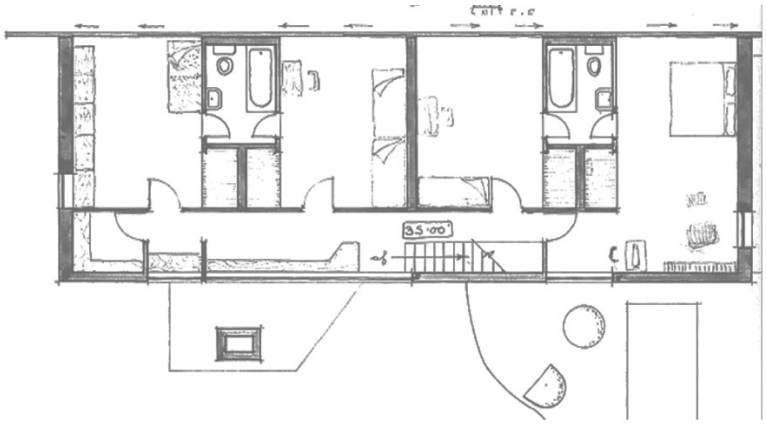

Figure 9b
Plan of upper floor of *Die Es*
(source: Courtesy of Fagan Architects).

Perhaps the house's greatest influence is Le Corbusier and his idea of the "architectural promenade".[3] Earlier architectural theory considered architecture as static spaces, but Le Corbusier posited that architecture should be "a series of unfolding views, encompassing and celebrating movements of the body" (Samuel 2007: 126). It can be likened to watching a film, according to the scholar Ulrike Kuch (2022), a relationship between space and time. Certainly, *Die Es* can be read as a sequence of spatial interrelations revealed by time or movement. It begins with the outside of the house, which is paved with rough stones that continue as the stairs that lead to the entrance.[4] With the view of Camps Bay hidden, the focus is on Table Mountain. The entryway, with its cave-like atmosphere is a liminal space between the outside and the inside. One then sees the Laubscher painting and, in passing, the image of an abstracted seascape is revealed. Glimpses of the colours of the earth, from the other side of the painting, recall what has been left behind. Then, one arrives at the main living area with its vista of Camps Bay, revealed by floor to ceiling windows that span the entire length of the long room. An entry like the opening sequence of a film.

There is one more space on this floor that should be noted: a recessed and sunken nook where one finds the hearth that gives the house its name. It is set in the back wall (i.e. the mountain side) and slightly lower than the main living area. It cannot be seen from the entrance to the living area; it is revealed only when one has well entered the room. When resting on the built-in seating, there is a sense of enclosure, like being in a banquette. The hearth offers a sense of intimacy despite the greater living area being otherwise neither visually nor physically separated. Figures 10 and 11 show the hearth, the latter with the Fagan family warming themselves by the fire.

[3] Le Corbusier coined the term *promenade architecturale* to describe his designs of Villas La Roche and Savoye
[4] In fact, the paving and stairway stones are the granite and sandstone that had been excavated from the foundation.

Figure 10 (left)
The hearth at *Die Es*, which gives the house its name
(photograph by the author).

Figure 11 (right)
The Fagan family gathered around the hearth
(source: Fagan 2005: 37, image 11).

We can also approach Le Corbusier's sequence theory by asking about the architectural pauses that delineate one space from another – the punctuation marks that separate out thoughts in a text. Consider the "full stop" that is needed to both separate and connect the dim entryway and the open living space, for the contrast between the two spaces is dramatic, and one's sensation is uncontrollably captured by the seductive sight of Camps Bay. This punctuation is formed by a wooden platform. Footsteps, previously muffled in the "cave", now hit the wooden floor and create sharp sounds that echo hollowly, bringing one "back to earth". The sound also makes one look down and take notice of the steps leading down to the living area. Once in the sunken area, the Camps Bay view becomes part of the *mise-en-scène*. The few small steps that lead from the open living area to the hearth nook are likewise strategic. They are few, for the lowering of the hearth space is slight. This is a subtle reference to the house's position *in* the mass of the Table Mountain.

The hearth turns our attention to Fagan's equally sensitive referencing of Western Cape architectural history. Fireplaces are not unique to Western Cape culture but are nonetheless significant to Cape houses. Consider the origins of this architectural vernacular, which typically comprises a single room cottage, with the hearth serving as the cooking area. The cottage expands into an "I-plan" and the hearth is at the original end. The fire is kept going all evening and during the cold winter, residents gather around its heat. *Die Es*' hearth, like its predecessors, offer a place of gathering, whether to enjoy the warmth of a fire or conversation. Interestingly, Fagan did not place the *Die Es* fireplace at the end of his living area "I" space (figure 9), perhaps because to do so would have meant the hearth would have been perpendicular to and not "in" Table Mountain. The relationship of the house to the mountain is clearly key, and it can be argued that Fagan favoured the symbolic reference to the Mountain over architectural heritage. Nevertheless, in naming the house "the hearth", he is also referencing the architectural "heart" of Western Cape homes.

Other Cape vernacular references of note include the chimney and the roof line. Like the chimneys of Cape homes, the *Die Es* chimney is free-standing. Its importance is signalled by an arched gateway of the wind lobby by the front door, which offers a framed view of it as shown by figure 12. Whilst we have suggested the influence of Gaudí's school at the site of the Sagrada Família, we also agree with architectural historian and critic Peter Buchanan who observes "the vaulted roof that evokes the curves of Cape Dutch gables" (Fagan 2005: 4).

Figure 12
A glimpse of the chimney can be seen via the arched gateway of the wind lobby at the entrance (source: Fagan 2005: 37, image 6).

At the same time, Buchanan (Fagan 2005: 4) notes that "although the vernacular inspiration pervades the house; it is so well assimilated as to blur into the modern", not a pastiche, as Tzonis and Lefaivre (2021) warned. Likewise, the "modern" is no mere styling. Although the most obvious aspects are in the living area and the view, the design also minimises the impact of the sometimes gale-force south-easterly winds that blow down the mountain and diffuses the otherwise harsh light of summer. Such designs lead Buchanan (Fagan 2005: 1) to say that Fagan's houses "*belong* in the present, the more so because they are rooted in place and past."

Fagan's legacy to critical regionalism is in marked contrast to South African academia. The tendency of academia has been to leave out the critical aspect and use the term to assert the validity of a conservative and essentialising validation of traditional colonial and indigenous architectural practices rather than understanding that the tension between the terms is meant to be understood as a way of enriching both local and global modes of thinking. Whereas Fagan, with his incorporation of vernacular fragments within a conventionally modernist and rationalist framework has enabled a mode of practice in which the rough edges of Corbusian modernism have been knocked off in order to produce an architecture of

considerable charm, whilst usually avoiding the mawkish sentimentality of the Neo-Cape Dutch and Neo-Victorian dross perpetuated by the bulk of the profession during the postmodern period, and the Neo-Vegas style which passes for "modern" in the Western Cape.

Laubscher's South African landscapes

Laubscher first studied fine art in South Africa, with Maurice van Essche from 1946 to 1947. He continued his studies first in London and then Paris[5] at the Académie Montmartre from 1950 to 1951, where he had weekly artistic examination and criticism sessions with Fernand Léger (Fransen 2009). During this time Laubscher resisted Léger's style, which favoured geometric shapes of cubes and cylinders in reference to industry and machinery, painted in a palette of primary and contrasting colours,[6] [7] although Laubscher acknowledged that Léger's "concepts of contrast, monumentality, colour, and spatial organisation would remain with him always" (Fransen 2009: 22).

He returned to South Africa in 1951, but his break from L'École de Paris subject matters of still life and figuration would not occur until 1953 when, on holiday at Bushman's River Mouth, he re-discovered his interest in the contorted shape of the euphorbia plant. His charcoal drawings interrogating the plant's knotted shape led to a series of euphorbia paintings in which Laubscher filled in the spaces between stems and branches with flat colours that aimed for intensity of spatiality, for example, figure 13. This has led the critic Matthys Bokhorst[8] to say that Laubscher was taking a first step towards abstraction (Fransen 2009). His use of heavy dark outlines has led some observers to comment on the influence of Léger (Fransen 2009).

Laubscher's landscapes began in 1955 following his employment as a colour consultant for a paint company when the frequent road trips exposed him to the land as visual inspiration. For example, the burnt carcasses of trees after a veld fire by Mitchell's Pass became a subject matter over the subsequent years (Fransen 2009). As Hans Fransen (2009: 90), the compiler of the most complete list of Laubscher's work to date, explains, Laubscher "started observing the interaction of manmade shapes (the contours of wheat fields, hedgerows, farm dams, paths) with the natural ones (hillsides, valleys, mountains and clouds), and the subtle curves, twists and textures these produced. The landscape in all its forms was an inexhaustible source of spatial and monumental qualities, both in harmony and in contrast" of which figure 14 is a good example.

[5] Alexander, Lucy, Bedford, Emma and Cohen, Evelyn. 1988. *Paris and South African Artists: 1850-1965*. Exhibition catalogue: South African National Gallery (Cape Town), 14 Apr – 29 May 1988, and Johannesburg Art Gallery (Johannesburg), 22 Jun – 17 Jul 1988. South African National Gallery. ISBN 0-620-12147-5.

[6] Fagan was not unique in his development of a regionally inflected modernism in Cape Town. Revel Fox used a harder edged version of the same tactic, whilst it was the work of Tony de Sousa Santos and Adele Naude, prior to their emigration, which caught the attention of Frampton as the exemplar of what he intended, a joyful and free modernism made for local conditions, rather than a faux vernacular pasted onto corporate junkspace.

[7] A style some have described as "Tubism" or "Industrial cubism"

[8] Bokhorst was National Chairman of the South African Association of Arts, and would become Professor of Cultural History and Director of the South African National Gallery)

Figure 13
Erik Laubscher, *Still Life among Euphorbias*, 1955, oil on board, 92 x 76 cm.
(Courtesy: Erik Laubscher Trust).

Figure 14
Erik Laubscher, *Donkerkloof*, 1964, oil on canvas, 61 x 50 cm
(courtesy of Erik Laubscher Trust).

Laubscher's palette was clearly inspired by the Cape. This is not to say that the colours are necessarily representational; rather, they are representative. To explain, consider the perception of colour according to Josef Albers (1975: 5): "factual color" is the colour in isolation, whereas "actual color" is the colour in context: that is, "in visual perception a color is almost never as it really is – as it physically is" (Albers 1975: 1). Whether Laubscher knew about Albers or not, like other talented painters, he would have known that the juxtaposition of colours created illusions and "truths". Take for example, *Swartland Sunset* (1966), shown in figure 15. Whilst the reds and yellows are expected, it is the specific placements and sizes of the colours that create the illusion of the vibrant glow that we experience when viewing a sunset. Secondly, the painting reads as a landscape even without the title. This is due to the illusion of depth with the "black hills" reading in the far distance, the fields bathed in sunset light in the middle ground, and the ochre-coloured fields in the foreground. That the ochre of the nearest field is tinged with green is important, for it suggests that there is still some vestige of daylight in the sky behind where the viewer is standing – a phenomenon only possible in a wide landscape, which the Cape enjoys. The painting's achievement is even more astonishing when one realises there is no single point perspective in the painting to guide the illusion.

Figure 15
Erik Laubscher, *Swartland Sunset*, 1966, oil on board, 100.5 x 120.5 cm, collection of Rupert Museum, Stellenbosch (source: courtesy of Erik Laubscher Trust).

Paintings from this period, the mid-1960s to early 1970s, have been described as Hard Edge (Berman 1993, Fransen 2009). The term first coined in 1959 by the American critic Jules Langsner describes abstract paintings that are characterised by areas of flat colour defined by clear and sharp (i.e. "hard") edges. Whilst this can be loosely applied to *Swartland Sunset* (1966), it clearly fits the description of works such as *Near Riebeeck Kasteel* (1968) and *Spring* (1967) (figures 16 and 17) (Fransen 2009). The style of the paintings also resonates with that of the *Die Es* painting.

Figure 16 (left)
Erik Laubscher, *Near Riebeeck Kasteel*, 1968, acrylic on canvas, 118 x 118 cm
(courtesy of Erik Laubscher Trust).

Figure 17 (right)
Erik Laubscher, *Spring*, 1967, acrylic on canvas, 110 x 122 cm
(courtesy of Erik Laubscher Trust).

The creation of the *Die Es* painting

As both Fagan and Laubscher have passed and there seems to be no paperwork, we can only reconstruct the artwork's creation through our assessment of their practices and interviews with those present at the time. The artwork is undated, but we place it between 1969 to 1971. First, the painting's composition resonates with the Hard-Edge paintings of the period. Second, the property was acquired in 1964 by Fagan for his family's home, and it took many years to complete for nearly all of it was built by him and his family. Indeed, Henry Fagan, the architect's son, recalled that it was only in 1969 that the upper floor, where the bedrooms are, was finished enough for the family to sleep in - though he added that the windows had still not been installed. This sets our earliest date since it is unlikely that any painting – let alone a site-specific one - would have been hung before the living area floor was completed and the house enclosed. The latter date, 1971, comes from family friend and architect Peter Rich. Laughing, he points to the photo (figure 18) where a horse seems to be surveying the artwork, saying that was the year the horse was around.

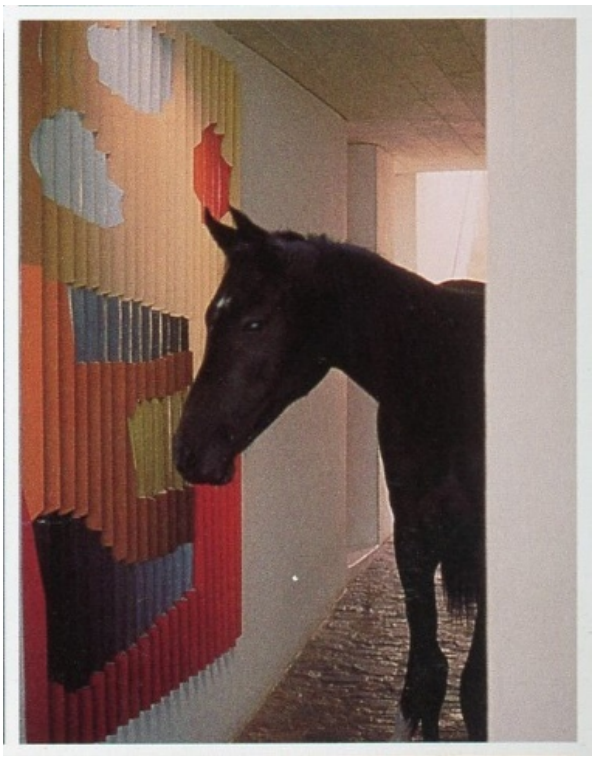

Figure 18
Photo of the horse and the *Die Es* painting
(source: Fagan 2005: 37, image 11).

Gwen Fagan, Gawie's widow and partner in the architectural practice, recalled that Fagan specifically wanted a dual aspect painting for the entryway, with colours of the sea as one advances towards Camps Bay, and of the earth heading towards Table Mountain. Henry Fagan recalled his father carving the triangular wood battens and designing the hanging system, which consists of two holes drilled into the back of the battens, at top and bottom, which lock into screws drilled into the wall. That the painting would need to be a commission was evident: Fagan approached Laubscher, a long-time friend, whose artwork he had already owned.

Laubscher had recently returned from a three-month study visit to the United States. In a 2007 interview, he recalls: "By 1965 the paintings were becoming Hard Edge, and then I received a Carnegie scholarship to the States. After the experience there I was going at it full-blooded, as I saw that it gave another dimension." (Fransen 2009: 266). Before considering the *Die Es* painting, let us consider what Laubscher may have seen in the United States to motivate him to work "full-blooded" in that direction

By the 1960s, American abstraction had moved away from gestural and expressionist works by the likes of Jackson Pollock. The year before Laubscher's study visit, the Museum of Modern Art (New York) hosted the exhibition *The Responsive Eye* (1965). Its press release states:[9]

> The exhibition will bring together paintings and constructions that initiate a new, highly perceptual phase in the grammar of art. Using only lines, bands and patterns, flat areas of color, white, gray or black, or cleanly cut wood, glass, metal and plastic, certain of these artists establish a totally new relationship between the observer and a work of art.

[9]Press release source, retrieved on-line: https://assets.moma.org/documents/moma_press-release_326375.pdf>.

The curator, William Seitz, further explains:

> Unlike most previous abstract painting, these works exist less as objects to be examined than as generators of perceptual responses, of colors and relationships existing solely in vision, of forms, presences and variations often entirely different from the static stimuli by the artist. Such subjective experiences, brought about by simultaneous contrast, afterimages, illusions and other optical devices are entirely real to the eye, although each observer will respond to them differently.

Even though Laubscher's visit came after the ending of the show, he is very likely to have encountered artworks by some of the exhibiting artists, such as Ellsworth Kelly and Frank Stella. Laubscher may have felt some affinity to Kelly's work, reductive in use of colours and shapes, "the basis of his abstraction always lay in his observances of natural and built environments" (Art Institute of Chicago). For example, the painting "Train Landscape" (1953), figure 19, invokes the haze of a wheat field under a bright sun. Laubscher may have also been intrigued by works such as "Yellow Yellow-Orange" (1962), figure 20, where the "distinction between figure and ground generally disappears, while the [painting] itself is presented without any frame, directly on a wall that becomes, if one will, itself a ground" (O'Donovan 2002: 296). Stella likewise applied his colours flat, but he deployed a greater range, better to explore the optical effects of their juxtapositions. The colours in *Hyena Stomp* (1962), figure 21, pulsate, as each colour advances and recedes. Stella would go on to shape his canvases, beginning with the *Irregular Polygon* series (1965-66), figure 22, although it is a question whether Laubscher saw them as they were made close to the time of his visit.

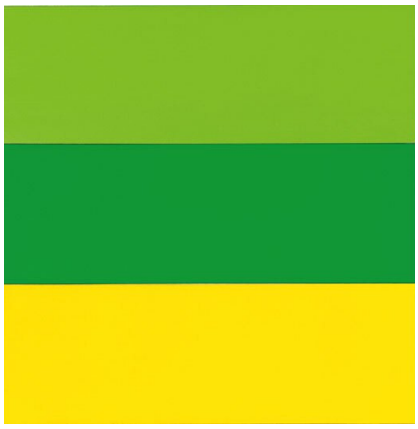

Figure 19 (left)
Ellsworth Kelly, *Train Landscape*, 1953, oil on canvas, 111.8 x 111.8 cm.
Private collection promised to the Museum of Modern Art (New York)
(Source: Ellsworth Kelly Foundation).

Figure 20 (right)
Ellsworth Kelly, *Yellow Yellow-Orange*, 1962, oil on canvas, 148.6 x 228.6 cm.
Private collection. (Source: Ellsworth Kelly Foundation).

Figure 21 (left)
Frank Stella, *Hyena Stomp*, 1962, alkyd paint on canvas, 198.2 x198.1 cm
Collection of Tate Modern, London (Source: Tate Modern).

Figure 22 (right)
Frank Stella, Union I, 1 of 11 paintings in the *Irregular Polygon* series, 1966,
alkyd paint and epoxy on canvas.
(retrieved from the public domain: http://media.cleveland.com/ent_impact_arts/photo/9494816-large.jpg).

Whilst we are not claiming that Laubscher saw any of the mentioned works during his time in the United States, it is likely he saw artworks by Kelly and Stella for they were well-known by then. At the very least, he encountered works by other artists exploring similar themes. We posit that seeing them may have suggested to Laubscher the possibility of minimalism to evoke a landscape and the idea of a painting as an object. Thus, when his friend, Fagan, asked him to make a painting for *Die Es*, with the unusual specifications, perhaps Laubscher saw it as a chance to explore American Hard Edge as applied to South African landscape.

The battens set the "hard edges" and the dual facets allow for abstracted images of Camps Bay and Table Mountain together. As noted, the "sun" and the "clouds" are constants in both landscapes. This is achieved by carving their shapes flat into the battens (figure 23). This makes the sun and clouds physically independent of the sides and may speak of them perching above the South African landscape holistically. Whilst it is possible that it was Fagan who suggested carving them out, it is also possible that Laubscher saw the strategy as a response to Hard Edge. It renders what is three-dimensional back into the two-dimensional: the painting that has become an object is, in part, turned back into a painting.

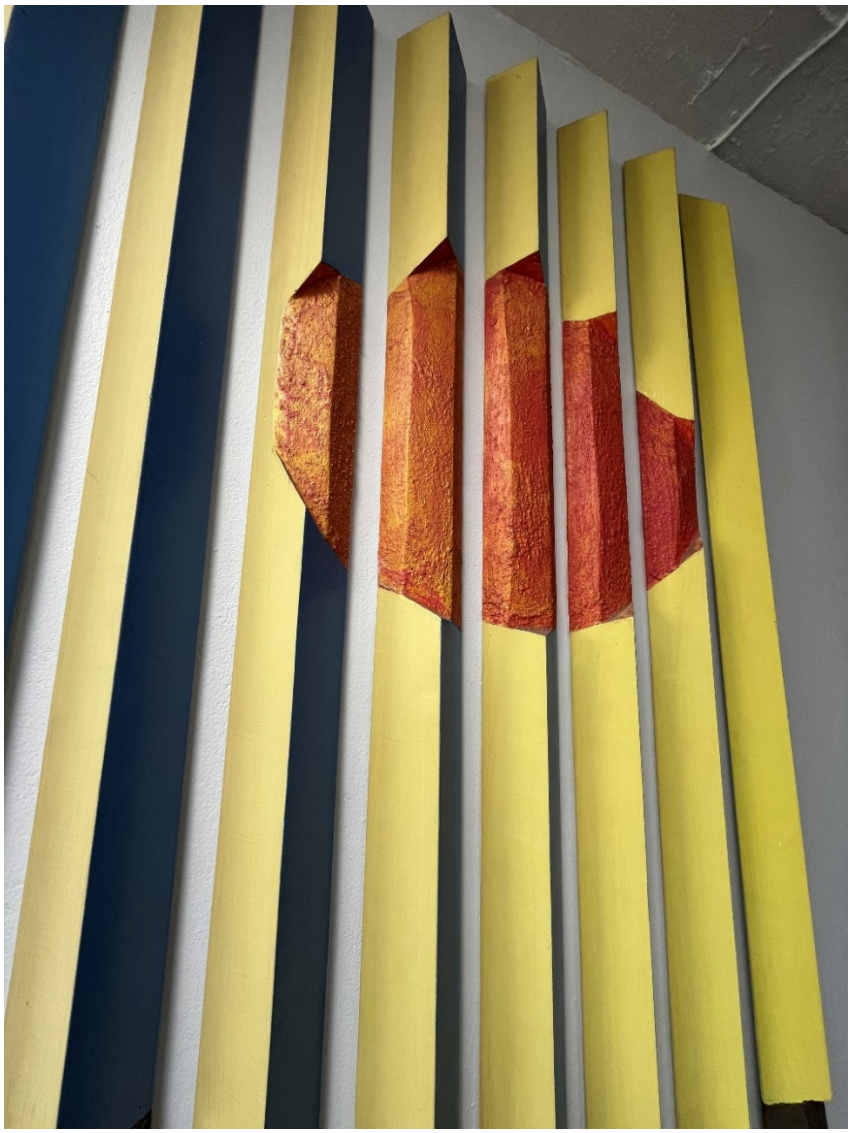

Figure 23
Detail of the "sun" element of the *Die Es* painting showing the area of the battens have been carved flat. (photograph by the author).

If Fagan's pause along the entryway creates a "threshold" for the house, the *Die Es* painting makes it a poetic one. Laubscher's composition symbolises what Fagan tries to achieve with his design, a transition from mountain to sea, from outside to inside, from a body in motion to one finally at rest by the hearth. The painting is not so much a landscape but an expression of the house as an idea of a landscape.[10]

[10] Authorship should be attributed to both Laubscher and Fagan. The addition of Fagan is not only due to our acceptance of his setting out the dual faceted nature of the work and the design of the battens to accommodate it, but because the house is the "ground" upon which the artwork is placed.

Critical regionalism of material and immaterial culture

The *Die Es* painting is not only the result of Fagan's and Laubscher's combined formidable material skills, but also their attitude of openness to critical thinking outside of their respective disciplines. Consider that *Die Es* would have been a successful as a house even without the painting, or Fagan could have created his own, or found a painting suitable enough for purpose. Of course, such solutions would not have achieved the same level of poignancy. Instead, Fagan purposely commissioned an artwork from an artist who also critically engaged in the combination of Western theory and technique with South African identification of place. It was also not a given that Laubscher would accept the commission. First, with a full-time job as a paint consultant, a young family, and responsibilities heading up various art education efforts, his art-making time and energy was a scarce resource. Fagan's format was at a distance to his preferred traditional rectangular canvas. Finally, visual artists, even when accepting a commission, do not usually work to formal specifications: "Artists are not told what to paint", as Laubscher's wife, Claude Bouscherain, who is also an artist, protested to the Fagans (recounted by Gwen Fagan). Thus, even as Laubscher may have seen it as a chance to experiment with American Hard Edge, he may also see the risk of it taking him too far out along the "artistic limb".

Kenneth Frampton (1983: 26), in his strategy for achieving critical regionalism, specifies "topography, context, climate, light and tectonic form" thereby focusing on the material aspects of architecture. Fagan's collaboration with Laubscher suggests another front: immaterial: culture, that is, a way of thinking with others in wider society who are also critically balancing global modernism with regional values and heritage. To be clear, we are not advocating cross-disciplinarity for its own sake, but meaningful engagement may show the connections and patterns that create culture. After all, it is this consideration that gives the creative arts a way of thinking beyond the expediency of global technology and the conventional aesthetics that risk becoming a pastiche of the past.

Figure 24 (left)
Gawie Fagan beside the painting (retrieved from the public domain: https://www.friendsoffriends.com/profiles/gwen-gawie-fagan/).

Figure 25 (right)
Erik Laubscher
(retrieved from the public domain: https://www.sahistory.org.za/people/frederik-bester-laubscher).

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Interview with Henry Fagan by the authors. Cape Town, South Africa, 26 September 2024.

Interview with Peter Rich by the authors. Cape Town, South Africa, 27, 28 September 2024.

Interview with Gwen Fagan by Peter Rich. Cape Town, South Africa, 28 September 2024.

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Kevin Fellingham is an award-winning architect who works in Cape Town and overseas. His recent project includes the gallery for the Claude Bouscharain and Erik Laubscher Trust. He is a member of the faculty of the School of Explorative Architecture (Cape Town) and formerly a senior lecturer at the University of Cape Town, Department of Architecture and the Built Environment. He is working on his thesis towards his PhD.

Rural-urban lived experiences: Cross-cultural space and place teaching and learning

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Architecture students need guidance to make sense of the complexities of organising space and place-making whilst being challenged to give agency to the communities they are designing for. The teaching and learning efforts are more significant for students when they experience cross-cultural activities in contexts outside their immediate sphere of influence and engagement. The main question is how can architecture students use their lived experiences through service learning to demystify environmental levels between spaces and celebrate culturally significant architecture through acts of care and engagement. Furthermore, the skills of rural women artists' Basotho *litema* practices in the Free State landscape should be celebrated. Efforts to establish new relationships between future architects and *litema* artists provide an intersectional perspective for design space and understanding the local heritage of culturally significant architecture in the Free State. These relationships and celebration opportunities give a new place of interaction in a less intimidating environment for contextual learning experiences of visual local rural art and architecture. For the theoretical framework, the socio-psychological theories of 1) Symbolic Interaction Theory and 2) the Socio-Historic Theory utilise the methods of 1) Design Thinking and 2) Participatory Action Research aimed at sustained relationships of care. The University of the Free State has worked with community partners since 2021 at three rural farm homestead sites within a four-hour drive from Bloemfontein. These sites provided the source for qualitative data from students on service learning, domestic thresholds, spatial organisation and culture while interacting with local rural women artists. These acts are needed to teach the complexities of physical and social attributes, abstraction, and embedded meaning around space-making for architecture students.
Keywords: domestic thresholds, space and place, *litema* art, architecture, service-learning

Landelik-stedelike geleefde ervarings: kruiskulturele ruimte en plek onderrig en leer
Argitektuurstudente het leiding nodig om sin uit die kompleksiteite van die organisering van ruimte en plekskepping te maak, terwyl hulle uitgedaag word om eienaarskap vir die gemeenskappe waarvoor hulle ontwerp, te gee. Die onderrig- en leerervaring vir studente, as kruiskulturele aktiwiteite buite hul onmiddellike sfeer van invloed en betrokkenheid kan meer betekenisvol wees. Die navorsingsvraag is hoe kan argitektuur studente hul geleefde ervarings, met behulp van diensleer interaksies met sorgsame betrokkenheid saam met kulturele betekenisvolle argitektuur, gebruik om omgewingsvlakke te ontsluier. Verder moet die vaardighede van plattelandse vrouekunstenaars se Basotho *litema*-praktyke in die Vrystaatse landskap gevier word. Pogings om nuwe verhoudings tussen toekomstige argitekte en *litema*-kunstenaars te vestig, bied 'n bymekaarkom perspektief vir ontwerp ruimte en begrip van die plaaslike erfenis van kultureel-beduidende argitektuur in die Vrystaat. Hierdie verhoudings en vieringsgeleenthede bied 'n nuwe plek van interaksie in 'n minder intimiderende omgewing vir kontekstuele leerervarings van visuele plaaslike landelike kuns en argitektuur. Vir die teoretiese raamwerk word sosiaal-sielkundige teorieë 1) Simboliese Interaksie Teorie, en 2) Sosio-Historiese Teorie, deur die metodes van 1) Ontwerp Denke en 2) Deelnemende Aksie Navorsing, ondersteun, vir volgehoue verhoudings van sorg. Sedert 2021 werk die Universiteit van die Vrystaat saam met gemeenskapsvennote by drie plattelandse plaasopstalle binne vier ure se ry vanaf Bloemfontein. Hierdie terreine was die bron van kwalitatiewe data vanaf student oor diensleer, huishoudelike drempels, ruimte-organisasie en kultuur, terwyl daar met plaaslike landelike vroue-kunstenaars interaksie was. Hierdie handelinge is nodig om die komplekse fisies- en sosiaal-gelaagde eienskappe, abstraksie en inherente betekenis rondom ruimteskepping vir argitektuurstudente te leer.
Sleutelwoorde: woonhuis drempels, ruimte en plek, *litema*-kuns, argitektuur, diensleer

Undergraduate students in architecture struggle to make sense of the complexities of organising thresholds between private to public space. The organisation of environmental levels challenges the physical building of structures to claim place-making, especially at sites of culturally significant architecture. Architects need a good understanding of cultural symbolic attributes to design for a different culture. Architecture furthermore utilises design tools such as design principles, aesthetics, and art, as well as the physical limitations of context and site, to make and build open and enclosed spaces.

An additional challenge is that lecturers must teach students the complexities and layers of physical attributes, abstraction and embedded meaning around space. However, the discipline of Architecture is fortunate because it provides tangible experiences that sensitise students to work with rather than in the built environment. Service-learning (SL) is used to teach students soft skills, graduate attributes and architectural complexities.

The Earth Unit (EU) in the Department of Architecture at the University of the Free State (UFS) has used service learning (SL) since 1996 as an effective tool for technology advancements to promote contemporary earth construction. Since 2021, the EU have shown to be effective in sharing meaning in treasured cultural activities such as *litema* wall decoration workshops (Bosman 2022; Bosman, Venter and Mabe 2023). Past reflections supported the cultural significance of students' positive cultural experiences and group cohesion (Bosman and Riep 2023: 308). These artists reflected on a more significant project for the EU, promoting the contemporary application of earth construction in South Africa. In the meantime, during 2021, informal student reflections during the service-learning workshops opened the possibility of combining other teaching and learning opportunities with the *litema* workshop. This set in motion the rural-urban reflections on the thresholds and environmental levels, as cross-cultural teaching and learning for students in architectural space-making.

The built environment's domestic spaces include significant earth-constructed dwellings in rural parts of central South Africa. Placing students in these rural homestead spaces, while engaging with traditional Basotho *litema* wall decoration workshops, helps students to better understand the thresholds between public and private domains. At the same time, the cultural significance of Basotho symbols with symbolic cultural meaning of heritage and identity is discussed during hands-on activities.

However, this is the first time the department tests whether SL can effectively teach a better understanding of environmental levels and placemaking through culturally significant domestic architecture. Since excellent teaching does not guarantee excellent learning, students' experiences before and after an intervention in the form of SL activities had to be investigated for learning efficiency. In this new approach, lecturers must explain and illustrate how the experience of space relates to 1) the comparison of the student’s lived world and that of a culturally rich architectural setting in which service-learning activities are presented, 2) the connection of different spaces from public to private with different thresholds to develop a sense of progression and 3) what makes place and building significant for identity and culture not well-known or experienced individually before SL activities.

This student survey explains the spatial relationship between students' own lived experience of space and threshold, and how it is perceived by students after SL workshops. Students were asked to reflect on their understanding and experiences after a new research question was formulated. The main question is how architecture students can use their lived experiences through SL to demystify environmental levels between spaces and celebrate culturally significant architecture through acts of care and engagement.

The following broad research objectives used are 1) that students must use and trust their lived experience of space, 2) that students must experience another kind of spatial experience of domestic spaces through service-learning than previously known, and 3) that students must be exposed to an act of care and management to appreciate diversity, identity, and culture as a significant component of architecture. For this article, intersectionality (Guy-Evans 2024: 1) positions art and architecture within a contextual interaction (service-learning) as an effective tool for teaching space and place making.

This teaching and learning method can help illustrate how space progression starts at the domestic level of experience embedded in students' lived experiences, to equip them with how to design for inclusivity. The hypothesis is that reminding students of their lived experience using domestic environmental levels and comparing this with new experiences of domestic earth-constructed vernacular dwellings will assist their design skills in designing for diversity in the public domain.

A 2024 project was used to gather students' perceptions with a qualitative reflective survey of second-year students [N–38] at the Department of Architecture, UFS. This article will not show whether students can design better transitional thresholds for organising public spaces and places. A further investigation will be necessary to illustrate this beyond the scope of this article. At most, it was expected to develop design students' soft skills, sensitise students to culture, context, the purpose of thresholds, and to design for diverse communities in future. More importantly, this article reflects qualitatively on SL attributes, domestic space, and place observation during workshop activities. The following section will position a twofold theoretical framework to support teaching and learning in architecture. The article aims to explain how valued symbols give meaning to people if the Symbolic Interaction Theory and Social Historic Theory are considered for engaged teaching and learning. This will be followed by the two methods used for this teaching and learning activity before the qualitative student reflections are analysed and discussed. The concluding recommendations will set the scene for continued research by the EU.

Theoretical framework

The article explores intersectionality theory (Guy-Evans 2024) as a perspective on how power relations, in this case, between lecturers, students, and female artists, learn from one another. Intersectionality aims for an increased understanding of how the interaction of different factors shapes humans. On a bigger scope, the research project explores a different method of using students' lived experiences concerning environmental levels and thresholds and culturally significant architecture as celebrations with *litema* workshops to support teaching and learning.

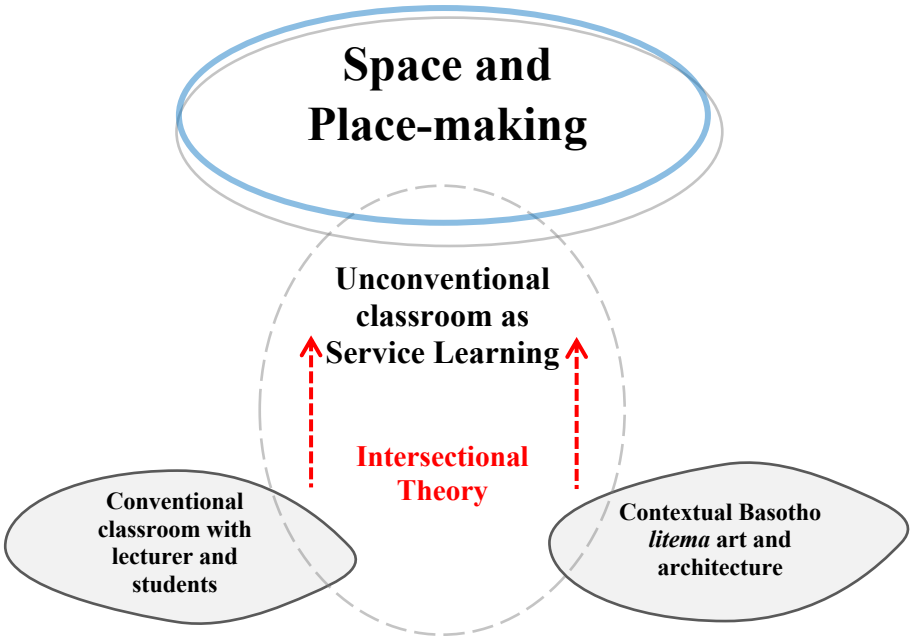

Figure 1
How Service-learning influences the power relations in unconventional teaching with the social relations of the *litema* workshop activities (diagram by the author).

This method must empower students to design spaces and places for all. The theoretical framework uses two socio-psychological theories and tools from two research methods to structure this teaching and learning approach. For this article, figure 1 shows how sociological theory supports service learning as a teaching and learning method from the perspective of intersectionality (Guy-Evans 2024: 1) of power relations (an unconventional classroom setting for lecturer and students) influenced by social relations (contextual Basotho *litema* art and architecture).

Figure 2 explains how the methods are supported by theory aimed at demystifying how environmental levels influence space and place.

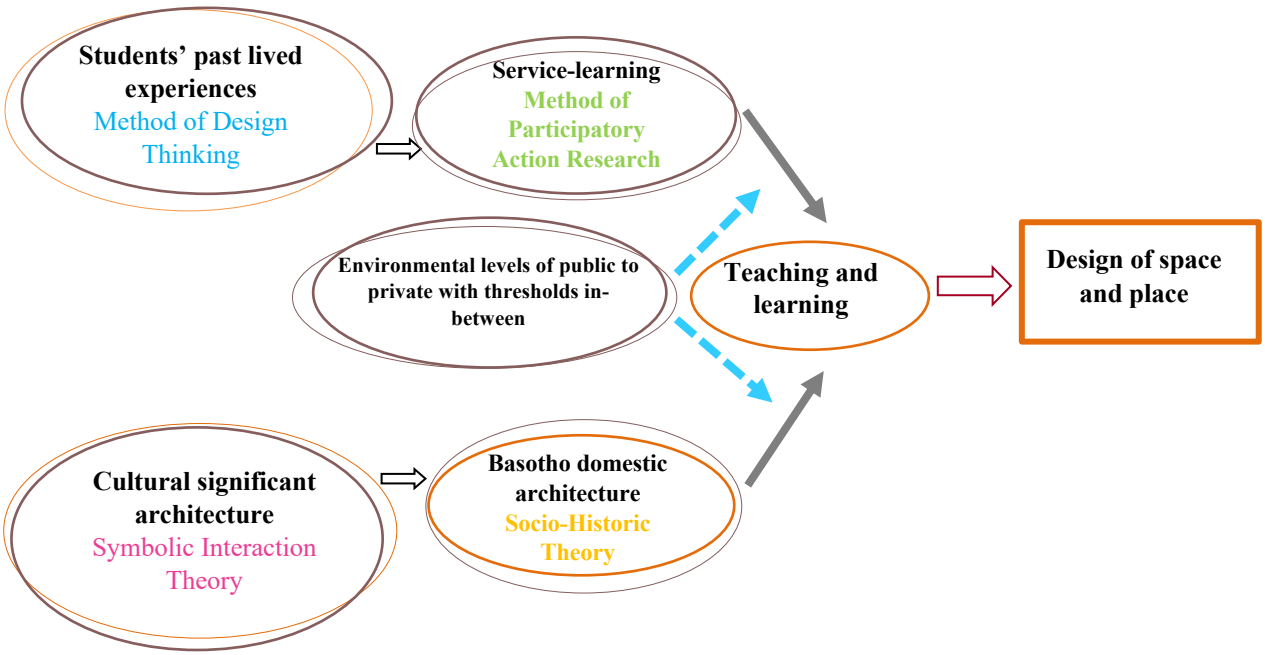

Figure 2
How do the two theories of the theoretical framework apply two methods to support the research question? (diagram by the author).

Firstly, Symbolic Interaction Theory (Aksan, Kısac, Aydın and Demirbuken 2009: 902) explains culturally significant architectural form that transcends into significant architecture to reflect site, context, culture, and place-making. The second theory is Socio-Historic Theory (Tzuriel 2021), which considers cultural context and social engagements to show how Basotho domestic architecture can be compared to the student's reference to domestic space, now compared to the Basotho domestic context.

Firstly, the model uses the Design Thinking (DT) method (Katoppoa and Sudradjat 2015) and interacts with students' past experiences before and after this specific engagement assignment and workshop activities were completed. Students are trained to understand the purpose of using the threshold between environmental levels to link public and private spaces and places. Secondly, in this model, SL celebrates acts of care and engagement that depend on Participatory Action Research (PAR) as a method of investigation to provide a place of interaction and engagement outside the traditional classroom. Furthermore, the combination of PAR and DT "enriche(s) architectural research with social and participatory dimensions" (Katoppoa and Sudradjat 2015: 118). The following section will link the combined methods used to the two theories postulated by social psychologists.

Early layers of spatial understanding and threshold experiences

Swiss psychologist and genetic epistemologist Jean Piaget (1973) believed that school learners and young adult students think fundamentally differently from adults. To address this, lecturers should take advantage of the opportunity to show how the students' cultural background, past lived environment, and physical context provide a connection with their current domestic environment. Lecturers must tap into these early layers of spatial understanding and threshold experiences. Past knowledge with cultural background and personal references to domestic space should enhance teaching and learning.

For several decades, it has been understood that knowledge is layered in students' minds (Bodner 1986: 1) and internalised as their knowledge through personal experiences (Al-huneidi and Schreurs 2013: 4). For architecture students to design new spaces, they must draw from their past references as their lived experiences.

This research considers the complex social-ecological contexts in southern African low-density rural environments where earth-constructed buildings are found. Informal urban areas deserve academic attention, but more needs to be written about this SL experience in rural areas (Harris 2004: 41). The lecturer's role changed from instructor to a facilitator on the rural site where *litema* women artists are the instructors (Bosman 2022; Bosman, Venter and Mabe 2023). Students are made aware of how much they already know by discussing and analysing their survey reflections. This is where their lived experience of domestic space plays an intersectional part in seeing the purpose and qualities of thresholds and spatial organisation. Back in the classroom, the activities can then be followed by the concepts of the design of spatial organisation (beyond the scope of this article). Students have an excellent understanding, but must be reminded (empowered) about how dwellers move between thresholds from semi-public to semi-private and private in the case of homes or dwellings. To understand how space-making is affected by social psychology, the following section will elaborate on two complementing theories.

Symbolic interaction theory

Symbolic interaction theory, one of several social science theories, explains that people live both in the natural and the symbolic environment, where objects do not have meaning on their own. This theory states that symbols are fact-based and founded in meanings (Aksan, Kısac, Aydın and Demirbuken 2009: 902).

Figure 3
Service-learning workshop during 2023 on Clearwater Farm, Warden district, Eastern Free State Province (photographs by the author).

In the Free State Province, the local significant vernacular architecture is mainly influenced by the proximity of Lesotho. Since 2021, the approach of SL with local vernacular building practices and Basotho *litema* wall decoration (figure 3) has been a good fit for the UFS. However, this approach continues to develop to optimise the learning process and research investment in the Scholarship of Teaching and Learning. The rich symbolism of *litema* has been tested by recently gathered qualitative data to establish current perceptions from *litema* artists during similar SL workshops between 2021 and 2023 (Bosman 2022).

Socio-Historic Theory

The Russian psychologist Lev Vygotsky developed the cultural-historical activity theory, called the socio-historical theory. This theory provided educators with a psychological and educational framework for cognitive shaping development that highlighted the role of language and social engagements in the cultural context (Tzuriel 2021). This theory supports the approach the UFS followed in the last three decades.

The Free State culture and mainly rural character is a great setting to illustrate and utilise care and community. Furthermore, there is an increasing need to research the cultural values of earth construction, which depends on more than just the technical performance of the building material. The problems are more than just technological: the influence of personal and social issues within different cultural contexts should be considered. Earth construction should also be celebrated as technology within vernacular heritage since it forms and develops identity and culturally significant art for architecture. *Litema* wall decoration on traditional earth-constructed dwellings is considered culturally significant architecture (Frescura 1981, 1985; 1989; Changuion 1989). This practice and art form, slowly disappearing from the landscape (Bosman and Riep 2023), should be acknowledged, celebrated, and perceptions investigated. Past recorded students' perceptions are mainly positive (Bosman 2022), but the learning opportunity of lived experiences and the organisation and design of space are now being investigated in this article (figure 4).

Figure 4
Service-learning in 2022 at the Basotho Cultural Village near Qwa Qwa, Eastern Free State Province (photographs by the author).

Australian psychologist Jennifer Barnes (2001: 6-9) explains lived experiences as a bodily awareness of the self and context simultaneously in two different worlds. Students must learn from both worlds to develop their design-thinking skills.

Design Thinking

Design Thinking is a way of practising design, formulated by Tim Brown (Katoppoa and Sudradjat 2015: 118) that expects an empathetic, optimistic, collaborative design thinker. This thinker needs three spaces for design innovation: 1) an inspiration space where a collection of problems can be solved, 2) an ideation space where prototyping provides form for ideas, and 3) an implementation space as a comprehensive scheme of production innovation for users or communities (Brown 2009). For this article, the first two spaces will be discussed, along with qualitative student feedback. Students were asked to give feedback on two case studies to learn from their current home and a rural Basotho homestead.

In architecture, one of the most influential methods of investigation, is when the researcher and designer depend on the analyses of different study buildings (precedents and case studies). For precedent buildings, other voices are cited, and plans and sections are analysed to understand the working and experience of the building. If case studies are used, the designer must visit the building to have first-hand experience and knowledge of the building. The designer does not necessarily need to cite other voices to understand or analyse the building's attributes. The method of analysing study buildings has been well established in architecture teaching and learning in the post-modern paradigm. The design thinking method supports the making of architecture in the case of how architects use thresholds between private and public environmental levels.

The lecturer must emphasise the need for and the purpose of working with thresholds. Confusing thresholds challenge a design if liminal space is used as a bigger threshold, such as a semi-public forecourt for waiting patrons between a public park and the semi-public restaurant interior. If a liminal space is included in the design proposal, then the student can test the proposed design by employing and analysing study buildings to guide the proposed design. The analyses of building attributes should include an understanding of the users' expectations of the building. These expectations are linked to norms, values and beliefs. Suppose the students are sensitised to the users' known beliefs and understandable practices. Then the architecture student is fully immersed in the building environment and community to make a tangible contribution (Harris 2004: 41) to the quality of rural life and beyond. Design Thinking is the primary tool for investigating architecture, but it has some limitations. As an alternative research method, participatory action research complements design thinking (Katoppoa and Sudradjat 2015: 118).

Participation as active service-learning with care and engagement

According to Brazilian psychologist Bernardes de Moraes (2021: 1), social psychology shows its value in the subtle influences that guide attitudes. Furthermore, science is not truly objective since theoretical perspectives of social psychology hold "more general explanations for a wide range of social behaviours in different situations". The perspective only provides a point of view from which to examine a range of social behaviours, such as care and engagement.

Heidegger's (1927) notion of care captures the attitude and mood of how we care about local rural art and architecture in the Free State landscape. The architect's ability to address communities' perceptions is developed by exposing students to real-life issues in early study

years, where “involvement in live projects brings together the three states of teaching, research and practice in architecture” (Mitchell and Tang 2015: 311). Architecture educators Linda Groat and David Wang (2013) applied social science qualitative and quantitative methods in relationship with architecture research to furthermore design meaningful places. Participatory action research (PAR), derived from action research (AR), is a model developed for community development in rural areas within developing countries (Katoppoa and Sudradjat 2015: 118). This article explores students' perceptions as qualitative feedback in which lecturers can optimise the architectural place and space-making opportunity.

Furthermore, these students face the challenges of working with people from different backgrounds, cultures, and ages (Jordaan 2011). Students are also made aware of the importance of reciprocity during SL activities to enhance the quality of the learning experience for all participants (Petri 2015: 94-5). Through acts of reciprocity, the SL experience is not associated with charity but is a shared experience with transformation (Pompa 2002: 68-9). The following section explains the data collection process and method followed in combined SL activities and a bigger research project, Architecture of Care and Engagement (ACE), that started in 2021 (Bosman 2022).

Data collection methods

The author and investigator of the ACE also coordinates the activities of the Earth Unit at the UFS. In May 2024, for the first time under the UFS Scholarship of Teaching and Learning programme, the author developed the effectiveness of the 2021 model of teaching and learning practised as SL (figure 5) to include cross-cultural lived experiences.

Figure 5
Service-learning workshop in 2021 at the Basotho Cultural Village near Qwa Qwa in the eastern Free State Province (photographs by the author).

Data samples were collected from all participating undergraduate second-year students who had to visit a small selection of homesteads for observation on the Duikerfontein farm, 15km north of Paul Roux. This was followed by the practical *litema* workshop activities at the Basotho Cultural Village (BCV), where the museum buildings of Basotho house typologies that developed over the last 250 years, are displayed and maintained annually.

The student participants were instructed with an SL assignment credited in the CONS2600 module at the Department of Architecture, UFS. Participants received detailed information about the purpose of the SL workshop and the tour arrangement weeks in advance.

The purpose of the research component was also made clear to students, as was the case with the artists during their survey (Bosman 2022: 45-6). Students were told precisely what the research was about and why the SL experience was combined with their lived experience. It was explained how they might benefit from a better understanding of space and placemaking, how to read thresholds between environmental levels (public to private), and why the significance of cultural architecture should be investigated and celebrated. During the 2021 survey, the individual *litema* artists were acknowledged and did not prefer anonymity (Bosman 2022).

Furthermore, students' voluntary participation was explained. Participants could withdraw from the survey at any point without giving a reason, but they all had to complete the weight-bearing assignment as part of their continued evaluation module. It was explained that if they did choose not to participate, it would not harm or positively affect their performance in the module. No incentives or rewards were given. Anonymity was guaranteed, and pseudonyms could ease the writing of their narrative explanations (responses). No identifying markers were mentioned in the reflective write-ups. Before departure for the SL workshops, the students received the research information leaflet, were instructed on how to fill out the questionnaire, and had to sign a consent form to confirm their participation in the study. The UFS General/Human Research Ethics Committee (GHREC) of the UFS approved the ethical clearance of the study (UFS-HSD2024/0209).

The data was analysed around holistic themes coded to address the main research question reflected in this article. The main question is how architecture students can use their lived experiences through service learning to demystify environmental levels between spaces and celebrate culturally significant architecture through acts of care and engagement. The student reflections used the constant comparative approach (Petri 2015: 98). The places investigated through SL are available within 350km of Bloemfontein. Basotho rural homesteads at Duikerfontein Farm, 15km north of Paul Roux, and the Basotho Cultural Village near Qwa-Qwa in the eastern Free State Province are still annually decorated in traditional *litema* wall decoration. This temporal art form is layered with cultural symbols used traditionally by mainly rural Sesotho-speaking communities for the past 170 years.

Findings and discussion

During and after workshop activities, student respondents were surveyed using a physical questionnaire to understand how engagement with SL has changed their perception of space and placemaking, environmental levels, and the significance of cultural architecture in the eastern Free State Province. This article's findings with survey questions are organised and discussed around 1) Symbolic Interaction Theory and 2) Socio-Historic Theory, while considering 1) The Design Thinking method, and 2) Participatory Action Research method. The first question that students had to reflect on was:

> Before the tour, had you visited any family in a small dwelling similar to the houses you worked on during the assignment? If so, please mention where and when this visit was.

The students' reflections will be divided into two cohorts for this article. Cohort 1 [N-9] replied that they had visited a family in a similar dwelling before the workshop. This group comprised one Afrikaans, one Sesotho, two Setswana, two IsiZulu and three IsiXhosa-speaking students. Cohort 2 [N–29] all replied negatively and consisted of a mix of Afrikaans and English-speaking students.

Reciprocal interactions in social environments

Symbolic interaction theory reflects on reciprocal interactions in social environments between people linked to specific, meaningful symbols. Human interactions provide data from perspectives and empathy, developing the ability of participants to evaluate themselves around people and objects around them (Aksan *et al*. 2009: 902). In the case of Basotho *litema* as a cultural symbolic object, it is even more significant to reflect a Basotho identity and for other South African groups to recognise it. The question is:

> Do communities' *litema* patterns and skills add to a South African architectural identity? Please explain.

For Cohort 1, all responders [N-9] replied positively but unexpectedly looked at *litema* broadly, not just as Basotho identity but as South African identity. The Sesotho students associated *litema* with the Basotho culture, but did not claim it exclusively, and stated that it is South African:

> Yes, they *(litema)* are art forms that the Sotho people have practised for centuries, they are easily recognisable and associated with South Africa.

Socio Historic Theory - Basotho cultural context

Regarding the setting or workshop experience presented at the Basotho Cultural Village near Qwa Qwa during the three-day workshop, it was necessary to establish a positive environment where specific assignment tasks could be conducted. Students reflected on the experience of both cohorts [N-38], considering the question:

> How did you experience the workshop activities regarding culture in general?

The reflections were neutral in 13% of the cases. Respondents used "sensible*;* the learning experience aided understanding". The reflections were positive in 47% of the cases with descriptions of "very helpful; informative; insightful; educational; interesting; therapeutic; thought-provoking; good; nice; connected with others." The 40% of respondents replied very positively and reflected with "learned a lot; wonderful; cool; fun; inspiring; amazing experience; very influential; enjoyable; enlightening and felt connected to my roots". This confirms that the workshop experience in the setting of the Basotho Cultural Village provided a positive and responsive environment for interactions outside of the classroom.

Lev Vygotsky saw social interaction as central to mental abilities if cultural and social factors support cognitive development (Tzuriel 2021). During workshop activities, students had to observe and participate by interacting and imitating earth plaster techniques demonstrated by the *litema* artists (figure 6).

Figure 6
The SL workshop in 2024 at the Basotho Cultural Village of *litema* plaster applications (photographs by the author).

Familiar contextual tools for enquiry allow students to access communities for representative reflections and insights gained during the exchange (Mitchell and Tang 2015: 303). Students observed and had the opportunity to work with earth plaster material. Conversations with the artists allowed for cultural narratives from primary sources on symbols used by Basotho women.

Design Thinking Method – lived experience

This research explores how one's own lived experience depends on transitional links between public and private space while celebrating identity in cultural diversity through acts of engagement, care, and appreciation. During the survey, five questions were asked of students on their lived experiences, in which they had to state if they had visited a small dwelling like the houses they worked on. Cohort 1 [N-9] responded that they had previously visited family or friends in rural areas. The question asked was:

> As a learning experience, did this assignment help you relate to how domestic spaces are designed/ planned? Please explain briefly.

Apparent contextual differences between rural and urban environments and how the lack of communal use is limited in their urban dwellings were frequently mentioned. Cohort 1 [N-9] of the respondents confirmed that the assignment did help them relate to how domestic space was designed. One student stated:

> I learned how to make these spaces feel private and public enough to invite people in.

The follow-up question prompted:

> Please briefly explain how this experience made you feel in a broader sense of life, commodities and needs.

Cohort 1 reflected with nostalgia, recalling positive memories (childhood, domestic chores, safety, comfort, open spaces, freedom, gratitude and a renewed yearning for community) and negative memories (living conditions, climate exposure, vulnerability, how to live in difficult situations and accessibility). One student stated:

> I felt very accomplished after working on the artwork and getting complimented on my skills by the ladies there. It felt amazing to go back to basically my childhood.

This response reflects positively on how service-learning provides a new experience that confirms the positive influence of heritage and cultural significance during SL. Students were

asked to consider two study buildings (case studies), 1) their current home in Bloemfontein and 2) a homestead at Duikerfontein Farm. The site visit was done *en route* to the Basotho Cultural Village. Students had to consider the thresholds that separate the environmental levels from public to private spaces.

During the survey, students were asked three questions about their lived experiences. Both cohorts [N-38] had to reflect on descriptions of thresholds and experiences of transitional space and movement between environmental levels. The question asked:

> Briefly explain how you understand the environmental levels from public to private, separated by thresholds in the homestead dwellings you visited during the assignment.

There was no significant difference between the reflections of the two cohorts on the three questions. Explanations on thresholds at the Duikerfontein homesteads ranged from: "transparent wire fences … that make semi-private spaces feel like public space" (exposed); "very porous thresholds"; "result in sudden changes"; "feel the shift from semi-public to private".

The next question was:

> How did you read/experience the transitional space (farm and homestead yard) between public (public road and access road to farm) and private spaces (kitchen, living rooms and bedrooms) of the dwellings during the visit? Please explain briefly.

Some students described transition space in the homestead as "missing", "the private is exposed (no semi-private space)" or mentioned the "absence of enclosed corridors and no transition". One student called it "no liminal place for comfort and privacy". Several students mentioned "the exposure to elements between the free-standing structures". One student observed: "It is a very abrupt transition".

Another student commented:

> The threshold from road to farm was obvious, leaving the public [space] when entering the private space, one could easily feel the shift from semi-public to private.

But then, more descriptive comments show the experience nuances:

> It was very sudden with the house [private] looking over the farm [semi-public]. It almost felt invasive walking into the homestead.

> It felt like the public could enter at any time … as if someone was constantly looking at you even while you sleep.

> One could easily feel the shift from semi-public to private.

Figure 7 shows basic diagrams of the two different examples of a student from Cohort 2. These descriptions illustrate that undergraduate students think about thresholds and transition spaces if they must explain them as an experience. Cohort 1 did not use the correct Duikerfontein homesteads, as described in the survey meetings; therefore, those diagrams will not be discussed.

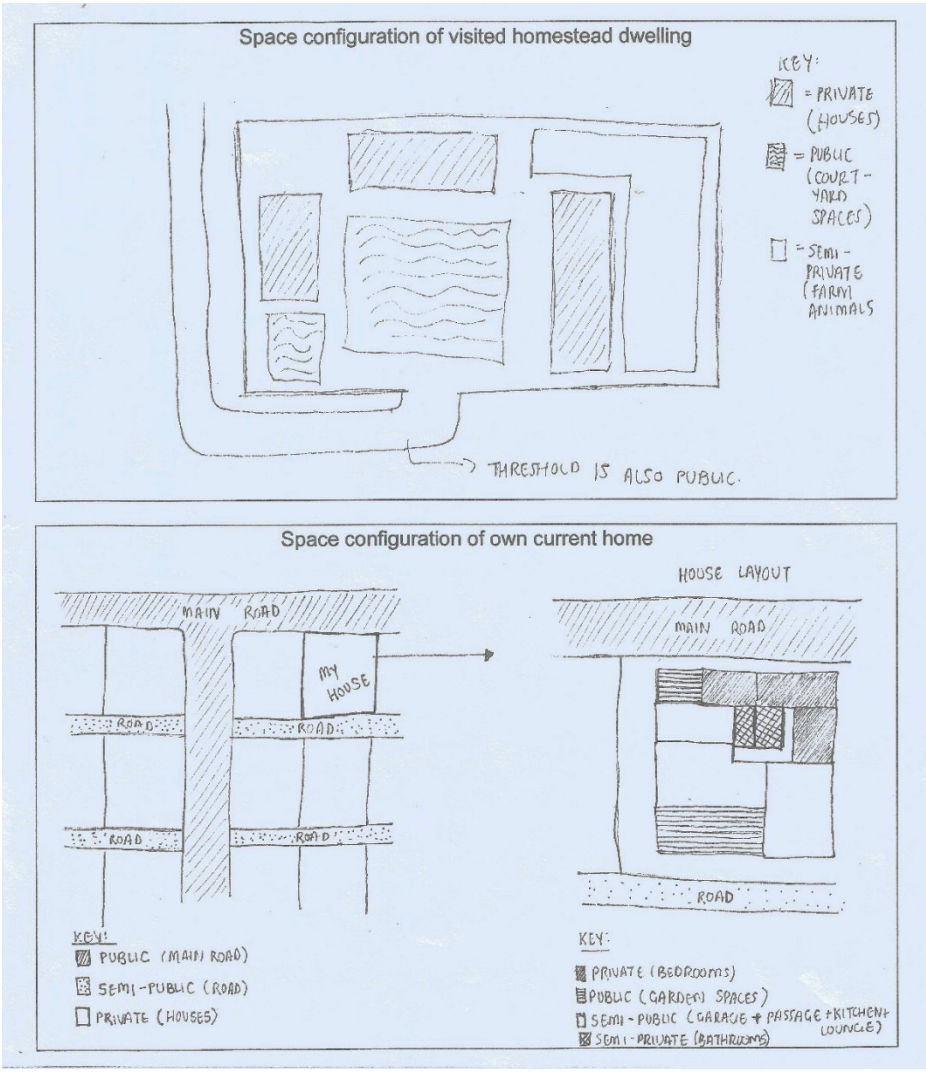

Figure 7
Example of diagrams a second-year student had to make to show thresholds and environmental level (source: anonymous survey questionnaire).

Participatory Action Research method - service-learning

Vygotsky postulated that a socially mediated process is a vital cognitive development tool for sharing cultural values, beliefs, and problem-solving strategies (Tzuriel 2021). Architecture-making involves problem-solving through the practice of design. Furthermore, social-cognitive scientist John Carroll (2006: 6) reminds us that designers "must be concerned with consequences beyond the client's directly articulated concerns". This approach supports qualitative and participatory research for architecture and design to include an active participatory process, since architecture is both a thinking and action process (Katoppoa and Sudradjat 2015: 119).

Architectural educators Maurice Mitchell and Bo Tang (2015: 302) stated that architectural making is a hands-on, creative activity utilising contextual resources and physical and cultural attributes. On the other hand, SL develops citizenship (Deely 2015: 4-5). Community engagement as SL is one of the important UFS graduate attributes as 1) Academic competence, 2) Critical thinking, 3) Problem-solving, 4) Oral communication, 5) Written communication, 6) Ethical reasoning, 7) Entrepreneurial Mindset, 8) Digital Skills and 9) Community Engagement.

The SL activities, such as community engagement, are outdoors during different seasons. During the ten workshop tours (2021-2024) to the eastern Free State rural areas, students gave unexpected positive feedback, even though these workshops were hard physical work, often done in extreme weather conditions. Students see opportunities for learning in a cultural context. This is a setting where a rural community can provide a rich cultural setting for study and can, in exchange, broaden and deepen the engagement that urban environments seldom offer (Mitchell and Tang 2015: 303).

Students were prepared for workshop activities and assignments weeks in advance. They watched previous (2021-2023) workshop slides so that they could understand what the work entails. Photos and videos captured the mood of SL as celebrating identity in cultural diversity through acts of engagement, care and appreciation. This set the scene for the activities, but more importantly, the physically demanding work under extreme climate conditions. The idea of preparation in advance is to avoid romanticising the three workdays as a break from campus and the classroom. However, it is important not to overwork the students using a structured program of daily activities, with enough breaks and leisure time in a beautiful rural landscape setting. Students should also have proper, comfortable accommodations and good, wholesome meals during this time. Students must rotate between more physical work activities and design wall patterns as instructed by the *litema* artists.

For students, researchers and rural residents, a shared ground for skills exchange and negotiation of difference was provided (Mitchell and Tang 2015: 303). The intention was not to collect from a distance but for students to use all their senses and "psychological antennae to capture and frame issues which are meaningful to the inhabitants" (Mitchell and Tang 2015: 303). Students were free to replicate artists' designs or make their own with guidance from the artists.

For architecture teaching, learning can draw from the spatial context in which students are placed and made aware of the significance (cultural architecture). Still, it is different from their everyday experience. Activities are then organised and explained. In this case, the activities involved active participation in earth wall repair and preparing the wall surface to which traditional *litema* was applied.

South African architect and academic Gerald Steyn (2015: 15) reminds us that vernacular dwellings evolved due to social needs and community customs within ecological and technological limits. These developments are aligned with domestic rituals and customs to produce social space. Vygotsky believed that community is central to "making meaning" (Tzuriel 2021). The narrative of the women, together with a tactile, hands-on experience, provided symbolic meaning to patterns used on the earth walls.

Conclusion

This article used a new experimental approach to provide a research design supported by social science theories. In this article, intersectional theory reflects on "increasing the understanding, that the interaction of different factors shapes humans, and that these interactions occur within a context of connected systems and structures of power" (Guy-Evans 2024). Each factor of race, gender, class or cultural context is not separate. We are shaped by these factors that connect us as South Africans. Intersectionality adds additional layers of complexity to understanding social inequality.

This study should demystify domestic space organisations' social complexity, with available building materials (influenced by socio-economic variables) linked to thresholds. Exposing students to unfamiliar, culturally built environments can help them better understand

other lived experiences while creating an appreciation of identity and culture in a different architectural environment. Design professionals should preserve cultural diversity, which challenges designers to undertake intercultural designs with subtle differences in the organisation of space, construction, details, and materials (Martin and Casault 2005: 3-5).

The concern is not just about how students embrace concepts of place, building material, building culture, and phenomenology; it is also about the visual aspect of the whole experience of students interacting with their built environment. This provides a unique learning experience.

This article shows that if students understand their skills in organising space, the place can be improved. Most students better understand the purpose of thresholds as a descriptive and comparative experience and how to use them effectively in their future proposed designs. The positive feedback on the significance of using *litema* as rural art for all South Africans is encouraging in a diverse developing country where intersectionality should be promoted in everyday life.

A continued scholarship in teaching and learning will be necessary to conceptualise how much design thinking can be achieved with evidence to show this after SL activities. Ideally, students' design skills will need to be purposefully tracked and documented during their continued study years. For this, more time will be necessary.

Teaching and learning with SL in other parts of the world can benefit architecture students if vernacular art and architecture can support activities of intersectional relationships of domestic space and place.

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Cinematic placemaking: The phenomenological contributions of *A Single Man* directed by Tom Ford

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In this paper it is argued that the discourse of architecture stands to gain a great deal from the disciplines of fashion, photography, and film. The film, *A Single Man*, directed by Tom Ford - fashion designer, interior architecture graduate - will be used as a case study. Fashion in architecture is certainly a controversial term, especially with the rise of the so-called Starchitect and the Bilbao Effect on the one hand, and a shift toward transformative, socially just, and climate sensitive architecture on the other. Similarly, the role of photography and film in architecture has in recent decades been brought to question, as such critiques ascribe the "spectators gaze" of architectural environments and the ocularcentric nature of our discipline to these media. This paper subverts these critiques by illustrating how fashion and photography can, in fact, give atmospheric and experiential insights into scenarios and places, providing valuable insights for architectural place-making. *A Single Man* is a narrative, set over the course of one day, and focusses on loss and suffering. The phenomenology of loss and suffering is concretised in this film through various phenomena, such as time, light, colour, objects in space, articles of clothing and the architecture of the home, embodied by John Lautner's 1949, Schaffer House in Glendale. The film provides us with a "perspectival perception" (Merleau-Ponty) of these phenomena, through the body and the mind of the protagonist, in both the present, and the past, through memory. These are all aspects that contribute to create a multisensory, embodied, and oneiric sense of place. In reference to the existential meta-narrative of the film, the paper concludes by fundamentally challenging the transient and static notions of fashion and photography, respectively, that exist in architectural discourse, and argues for an episteme that prioritises the experiential nature of architectural place-making.
Keywords: fashion, photography, film, architectural place-making, phenomenology, Tom Ford, John Lautner, Schaffer House

Placemaking im Film: Tom Fords *A Single Man* als phänomenologischer Beitrag
Diese Arbeit argumentiert, dass der architektonische Diskurs erheblich von einer Auseinandersetzung mit den Disziplinen Mode, Fotografie und Film profitiert. Als Fallbeispiel dient der Film *A Single Man*, inszeniert von Tom Ford – einem Innenarchitekten, Modedesigner und Filmemacher. Der Begriff *Mode in der Architektur* ist zweifellos kontrovers, insbesondere im Spannungsfeld zwischen dem Aufstieg sogenannter „Starchitekten" und dem „Bilbao-Effekt" einerseits sowie einer zunehmenden Hinwendung zu sozial gerechter, transformativer und klimasensibler Architektur andererseits. Auch die Rolle von Fotografie und Film in der Architektur wurde zuletzt kritisch hinterfragt, da es die Gefahr gibt, dass diese eine rein visuelle, auf den Blick des Betrachters reduzierte Wahrnehmung architektonischer Räume fördern. Diese Arbeit setzt diesen Kritiken eine alternative Perspektive entgegen, indem sie zeigt, wie Mode und Fotografie atmosphärische und erfahrungsbasierte Zugänge zu Räumen ermöglichen und somit wertvolle Impulse für das architektonische Place-Making liefern können. *A Single Man* erzählt die Geschichte eines einzigen Tages, geprägt von Verlust und Trauer. Diese Erlebnisse werden im Film durch verschiedene Phänomene konkretisiert – darunter Zeit, Licht, Farbe, Objekte im Raum, Kleidungsstücke und die Architektur des Hauses. Durch die verkörperte Wahrnehmung des Protagonisten – sowohl in der Gegenwart als auch in der Erinnerung – vermittelt der Film eine perspektivische Erfahrung im Sinne der Phänomenologie Merleau-Pontys. All diese Elemente tragen zu einem multisensorischen, verkörperten und traumähnlichen Raumgefühl bei. Im weiteren Verlauf werden zusätzlich Themen wie Häuslichkeit und Geschlecht behandelt. Im Rückgriff auf die existenzielle Metaerzählung des Films hinterfragt die Arbeit schließlich grundlegende Annahmen der Architekturtheorie, die Mode als flüchtig und Fotografie als statisch begreifen. Stattdessen plädiert sie für eine epistemologische Neuausrichtung, die die erfahrungsbasierte Dimension architektonischer Raumgestaltung in den Mittelpunkt stellt.
Schlüsselwörter: Mode, Fotografie, Film, Architektonische Raumgestaltung, Phänomenologie

Fashion in architecture is not a popular term. Where terms as "the Starchitect" and "the Bilbao Effect" have come to denote the superficial and ocular-centric (Pallasmaa 1996), in contrast to socially responsible architecture that has now gained much traction globally. The ocular-centric paradigm in architecture, argues Pallasmaa (1996: 19), has led to weak inhumane contemporary architecture and cities that exemplify a negligence of the body and the senses, an "imbalance of our sensory system". He feels that it has led to growing experiences of alienation, detachment and solitude in the technological world today, where these experiences ironically occur in the technologically most advanced settings, such as hospitals and airports. Pallasmaa (1996: 29) argues that until recently architectural theory and criticism has been almost exclusively engaged with the mechanisms of vision and visual expression, and that both perception and experience of places have mostly been analysed through the gestalt laws of visual perception.

Such criticism towards architecture being a visually dominant discipline has been voiced by many. Robert Morris (1978: 73) writes: "when an object has become specific, dense articulated and self-contained, it has already succeeded in removing itself from space. It has only visual aspects: from this side or that, close up or far away". Nietzsche (1968: 253) tried to subvert the authority of ocular thinking in seeming contradiction with his line of thought, and also accused philosophers of a "treacherous and blind hostility towards the senses". Anti-ocular positions have been championed by many French writers, including Henri Bergson, Georges Bataille, Jean-Paul Satre, Jaques Lacan, Louis Althusser, Guy Debord, Roland Barthes, Jaques Derrida, Luce Irigaray, Emmanuel Levinas and Jean-Francois Lyotard.

Photography can also perpetuate ocular-centrism, as photos of architectural places from physically unattainable vantage points, and devoid of people, are seen to neglect our embodied and diachronic encounters with places. In this sense, imagery is seen to represent a certain photographic gaze, and a phenomenology from without, as opposed to a phenomenology from within (Shirazi 2009). This paper subverts these critiques by arguing that fashion, film and photography, can be of profound use to architects, as they have the potential to give atmospheric and experiential insights into place-making. To illustrate this interchangeability, phenomenology is used to discuss *A Single Man* (2009) directed by Tom Ford (1961-). Ford, the iconic American fashion designer, had studied architecture at Parsons New School of Design and then went into fashion and later filmmaking.

An existential story

A Single Man (2009) is a film based on a novel of the same name, written by Christopher Isherwood. Isherwood (1904–1986) was an English-American novelist, diarist, and screenwriter. The novel and the film is set in Los Angeles in the early sixties, during the time of the Cuban missile crisis, just prior to America's sexual revolution. The sexual revolution in America spanned from the 1960s to the 1980s and included the increased acceptance of sex outside of heterosexual and monogamous relationships and was succeeded by further acceptance of the contraceptive pill, pornography, and alternative forms of sexuality (Allyn 2000). The story of *A Single Man* is set over the course of a single day in the life of the protagonist George. George is single, he is a man, and he is homosexual. At the end of this day George is going to kill himself. The story starts and ends in George's home – filmed at John Lautner's, Schaffer House (1949) in Glendale, California. This house is a character in the film establishing the time period and atmosphere. George is grieving the loss of his partner, Jim. Grief that, as a gay man in America in the sixties, cannot be expressed publicly. We follow George, a British expat, through his day. We find him waking up from a dream in his home, we follow him to work – he is a university professor of English – we meet one of his students, Kenny, we follow him on his encounter with

Carlos, a hustler. We join him for dinner at his friend Charley, we follow him on his night out after dinner, and finally we return home with him, ultimately to his death, "and just like that it came".

The story is primarily concerned with George's existential condition. He sees the world *a priori* – as if looking and seeing for the first time– a way of seeing that German phenomenology philosopher Edmund Husserl refers to as bracketing. As George knows this is his last day, everything appears to be more vivid. Upon waking from a dream his voice tells us: "waking up begins with saying 'am' and 'now'" (Isherwood 1964: 1). In a Heideggerian sense this relates to George's *being in the world* and furthermore to his *being in time*. Thereafter, he acknowledges the *here* of his existence, the *at home*. From this departure point we follow him through a series of experiences fundamentally tied to the experience of place. Through these person-place encounters, George searches for the meaning of life, life after the death of Jim. These ontological questions – to be, to be in time, in place, at home– have long been subjects of phenomenological inquiry (Heidegger 1927, Norberg-Schulz 1980).

A Single Man, is a semi-autobiography of Isherwood. The film, however, was adapted in various ways. A major challenge was that most of the novel was written as a stream of consciousness. Isherwood's writing style was influenced by Virginia Woolf's (1925) *Mrs Dalloway.* Both narratives refer to the consciousness of a character reflecting, over a single day, on life and death, love and loss (Carr 2015). Further similarities are found between *A Single Man* and *Mrs Dalloway* where George, in the former, and Septimus, in the latter, experience the taboo of homosexual grief. In *Mrs Dalloway,* Septimus Smith is a traumatised World War I veteran, whose mind unravels after the death of his beloved comrade Evans. In the novel, Clarissa secretly experiences similar grief.

The most notable change is that in the novel of *A Single Man*, George does not intend to kill himself. There is also a scene in the which George visits Doris, an ex-lover of Jim, in hospital, that has been omitted in the film. Carlos, the hustler, was also added to the film. There are also adjustments to the architectural settings, most notably in the depiction of the main setting, the home. Where Isherwood's home is located on an island, "you could only get to it by the bridge, [like] a house in a forest clearing" (Isherwood 1964: 123). In contrast, Ford selected Lautner's Schaffer House as George's home, which is located on a suburban main street.

Character of the home

The interior styling and filming of the Schaffer House expresses George's existential condition in various ways. As both the narration and George's visual perspectives alternate between first and third person, we are made acutely aware of his embodiment in his home, as an expression of place-ballet. Place-ballet is the phenomenological notion that describes the regularity of place founded in habit, routine, and supportive physical environment (Seamon 2000). In this regard Maurice Merleau-Ponty (1962) suggests we consider our life worlds in terms of the perceiver and the perceived. Merleau-Ponty (1908–1961) was a French philosopher and a central figure in phenomenology. He is best known for highlighting the primacy of perception, this is the notion that our body and senses are the foundation of how we experience and understand the world. His major works, such as *Phenomenology of Perception* (1962), argue that consciousness is not detached and abstract but embodied. In *A Single Man*, George is the perceiver, and his environment, the *mis-en-scène*, is the perceived. This relationship implies an existentiality of space, or a psychogeography of the home. Psychogeography is a term associated with French Marxist theorist Guy Dubord (1931-1994) and the situationists, that refer to the way in which material environments prompt movement, perception and ultimately, experience.

The film starts and ends with views of George lying on his back. From this initial scene, the viewer is confronted with the subject of death. After the initial scene we see a discrete sequence of events that make up George's usual daily routine in his home. This is reflected not only in his place-ballet but also in the way he opts to present himself to the world. Ford asserts that this is George's way "[to keep] himself together by keeping his outer world in order. This is how this man exists. This is how he gets through the day. On the worst day of his life, he's polishing his shoes. He's putting on his tie. He's being held together by the surface and by the order of everything" (Weintraub 2009). Ford also notes that he specifically anticipated Colin Firth playing this role as "there's something about Colin that does seem very contained on the surface and yet inside you know there's enormous emotion" (Weintraub 2009).

The Schaffer House, a typical exemplar of mid-century modern architecture, reinforces these notions of order and perfection. In his book *Architecture Depends,* Jeremy Till (2009) argues that the modernist project is known for its obsession with order and ridding of contingencies. A characteristic of the architectural discipline that keeps contingencies at bay is in the way it has, throughout time, been subservient to notions of order. The view of ordering architecture is not new. Till (2009: 27) highlights how, "with a certain immodesty" the much revered first century BCE Roman architectural author Marcus Vitruvius Polio once wrote, "I decided that it would be a most worthy and useful thing to bring the whole body of this great discipline to complete order" (McEwen 2003).

John Lautner (1911–1994) was an American architect and a student of Frank Lloyd Wright at Taliesin. He was known for his dramatic, futuristic residential designs in Southern California. Lautner was a pioneer of Googie architecture, also known as Populus and Doo Wop, a branch of modern architecture that was influenced by cars, jets, the Space Age, and the Atomic Age. The Schaffer House (1949) is an early independent project of Lautner and was designed for a mother and daughter. It differs significantly from Lautner's other projects as it is more restrained, modest and understated. It has light timber construction as opposed to his later expressive concrete elements and forms. It also has a domestic scale that is intimate and not monumental, like many of his later works. The exterior of the Schaffer House has universal and dynamic qualities that represents George's migration from England to America, a country where anyone can achieve greatness. The interior with its dark timber panels and a fireplace, however, is warm, and reminds us of his past in England.

Loneliness, isolation and invisibility

In the film the home represents George's sense of loneliness and isolation. In the novel the sense of isolation is more pronounced, as the house is on an island. In the film, George's house is located on the main road, immersed in suburbia. On the main road however, the viewer becomes aware of George's despair through confrontations with a society that define him as *other*. George imagines the neighbourhood children seeing his house as dark and secret looking, just like the lair you'd choose for an old story-book monster. Isherwood uses loneliness and isolation to express the human condition of the gay man in America during the 1960s. In filming the Schaffer House from the outside in, George's loneliness is symbolically emphasised. The bathroom scene – where he stares out towards the neighbours' morning routine and contemplates the semblance of domestic normality in this heteronormative suburbia – amplifies George's disconnect from the world.

The Schaffer House as a character in the film is not unique. Hollywood seems to have a penchant for Lautner's designs. His houses appear in films, where iconic characters are often synonymous with their architectural settings, including Mia Wallace in *Pulp Fiction*'s (1994)

Jack Rabbit Slims, in James Bond's *Diamonds are Forever* (1971) in the Elrod House, Palm Springs and in Alex Munday in *Charlie's Angels* (2003) in the Sheats-Goldstein House, Beverly Hills.

The Schaffer House, unlike these UFO-looking structures, is tucked away in a forest of trees, and thus isolates George from the outside world. His home becomes a stylised forest. As the audience sees George looking out the window watching the neighbours, the Strunk family, the viewer experiences George's loneliness and disconnect from the rest of the world. "The camera pulls back from the outside until we see a portion of his face covered from the outside wall panels. This image is contrasted with the image of the Strunks. Their family is outdoors, playing as a group, cheerful, whereas George is indoors and alone. Through the wood panels he appears jailed in his own home" (Ahi and Karaoghlanian 2009). The Schaffer House, a timber and glass house, represents the invisibility that George feels toward the outside world. There is no clear "insideness" versus "outsideness". The elegance and refined nature of the architectural skin of the house is similar to George's exterior appearance, and is in stark contrast to his inner turmoil. The theme of invisibility is continued at the university where he lectures about invisible minorities and fear, and again in one of the final scenes where Kenny says to George, "nobody would have seen us. We're invisible – didn't you know?" (Isherwood 1964).

The architectural settings in the film appear to be distinctly gendered. Ian Phillips, the film's art director, considers the Schaffer House to be "a very masculine house" (Ahi and Karaoghlanian 2009). He adds that George wasn't transparent about his sexuality. The architecture of the house, therefore, could be seen as a visual representation of how George's sexuality remains invisible from society during this time (Ahi and Karaoghlanian 2009). His best friend Charley's style, in her clothes, make-up and her home, contrasts the minimalist and ordered expressions of George's character. Like Charley, everything in her house is dramatic and over the top, exhibiting femininity and a flair of Hollywood Regency.

Passage of time and the inevitability of death

The passage of time and the inevitability of death is expressed in the film through movement and light. Architecture has a long tradition in relying on light to express the diachronic nature of our existential condition. Light, of course, has no impact without darkness. Juhani Pallasmaa's *The Eyes of the Skin* (1996) refers to the significance of shadows and Tanizaki's *In Praise of Shadows* (1977) is a proponent of a more shadowy, older aesthetic tradition. The opening text of the film, crediting Ford's production company, sets the scene: *Fade to Black.* Indeed, light in architecture, should be considered, not as a mere result of the material aspects of the lifeworld, but as architecture in itself. Indeed the modernist architects were big proponents of the use of light. Le Corbusier (1923: 94) for example argued that: "Architecture is the masterly, correct and magnificent play of volumes brought together in light." In George's home, focus is placed on "the rhythms of light in the grove of live oaks. [The house] sits between the trees in two vertical layers, one of redwood boards and the other of mullioned glass planes, to create the sense of an unbroken transparent screen" (Ahi and Karaoghlanian 2009). The construction of its ceiling, along with the use of glass, provides a light feeling to the house, which results in a "floating environment" (Ahi and Karaoghlanian 2009). This lightness refers to the scene in George's dream where he is floating in water – where it is ambiguous as to whether he is dead or alive. This lightness is also in contrast to the gravity of his grief. George's awareness of the passage of time is extended through the deceleration of motion in certain scenes, when he is driving, or watching a visceral tennis match between two young men. He knows that this is the last day of his life, but somehow he attempts to prolong experiences of beauty. This

manipulation of time reminds us of *Durée*, where time is understood not as an abstract absolute but rather as something that is fundamentally tied to the duration of experience (Bergson 1910).

A sensory syntax

A changeable palette of colour denotes shifts in George's mood – where a character's normally grey face floods with colour in the presence of another life force (Dargis 2009). These changeable palettes also give us impressions of temperature. Artists and architects often employ colour to invoke temperature, texture, and mood. The film's colour manipulation also speaks about life and death. In George's dream, where he approaches the deceased Jim in the snow, the scene is chilling. Upon waking, the audience views him lying on his back on his bed, there is a pen, it reminds us of a suicide note, ink is spilt on the sheet, and reminds the viewer of blood. From this departure point, until the end where we find George in the same position, the film varies in colour saturation. The scene with the hustler Carlos is particularly rich in colour saturation. It speaks of death in its direct reference to the shower murder scene of Janet Leigh in Alfred Hitchcock's *Psycho* (1960). The scene is flooded with pink light of the Los Angeles sunset. Ford deliberately discarded the novel's visceral descriptions of the placeless nature of Los Angeles. In the novel, as George drives to work, he engages in an extensive inner monologue, imagining a dystopian future for what he sees as a placeless and alienating Los Angeles.

In the film, coldness denotes death where warmth denotes life. Charley's house is warm. George's house is cold. His memories are warm, the present is cold. Our skin mediates the exterior world of perceived order and the interior world of emotion. In the film, the architectural skin does the same. The domestic interior represents loneliness and isolation and speaks of despair, where its façade seems to be in perfect harmony with nature. Charley's make-up does the same. In a scene we see her face, half made up.

Conclusion

Exploring the film *A Single Man* through the lens of phenomenology gives us insight into the profound interplay between human lived experience and spatial design. George's existential story, as depicted in Tom Ford's adaptation of Christopher Isherwood's novel, is deeply intertwined with the architectural and atmospheric qualities of his surroundings. John Lautner's Schaffer House becomes more than a mere stage setting— it is a reflective vessel for George's grief, isolation, and identity. The glass walls and modernist precision of the house encapsulate a duality: openness and concealment, perfection and inner chaos. This architectural narrative parallels George's own pristinely managed exterior and emotional interior.

Ford's deliberate and symbolic use of light, colour, and materiality evokes a sensory syntax that speaks to the film's themes of life, death, and temporality. The changing colour palettes mirror George's fluctuating moods, while the interplay of shadow and illumination serves as a poignant metaphor for his existential awareness. The juxtaposition of saturated warmth and coldness, between George's memories and his present reality, illustrates the human experience of loss and longing. Similarly, the contrasting architectural expressions between George's restrained, modernist home and Charley's exuberant, theatrical environment, emphasise differing emotional landscapes and approaches to life.

The film's phenomenological focus invites viewers to consider the embodied experience of place. George's interactions with his home reflect his inner struggles and highlight the inseparability of environment and emotion. This resonates with broader architectural discourses on the relationship between space, time, and human perception, as seen in concepts like Merleau-

Ponty's embodied engagement and Bachelard's *Poetics of Space* (1964). Ultimately, *A Single Man* demonstrates how architecture and design, much like fashion, film, and photography, can articulate the human condition. Through its sensory and symbolic depth, the film reaffirms the potential of these disciplines to not only shape our environments but also profoundly influence our experiences of them.

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Enhancing sensory experiences: the architecture of Hans Heyerdahl Hallen

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The distinctive *oeuvre* of award-winning South African architect, Hans Heyerdahl Hallen between 1959 and 1987, has not been systematically studied. The authors of this paper, and a recently published monograph, contend that Hallen's work displays a conscious incorporation of artistry in collaboration with artists and craftspeople, that heightens the sensory experience and perception of his buildings, and these combine to induce a strong sense of proprioception for the viewer. The ability to sense one's own position and movement in space without relying on visual input alone was unique at this time. These aspects of Hallen's architecture are explored in selected works located in Durban and Gauteng. The research is significant for its recovery of the unique contribution that Hallen's work made to modern architecture in South Africa. His contemporaneous strategy to integrate art and architecture notably enhanced the sensory experience of his buildings, leaving an architectural legacy that demonstrated a strong sense of purpose, meaning and social justice during a difficult period within a divided nation.
Keywords: modernism, *genius loci*, sensory experiences, integrated art and architecture, proprioception

Gesteigerte sensorische Erfahrungen in der Architektur von Hans Heyerdahl Hallen
Das unverwechselbare Werk (1959–1987) des preisgekrönten südafrikanischen Architekten Hans Heyerdahl Hallen wurde bisher nicht systematisch untersucht. Die Autoren dieses Artikels und einer in Kürze erscheinenden Monographie vertreten die Ansicht, dass Hallens Werk auch eine bewusste Einbeziehung künstlerischer Fähigkeiten in Zusammenarbeit mit Künstlern und Handwerkern aufweist, wodurch die Sinneserfahrung und Wahrnehmung seiner Gebäude gesteigert wird. Sowohl die Sinneserfahrung als auch das integrierte Kunstwerk erzeugen beim Betrachter eine starke Propriozeption. Die Fähigkeit, die eigene Position und Bewegung im Raum zu spüren, ohne sich allein auf seinen visuellen Input zu verlassen, war zu dieser Zeit einzigartig. Diese Aspekte von Hallens Architektur werden anhand ausgewählter Werke in Durban und Gauteng untersucht. Die Forschung ist bedeutsam, da sie den einzigartigen Beitrag untersucht, den Hallens Werk zur modernen Architektur in Südafrika geleistet hat. Verankert durch seine zeitgenössische Strategie, Kunst und Propriozeption in sein Werk zu integrieren, vermittelte Hallens architektonisches Vermächtnis ein starkes Gefühl von Sinnhaftigkeit, Bedeutung und sozialer Gerechtigkeit für eine geteilte Nation in einer schwierigen Zeit.
Schlüsselwörter: Modernismus; Genius Loci; Sinneserfahrungen, integrierte Kunst und Architektur; Propriozeption

The South African architect Hans Heyerdahl Hallen (1930-2022) produced a distinctive body of work between 1959 and 1987, with many of his buildings receiving awards of merit and deserving of wider recognition. Born in Durban to Norwegian parents he graduated from the University of KwaZulu-Natal (formerly Natal) in 1953 as the top architecture student of his year. He was awarded a Union Scholarship, that supported travel to Europe and research on his chosen topic: "The treatment of changing levels in buildings, their

environs and the open landscape". Travel in the 1950s took him to Spain, France, Germany and Italy, and more significantly, the Nordic countries that enabled an engagement with his cultural heritage. He worked for the London County Council on their renowned Roehampton housing estate (1958-59). This was regarded as a leading exemplar of modern architecture inspired by the architect Le Corbusier and expressive of the New Brutalist movement of the 1960s. Returning to Durban in 1959 he commenced practice, forming partnerships with Maurice Dibb in the 1960s and Danie Theron in the 1970s. Most of his buildings are located in his home town of Durban, but are also found in Johannesburg, Midrand and Lesotho.[1]

Throughout his career as an architect, Hallen pursued his abilities in art that he had first shown while a student. Leaving a three decade legacy of architecture in South Africa he migrated to Australia in 1987 and settled in Sydney, where he renewed his passion for drawing and painting.

Figure 1
Hans Hallen in the "court of creativity", architects' office at 741 Musgrave Road, Durban, working on a large painting (source: courtesy June Meiring-Hallen).

Unsurprisingly, Hallen's early architecture was strongly reflective of mid-twentieth century architecture and New Brutalism. This is evident in the expressive use of materials in their raw state, such as concrete imprinted with the patterns of formwork, brickwork, and the sculptural expression of structural elements, ducts and staircases.[2]

A key design strategy was the site specific response to the undulating topography and subtropical climate of Durban, delivering the physical and symbolic grounding of his architecture into their landscape settings. This directly contradicted the modernist practice of

[1] For a comprehensive review of Hallen's architecture and its wider significance refer to the book by Kathi Holt, Errol Haarhoff and Walter Peters, *Hans Heyerdahl Hallen: Nordic Influences on Modern Architecture in South Africa* (2026). Awards of merit and a Gold Medal were conferred by the then Institute of South African Architects (ISSA), now SAIA. He was also inducted as an Honorary Fellow of the American Institute of Architects in 1981.

[2] These ideas are fully developed and discussed in our book, *Hans Heyerdahl Hallen: Nordic Influences on Modern Architecture in South Africa* (2026).

raising buildings above the ground on columns (*pilotis*) as demonstrated by Le Corbusier. Hallen became an early adopter of climate responsive design that created comfortable environmental conditions, especially in the subtropical context of Durban.

Another design strategy of significance was Hallen's assertion that architecture should serve more than mere functional needs, crafting "a social manifestation…[that] provides spiritual and physical meeting places which are focal points for both individuals and communities" (Hallen 1997), irrespective of the clients' social or economic standing. Such notions reflect Norwegian architect Christian Norberg-Schulz's (1976) concept of *genius loci*, or the spirit of place, derived from the philosophy of phenomenology. Hallen first encountered this concept during his visits to the Nordic countries, and from his student reading of a journal edited by Norberg-Schulz: *Byggekunst*.

Designing to incorporate social needs led to the frequent use of the courtyard at various scales in his buildings, ranging from the intimacy of the house, to large public and commercial buildings serving a community of users. Informed by the concept of *genius loci*, these courtyards offered both a sense of enclosure and an enhancement of place and social identity. Hallen further considered the impact of experiencing architecture from curated paths of movement across the site, to create a heightened perception of the forms in the landscape.

However, our reappraisal of Hallen's architecture shows that what distinguished his architecture went beyond these design strategies in many of his buildings to include the integration of artwork that richly augments the architecture, producing enhanced sensory encounters with space, texture, colour and materiality.

The integration of artwork in architecture

The unity of art and architecture was severed in the nineteenth century by the creation of disparate vocations and professions, where artwork became merely an adornment to buildings. For example, in his *The Illustrated Handbook of Architecture* (1859), the architectural historian, James Fergusson, demonstrated how a plain building could be embellished to serve different uses by the addition of progressively more elaborate ornamentation (Dixon and Muthesius 1985: 17). Opposition to such applied ornament was to lay the groundwork for the emerging modern movement. In his publication of 1908, *Ornament and Crime*, the Viennese architect Adolf Loos submitted that extraneous ornamentation was a waste of resources.[3] He went on to proclaim this practice as aesthetically degenerate, socially dishonest and criminal, and pursued a minimalist path in his own architecture. Also conceptualised was the idea that the building itself was a work of art, further justifying "the elimination of any artistic decoration" (Marschall 1999: 3).

Despite this radical separation of architecture from art practices, key protagonists of the modern movement in architecture, in particular Le Corbusier and Walter Gropius, continued to argue that art had a significant role in architecture. It should be remembered that the Bauhaus was founded upon the premise of a "fundamental unity underlying all branches of design" and what it "preached in practice was the common citizenship of all forms of creative work, and their logical interdependence on one another" (Gropius cited in Herbert 1955: 24). Le Corbusier conveyed what he saw as the poetics of architecture, in the "cognitive capacities, the unique spatial intelligence, and the collective memory" that architecture embodies (Tzonis 2001: 7). Perhaps what is more significant is a unity between the architecture and art as proposed by Sabine Marschall:

[3] Adolf Loos, *Ornament and Crime*: https://www2.gwu.edu/~art/Temporary_SL/177/pdfs/Loos.pdf.

> …a true integration of art and architecture implies that the very conception of the building includes the artwork. This physical incorporation or unity is most often realised when the architect and artist are one and the same person or when the architect is closely collaborating with the artist(s). (Marschall 1999: 7).

In this way, Hallen's architecture also aligns with Jane Rendell's notion of a "critical spatial practice" that "transgresses the limits of art and architecture, and engages with both the social and the aesthetic, the public and the private" (Rendell 2006: 20). Rendell elaborates:

> …we could say that art is functional in providing certain kinds of tools for self-reflection, critical thinking and social change. Art offers a place and occasion for new kinds of relationships 'to function' between people. If we consider this expanded version of the term function in relation to architecture, we realize that architecture is seldom given the opportunity to have no function or to consider the construction of critical concepts as its most important purpose (Rendell 2006: 15).

We submit that apart from consciously inducing sensory experiences in Hallen's buildings, the integration of artwork enhances the whole. The role that artwork potentially plays in this regard was highlighted by Hallen in an opening address as President-in-Chief of Institute of South African Architects (1974-75).

> If we wish to look from the outside in, as it were, at a society or civilisation to learn what they were about; how they did things; what their aims were; what they value highly, and what they did not value at all…I am convinced that we would have to go to the creative artists, poets, philosophers, the playwrights of an age, and to architects, for it is they that crystallise in form, shape and in meaning, the aspirations, visions, hopes, and failings of their world. (Holt, Haarhoff and Peters 2026: 221-2).

That Hallen was serious about the integration of art and architecture is further demonstrated in a poster he included in the exhibition of the Natal Provincial Institute of Architects held a decade later in the Durban City Hall in September 1983. The exhibition theme *The Work of Natal Architects*, was intended to provide a platform for practices to showcase their work with images of actual projects that were to be presented using two posters and, optionally, with models (Peters and Beattie 1983: 8-11). As shown in figure 2, the two posters on the left show work from his practice: the Huletts Headquarters building in Durban (1974-76), and a door to the Brenthurst Library in Johannesburg (1977-79) entitled *Doors of Memory* (both discussed later), accompanied by a model of his restoration proposals for the old Durban railway station (1982). Hallen added a third poster, an enlarged photograph that looked up into the underside of the sculptured dome of Gianlorenzo Borromini's church *San Carlo alle Quattro Fontane* in Rome, 1638-41. Entitled *Borromini We Need You,* Hallen emphasised Borromini's ingenious blending of architecture and sculpture, perhaps to demonstrate the power of historical precedent without the need to imitate, copy or decorate, and surely to oppose the trend of postmodernism and pastiche that was then rampant in South African architecture.

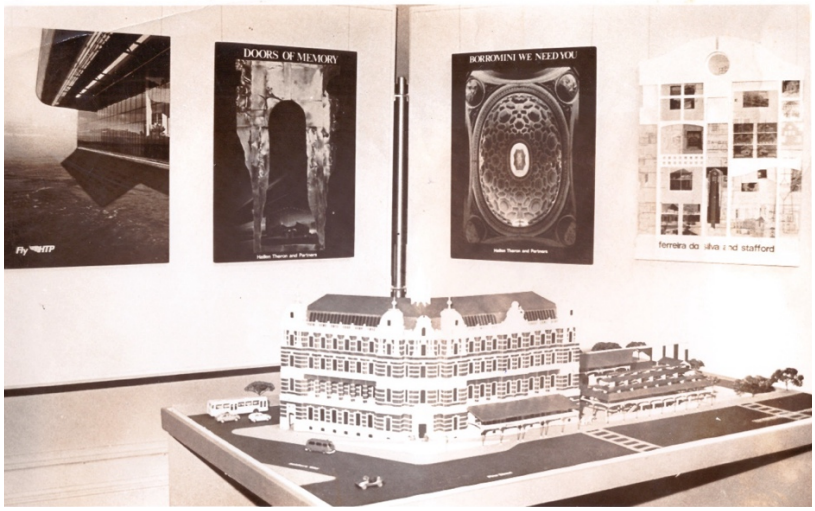

Figure 2
Natal Provincial Institute of Architects Exhibition, 1983. The three posters from the left and the model of the restoration of the Old Durban railway station were Hallen's contribution (photograph by Peter Newman, UKZN).

Hallen's architecture is marked by the methods he used to induce sensory responses for the users. This involved deeper purposes and meanings of what were perceived to be the cultural, symbolic and social roles of buildings in their wider environmental settings. Largely achieved by applying his own artistic skills and then actively collaborating with artists and artisans, and making them part of the design teams. We contend that Hallen's architecture is distinguished by the way in which he integrated artwork to augment the personal and collective sensory experiences of the architecture without relying on visual senses alone.

Enhancing the sensory experience

Important in the observations that Hallen made about Nordic architecture in the 1950s was the shift from the geometric qualities of space underpinning 1930s modernism. The social concepts that related to the idea of place and placemaking, were expressed by Norberg-Schulz in his concept of *genius loci*. For Norberg-Schulz, sensory experiences are complex: "…orientation to different objects may be cognitive as well as affective, but in either case it aims at the establishment of a dynamic equilibrium between [man] and [the] environment" (Norberg-Schulz 1971: 9, Haddad 2010). This notion was emphasised by Hallen: "Landform, landscape and buildings stay in our memories and with our experience of place and of time, they enter our cultural life through the effect on personal identity, cultural identification and social values, from these are made the symbols of an age, a period or a group" (Hallen 1997). Hallen also emphasised: "The idea of the observer moving is an important consideration in the design of buildings and their settings. It is then that a proper concordance of landscape and buildings is achieved" (Hallen 1997).

The construct of perceiving buildings in the landscape was conceptualised in the 1900s by Adolf von Hildebrand who showed that there was a distant view of buildings, which he named "visual" (*Gesichtvorstellungen*), and a near view, for which he coined the term "kinaesthetic" (*Bewegungstellungen*). While the distant view presented a two-dimensional image on the retina, in a painterly tradition, the near view presented a series of multi-images of more abstract three-dimensional experiences. Through the process of movement, the vision-in-motion (kinetic vision) prevents the whole from being assimilated in one glimpse but creates

a series of successive impressions. Hildebrand proposed that we use these two types of viewing simultaneously to conceive and perceive of form in three-dimensions (Holt-Damant 2004: 31).

While the sensory experiences of architecture are normally associated with the traditional senses, such as sight and sound, we argue that Hallen's architecture extends to include the haptic (touch), producing sensory encounters with building elements, textures, and materiality, and also a seventh sense, that of proprioception. With origins in the medical disciplines, a sense of proprioception is defined as "one's awareness of their body's position and movement through space" (Calvo-Salve and Willenbrink 2019). "It contributes to both the conscious and unconscious awareness of limb and trunk position and movement" (Valdes, Manalang and Leach 2024). Informed by the philosophy of phenomenology, and applied in architecture, proprioception has been duly adapted to study sensory relationships within architectural spaces (Sepanta 2022). This correlates closely with Norberg-Schulz's concept of movement derived through pathway and direction by introducing a dynamic experiential dimension (Norberg-Schulz 1971: 18-21).

We contend that Hallen's architecture induced a range of sensory experiences including that of proprioception, through the specific incorporation of artwork. Examined are a selection of Hallen's early buildings that demonstrate these ideas through various design strategies, leading to a more mature and comprehensive approach to the integration of art in the later work. This is organised under three headings: early beginnings, experimental development, and mature work.

Early beginnings: landscape and movement

Soon after establishing his practice in Durban, Hallen submitted an entry in 1964 to a design competition for a Voortrekker monument to be located at Winburg in the Free State, where in 1837 the Voortrekkers had camped before dispersing eastwards and northwards. Called for was an expression of the striving for freedom, acknowledging the role of women in the trek, and the representation of the five trekker parties symbolically by streams of water (Peters 2012 2014).

The competition jury found that few entries had used the topography of the site to inform their designs. Hallen's winning design, however, was located on a knoll, making the landscape part of the symbolic experience. On this knoll, five concrete half pipes representing the trek parties reach upwards, with the tops of the pipes sliced at their terminations to evoke the horns of draft oxen. The pipes define an internal protective space, the roof to which has waterspouts cantilevered from a low linking roof decanting water into oval-shaped stone bowls. There is a deliberate change of scale from the tall elements seen at a distance, to the protective intimate space below the linking roof symbolising the role of the women, although the concomitant figurative statue never materialised. The entire structure is constructed of exposed concrete, not unlike grain silos in this area, and abstractly represents the required symbolism through materiality, form and spaces. The monument is itself a sculptural work of art, but carefully set within the larger landscape as an essential part. Part of the visitor's sensory experience is induced by the placement of a meandering stepped pathway linking the parking area at the foot of the knoll, up the slope to the base of the monument.

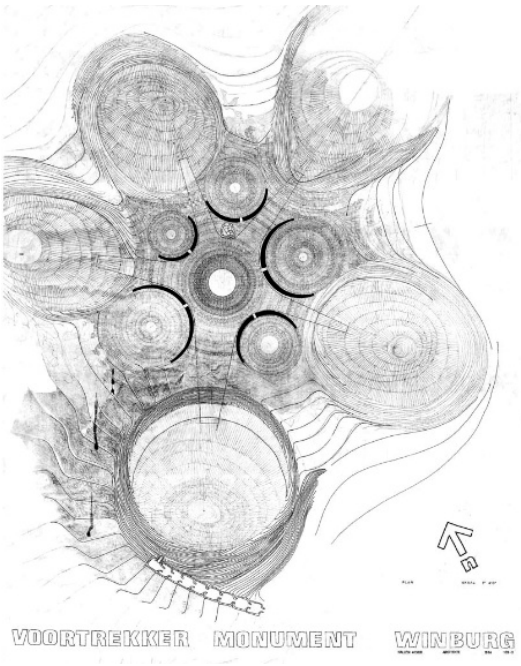

Figure 3
Hallen Dibb and Partners, Voortrekker Monument, Winburg, Free State, 1966. Competition entry plan (source: Prysvraag, *South African Architectural Record*, August 1965: 28).

Figure 4
Hallen Dibb and Partners, Voortrekker Monument. The monument on the knoll (source: courtesy Walter Peters 2012).

Winning the design competition with its subsequent construction in 1967-68, thrust Hallen into national prominence. It also provided an early demonstration in the design of what might be considered a large scale sculptural artwork itself, where sensory experiences are

heightened by its landscape siting and the conscious design of the movement pathways to enhance the experience.

A couple of years after winning the monument competition, Hallen began a series of commissions for the Norwegian Mission Society that would define his *oeuvre*. His family connections with the Norwegian community in Durban and the Swedish Lutheran Mission at Rorke's Drift resulted in a commission for a new arts and craft training centre at Thabana Li Mele, Lesotho in 1967.

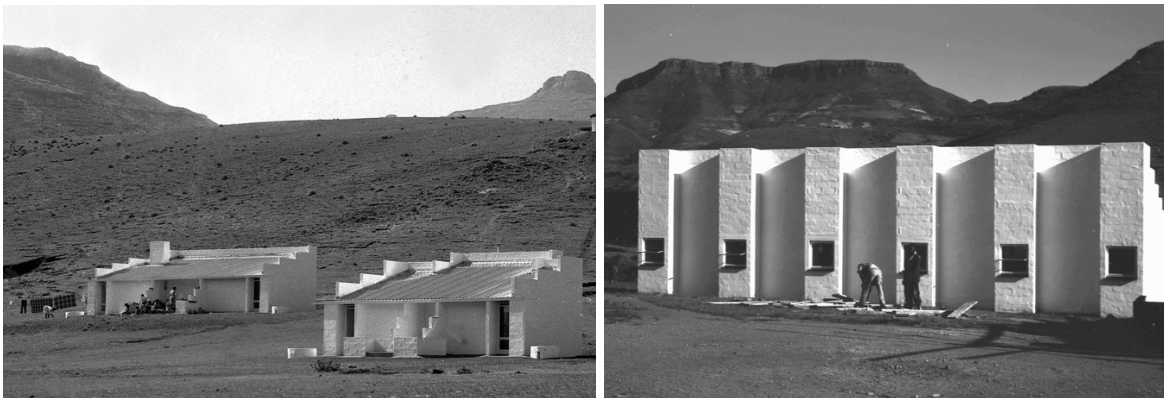

Figure 5
Hallen and Dibb Architects, Thabana Li Mele, Lesotho, 1967
(source: June Meiring-Hallen).

The Mission at Rorke's Drift in KwaZulu-Natal provided a skills-based training in tapestry, weaving and ceramics, offering potential income and employment to the local community. The original founders of the arts and crafts centre were Ulla and Peder Gowenius, who sought funding from the United Nations Development Fund and the Swedish International Development Agency to set up a second, independent centre in neighbouring Lesotho (Hobbs 2020: 10-12). The tight budget and dramatic rugged site presented Hallen with an opportunity to bring all the themes together in an innovative and affordable design. The somewhat modest buildings were given symbolic power by integrating the dramatic landscape as part of the architecture:

> Hallen's response to this landscape, was an assemblage of modern, white, detached pavilions, arranged along the contour lines. It was an architecture of walls, modulated by light and shade; the whiteness of which contrasted sharply against the black rocky backdrop of the mountain range (from which the Centre takes its name).
>
> Each structure was firmly embedded into the landscape, forming the layered floor, with the mono-pitch roofs aligned to the steep slope of the land. The space between each building was as important as the buildings themselves. Light at this altitude is intense, and casts sharp blue shadows from the angled walls, and a deep modulation in the window openings in the walls. Experienced first from a distance, then on approach, and finally by proprioception as one moves into and through the spaces…
>
> The modernist, white-walled cubic forms appear like beacons in the landscape, celebrating the potential for this rural community. Hallen contributed no artwork to these buildings, as the artists themselves brought life, colour and texture to the spaces and landscape with their daily work. Outdoor vertical weaving looms with dyed wool drying over lines, hung like giant murals in the courtyards. While men, women and children all dressed in the customary Basotho blankets worked

together creating a sensorial image of convivial collaboration. (Holt, Haarhoff and Peters 2026: 61-3)

Although these two early buildings produced a *modus operandi* that defined and set his architecture apart, Hallen's later work sought to deepen the integration of art through a process of collaboration with many artists and in different mediums.

Experimental development: artwork and architecture

An early application of integrating art in buildings came in the collaboration with Janusz Warunkiewicz, architect of Durban's Ocean Terminal completed 1961, and in House Masojada, designed by Hallen, 1961-62. In the former project, the two contributed sculptural *bas reliefs* and panels in the restaurants, while in the latter each animated a side of a concrete wall supporting the bedroom wing of the house designed by Hallen (figure 6).

Figure 6
Hans Hallen, House Masojada, Berea, Durban, 1961-62.
View of support wall to which artwork was applied
(source: *South African Architectural Review*, July 1963).

However, artistry was not only the preserve of Hallen's signature buildings. He began involving artists in affordable apartment blocks, first at Stellenberg, 1962, in which he designed a dedicated entry wall for embellishment by ceramic artist James (Jim) Hall (figure 7). While many of the projects of this time required simple rectangular forms and inexpensive materials to control costs, Hallen also enriched the visual appearance by introducing strong sculptural forms such as staircases, as seen in the example of Stellenberg.

Figure 7
Hans Hallen, Stellenberg, Berea, Durban, 1962. Left, a view of the building from the street. Right, detail showing Jim Hall's ceramic panel including the building name at the entrance, and the adjacent sculptural staircase form (Source: Hans Hallen photographs courtesy June Meiring-Hallen).

There are other examples of Hallen incorporating artwork in architecture over the 1960s, especially collaborating with artists during the design stages. One of the most evocative examples of sensory experience is in St Olav's church on Durban's Berea (1966-68). It is here that proprioception is consciously considered, before being developed further as a concept in the 1970-80s.

Early in Hallen's career, he was presented with a series of opportunities to design and build churches. Through these modest commissions he was able to hone his understanding of form and space conception, building up a distinctive approach to making architecture enriched with art. The urban context of St Olav's Norwegian Lutheran church stood in stark contrast to the rural free-standing monument of Winburg. Sited on the former tennis courts of the Norwegian club, and tucked behind its community hall, the site afforded little visibility from the street. This was mitigated by incorporating a tall exposed concrete belltower serving as a visual landmark, drawing the congregation towards an entry courtyard (figure 8). The church is internally focussed and defined by an octagonal auditorium of solid red brick walls. To adapt the enclosed spaces for the sub-tropical climate, Hallen introduced passive ventilation systems (Peters 2014). Fresh air enters the space at a low level through apertures along the perimeter walls, while stale air escapes upwards through the clerestories of the monopitch roofs, that surrounds the lowered central portion of the roof.

While the interior has no outlook, it is filled with light. Similar to the Winburg monument, the monumental forms shape the natural light producing ever-changing patterns through the clerestory windows. Such control of light directs where the congregation look and what they will see. For instance, the shaft created by corbelled bricks that light the sanctuary, or the coloured, tall slit windows that accent the corners of the octagon bringing an ethereal light and a sense of immanence into the place of worship (figure 9).

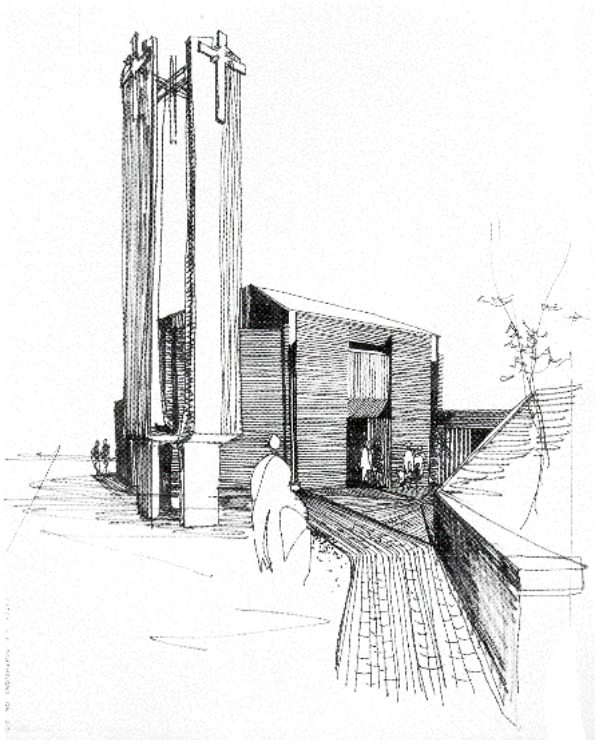

Figure 8
Hans Hallen, St Olav Lutheran Church (1966-1968), Berea, Durban, recessed from the street. Sketch by Hallen (source: Hallen Drawings Collection, Technical Reference Library, UKZN).

Figure 9
Hans Hallen, St Olav Lutheran Church (1966-1968). View to sanctuary. Note the daylighting penetrating through the clerestories over the lowered central roof; to the altar by way of a shaft of light, and the predominantly red *dalle de verre* strip windows on either side (source: Roger Jardine 2014).

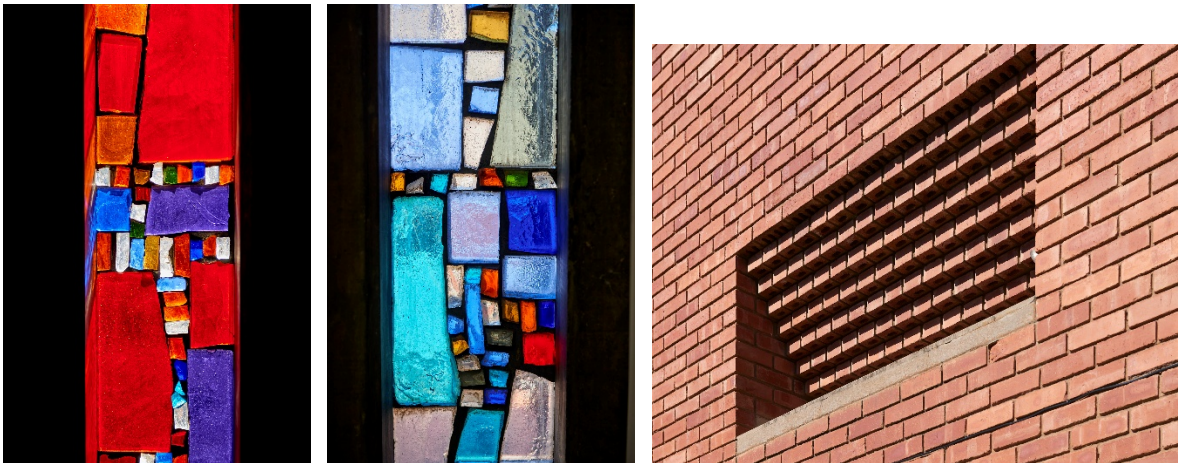

Figure 10
Hans Hallen, St Olav Lutheran Church (1966-1968).
Left, two examples of *dalle de verre* strip windows by James Hall.
Right, the corbelled aperture through which a shaft of light naturally illuminates the altar (photographs by Roger Jardine 2014).

Hallen sought to increase the sensory experience of the congregation using movement. Firstly, by inclining the floor plane, the path from arrival to seating is gently directed down towards the altar. Secondly, by knowing where one is in space and in relation to others he induces proprioception. Hallen's widow, June Meiring-Hallen, recalls from their last trip to South Africa in 2016 how this worked: "The realisation of one's body, one's time-limited self, feeling the passing of time as the light in the building changes and the sounds from choir to organ that reverberate from the ceiling and the walls" (Holt, Haarhoff and Peters 2026: 49).

But most striking is the incorporation of artwork into the architecture, using the contemporary technique of *dalle de verre*, in which coloured slabs of glass were set in a matrix of black epoxy resin[4] (figure 10). Hallen had personally imported the glass, epoxy resin and sand filler from France in preparation of the task, that he was to make himself. As events unfolded, and Hallen had come to admire the skills of James Hall, both as an artist and technician, and the task was re-assigned to him. Hall carried out the craftsmanship for the glazing of the tall and narrow panels, but the colours for each orientation were selected by Hallen. Red was chosen for the sanctuary, the colour of the chasuble (vestment) worn on high festivals of the church, while green, blue and yellow dominate the other sides.[5]

Mature work: the integration of art and architecture

Two buildings stand out as examples that consciously involve the integration of art and architecture, both inviting collaborations with artists as part of the design team in the late 1970s and early 1980s. The first is the Mangosuthu University of Technology (MUT), uMlazi, Durban (1978-83), formerly the Mangosuthu Technikon. This was the realisation of an ambitious project to build a privately funded tertiary educational facility in the township of uMlazi, south of Durban. Designed to create new opportunities for education and training

[4] Other examples of *dalle de verre* can be found in slit windows of House Shaw, 1966-67, and in a bull's eye window of the staircase of Jim Hall's own house, which Hallen designed, 1969-70

[5] Hallen email to Walter Peters, 30 August 2014.

among those impacted by apartheid, the chief minister of the KwaZulu government, Mangosuthu Buthelezi, spearheaded the project.

Following the initial feasibility and master-planning, Hallen Theron and Partners were engaged to design and deliver phase one. Hallen's underlying objective was to create an educational facility of the highest order. It needed to be flexible for future growth, adaptable to change, and require little to no maintenance. It was constructed from local materials with labour sourced from the region. This vision was described as a "temple of hope" in an era of social and political despair (Biermann 1983: 15).

MUT is first seen from the nearby freeway. As one gets closer moving through the township, the distant view resembles a two-dimensional painterly image of an Italian hilltop town, very much like the artist and sculptor, von Hildebrand had described.[6] As one approaches the complex that is designed around a courtyard, a series of successive impressions are revealed (figure 10). These images complete the near view, offering a more tactile three-dimensional experience assembled from the kinaesthetic "visions-in-motion" (Holt-Damant 2004: 31). From the forecourt, Hallen leads the viewer into and through the complex. Carving pedestrian paths and routes through and between the assembly of buildings, towards the internal social space of the courtyard.

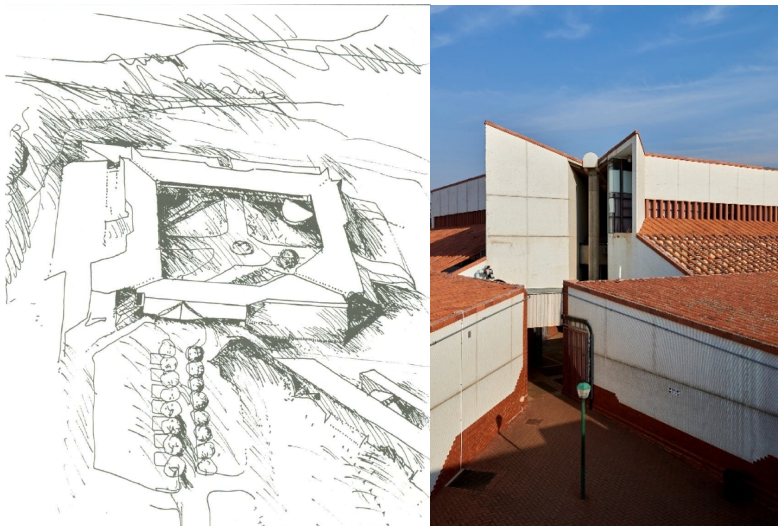

Figure 11
Hallen and Theron, Mangosuthu University of Technology (1978-83). Left, aerial view sketch by Hallen showing the central courtyard (source: *Architecture SA*, Jan/Feb 1983).
Right, the diagonal corner entrance (photograph by Roger Jardine 2014).

The local bricks are typified by the red iron oxides found in the soils and clays of KwaZulu-Natal, contributing to a concordance of landscape and built form. The bricks are corbelled and bevelled at the corners and window openings to give decorative expression to what would be an otherwise flat wall, celebrating the shadows cast by the intense subtropical light. These simple materials were used in many innovative ways to provide cladding, control of solar penetration, handrails and even planter boxes in terracotta clay (figure 12).

[6] Example of drawings and paintings by Hallen of hilltop towns in Europe are in Holt, Haarhoff and Peters, 2026.

Figure 12
Hallen and Theron, Mangosuthu University of Technology (1978-83). Left, a transformation from bevelled corner to right angle by way of corbelled and inverted plinth header bricks. Right, a triangular aperture of hollow blocks laid diagonally (photographs by Roger Jardine 2014).

Renowned South African artist, Andrew Verster (1937-2020), worked with Hallen on many projects, as artist-in-residence, collaborator and as a commissioned artist. Collaborating with Hallen on MUT, Verster designed, co-fabricated and installed the translucent glass-etched panels of the vestibule. This artwork was so closely intertwined with the architecture, that as a first experience entering the university, the foyer set the benchmark for the high quality of art-enriched spaces to be found throughout the campus (figure 13).

Figure 13
Hallen and Theron, Mangosuthu University of Technology (1978-83). Vestibule enclosed with glass-etched panels by Andrew Verster and craftsman Audie Neal
(photograph by Hans Hallen, courtesy June Meiring-Hallen).

The original artworks of abstracted ink drawings were transferred onto the glass panels, then masked with “black Japan” and finally etched. This process was repeated up to five times to achieve the different depths of layered translucency required for each glass panel.

Fifteen additional South African artists, both leading and emerging, were coopted by Verster to contribute artworks to MUT. These are distributed throughout the teaching spaces. Some of these works, such as the main feature fountain in the courtyard by Clive van den Berg, or the mosaic tiled walls on the entry façades to the students' residences, are closely integrated into the architecture (figure 14).[7]

Figure 14
Hallen and Theron, Mangosuthu University of Technology (1978-83).
Fountain in the courtyard of MUT by Clive van den Berg
(photograph by Roger Jardine 2014).

The second building demonstrating a maturity of integrating art and architecture is the Brenthurst Library in Johannesburg (1977-79). At the opposite end of the spectrum to a private university for social good, this commission presented a once-in-a lifetime opportunity to design a bespoke private library, conceptualised as an inhabitable sculpture, for a patron of the arts, Harry Oppenheimer.

The library was to accommodate and conserve the prized Oppenheimer Africana Collection comprising valuable manuscripts, letters, paintings and watercolours pertaining to the history of colonisation in Southern Africa. Increasing requests from researchers to access the material, along with unfavourable storage conditions in an old house, necessitated a new climate controlled, state-of-the-art library and storage facility. The historic grounds of the Brenthurst Estate provided the site for the new library where it was to be nestled into the *koppie* and wedged between the freeway and the main entry.

At first glimpse from a distance, the library resembles a collection of Renaissance-like treasuries or chapels, defined by polychromatic façades. There has been some debate about whether Hallen was influenced by architects like Louis Kahn, or even James Stirling whom he had met while in London in the 1950s. Acknowledging that a number of architects in his practice had studied with Kahn at the University of Pennsylvania,[8] Hallen preferred to credit the Italian masters for his inspiration, as demonstrated by his poster *Borromini We Need You* (figure 2).

[7] Hallen collaborated with Clive van den Berg on another fountain that was a centre piece to the Gugu Dlamini Park, part of the Centrum development in Durban by Hallen, Theron and Partners, 1985.

[8] The class of 1961-62 included Jack Diamond, partner in the Diamond and Hallen practice, and Danie Theron of the practice Hallen Theron and Partners, which later included Kahn-graduate Lance Smith.

The library presents a suite of customised buildings; each hosting a single function and assembled around the central, groin-vaulted reception pavilion. The buildings are embedded into the topography, with each building articulated by a landscaped courtyard that extends out into the main garden beyond. Visitors are guided towards the building through gardens tempered by the topography and natural landscape. These directed paths of movement slowly reveal the forms and spaces of the whole, reminiscent of Hildebrand's "vision-in-motion", while revealing the *genius loci* of the highveld (figure 15).

As one approaches the building, the detail and materiality comes into focus, balancing a rich array of materials, both rough and polished, that resonate with the character of the region. Striated bands of travertine separate the slightly grainy Transvaal face-bricks, providing a human scale to the building forms while countering the smooth finishes of the marble and granite floors. The porthole windows in each of the enclosed cross-vaults of the reception area, are encircled with gold-leaf, acknowledging the resources and mining industry upon which Johannesburg was built. The windows are filled with translucent rose marble.

Figure 15
Hallen Theron and Partners, Brenthurst Library, Johannesburg (1977-79). Entry forecourt (photograph by Hans Hallen courtesy June Meiring-Hallen).

As was typical of Hallen's design repertoire, the integration of art and craft were intrinsic to the Brenthurst Library. Hallen recruited Andrew Verster to design and fabricate two portal doors to the library, who in turn worked with Hannah Lurie, the well-known South African sculptor to model the first maquette panels in clay before casting in aluminium. One door serves as the main entry and the other the great gallery, which is used for ceremonial purposes only, but both allude to Renaissance baptisteries (figures 16).

Figure 16
Hallen Theron and Partners, Brenthurst Library, Johannesburg (1977-79). Left, the main entrance door. Right, the ceremonial door between columns lined with stainless steel (photographs by Hans Hallen, courtesy June Meiring-Hallen).

In addition to accommodating the vast Brenthurst art collection, Oppenheimer commissioned two further murals for the library. The first was from Verster and located in the book stack area. Placed at eye-height, it provides an evocation of the bleached-out colours of the highveld landscape. The second mural was by Australian artist Leonard French (figure 17). Oppenheimer invited French to visit South Africa with the brief to paint his impression of the future of the country. French's response was a six-piece mural entitled *Bridge of Reconciliation* which represents South Africa as a country he perceived as thoroughly divided and far from united. Its commanding position in the reception area is significant, as it sets the tone for the library, prompting the visitor to ponder whether the gap in the bridge might soon close or open wider.

Figure 17
Hallen Theron and Partners, Brenthurst Library, Johannesburg (1977-79). The reception space and main entrance door is just right of centre, while the ceremonial door can be seen outside through the window left of centre. At right, Leonard French's mural, *Bridge of reconciliation*, 1982 (photograph by Leon Krige, 2022).

Conclusions

Hallen completed his secondary school education in 1948, the same year that the then white government of South Africa introduced laws that created apartheid. Apartheid consequently coloured his time at university and his professional life as an architect in South Africa. As architectural writer and critic, Catherine Slessor observed, many architects:

> …simply left the country, their talent and energy dissipated and disperse around the globe. Those who stayed either swallowed the bitter pill and anaesthetised themselves against state horror or tried to alleviate conditions by modest technical means and political interventions (Slessor 1995).

Hallen was among many who chose to stay, or had no alternative, but actively expressed an opposition to the apartheid regimes during this period. When appointed as President in Chief of what was then the Institute of Architects (1974-75), Hallen used this public platform to openly express his opposition to apartheid, the disenfranchisement of the majority of South Africans and destructive impact it had on South African cities. Notably, his clients were from different backgrounds, but he sought to deliver the best architecture that could enrich the lives of all peoples. His opposition to apartheid led to being appointed to the board of the Urban Foundation in South Africa. He served on the Council of the International Union of Architects 1975-1981, where he motivated to have Africa recognised as a separate region. Hallen was inducted as an Honorary Fellow of the American Institute of Architects in 1981.[9]

The design strategies he strove to incorporate in all his buildings were intended to deliver good social outcomes on the part of all users, by elevating their sensory experiences through conscious design strategies. At different scales, each of these buildings demonstrate Hallen's *modus operandi*, that closely integrates art into the architecture, which was unusual in South Africa at that time. Drawing people across cultures and language groups, Hallen surrounded himself with talented architects, artists, engineers, teachers, sculptors and crafts people who were as creative and passionate about design as himself.

Even more distinctive is the way in which the spatial experience was augmented by the sense of proprioception induced by the design. The coherent unification of the architecture, including form, materiality, and integrated artwork, all lead to a strong manifestation of the spirt of place – the *genius loci*. Undoubtedly, such outcomes were shaped by Hallen's own artistic abilities and the artist collaborations he formed, all of which imbued the haptic and experiential qualities of the architecture, perhaps best encapsulated by his poster: *Borromini We Need You*.

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Walter Peters is an emeritus Professor of Architecture of the University of KwaZulu-Natal and a Research Fellow of the University of the Free State. His fields of research and publication cover the history of architecture in Namibia and South Africa. Over four decades he served as editor of the Journal of the KwaZulu-Natal Institute for Architecture. He is a Sophia Gray laureate and is the recipient of both a Writers and Critics Award and a Medal of Distinction from the South African Institute of Architects.

Circular architecture in production glass hotshops

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This paper unpacks the symbolic, cultural and ecological significance of circular architecture integrated in glass hotshops, underpinning its historical background and contemporary significance. From the seventeenth century red brick cone-shaped superstructures in England, to the contemporary ecological forms of Kitengela Glass in Kenya, the rhythmic, communal and collaborative nature of glassmaking has consistently been supported by circular hotshop layouts. Informed by anthropology, architectural theories and site-specific case studies – Kitengela Glass (Kenya), Ngwenya Glass (eSwatini), Novotný Glass and Ajeto Glass (Czech Republic) – this paper suggests that circular layouts are of crucial value to hotshop production; they are not incidental. These spatial layouts encourage dynamic flow and team collaboration, encompass cosmological symbolism, and inspire sustainable practices. Although the circular layout is no longer vital within industrial spaces, the circular layout continues to form the lived experience of glassmaking, mirroring glass in its fluid state and the shared experience of its makers.
Keywords: circular architecture, glassblowing, community, sustainability, symbolism

Sirkelvormige argitektuur in produksie warmglaswerkswinkels
Hierdie artikel ontleed die simboliese, kulturele en ekologiese betekenis van sirkelvormige argitektuur wat in glaswerkswinkels geïntegreer is, en beklemtoon beide die historiese agtergrond en hedendaagse relevansie daarvan. Van die sewentiende-eeuse rooi baksteen koniese superstrukture in Engeland tot die hedendaagse ekologiese vorms van Kitengela Glass in Kenia, is die ritmiese, gemeenskaplike en samewerkende aard van glasmaak deurgaans ondersteun deur sirkelvormige werkswinkel-uitlegte. Met insigte uit antropologie, argitektuurteorieë en plekspesifieke gevallestudies – Kitengela Glass (Kenia), Ngwenya Glass (eSwatini), Novotný Glass en Ajeto Glass (Tsjeggiese Republiek) – stel hierdie artikel voor dat sirkelvormige uitlegte van deurslaggewende waarde is vir warmglasproduksie; dit is nie toevallig nie. Hierdie ruimtelike uitlegte bevorder dinamiese vloei en spanwerk, omvat kosmologiese simboliek, en inspireer volhoubare praktyke. Alhoewel die sirkelvormige uitleg nie meer noodsaaklik is binne industriële ruimtes nie, bly dit vorm gee aan die geleefde ervaring van glasmaak, wat die vloeibare toestand van glas en die gedeelde ervaring van sy makers weerspieël.
Sleutelwoorde: sirkelvormige argitektuur, glasblaas, gemeenskap, volhoubaarheid, simboliek

For centuries, circular geometry has been of cultural significance to humanity, occurring in architecture and ceremonial practices throughout history. This enduring symbolism often manifests in craft spaces, where the circular form serves both functional and communal purposes (El Katra 2020: 7). Within the glass production environment, the circular form is often evident as a design layout element within community-driven hotshops. This type of layout serves both a symbolic and functional purpose, despite glass production hotshops having transformed to meet the demands of the mass production process. This paper explores how circular architecture shapes the layout and experience of glass production, drawing on historical examples such as the Red House Glass Cone (circa 1790) in England and contemporary hotshops like Kitengela Glass (circa 1993) in Kenya, and argues that circular layouts are not only practical but also embody cultural and ecological symbolism that reinforces the community-oriented nature of glassmaking.

Originally, wood-fired hotshops were in the form of a rectangular shed, which contained the furnace and a chimney or simply a hole in the roof to let the fumes out. In the second half of the sixteenth century in England, coal became a widespread substitute for wood as a fuel, due to Britain's early economic revolution's first energy crisis: deforestation. The adoption of coal changed the economic history of Britain and Europe, which in turn led to the Industrial Revolution (Nef 1977: 140). At the beginning of the seventeenth century, the English glass

industry adopted coal as a fuel, resulting in a considerable reduction in costs, enabling sales and production to increase. Glass manufacture reflects the architectural and industrial innovations of Britain's Industrial Revolution[1] and became an important part of the coalfield economy in Europe (Crossley 2003: 161). Toward the end of the seventeenth century, areas in England such as Stourbridge erected tall cone-shaped glasshouses constructed of red brick. The landscape from Stourbridge to Dudley was characterised by these red, conical-shaped superstructures, which housed the central furnace around which the glass artisans worked. The conical-shaped architecture of these seventeenth to eighteenth-century glasshouses created both a working space for the production of glass and performed the function of a chimney for the furnace, reducing fumes and smoke build-up in the interior.[2] The circular architectural form of these structures mirrors and enables the way the glass artisans utilise the space around the central furnace in a repetitive movement and intuitive choreography of the glassmaking process.

Figure 1
Glassblowing, *Agricola, De re metallica*. Sixteenth century
(retrieved from https://www.eaia.us/post/the-tools-of-america-s-first-glass-blowers).

[1] The British Industrial Revolution (1760-1840) brought mechanisation, innovative and great social change. Industrialisation introduced the invention of steam-powered mechanisms, which were used in factories in ever-growing urban centres (Cartwright 2023).

[2] Dudley Metropolitan Council. 2025. *Red House History*. Retrieved from https://www.dudley.gov.uk/things-to-do/museums/red-house-glass-cone/red-house-history/#skip-main on 7 July 2025.

These early glasshouses can be considered to be more than a mere practical response to the needs of an industrial or production hotshop. The cultural and symbolic meanings of circular architecture should also be considered here. In *Built Upon Love,* Alberto Pérez-Gómez (2011: 37) unpacks "architecture that offers societies a place for existential orientation". A typical example of this is discussed by Pérez-Gómez and is the proportionally harmonious, circular layout of ancient Greek theatres which Vitruvius[3] suggests are capable of giving humanity a sense of meaning and inclusivity (Pérez-Gómez 2011: 37). Additionally, Banister Fletcher and Flight Banister Fletcher (1905: 1) refer to Vitruvius' explanation of the origins of architecture: "man in his primitive state imitated the circular nests of birds and the lairs of predatory mammals; creating shelters of twigs that were first covered in mud which then developed into huts formed by branches and tree stumps covered with packed earth". Similarly, the megalithic ritual circles (cromlechs) of Stonehenge[4] and the vernacular circular huts found in many African cultures, exhibit circular spaces that have historically been used to gather people into communities (North 1996: 39–49; Oliver 1997: 132–5). These examples highlight how circular architecture, beyond its symbolic significance, also fosters shared presence and mutual awareness – qualities that serve as tangible counterparts in the working rhythms of production glass studios. Likewise, in glass hotshops, the sharing of tools, materials and often knowledge, and the proximity that artisans work in, requires an unspoken form of communication – qualities reflected in circular architecture.

Figure 2
Stonehenge, England
(photograph by the author).

[3] Vitruvius served as a military engineer, architect, and theoretician under Caesar Augustus in the first century BCE (University of Colorado Boulder Libraries. 2024. Architecture and design: Critical regionalism. Retrieved from https://libguides.colorado.edu/c.php?g=1084056&p=7902486 on 24 June 2025.

[4] Stonehenge is a prehistoric megalithic monument located in Wiltshire, England, constructed between 3000 and 1600 BCE. Composed of a circular arrangement of standing stones, it is widely believed to have served ceremonial, astronomical, and communal functions (North 1996: 39–49).

A contemporary example of a circular production hotshop design that exhibits a sense of a shared creative space is the architecture of Kitengela Glass in Kenya, which integrates environmental principles, recycled materials, and is aligned to the celestial planes.[5] Together with the symbolic orientations, the architecture and layout of the Kitengela Glass studio show an awareness of ecology and African cosmology. This contemporary design is an example of how glass hotshops can be inspired by vernacular architectural traditions and at the same time encourage sustainability and community. A form of spatial storytelling is embedded in the material practice of glassblowing.

In this paper, the circular architecture of glass production hotshops is discussed within three intersecting discourses: symbolic and cultural understandings of circular space, historical glassmaking hotshops and practices, and contemporary ecological design. This paper argues that the often-recurring circle form of hotshops is not incidental but an architectural expression of deeply embedded values of glass as a medium: fluidity, transformation, interdependence, and resilience. Through the discussion of historical glasshouses and contemporary hotshop practices, this paper aims to open a cross-cultural dialogue about how space influences not only how we make, but also how we think, feel, and connect through the craft of glassmaking.

Symbolic and cultural understandings of circular space

The circle is a symbolic and esteemed universal form of wholeness, unity and inclusion that spans multiple societies and epochs (Wordsworth, n.d.). The frequency of its recurrence in sacred and domestic architecture is testimony to its resonance with basic human values: collectivity, balance, and continuity (Pérez-Gómez 2011: 38). In glass production hotshops where collaboration is an inherent part of the making process, the circle is especially significant as a spatial and a symbolic structure that supports societal togetherness, incorporated practice, and community identity.

The symbolism of the circle has long fascinated architects, anthropologists and philosophers such as Gaston Bachelard. In *The Poetics of Space,* Bachelard (1994: 30) describes the house as an enclosed space, a vessel for dreaming; he thus accentuates the rounded form as an intimate, memorable and psychologically safe place. He argues that the circular enclosure is "a cell that protects", creating an embodied experience of wholeness and progression. In environments that encourage a shared experience, such as the glass production hotshop, this idea is extended by the rhythmic movement around the centrally situated furnace, which invokes ritualistic or cyclical human behaviours. In traditional glassmaking production hotshops, the spatial choreography of the workshop epitomises this cyclical nature. In *Collaborative Art in the Twenty -First Century,* contemporary American choreographer Martha Graham's[6] statement "Nothing is more revealing than movement" is used as an example to explain the fluid, choreographed movement of unspoken communication that can be seen in a team of glassblowers; the gaffer[7] uses inaudible, subtle signals; a glance, a nod, a gesture of the hand or body (Bacharach *et al* 2016: 188). This continuous flow of movement mirrors the inherent properties of glass – fluid, rotational, centrifugal, as well as the symbolic qualities

[5] Kitengela Glass. n.d. Home and Anselm's story. Retrieved from https://www.kitengela.glass/pages/our-story on 20 June 2025.

[6] Martha Graham (1894–1991) was a profound American choreographer who formed modern dance through expressive body movement and emotional themes (Retrieved from https://marthagraham.org/history/ on 10 July 2025.

[7] The gaffer who is the team leader is the most experienced member of the group who directs the team (Bacharach et al 2016: 188).

inherent in a circle as infinite and inclusive (Adamson 2016: 66-7). The continuous circular spatial use by both body and knowledge within the studio reflects the structure of the circular form itself.

The field of anthropology connects the circular structures, found in vernacular architecture, to the social and symbolic meanings inherent in cultural practice. Circular homes, meeting sites and places of ceremonial practice are common in traditional societies. The hierarchical nature of the circular dwelling and kraal in African vernacular architecture reflects deeply rooted social, cultural, and spatial orderings within traditional African societies. The hierarchy is not merely physical but symbolic, communicating relationships of power, age, gender, spirituality, and function (Ndhlovu 2023). This spatial layout is discussed in the context of Southern African Zulu culture of the early eighteenth and late nineteenth centuries (figure 3). The traditional Zulu kraal layout, borne of both practical and cultural symbolism, consists of numerous beehive-shaped huts arranged in a circular layout around a central livestock enclosure. Each section of the kraal has a designated function; in the most central position, the livestock enclosure houses the cattle, which are not only considered livestock but cultural symbols of wealth and status. The positioning of the huts is based on family hierarchy; arranged in a radial layout with the chief in the highest, central, most honoured position, flanked by the homes of his senior wives, then the younger wives and the extended family mirroring the formal hierarchy. The internal layout of the huts embodies subtle hierarchies; the centre of the hut is reserved for the hearth, and the periphery is typically divided into gender roles (Ken-Anaukwu n.d). These hierarchical forms reflect cultural and cosmological beliefs. The circle represents unity, continuity and protection. The inward-facing layout promotes collective living and surveillance of cultural behaviour (Oliver 1997: 120-40). Similarly to the circular formation of the vernacular Zulu kraal, hotshops encourage mutual visibility and interdependence, subtle hierarchies built on skills and experience. This spatial layout is evident in the contemporary hotshop practice, Kitengela Glass, where the centrally positioned furnaces encourage knowledge sharing, teamwork and embodied learning. In the context of production hotshop spaces, the shared orientation around a central furnace creates a similar spatial democracy, where each member contributes to a communal goal (Crossley 2003: 173).

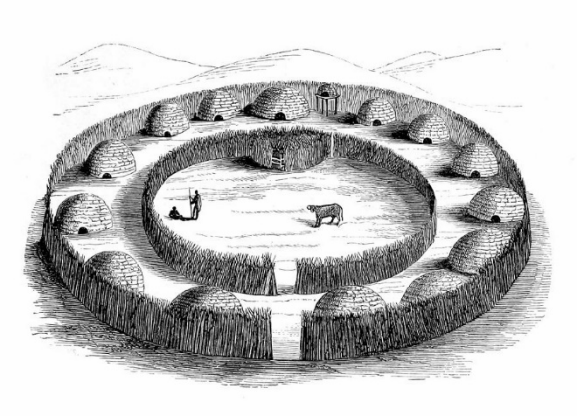

Figure 3
Layout of a circular Zulu kraal
(retrieved from https://prints.sciencesource.com/featured/south-africa-zulu-kraal-1857-british-library.html).

The essence of a collective contemporary community practice is further extended in events such as the International Glass Symposium (IGS) held in Nový Bor, Czech Republic. In October 2024, the author attended this symposium where artists, students, production

workers, and master glassmakers from around the world gathered in a shared experience of glass and its cultural traditions. The opening event of the International Glass Symposium was held at Ajeto Glass production studio, where attendees gathered around the central furnace to witness a symbolic live performance featuring aerial acrobats moving rhythmically around the central furnace (figure 4). This performance highlighted the central furnace as both a literal and symbolic hearth, encouraging unspoken forms of communication, shared momentum, and a deep sense of community rooted in mutual engagement with glass.

Circular hotshops function beyond their social significance as sensorial and temporal environments – spaces where glassmaking becomes a choreographed movement through rhythm, time and bodily presence – lived time. In *The Eyes of the Skin*, Juhani Pallasmaa (2005: 70), in his phenomenological reading of space, refers to hotshops as an embodied spatial experience of architecture. This architecture is not based only on the visual but is an experience in which curved organic spaces appeal to humanity's need for a bodily experience (Pallasmaa 2005: 45). Production glasshouses are not mundane inert structures; they function as temporal frameworks within which the rhythmic process of glassmaking – heating, shaping, cooling – transpires. Pallasmaa (2005: 39-45) argues that architecture is fundamentally a temporal art form, experienced through the movement of the body and the unfolding of time. In this context, the glasshouse is not only a site where glass is made but a sensory and temporal environment which is organised by labour, the transformation of material and the shared ritual of glassmaking.

Figure 4
Opening night of the International Glass Symposium 2024, at Ajeto Glass in the Czech Republic (photographs by the author).

Alberto Pérez-Gómez (2011: 40) discusses how architecture can create a setting where the experience of being, and the meaning derived from it, is framed by time. In the first architectural theory text dating from the first century BCE, Vitruvius discusses the way the ancient Greek theatre conveys to the participant a sense of inclusivity and an understanding of their place in the world, through a mimesis of the cosmos. The circular plan of the building is

a reflection of the cosmos; the lower sections of the auditoriums are divided into 12 wedge-shaped sections called *cunei*, which are mimetic of the cosmos, the cyclical nature of life and time, and which also echo the human perception of existence and belonging. Historical examples such as Stonehenge (figure 2) in Britain further reinforce the link between circular forms, ritual, cosmology and temporality. This ancient stone circle was constructed as an astronomical marker; a site intended for ritual engagement with the cosmos and cyclical patterns of nature (North 1996: 39-49). These circular structures denote humanity's innate need to map its agricultural, spiritual and social activities using recurring cycles of nature. This same nature of repetitive cycles underpins the work of glassmakers, where timing, repetition, and seasonal rhythm dictated by extreme temperatures govern hotshops. Thus, the circular form, a temporal concept, becomes ingrained in the logic of making.

Contemporary glass hotshop architecture continues to interpret the symbolic language of circularity. Circular layouts are no longer an industrial necessity as in the early English glass cones, but contemporary studios are prioritising collaboration, ecological consciousness, and cultural storytelling. Kitengela Glass in Kenya is an example of a glass studio that reinterprets the symbolic language of circularity within a broader African context. The symbolic power of the circle is emphasised by the studio's relevance to local tradition, the use of recycled glass and the architectural integration of the building with the surrounding landscape (figure 7).[8] This hotshop does not mimic Western models but creates a hybrid that pays homage to both local craft practice and African vernacular heritage.

Historical glassmaking hotshops and practices

Historically, glass hotshop architecture was informed by the physical challenges initiated by molten glass, the synchronised choreography of a shared creative effort and symbolic and ideological structuring of spatial design (Hajdamach 2009: 183–5). The iconic conical "superstructure" that dominated the seventeenth to nineteenth century European skylines was the most architecturally prominent form to emerge in the production of hot glass facilities. The organisation of space within these structures reflects an interaction between the technical restrictions created by the medium – glass – and the communal nature of its production practices (Crossley 2003: 173).

Glassmaking centres in Britain predominantly used the circular or conical layout for production hotshops. From a functional perspective, the circular format solved the problems of thermodynamics and ventilation. These conical superstructures of the seventeenth to nineteenth century created a draught that could be controlled through the central furnace and flue. This had been achieved in previous glasshouses; the draught may have been regulated by opening and closing the melting furnace-gathering holes, or they would have used shutters in the underground air passages. There is no doubt as to the efficiency of the cone's ability to create a draught; the conical form guided smoke and hot air upward through the central chimney, ensuring that the air at ground level stayed relatively clean and controlled the furnace temperature. The glassmakers were arranged around the central furnace, the spatial and symbolic heart of the glasshouse, in a synchronised cycle of heating, forming and annealing. This layout supported a continuous workflow, an essential element to the process of glass production; molten glass must be shaped rapidly before it cools and hardens (Crossley 2003: 171).

[8] Kitengela Glass. n.d. Home and Anselm's story. Retrieved from https://www.kitengela.glass/pages/our-story on 20 June 2025.

The best preserved of four surviving glass cones in the United Kingdom is The Red House Glass Cone (1790) in Wordsley Stourbridge – 30.5 metres high, Catcliffe (1840) in South Yorkshire – 18,288 metres high, Lemington (1789) in Newcastle, – 36,576 metres high and Northern Glass cone (1825) in Alloa, Scotland – 24 metres high.[9]

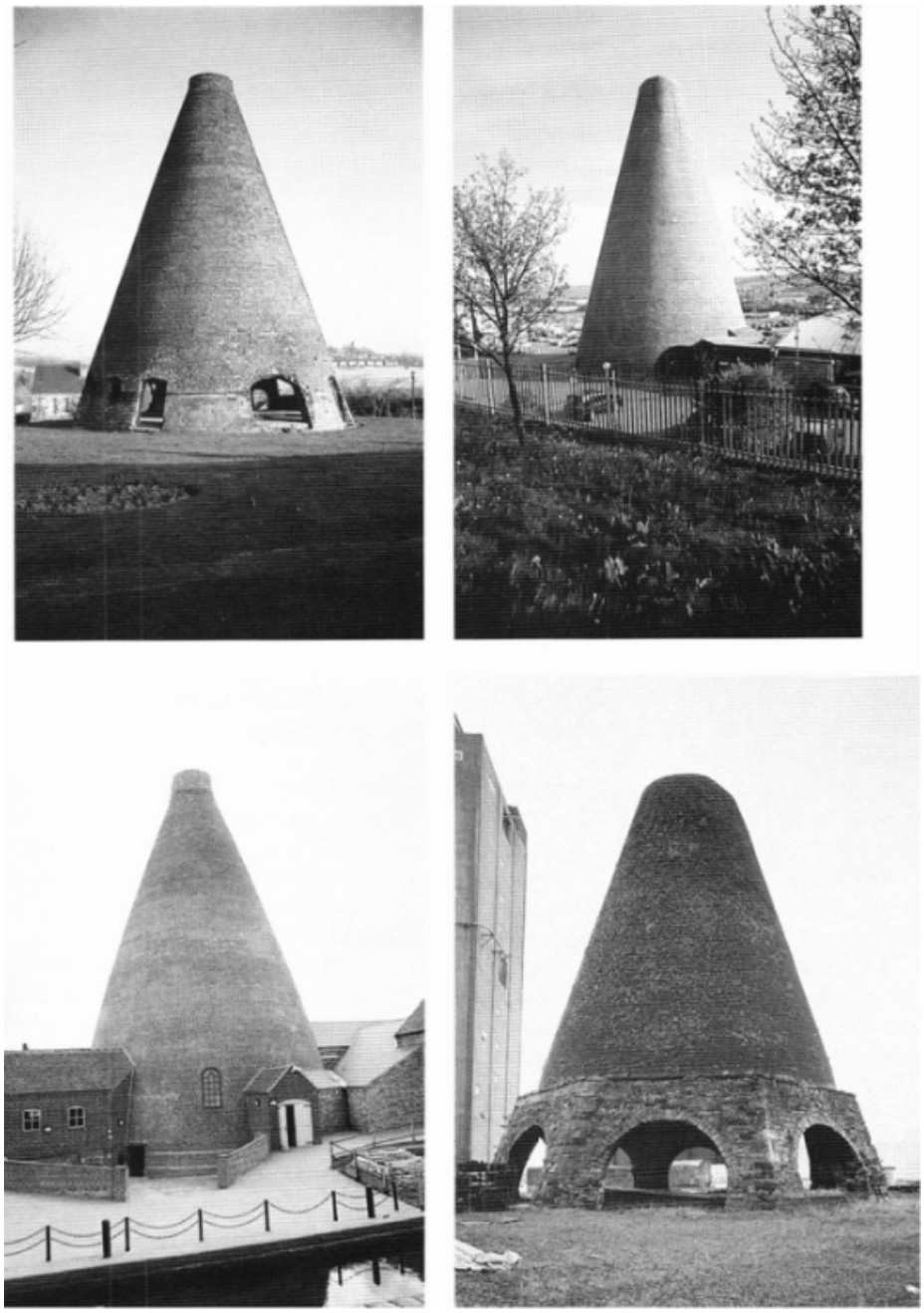

Figure 5
Standing cones: top left, Catcliffe, South Yorkshire, top right, Lemington, Newcastle. Bottom left, Red House Glass Cone, Stourbridge, bottom right, Northern Glass Cone, Alloa, Scotland (retrieved from https://www.researchgate.net/publication/285949784_The_Archaeology_of_the_Coal-Fuelled_Glass_Industry_in_England).

[9] Dudley Metropolitan Council. 2025. *Red House History*. Retrieved from https://www.dudley.gov.uk/things-to-do/museums/red-house-glass-cone/red-house-history/#skip-main on 7 July 2025.

Historical records show evidence that the interior of The Red House Glass Cone in Stourbridge provided space for the blowing of glass and for glassmakers to gather around the furnaces. Flat glass manufacture needed sufficient space to blow and spin crowns, for the swinging and flattening of glass cylinders. Annealing appears to have taken place in structures that were built around the exterior of the cone, accessed through arches (Crossley 2003: 173). More than just being a practical solution, this circular hotshop format mirrored the social organisation of glassmaking. The craft of glassblowing and hot forming is team-based; gaffers, assistants and punty holders work collectively on a single piece. The floor plan of early glasshouses such as The Red House Glass Cone allowed for good visibility and sufficient flow between team members, a necessary factor for the synchronised movements and non-verbal communication that was essential to making complex forms (Willmott 2010: 45).

Figure 6
Interior of Red Glass Cone House in Stourbridge
(photographs by the author).

The design of these historical hotshops can be additionally referenced within the wider European traditions of circular industrial architecture. Communal baking buildings, forges, kilns and factories where a centralised heat source was required used similar layouts for spatial efficiency and collaborative interaction. Architect historians have identified likenesses in the circular layout of glass cones and medieval guild halls or monastic refectories – the crucial similarity being that they are spaces where labour and ritual are evenly distributed around a central axis (Oliver 1997: 116). These spaces specifically display a spatial metaphor for togetherness, equality and artisanship.

Glass production began to transform due to industrialisation by the mid-to-late nineteenth century. Increased mechanisation, mass production and the division of labour into specialisations led to the decline of circular glass cones and the move to rectangular, modular factory designs became prevalent. These later glassmaking facilities favoured production volume over craft comradeship, processes were separated from each other, and workers were spatially isolated from the furnace and one another (Hajdamach 2009: 150-200). However, the circular production hotshop layout continues at some of the surviving heritage sites and at contemporary studios such as Ngwenya Glass in eSwatini under the ownership of the Peterjohn family in 1987 (figure 8), Kitengela Glass in Kenya in 1993, Novotný Glass in the Czech Republic in 2007 (figure 9), and Ajeto Glass in the Czech Republic in 1994, that continue to position the furnace as the core of the glassblowing community.

Contemplating the historical timeline of the circular production hotshop, it becomes evident that its purposefulness is not only utilitarian, but it is a reflection of the nature of the craft itself. Glass in its molten state moves in circles – gathering, spinning and turning. The architecture that contains the conversion process mirrors these activities, reflecting the cycles and supporting the human networks that keep them alive. Reflecting on this spatial history provides a platform for the exploration of contemporary hotshops, such as Kitengela Glass, which revive and reimagine these principles in new ecological contexts.

Contemporary ecological design

The long-standing significance of circular architecture in glass hotshops finds fascinating expression in contemporary contexts that expand beyond Europe. An outstanding example of this is Kitengela Glass, which is located outside the capital city of Kenya, Nairobi. Kitengela Glass was founded in 1981 by artist and environmentalist Nani Croze. An energetic glassmaking complex, Kitengela Glass fuses traditional African architecture, environmental awareness, and collaborative glass production. Central to Kitengela Glass is its hot glass production studio; the spatial layout demonstrates a conscious return to circular principles, in architectural form, philosophy and flow (Hamilton 2023). The hotshop at Kitengela Glass is both conceptually and physically arranged around a circular production process. The furnaces are positioned at the heart of the studio, and the workstations are placed radially around it, to support the synchronised team movements. The architecture of the hotshop responds to both the material requirements of glass as a material and the cultural context in which it exists. The influence of local vernacular forms, for example the Maasai hut, is evident in the curved structures that are designed to reflect the cycles of nature and at the same time create inclusive, open spaces that encourage visibility, mutual dependence and creative exchange.

In contrast to the superstructures of nineteenth century England, Kitengela Glass has a more integrated and environmentally sensitive approach. The dome was built over three years as funds became available. In the early 1990s, Anselm Croze, son of Nani Croze, went to France on a short course with Willem and Bernard Hessen. Anselm Croze was invited to the

Oude Horn glass studio in Holland by Willem and Bernard Heesen. He returned to Kenya to set up the first East African glassblowing company. Anselm Croze made contact with Finnish glassblower Mikko Merikallio, who taught him how to build a furnace. With no source of electricity in rural Kenya, they needed to generate their own power. Merikallio's unique steam-injected system using recycled engine oil helped Anselm Croze to heat the glass furnace. The studio buildings clearly demonstrate his dedication to sustainability; embedded in the very fabric of the structure, the use of curved forms and natural ventilation reflects not only the functional logic but also embodies the spiritual and cosmological disquiets. The interior is illuminated by inserting the bases of one thousand recycled glass bottles into the walls. The bottles, through which shards of light shine, are placed in a pattern that replicates the position of the stars in the sky. The hotshop dome of Kitengela Glass is aligned with the solar cycle and natural landforms. This alignment strengthens the ideal of production, which is situated within a larger ecological and temporal rhythm (Hamilton 2023).

Figure 7
Kitengela Glass hotshop dome in Kenya
(retrieved from https://www.kitengela.glass/pages/our-story?srsltid=AfmBOora-ICIXw9mmEV7w5pMFdB0EeTsHU5slBdvYHy6_9kFIYYrnl11).

The layout of the studio fully supports the team-based ethos of glassmaking. From the furnace, molten glass is gathered by the artisans, and this is then passed through the defined zones of shaping, blowing, and annealing. This studio layout supports sustained cooperation and non-verbal exchange – a climate that reflects the interconnected and experiential principles explored by theorists such as Pallasmaa and Bachelard. The layout of Kitengela Glass reveals how the circular form nurtures not only technical effectiveness but also a more profound sense of unity and co-creation. Kitengela Glass' purpose is to improve the community; its most obvious contribution is aesthetic beauty, but it also gives back in more tangible ways. All the material used at Kitengela Glass is found and recycled; offcuts of sheet glass are found at building sites and melted to be used to blow glass. Kitengela Glass hosts workshops, offers apprenticeships, and sponsors charities such as hospitals with work made by creative locals as well as by professional artists.[10]

[10] Atlas Obscura, 2016. Kitengela Glass. Retrieved from https://www.atlasobscura.com/places/kitengela on 1 July 2025.

What sets Kitengela Glass apart is the way it combines global and local traditions. It can be argued that the logic of the circular hotshop is passed down from centuries of glassmaking traditions. Kitengela Glass' execution is entirely based in East African soil. After completing the entrance of the studio, Anselm Croze then created the iconic glass-studded dome, which was based on the constellation of that day. This results in a compound space that draws from the vernacular architecture of Kenya, contemporary ecological ethics and the requirements of a production studio. Such a synthesis aligns with Kenneth Frampton's (1980) concept of critical regionalism, which argues that architecture should acknowledge climate, culture and tradition and at the same time oppose standardised global design trends.

While it is understood that Kitengela Glass is one of the primary case studies in this paper, there are other active hot glass production studios that still include the persistent dynamics of circular flow in contemporary workshop practice. Two examples are Ngwenya Glass (figure 8) in eSwatini and Novotný Glass (figure 9) in the Czech Republic; both workshops reinforce the principles of centrality, teamwork and circular movement in their hotshop environments.

Figure 8
Central furnace layout at Ngwenya Glass Factory in eSwatini
(retrieved from https://www.kalahari.com.au/our-artisans/ngwenya-glass/).

Figure 9
Interior layout of Novotný Glass in the Czech Republic, showing the central positioning of the furnaces
(photograph by author).

Founded in 1979, Ngwenya Glass, situated in the mountainous region of eSwatini, houses a 46-year-old functioning glassblowing studio in southern Africa. The studio layout is arranged around a central furnace; artists work in a synchronised motion around it. It must also be noted here that while the physical space is not fully circular in form, the operational flow of production follows a radial layout; materials and tools are shared and distributed in a way that supports efficiency and a shared rhythm. Similar to Kitengela Glass, Ngwenya Glass merges sustainability into its ethos and works exclusively with recycled glass. The group-oriented process of making involves multiple gaffers and assistants; this process expresses the same collaborative circularity that was evident in the earlier European models.

Correspondingly, Novotný Glass, founded by Petr Novotný and located in the Czech Republic, exhibits a European equivalent that maintains the spatial traditions of historical Bohemian glass production. Notably, not housed in a traditional cone, the production layout continues with a circular workshop model. In 2004, during the International Glass Symposium, the author visited the studio to be a first-hand witness to how the four-pot furnace, which is centrally located and surrounded by open workstations, keeps clear lines of sight between team members, and in so doing, encourages efficient, rotational movement around the hot zone areas. This layout maintains the fast-paced nature of production work and maintains the community-driven ethos evident in traditional Czech glassmaking (Brückner 2011).

Collectively, the Kitengela Glass, Ngwenya Glass, and Novotný Glass studios show evidence that the principles of circular production hotshops go beyond geography. The centralised, radially arranged layout of production glassmaking remains consistently significant whether in the bushveld of Kenya, the forests of Bohemia or the mountains of eSwatini. What changes is the architectural language that is used to express the logic of the layout – superstructure cones in nineteenth-century England, outdoor curves at Kitengela Glass, and the recycling of industrial interiors in Europe. Despite the layout, the circle continues as a spatial solution that fosters collaboration, visibility, and communal participation.

What makes Kitengela Glass stand out, is the manner in which it changes this production logic into a wider architectural resource. Circularity is now not only about flow and efficiency, but it also creates a sense of belonging, cosmology, and engagement with the environment. Since they opened it in the 1990s, Kitengela Glass has reused hundreds of tonnes of waste glass that would have ended up in landfill. It also uses thousands of litres of discarded oil and employs over 90 staff (Hamilton 2023). The studio becomes a site that demonstrates a material manifestation of ecological principles, where glass production is consolidated into a landscape and culture that values the principles of balance, reuse, and ritual. In this manner, Kitengela Glass stands at the crossroads of tradition and innovation, where circular spatial design expresses an African worldview rooted in sustainability and collaborative creation.

As glassmakers persist with adapting their studios to new environmental and cultural circumstances, Kitengela Glass affords a model of how hotshops can remain based on traditional craft and at the same time adopt contextually rooted architectural innovation. The circle remains not only for its functionality, but because it encompasses the deeper ethos of glassmaking: interdependence, renewal and continuity.

Conclusion

More than a merely functional enclosure for molten glass, the architecture of the production hot glass studio embodies the social, symbolic and environmental values that define the practice. As discussed in this paper, the constant use of circular forms in hotshop design throughout diverse cultures and historical periods is not merely coincidental. Circular forms

are a reaction to the inherent nature of glassmaking, a fluid, cyclical and deeply collaborative process. Circular architecture has consistently provided a vehicle to facilitate communal making, from the tall cone-shaped glasshouses of industrial England to the natural, earthy, open structures of Kitengela Glass in Kenya. The spatial organisation of glass production teams around a central furnace is not just efficient; it reinforces the ethos of mutual dependence, rhythm, and understanding of interconnectedness, dynamics that are core to hot glass processes. These circular layouts allow glassblowers to foresee each other's movements, share tools and produce collaborative artworks in an environment of physical and relational harmony. Such environments are deliberately designed to support interdependence.

The circle also holds a significantly deep cultural meaning. In many societies, circular spaces symbolise unity, equality and relationships, which are values that line up with the values of traditional glassmaking artisans. Also, in many vernacular situations from African huts to European cromlechs, the circle is a spatial gesture of inclusion, community and belonging. When production glass hotshops use this layout – consciously or intuitively – they include these cultural meanings in the area of craft.

Kitengela Glass epitomises this reimagined form. Founded on the values of both East African vernacular architecture and contemporary ecological design, Kitengela Glass revolutionises the concept of a circular hotshop from an industrial artefact into a dynamic, evolving realisation of sustainable practice, creative innovation, and cultural fusion. The Kitengela Glass studio is not a copy of European forms, but it interprets circularity from an African perspective through the use of local materials and a design approach that is both ecologically mindful and symbolically in tune with natural rhythms. Kitengela Glass serves as a model for how glass production spaces can incorporate global influences while remaining grounded in regionally specific traditional and environmental values.

Ngwenya Glass, Novotný Glass and Ajeto Glass strengthen the continued use of circular layout in production hotshops. Although varying in degrees of architectural refinement, these studios support a central furnace layout that allows for a circular workflow and communal production. Thus, these examples confirm that the circle is not bound to a specific aesthetic tradition but can vary according to the context of where craft processes continue to be practised through collective engagement and cyclical processes.

If one follows the process of this architectural development, it becomes obvious that circular hotshop design is not an antiquated design but a flexible prevailing response to the developing needs of production glassmaking. Despite increasing technological sophistication and functional advancement within glass studios and production, the circular layout remains integral in facilitating the human dynamics of making – dynamics grounded in temporal coordination, mutual trust, and unvoiced knowledge.

This paper has argued that glass production hotshops constitute more than just a layout that is efficient; it is a structural manifestation of the cultural values, procedural logics and social interactions that underpin glassmaking. The continued attraction of the circle is founded on its capacity to reconcile dualities, such as fluidity and solidity, technical precision and symbolic meaning, individuality and collective practice. Similar to the manner in which glass transforms from a liquid to a solid state, so too does the space that contains the making process transform; it is formed not only by the heat and tools of the artisan but also by the rhythms of human connection enabled by these spaces.

In an age frequently defined by environmental issues, technological change, and changing modes of creative effort, the reconsideration of architectural typologies in craft-inspired practices is more important than ever. The circle provides a spatial and conceptual

model that denies fragmentation, encourages rhythm and enters the collective. Albeit in the curved structure of Kitengela Glass, the persisting craft traditions of Ngwenya Glass or the polished flow of Novotný Glass, circularity continues to form the lived experience of glass production hotshops today.

As this paper suggests, the architecture of the glass hotshop is not merely incidental; it is essential to the act of making. The architecture affects the way we work, how we interact and how we perceive the future of our craft. For as long as glass persists to be blown, spun and shaped under the illumination of the furnace, the circle will endure not as a geometric configuration, but a structuring logic embedded in practice.

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One sheet, two minds: Investigating the artistic-technical threshold in a hybrid hand drawing by Errol Pieters

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The craft of architectural hand drawing is steadily regressing, separating the immediate hand-brain connection that fosters creative thought. This article re-asserts that discourse through an in-depth study of a hybrid drawing by South African architect-educator Errol Pieters (1951-2020). Here, "hybrid drawing" refers to a single hand-drawn, multi-layered sheet that integrates conceptual, representational, and technical information so that the entire design process - from concept to buildable solution - is legible in one image, rather than separated across digital-analogue media. Using an Artefact-led Layered Visual Analysis (ALVA), the study examines Pieters' 1984 cupboard elevation as an intrinsic case. The method involved: (i) stratified digital deconstruction of the scan to isolate six information strata; (ii) typological coding against existing literature; (iii) threshold analysis of overlaps between artistic and technical layers; and (iv) reconstruction of the likely sequence in which Pieters developed the sheet, triangulated with interview and archival sources. Findings show that, for Pieters, artistic exploration and technical resolution evolved in parallel on the same surface, demonstrating that separating these processes can disrupt design thinking. The case further suggests that such hybrid drawings can restore the embodied, iterative dialogue between imagination and execution now diluted by screen-based workflows. By naming and detailing the ALVA method, the paper offers a replicable tool for historians, educators, and practitioners seeking to study or revive the craft of hand-drawn hybrids in contemporary architectural practice.

Keywords: Artefact-Led Layered Visual Analysis (ALVA), artistic-technical threshold, Errol Pieters, hybrid drawing, hand-drawing.

Een tekening, twee denke: Die ondersoek van die kuns-tegniese drempel in 'n hibriede hand tekening deur Errol Pieters

Die kuns van argitektoniese vryhandtekening is besig om geleidelik agteruit te gaan, wat die onmiddellike hand-brein terugvoer wat kreatiewe denke bevorder, vrerbreek. Hierdie artikel herbevestig dié diskoers deur 'n in-diepte studie van 'n hibriede tekening deur die Suid-Afrikaanse argitek-pedagoog Errol Pieters (1951–2020). Hier verwys "hibriede tekening" na 'n enkele, handgetekende, gelaagde vel wat konseptuele, voorstellings- en tegniese tekeninge integreer, sodat die hele ontwerpproses - van konsep tot boubare oplossing - in een blik leesbaar is, eerder as om dit oor digitale en analoog media op te deel. Deur gebruik te maak van 'n Artefak-gesentreerde, Laagsgewyse Visuele Analise (ALVA), ondersoek hierdie studie Pieters se 1984-kas aansig as 'n intrinsieke gevallestudie. Die metode behels: (i) gestratifiseerde digitale dekonstruksie van die skandering om ses inligtingslae te isoleer; (ii) tipologiese kodering teenoor bestaande literatuur; (iii) drempelontleding van oorvleuelings tussen artistieke en tegniese lae; en (iv) rekonstruksie van die waarskynlike volgorde waarin Pieters die vel ontwikkel het, getrianguleer met onderhoud- en argiefbronne. Die bevindinge toon dat, vir Pieters, artistieke ondersoek en tegniese oplossing parallel op dieselfde papier ontwikkel het, wat wys dat die skeiding van hierdie prosesse ontwerpsdenke kan ontwrig. Die gevallestudie dui verder daarop dat sulke hibriede tekeninge die iteratiewe dialoog tussen verbeelding en uitvoering kan versterk, wat tans deur digitale wersprosesse verbreek is. Deur die ALVA-metode toe te pas en te beskryf, bied die artikel 'n moontlike herhaalbare raamwerk vir historici, pedagoë en praktiserende argitekte wat die kuns van handgetekende hibrides in kontemporêre praktyk wil bestudeer of herleef.

Sleutelwoorde: Artefak-gesentreerde Laagsgewyse Visuele Analise (ALVA), artisties-tegniese drempel, Errol Pieters, hibriede tekening, vryhandtekening

The hybrid drawings of Errol Pieters offer a rare opportunity to examine how artistic intuition and technical resolution can live on a single architectural drawing sheet. Rather than positioning Pieters as a nostalgic figure, this study considers his drawing method as a reflective and integrative practice with continued significance. Following his death in 2020, Van Tonder, together with Pieters' widow Désirée, undertook the task of cataloguing his archive of drawings and paintings in various media (Pieters and Van Tonder 2023). During this process, a recurring structure emerged: many sheets layered conceptual sketches, artistic studies, and technical annotations in a single composition. Closer analysis revealed six distinct strata of information, forming the basis of this investigation.

This article focuses on one such work: Pieters' 1984 elevation for a cupboard separating two children's bedrooms. More than a technical document, the sheet embodies the interwoven nature of architectural thinking, tracing design development from concept to iterations, and buildable detail. It shows how tactile, hand-based techniques can maintain a dialogue between creative ideation and material resolution. In doing so, Pieters' approach offers a counterpoint to the increasingly fragmented workflows (Van Beerendonk and Ter Hall 2021) of digital production, positioning the hand-drawn hybrid as both artefact and critique within a longer history of architectural representation.

Since the onset of Computer-Aided Design (CAD) in the mid-1970s, digital workflows have become the default for documenting and visualising buildings (Carpo 2017). Today a project's credibility is often measured by the fluency in BIM models, rendering plug-ins and cloud-based coordination platforms (Llach 2021, Mousavi *et al*. 2024). Regulatory frameworks and day-to-day client expectations reinforce this mode of working, asking for ever-more accurate construction information sets delivered at speed (Tanga *et al*. 2021). The unintended consequence is that the manual craft once integral to architectural thinking – sketching ideas, refining details and testing proportions directly on paper – has slipped to the margins of professional practice (Mohammedi and Arrouf 2024).

When artistic instinct and technical precision are forced into separate modes of delivery, an important feedback loop is broken: drawings cease to be places where design intent and buildability are in dialogue (Schmid 2021). Pieters' 1984 cupboard elevation shows another possibility. Such drawings can condense meetings, spark material discoveries and expose construction problems early, advantages that complement, rather than compete with, digital production (Do 2005, Špaček, Peciar and Šíp 2016, Prawata 2017).

Through an Artefact-led Layered Visual Analysis (ALVA), this article examines how Pieters' drawing re-opens the dialogue between imagination and execution and argues for the ongoing relevance of this approach in contemporary architectural practice. The discussion situates the work within debates on visual communication in architecture, explains the analytical method, presents the findings, and reflects on how the insights might inform the profession's current, digitally dominated practices.

Errol Pieters' life and career

Errol Paul Pieters (5 April 1951 – 18 April 2020), was a South African architect-educator. He was born in Sabie, Mpumalanga, and lived most of his life in Pretoria. Pieters matriculated at Afrikaanse Hoër Seunskool in 1968, after which he studied and graduated with a B-Arch degree at the University of Pretoria in 1974. Pieters married Désirée Lustig in 1978 and they have two children, Saskia and Arno. He pursued an academic career from 1982 at the Tshwane University of Technology (TUT) (known as Technikon Pretoria until 2004), became acting

Head of the Department of Architecture in 1989 and filled the permanent position soon thereafter.[1]

According to Emmanuel Nkambule (Pieters and Van Tonder 2023: viii), although seldom celebrated in the broader context, Errol Pieters is acknowledged amongst his peers as the force behind leading the Department of Architecture at TUT to full professional accreditation. Former students and colleagues, such as Arno Pieters, Riëtte Kotzé, Francine van Tonder and Carl Jeppe (Pieters and Van Tonder 2023: 242, 243, 244, 245) recall an enigmatic yet generous mentor whose rigorous reasoning and dry humour shaped many lessons. Over the course of his career, he challenged many students to rethink both architecture and the world, as testified by Arno Pieters, Riëtte Kotzé, Wessel Van Dyk and Allen Luchini (Pieters and Van Tonder 2023: 242, 243, 244). His grasp of drawing, painting and other creative media underpinned this pedagogy, and his hand-drawings remain benchmarks of architectural skill (see testimonials by Pieters, Van Dyk, Luchini and Van Tonder in Pieters and Van Tonder 2023: 242, 243, Van Tonder and Stander 2022: 397, 398).

After retiring in 2011, Pieters spent his time painting, drawing, and writing, until his death in 2020. Yet his work stays largely invisible within mainstream art and architecture circles; the most comprehensive acknowledgement to date is a self-published tribute by his widow, Désirée and former student, Francine van Tonder (2023).

The hand-brain connection

Architectural drawings have artistic importance. Chris Wilkinson (2016) reminds us that drawing is a fundamental element that should always be part of the design process. In *Why Architects Still Draw*, Paulo Belardi (2014) echoes this, calling the hand sketch the crucial interface between idea and final design, containing the entire project within it. Juhani Pallasmaa (2009, 2017) goes further: as the pencil moves, intangible ideas gain form, turning tentative impressions into visible sketches. In full concentration, the tool itself seems to vanish, letting the hand "think" directly in space, matter and time.

If hand drawing is the bridge between imagination and construction, it must also serve design communication. In *Psychology of Architectural Design,* Ömer Akin (1986) therefore treats drawing methods as paths to convey the architect's design intent. For Gabor Gallov (2019: 54), the sketch is still vital, not only to convey ideas but also to cultivate an architect's personal visual language outside the confines of ubiquitous software. Archigram architect Peter Cook known for his visionary drawings, adds a neuro-physical lens: over years of practice, the brain predicts what the hand enjoys doing, while the hand trusts the brain's guidance, an intimate feedback loop that digital tools rarely replicate.[2]

The ritual value of the pencil supports this intimacy. Carlo Scarpa famously started every design class at the University of Venice by showing students how to sharpen a pencil, insisting that this simple ritual is the very starting point of architecture (Olsberg 2013). Scarpa's reverence recalls a long debate: as drawing techniques evolve, so too do architects' approaches to line, shadow and spatial suggestion, often contested, yet always formative. Louis Kahn's "composite sketches" frequently combined perspective studies, structural annotations, and site diagrams in a single sheet, using drawing as a thinking process rather

[1] Relayed by Désirée Pieters (2023), widow of Errol Pieters and curator of the body of work he left behind.

[2] *Architect Peter Cook on the Benefits of Drawing by Hand | Louisiana Channel*. 2022. Online at https://www.youtube.com/watch?v=1suurGcp8BI. Accessed on 26 October 2023.

than merely representational (Domer 1993). Álvaro Siza's sketchbooks reveal plans, elevations, furniture studies and material notes combined on the same page, depicting an iterative process between concept and buildability (Testa 1984). Zaha Hadid's early pre-digital axonometric drawings layered formal exploration, programme, and space into complex hybrid works (Luscombe 2020). These examples show a mode in which the architectural drawing is not separated into isolated phases, but rather a collection of traces from various design concerns over time.

Such drawings can outlive their original purpose to become artefacts. In his reflections on teaching freehand drawing to architecture students, Andrzej Białkiewicz (2019) notes that architectural drawings from the 1960s and 1970s, were collected and transferred to the Museum of Modern Art (MoMA) in New York. Initially, these drawings were regarded as mere illustrations of the artists' concepts and plans, with their artistic value overlooked. Today, they are recognised as works of art (Białkiewicz 2019). A similar shift is occurring with Pieters: during the cataloguing of his works, drawings completed as a student have been held by the University of Pretoria's architectural archives, posthumously found and added to his *oeuvre* (See *Why I enjoy drawing so much*, in Pieters and Van Tonder 2023: 62). This confirms that such hybrid hand sketches can add cultural value long after their technical relevance have faded.

Architectural hybrid drawings

Hybrid drawing is usually discussed as a media blend; hand lines finished off with CAD or digital colour washes. Mónica Gómez Zepeda (2019), Beata Makowska (2019) and Hristina Meseldžija (2022), all define the term in this way, and Gilbert Gorski (2014) shows how this combination keeps the exploratory strength of hand sketching while enhancing the clarity and refinement with digital presentation.

Pieters' practice casts hybridity in a remarkably different light. For him, a hybrid drawing is still one physical sheet, but it merges every stage of design into a single composition: loose concept sketches, atmospheric renderings, figure studies and marginal notes sit alongside scaled plans, dimensions, hatch patterns, level markers and construction details. The page is simultaneously notebook, presentation board and set of working instructions: creative intent and buildability all legible at a single glance.

This integration operates at what this study calls the artistic-technical threshold: the zone where abstract intent and precise, buildable instruction overlap and inform each other. As Donald Schön (1984) and Gabriela Goldschmidt (1991, 2014) argue, design evolves through a "reflective conversation" between the mind and the drawing, where each mark can shift between an evocative suggestion and a technical command. In Pieters' work, this effortless crossing is not sequential but iterative: indicative moves produce technical refinements, and technical constraints create artistic intentions. In doing so, his drawings position the artistic-technical threshold not as a boundary to be crossed once, but as an active workspace where creative and constructive thinking are in dialogue in real time. That approach questions the separation that has shaped architectural representation since Alberti and, later, Raphael. Classical architectural theory separated drawings into representational views**,** prized for visual and emotive impact even at the cost of accuracy, and technical instructions**,** where precision was important (Carpo 2013). Pieters collapses the two, proving that delight and accuracy can exist on the same page.

Errol Pieters' personal account on architectural drawing

The following translated excerpt has been lightly edited to foreground Pieters' conviction that the hand-drawn line is indispensable to design thinking. It underpins this study's focus on his hybrid drawings, where concept, presentation and technical resolution co-exist on a single sheet.

> I was once invited to a lavish project presentation, in a room so immaculately minimalist it "smelled of money." After an impressive display of digital renderings, the lead architect was asked to clarify a spatial idea on the whiteboard. His sketch was hesitant, almost childish, and he soon abandoned the pen in favour of vague hand-gestures. I felt a deep embarrassment, not for him, but for our profession. Le Corbusier's maxim came to mind: "I would rather draw than talk; drawing is quicker and leaves less room for lies." At that moment I realised how rare competent freehand drawing has become among architects.
>
> Sketching is not a nostalgic indulgence; it is the architect's elixir. On-site it reveals a place's "secrets," on the drawing board it fuels the iterative leap from hunch to resolution, and in dialogue it conveys truth with a clarity words cannot match. When schools treat sketching as a token guest-lecture, quickly eclipsed by "serious" computer work, they sever the hand-brain connection that cultivates spatial insight, empathy, and elegance. History shows that the most enduring designers can draw; those who cannot too often bequeath us uninspired or even disastrous buildings. Re-establishing freehand sketching at the core of architectural education is therefore not nostalgic, it is urgent.[3]

Pieters often argues in his unpublished memoirs that drawing by hand is fundamental to initiating a design, navigate designers block, and design resolution.[4] Pieters often spoke of the joy that comes with pencil to paper and drawing the first and second line of a sketch; that he experienced a thrill and a pleasurable sensation, invoking a contentedness (Pieters and Van Tonder 2023: 62).

Set against the analyses that follow, his words renew the call for sketching as a catalyst for coherent, inventive, and humane architecture.

How the *kas* came into being

Pieters drew heavily on Christopher Alexander's *A Pattern Language* (1977) when designing the house he shared with his wife, Désirée. The initial layout combined Alexander's "Farmhouse Kitchen" pattern with a "Parents' Realm" to the east and, in anticipation of children, left space for a "Children's Realm" to the west. The plan faced north to capture winter sun in the southern-hemisphere climate (Alexander 1977: 513, 614).

As the family grew, so did the house. When the babies became toddlers Pieters built the Children's Realm, furnishing it with a "cluster of beds" and a small play zone (Alexander 1977: 143, 651). Once the children were older the cluster was divided into two bedrooms separated by a shared cupboard; Pieters cut an internal hatch through this cupboard so the siblings could talk to each other at night. In their teenage years, the rooms were rearranged

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[3] This excerpt is translated from an unpublished essay written by Errol Pieters in July 2019, titled *The breathtaking presentation of an extraordinarily beautiful building (Die asemrowende aanbieding van 'n buitengewone mooi gebou)*, shared with close friends and family, including the authors.

[4] Pieters, Errol. 2018a. *How to get rid of 'designers block', How I start designing (Hoe om 'designers block' kaf te draf, Hoe ek begin ontwerp),* unpublished memior.

Pieters, Errol. 2018b. *How to design in architecture (Hoe om te ontwerp in argitektuur)*, unpublished memoir.

again, the former play space becoming one bedroom and the original sleeping alcove the other; an ongoing, pattern-based development that represented Alexander's principle of incremental growth.[5]

Figure 1 depicts the subject of this study, an elevation annotated "Pappa 33.6 | Saskia 3.7 | Arno 1.9, cupboard between Saskia and Boetie, scale 1:10." It outlines the storage unit, or cupboard, that later transformed the children's cluster of beds into two separate bedrooms.[6] Although the built cupboard evolved from this version, Pieters frequently showcased the drawing in his lectures as a model of hybrid hand-drawing.[7] After his retirement it was tucked away in a studio drawer and remained unseen until its rediscovery following his death in 2020.[8]

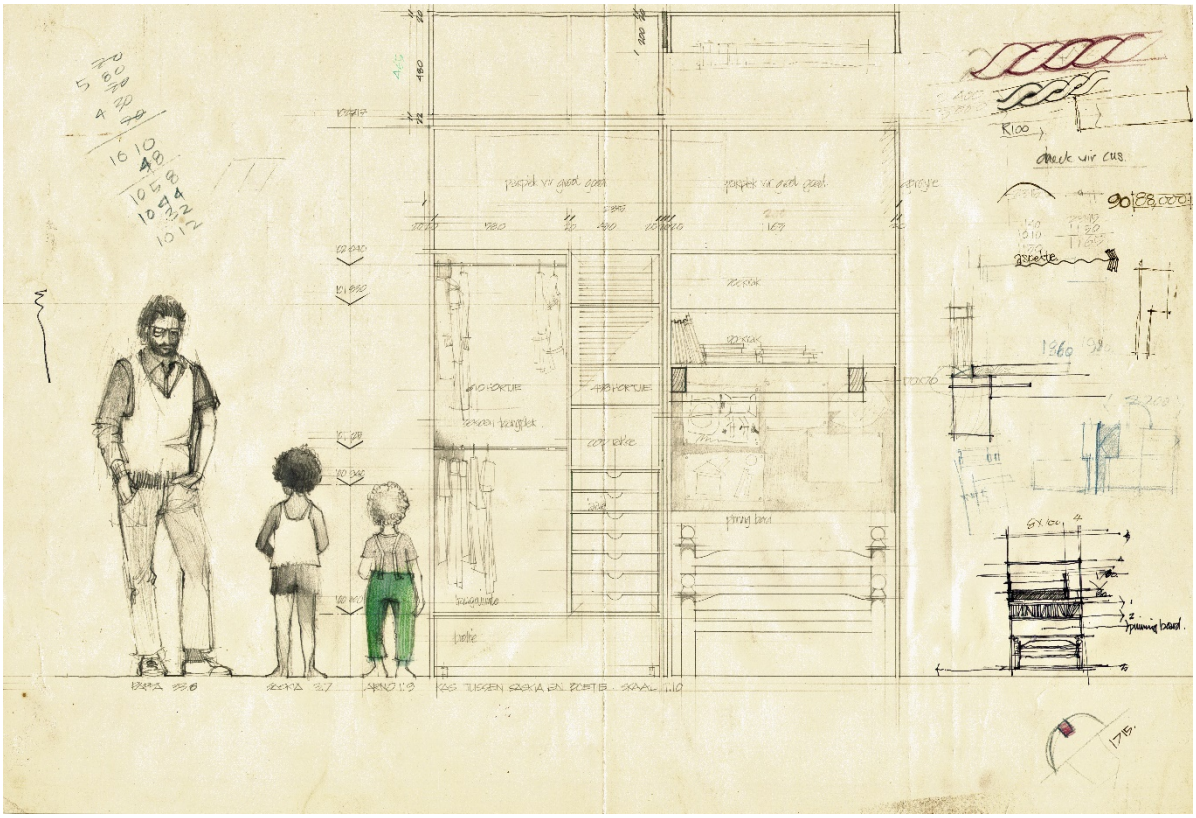

Figure 1
PAPPA 33.6 SASKIA 3.7 ARNO 1.9 KAS TUSSEN SASKIA EN BOETIE. SKAAL 1:10

Artefact-led Layered Visual Analysis (ALVA)

[5] Désirée Pieters (2023), during an informal interview with the authors.

[6] After the drawing was archived and published in a book of Pieters' work and life, the artwork was exhibited for sale at the book launch exhibition in May 2023. One of the authors of this paper purchased it for their art collection.

[7] Personal account of both authors.

[8] Pieters' widow, Désirée Pieters and one of the authors of this paper digitally archived most of Pieters' drawings after his death, for publication in a book of Pieters' work and life.

To investigate how Pieters merged artistic vision and technical instruction onto a single sheet, we adopt an ALVA method: The drawing is scanned at high resolution, then digitally "peeled" into layers: (i) concept sketch; (ii) architectural presentation; (iii) technical draughting; (iv) figure drawings; (v) conceptual details and (vi) doodles and notes. Each layer is coded against established definitions of its drawing type and compared with the others to locate the precise point at which exploratory line-work hardens into buildable information, the artistic-technical threshold that anchors the argument of this paper.

Once the layers are isolated, sequence clues such as line-weight build-up, erasures and overwritten dimensions are read abductively to sketch a likely timeline of the sheet's evolution. That inferred chronology is then cross-checked against contemporary drafting conventions and anecdotal evidence from Pieters' widow, Désirée. The result is a provisional "road map" of his hand-eye thinking, showing how the pencil moved back and forth between idea, presentation and specification without ever leaving the page.

By reconstructing that workflow, the study seeks not only to clarify the internal logic of a single 1984 drawing but also to offer practising architects fresh evidence that hand work can keep concept and constructability in continuous dialogue: insights that may help counter the profession's drift toward screen-bound design processes. Figure 2 shows how the ALVA method is used to stratify the work in layers that signify different working or presentation "modes" in architecture.

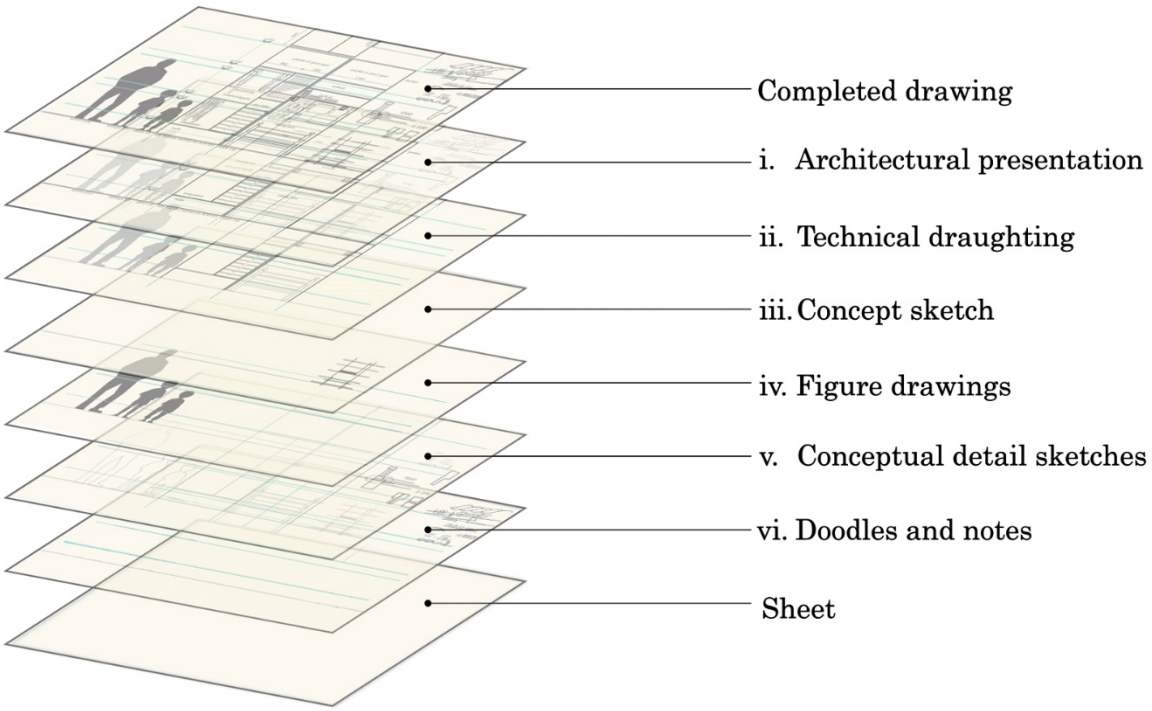

Figure 2
Analysing the work using an ALVA method
(drawing by the authors, 2025)

Table 1 develops this further into a correspondence matrix that links the six information-layers isolated through ALVA to comparable drawing categories discussed by Francis D. Ching (2019) and Nikolas Davies and Erkki Jokiniemi (2011).

Table 1: Correspondence matrix of Pieters' work, Ching (2019) and Davies and Jokeniemi (2011)

ALVA layer from the sheet (Pieters)	Closest category in Ching – *Design Drawing*	Closest category in Davies & Jokiniemi – *Architect's Illustrated Pocket Dictionary*
i. Architectural presentation drawing	*Presentation / Rendering drawings* (colour, tonal depth, entourage)	*Presentation drawings* (client-facing visuals conveying aesthetic intent)
ii. Technical draughting	*Working drawings* (orthographic plans, sections, elevations with dimensions)	*Working / Assembly drawings* (precise construction information)
iii. Concept sketch	*Concept / Parti sketches* (thumbnail, loose, exploratory)	*Conceptual drawings* (early ideation sketches)
iv. Figure drawings	*Entourage / Human-scale studies* (proportion & use diagrams)	*Scale figures* (human reference icons)
v. Conceptual detail sketches	*Detail studies* (freehand component exploration)	*Detail drawings* (junction or material articulation)
vi. Doodles & notes	*Design journal notations* (marginalia, thought prompts)	*Field notes / Site notes* (aide-mémoire, cost or spec jotting)

Drawing analysis

The sheet (figure 1), drawn in graphite with selective ink and coloured-pencil accents, is organised as an internal elevation. On the left Pieters sketches himself and his two young children at scale, their heights and ages noted ("Pappa 33.6, Saskia 3.7 and Arno 1.9"). These figures anchor the drawing emotionally while providing a human measuring scale for the cupboard that occupies the centre of the page. The elevation of the cupboard is rendered with precise construction lines, dimensions and Afrikaans labels identifying hanging space, drawers, a pin board, and trolley.

To the right, Pieters overlays additional layers of technical thinking: section details, timber sizes, and notes. Smudged erasures, overwritten numbers and quick elevation doodles reveal an iterative process. Together, the pragmatic instructions and expressive sketches demonstrate Pieters' hybrid method: concept, scale reference and buildable detail presented seamlessly on one hand-drawn sheet.

Figures 3-8 present the isolated six information strata or digitally "peeled" layers of Pieters' 1984 cupboard elevation.

Figure 1
Isolated aspect - the concept sketch

Figure 3 isolates the *concept sketch* layer, which is defined as a a thumbnail drawn entirely freehand and either un-scaled or at a very small scale. As Ellen Do (2005) observes, diagrams and sketches are symbolic representations that architects create for problem-solving and spatial reasoning, embedding both functional requirements and formal intentions from the outset.

Pieters' thumbnail does exactly that. Despite its smaller size he strengthens key lines and adds tonal hatching to indicate the cupboard carcass, a bed and a band of books whose striped pattern cues the storage rhythm later refined in the main elevation. A few dimensions and the lone note, "pinning board," linked by a quick leader line, show that pragmatic allowances; how many books, where to tack drawings, were already folded into the first graphic thought, illustrating the integrative spirit of his hybrid method.

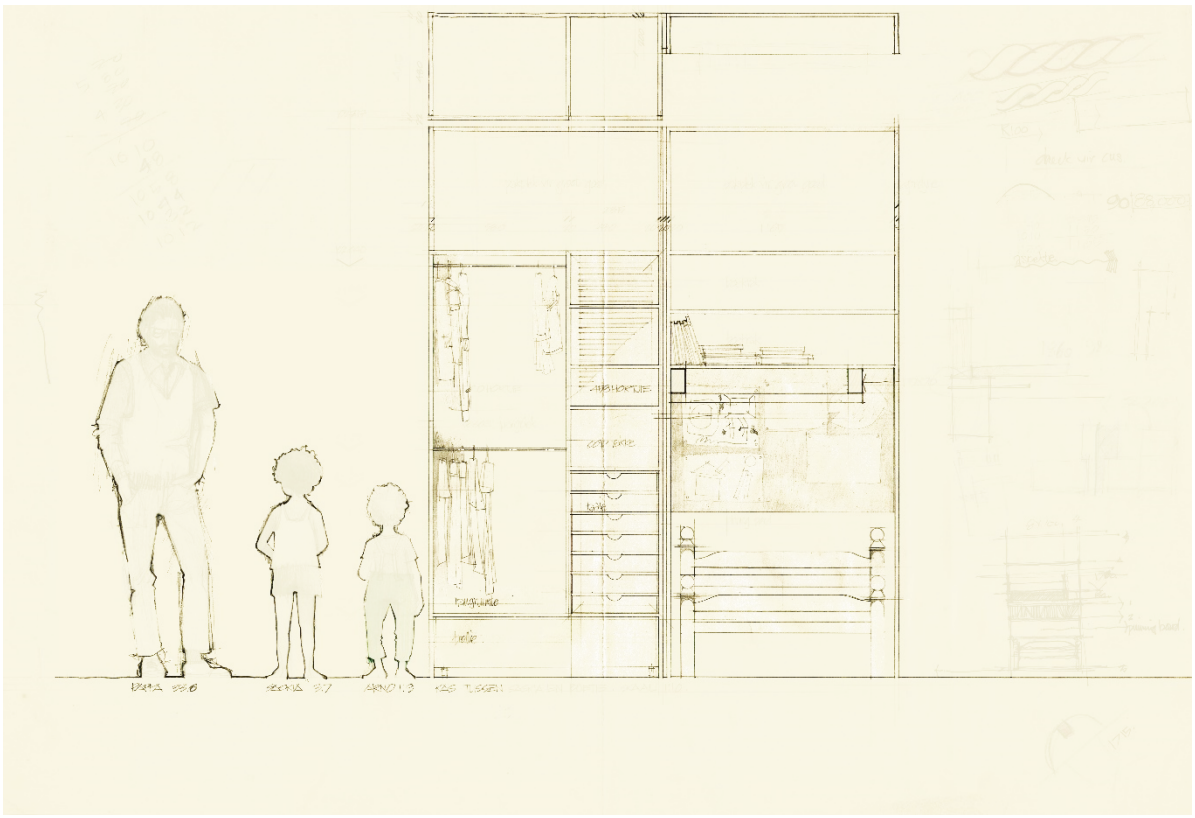

Figure 2
Isolated aspect - the architectural presentation drawing

Figure 4 isolates the *architectural presentation* layer of Pieters' hybrid sheet. It combines ruled precision with freehand sketches: the cupboard elevation and room envelope are drafted with straight-edge control, while loose strokes suggest furniture, clothing and pin-up drawings. The finished-floor level of the existing structure is clearly marked, and the proposed insert is outlined in lighter construction lines; planer cuts are rendered with the conventional planed-wood hatch rather than a solid poche. Human figures appear only as profile outlines, standard practice for conveying scale and intended users, while graded line weights push nearer elements forward and let background parts recede. Subtle graphite shading lends the flat elevation a sense of depth and also hints at the direction of incoming sunlight.

Taken together, these devices match classic descriptions of presentation drawings in Tom Porter and Sue Goodman (1992), Betty Edwards (2012) and Ching (2023), and they articulate spatial intent, material suggestion and human occupation without the exhaustive dimensioning that belongs to technical documentation.

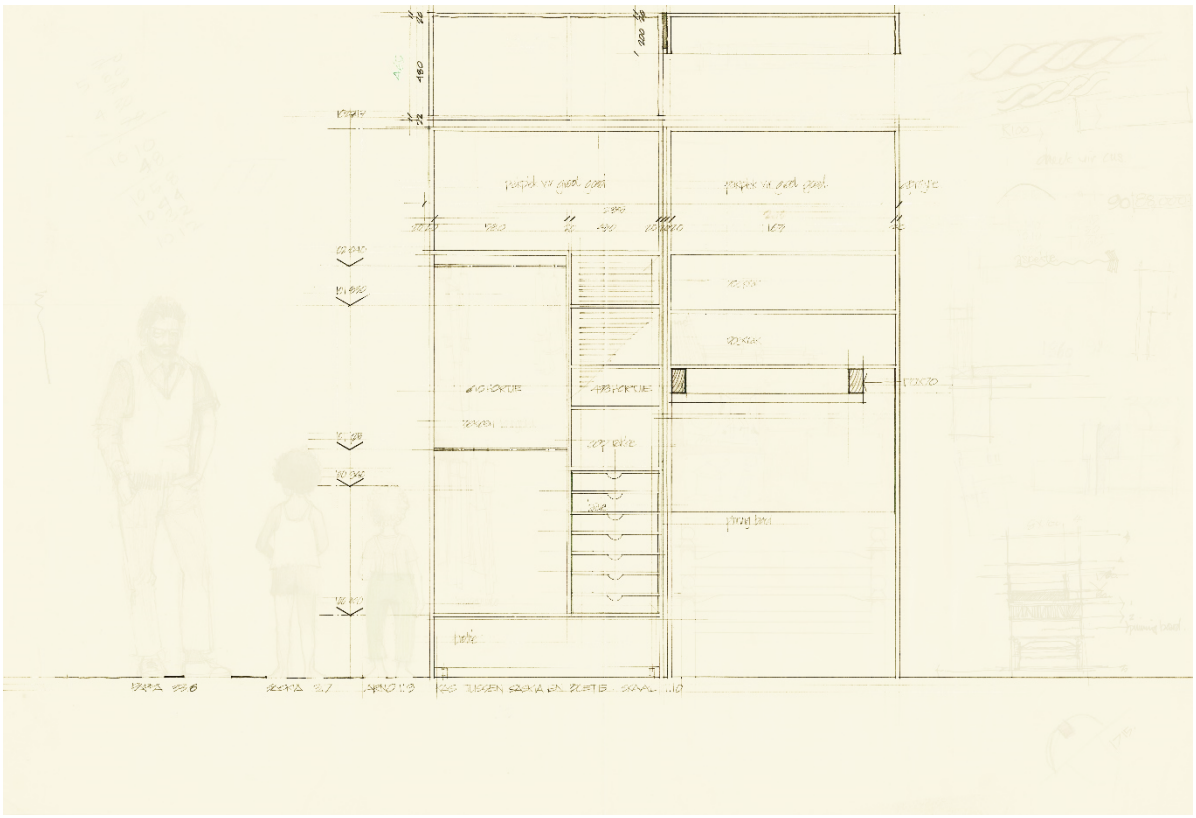

Figure 3
Isolated aspect - technical draughting

Figure 5 isolates the *technical-draughting* layer of the drawing. Here the cupboard carcass, shelves, drawers and shutter doors are ruled to scale with clear line-weight hierarchy, while text and numerals sit neatly between guideline strokes. Standard annotation elements; dimensions, level datums, material hatching and Afrikaans labels, are grouped logically across the page, producing the disciplined legibility prescribed in working-drawing manuals (Liebing 1999, Wakita and Linde 2003, Bichard 2012). Although dimensions appear sparse at first glance, closer inspection shows every critical element sized precisely, avoiding the clutter that is often found on technical sheets.

Pieters departs from convention in ways that both delight and inform. His main caption reads “PAPPA 33.6 SASKIA 3.7 ARNO 1.9 – kas tussen Saskia en Boetie, skaal 1:10,” using the family’s ages as a playful yet functional date stamp (Pieters was 33 years 6 months in October 1984). Heights of the three figures are recorded as level markers: 100 940 mm, 101 125 mm and 101 830 mm, granting the children the same documentary status as structural elements. Such user-centred annotation is rare in technical drafting, where people are normally omitted or treated as generic silhouettes; here it signals the cupboard’s real clients and reflects a design empathy often absent in children’s environments (Foley and Leverett 2018). This layer embodies the “technical-resolution” drawing described by Davies and Jokiniemi (2012), while simultaneously bending the rules through personalised notation and restrained, purposeful dimensioning.

Figure 4
Isolated aspect - figure drawings

Figure 6 isolates the *figure drawings* layer: Pieters, his daughter Saskia and his son Arno, set against the cupboard's elevation. Clothes are sketched in enough detail to read as shoes, braces, rolled sleeves and tousled hair, while fine graphite touches pick out knuckles, heels and even the curve of Achilles tendons. Pieters stands casually with one hand in his pocket; Saskia peers to her left; Arno faces squarely forward.

Using family members as living scale bars was typical of Pieters' practice and underscores, as Sue Gussow (2008) argues, the value architects place on figure drawing for spatial awareness. The sheet's figures match classic guides by John Raynes (1981), Diana Constance (2004), and Borough Johnson (2009), yet their personal specificity also fulfils the sketch's symbolic role: they embed functional data (actual heights in millimetres) and formal intent (how users will occupy the space) in a single graphic gesture, reinforcing Do's (2005) view of sketches as problem-solving symbols within a designer's discipline.

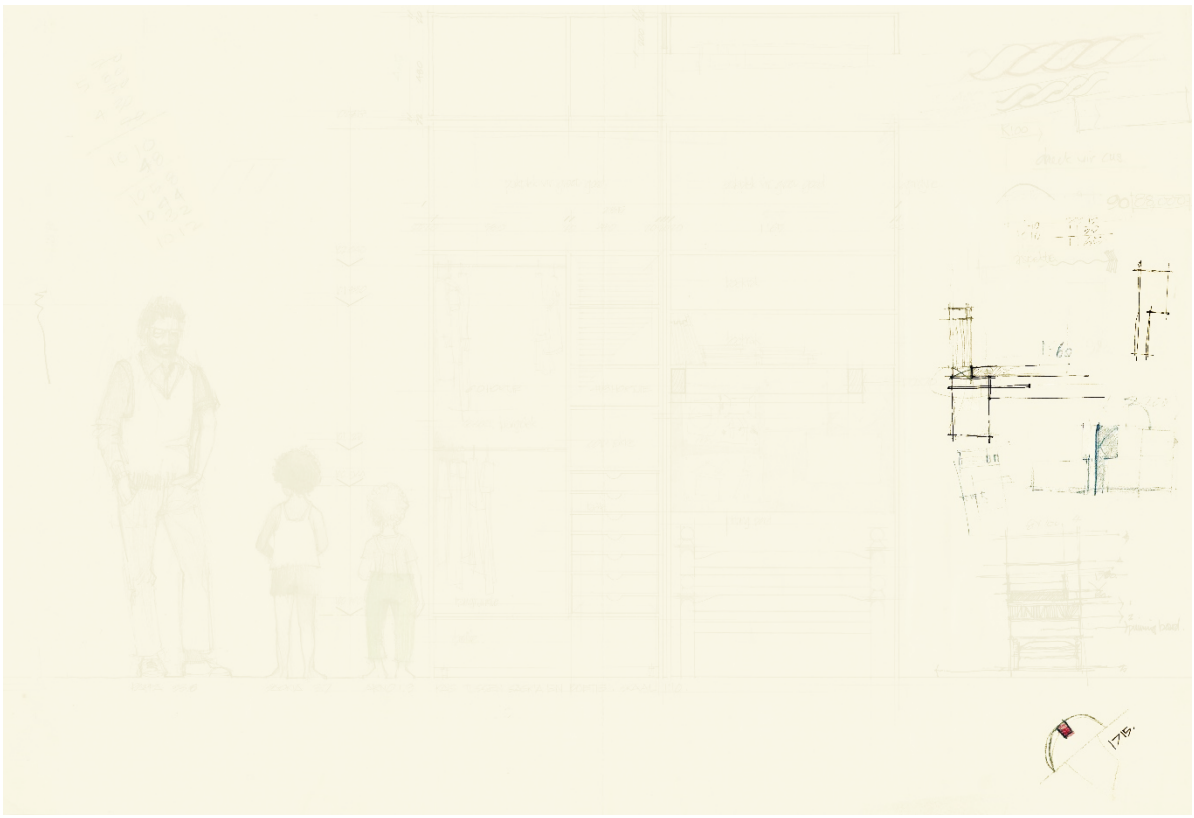

Figure 5
Isolated aspect - conceptual detail sketches

Figure 7 isolates Pieters' *conceptual details* layer: pocket-sized assembly diagrams pencilled beside the main elevation. Slightly heavier line weights denote cut planes, while varied hatching distinguishes boards, battens and solid framing, clarifying how components lock into each other and where fixings occur.

These quick studies reveal Pieters testing joinery and anchorage on the fly, moving between overall form and minute construction logic on the same sheet. Their presence confirms the architect's iterative workflow; technical resolution feeding back into concept, and vice-versa, and enriches the hybrid drawing by exposing the timber cupboard's build as well as aesthetic.

Figure 6
Doodles and notes

Figure 8 isolates the sheet's most informal layer: *doodles and notes*. A loose braid-like pattern occupies the top right corner, accompanied by a waved arrow drawn at an angle unrelated to the rest of the composition. Nearby, Afrikaans jottings: "Aspekte," "Check vir Cus" (a note to consult friend Carl Jeppe) and "R100," a likely cost prompt. To the left, quick calculations, suggesting Pieters was mentally tracking a quantity while drawing, the squiggle at left serving as a customary pen-test.

These marginal marks hint at real-time conversation and multitasking, revealing the designer's thinking continuum rather than a polished presentation. Far from clutter, they enrich the hybrid sheet: the braid most likely indicate a rope handrail, the stray notes record decisions and social context, and the pen-test anchors the drawing in the tactile routines of hand work. Together they complete the document's layered narrative of concept, detail and everyday design cognition.

Drawing as palimpsest: Layered authorship in Pieters' sheet

A palimpsest is a surface repeatedly scraped and reused, its earlier marks still faintly visible beneath later inscriptions. Medieval scribes economised by erasing and overwriting costly vellum, so successive thoughts co-existed on a single page (Hillier 2016). Brenner's study of the thirteenth-century drawings for Reims Cathedral records the same practice in architecture: erased ruling lines remain on reused vellum, preserving each iteration of the design (Branner 1958).

Today, non-destructive imaging such as X-ray fluorescence, infrared reflectography and multispectral scanning exposes hidden strata in paintings and manuscripts, revealing

underdrawings, altered proportions and pentimenti (Favero *et al*. 2017). We apply a comparable logic digitally. In Pieters' sheet faint erasures, re-hatched panels, overwritten level markers and doodles that cut across construction lines show the design of the cupboard was refined in several passes. Our ALVA method peels these traces apart in overlays, using image editing software, so each "layer" can be inspected without damaging the original. The next section ("Sequence", figure 9) reconstructs the probable order of those layers, reading the drawing exactly as a conservator would parse a palimpsest.

Re-tracing the creation of a hybrid drawing – the Errol Pieters way

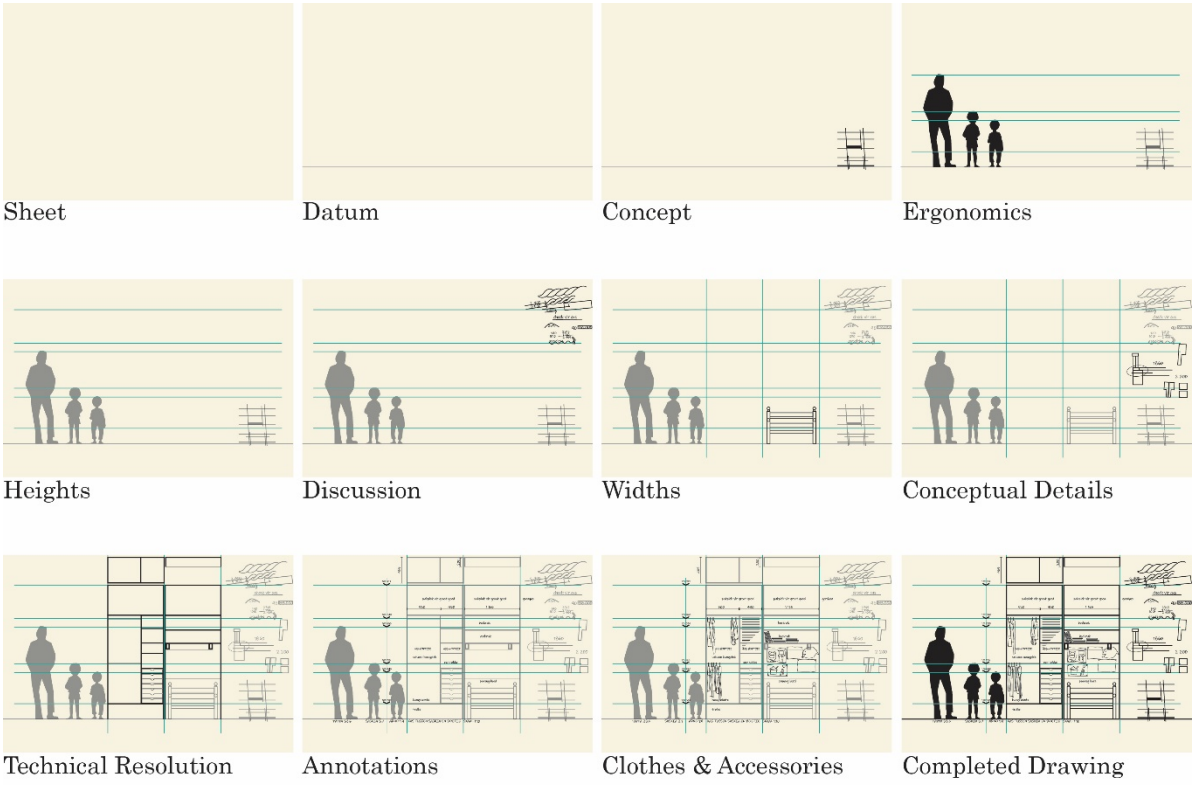

Figure 7
Perceived sequence of the evolution of the hybrid drawing

Figure 9 visualises our pre-interview hypothesis as a twelve-step storyboard. Pieters begins with a blank sheet, then strikes a horizontal datum to anchor scale before adding a quick concept doodle in the right margin. Life-size silhouettes of himself and the children appear next, allowing him to plot ergonomic height lines across the page. A burst of conversation prompts cost notes and a braided sketch, after which vertical width markers and a trial bed establish the cupboard's footprint. Thumbnail detail studies follow, feeding into a ruled technical outline of shelves, shutters and carcass. Only when the structure reads true does he layer in systematic annotations, dimensions, and finally the personal touches; hanging clothes, toy-box clutter and line-weight refinements, that complete the hybrid drawing.

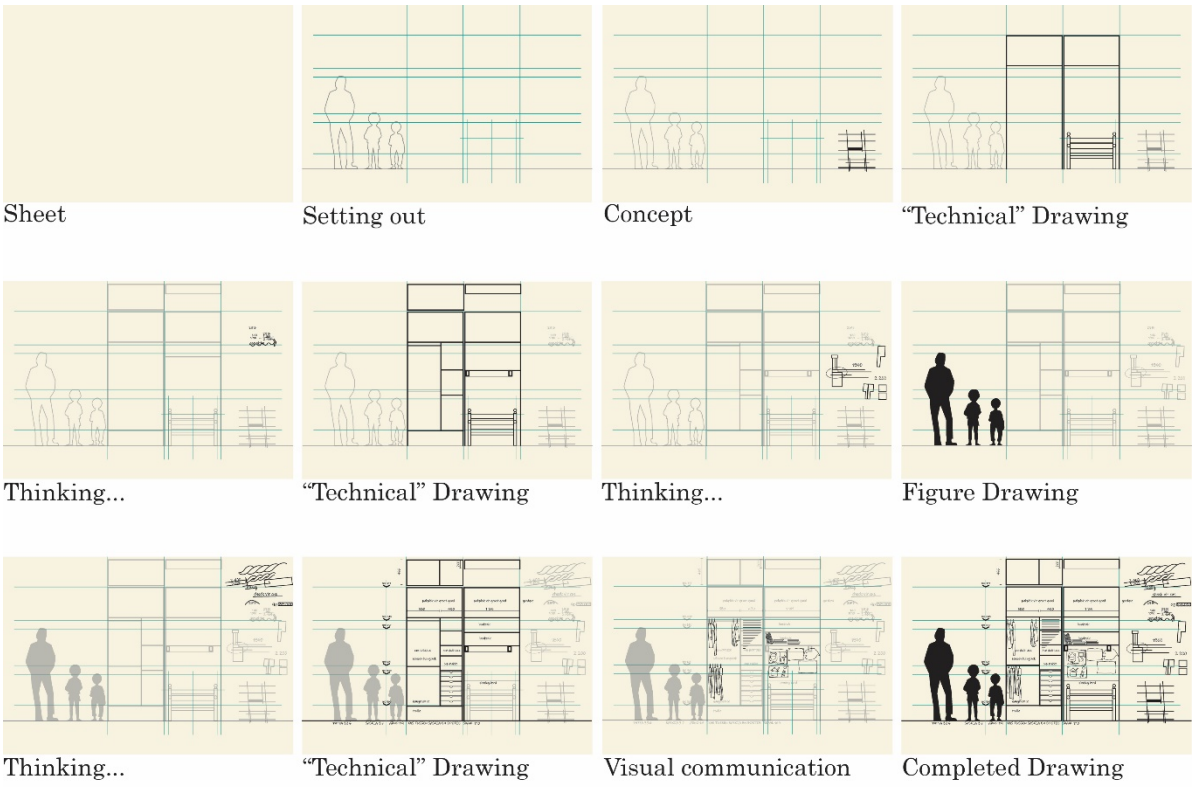

Figure 8
Sequence of the evolution of the hybrid drawing according to Désirée Pieters

Désirée Pieters' recollections reveal that Errol's workflow, while broadly linear, was anything but mechanical. He began by "setting out" the sheet; establishing a centreline, scale bar and finished-floor datum, yet almost immediately veered into quick thumbnails to test proportion and storage logic. Those thumbnails sparked lively kitchen-table discussions; mid-conversation he would flip the page, jot a cost estimate ("R100") or note a suggestion from neighbour Carl "Cus" Jeppe, then return to the elevation refreshed. Measurements were never fixed on a single pass: he re-checked the children's heights each time one of them wandered into the studio, adjusting the level markers so the cupboard would grow with them.

A distinctive loop involved the figure drawings, one of Pieters' favourite pastimes. He would possibly then shift to ruled lines, resolving shelf spacing, hinge clearances and shutter width with a draughtperson's precision, before allowing the pencil to "wander" back into human gesture and facial nuance. These detours were not indulgences; they recalibrated scale and ergonomics, ensuring the cupboard served the users whose likenesses animated the page.

Figure 10 maps this iterative rhythm, showing moments of "processing" interwoven through the design process: a conversation, note or doodle, moving between resolution and concept. Seen in this light, the drawing is less a straight path than a spiral, each circuit tightening the fit between lived experience and buildable form.

Rather than unfolding as a linear sequence from abstract idea to resolved detail, Pieters' sheet shows the design developing through an ongoing conversation with the drawing itself. This iterative "back-talk" embodies Schön's (1984) notion of *reflection-in-action*, where each stroke prompts fresh insight and the designer literally thinks on the page. At the same time, the seamless toggling between creativity and buildability enacts the *co-evolution* of problem and solution spaces described by Nigel Cross (Dorst and Cross 2001), confirming that artistic

and technical reasoning develop together, not in separate phases, when hybrid sketching is allowed to drive the process.

Conclusion

This dissection of Errol Pieters' 1984 cupboard elevation demonstrates that a single hand-drawn sheet can sustain an entire cycle of architectural thought, from first intuition to buildable detail, without recourse to digital modes of production or separate drawing sets. Stratifying the image with the ALVA method revealed six interlocking strata: concept sketch, architectural presentation, technical draughting, figure drawings, conceptual details, and doodles and notes. The palimpsest study exposed erasures, over-writes and late additions that maps a spiral rather than a linear workflow. The artistic-technical threshold we set out to locate is therefore not a fixed line on the page but a movable boundary, crossed repeatedly as the designer straddles between imagination and execution.

For architectural practice, the case suggests that hand hybrids can still compress briefing, design development, and construction dialogue into one communicative artefact, saving coordination time, foregrounding user ergonomics and recording decision history in ways digital workflows seldom match. For scholarship, ALVA offers a transferable protocol for cataloguing, teaching and conserving drawings whose layered authorship might otherwise go unrecognised; accessible to any researcher with a scanner and image-editing software.

While the realities of contemporary practice - tight project timelines, complex regulatory requirements, and highly integrated digital coordination platforms - limit the widespread use of fully hand-drawn hybrids, Pieters' approach remains valuable as a complementary tool. In early design phases, client engagements, and educational contexts, this mode of drawing offers a tangible, iterative space where artistic intent and technical resolution evolve in dialogue.

By recovering Pieters' process we invite further research of late-twentieth-century hand drawing: not as nostalgic craft but as a practical medium that can sit alongside today's digital tools. Extending this study to other drawings in Pieters' archive, and to work by his peers, could show even more ways in which hand and mind continue to shape thoughtful, buildable architecture.

AI declaration

The authors used ChatGPT (OpenAI, 2025) and Elicit to assist in literature synthesis, text refinement, and research organisation. Elicit was used to identify relevant academic papers, while ChatGPT aided in refining the writing and structuring of the paper. All AI-generated content was critically reviewed and edited to ensure accuracy, coherence, and alignment with the research objectives. The authors will make the prompts available for review upon request.

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Francine van Tonder is an aspiring academic and researcher. She holds a national diploma, bachelor's, and master's degree in architecture from the Tshwane University of Technology as well as a master's degree in business leadership from the University of South Africa. Recently Francine co-authored a book on the life and work of Errol Pieters, www.errolpieters.com. Her research focus includes archiving as a sub-set of Knowledge Management; the architectural process (design process and construction process) to mitigate the climate emergency, architectural data management for effectiveness, indigenous knowledge systems in sustainable construction, and gender as it translates into built form. As a self-proclaimed lifelong student, Francine has lectured at various universities and departments since 2008, while also acting as an architectural specification consultant.

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Erich Mayer in Namaqualand: depicting the landscape and vernacular buildings

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Erich Mayer has become known for his drawings and sensitive watercolour artworks of the South African landscape, farm life, townscapes, scenes during holy communion, camping scenes, the recording of folk life, farmers and their clothing and folk furniture. Of special significance are his depictions of dwellings and structures on farms in Namaqualand. Namaqualand was one of the regions he often visited and his depictions during this period are evidence of his keen eye for detail and his skill for drafting with pencil and recording with watercolour as medium. His drawings are of exceptional value to the architectural historian as they depict the simple buildings and structures of a particular region of a specific period. These visual records can be considered as factual documentation of the region's vernacular architecture – of which very few examples still exist.
Key words: Erich Mayer, Namaqualand, vernacular architecture

Erich Mayer in Namakwaland: uitbeelding van die landskap en volksgeboue
Erich Mayer is bekend vir sy tekeninge en sensitiewe waterverf kunswerke van die Suid-Afrikaanse landskap, plaaslewe, dorpstonele, nagmaal en kamptonele, die skets van boeremense en hulle kleredrag, boeremeubels en volkslewe. Van besonderse belang is die tekeninge wat hy gemaak het van wonings en strukture op plase in Namakwaland. Namakwaland is een van die streke wat hy meer as eenmaal besoek het en die tekeninge tydens hierdie periode getuig van sy fyn waarnemingsvermoë en vaardige hand met potlood en waterverf as medium. Vir die argitektuurhistorikus is die tekeninge waardevol, aangesien dit die eenvoudige volks- geboue en -strukture weergee van 'n spesifieke streek binne 'n vasgestelde periode. Hierdie visuele inligting kan as feitlike dokumentasie gesien word van die streek se volksargitektuur waarvan weinig vandag nog bestaan.
Sleutelwoorde: Erich Mayer, Namaqualand, volksargitektuur

Even though Erich Mayer is not mentioned in Esmé Berman's (1975) *The Story of South African Painting*, his work fills a unique niche in South African art history. Berman (1996: 280) rectified this omission when she expressed her view on Mayer noting that: "The work of Erich Mayer furnishes a fairly comprehensive record of rural South African life and scenery during the first half of the twentieth century".

Mayer's work may be considered of little art significance and he may not be considered one of the avant-garde artists in art history, but his works reflect the South African landscape and the lives of isolated and dispersed rural communities and families. Mayer's works reflect a sharp eye for detail without any agenda other than to record the simple lifestyles and rural scenes in which these people lived. In general, Mayer is associated with landscape painting and in the short catalogue on his work authored by Van der Westhuysen (1969) in the *Ons Kuns Lantern* compilation, examples of his work focus on his landscapes with a few portraits of individuals.

The works referred to in this essay represent the period between 1919 and 1940. This is a unique period in the history of South Africa. It reflects on the period after World War I (1914-1918) up until the start of World War II (1939-1945). The examples include some of the Mayer depictions in the collection of the DITSONG: National Museum of Cultural History (Pretoria).

This essay does not focus on Mayer as an artist but rather his depictions of aspects of the Namaqualand landscape and in particular his recordings of early frontier shelters and farm dwellings in this region. The occurrence (in 2024) of some of these building and shelter types

such as the domed *matjies* huts used to be more common in the early part of the twentieth century. Some of the more permanent farm buildings may also have disappeared or have been altered and extended to the point where they are not recognisable any more in 2024.

The Mayer depictions give the architectural historian an insight - though selectively- into the type of buildings and structures that existed within the period when Mayer travelled through Namaqualand between 1919 and 1940. As the region is both climatically and botanically unique, it can only be assumed that the farm buildings would reflect a strong vernacular character and laws and building regulations did not determine the form-giving aspects of the architecture. Form-giving was determined by the locality of each farmstead and in this circumstance the limited natural resources available for construction, in particular the lack of timber. The extremely low average rainfall and the differences of seasonal and day and night temperatures directed the logic and rationale for building, resulting in the construction of dwellings with a strong vernacular character (Naudé 2002, Naudé M. and Naudé S. 2017). This paper focuses on identifying these tendencies and character.

Motivation for the study

The DITSONG: National Museum of Cultural History (DNMCH) in Pretoria has a collection of about 800 artworks by Erich Mayer. No descriptive catalogue for these works exists and the complete collection has never been exhibited. For the cultural historian the topics represented in the work of Mayer are diverse. Several topics and specialist domains such as vernacular architecture, landscapes (depicting a particular period), works depicting aspects of different geographic regions and sub-themes highlighting aspects of cultural history such as interiors, folk clothing and folk furniture are depicted (Olivier 1980). His works are in different mediums ranging from pencil and ink drawings to oils and water colour paintings.

In this essay the focus is on the landscape and the vernacular buildings and structures of the region. The objective of this paper is to add value to these depictions, not as works of art, but as visual documents or recordings. They contain evidence about a period of lost material culture and interpretation to reveal their inherent historical and cultural historical importance. This study does not include the entire collection of drawings and paintings of the Namaqualand region in the Museum collection. Certain images were selected for more intensive research and published format.

These works also contain valuable evidence of the social life of a small group of people who dared to settle in a rather inhospitable arid region. It is assumed that under such harsh conditions these individuals and their families survived due to an ability to use the resources of the surrounding landscape to build homes and make a living. It is believed that some useful information may be retrieved regarding building technology of the region and that general patterns may emerge that can be used to create a matrix in which the vernacular building traditions of the people can be framed.

In this study the sites were not visited to verify any of the architectural detailing or to compare the actual settings and architectural fabric with those archaeological remains that might still be present in the landscape. This activity has been the preserve of the Vernacular Architecture Society of South Africa (VASSA) and of its active members who have mapped and recorded numerous farmsteads and farm buildings in the region. Of exceptional significance are the many publications of VASSA in which these recordings are featured, supported by historical maps, photographs and on-site descriptions (Amschwand 2013b, 2014, 2015, Archer and Amschwand 2012). Their publications and the obvious enthusiasm of the members of the society have served as a principal motivation for presenting these works of

Mayer, that have lain as dormant sources of information, images that might be valuable to the regional history of the area a hundred years ago.

Erich Mayer

Erich Mayer was born in Karlsruhe, Germany in 1876, and only arrived in South Africa when he was 23, just prior to the Anglo-Boer War (1899-1902). He came to South Africa due to ill health but after practising as a land surveyor for one year, he considered his health to have recovered to the extent that he could join the War as a volunteer on the side of the Boer forces. After six months being on commando with Comdt. Sarel Eloff (commandant of the Johannesburg Boer commando and grandson of Paul Kruger), he was captured at Mafeking (now Mahikeng, capital city of North West Province) and sent to St Helena as a prisoner of war for two and half years. As a foreigner he was then sent to London together with 68 other foreigners. He only returned to southern Africa via German West Africa (later, South West Africa, now Namibia) in 1904. Here he focused on painting and drawing. In 1907 he returned to Germany to study art at the Academy of Karlsruhe and in Stuttgart between 1909 and 1911.

Mayer returned to South Africa in 1911 and first stayed in Port Elizabeth for five months, thereafter spending six months in Potchefstroom and eventually two years in Pretoria. He started gaining success as an artist with an exhibition in Johannesburg. Unfortunately, the First World War broke out in 1914 and realising his predicament as a German, he moved to the Magaliesberg near Rustenburg (North West Province) where he continued with his art work. Soon he was interned in a military detention camp where his health once again deteriorated. He did not remain in the camp in Pietermaritzburg for the duration of the war but was allowed parole so he relocated to a farm de Emigratie on the Highveld. He recuperated after several operations and started to practice his art again. By 1919 he was 43 and still in the prime of his life (MK 1919: 213-5).

Erich Mayer's works in the DNMCH collection are not large in dimension and most of the pencil drawings were done on pieces of paper ranging in size from 50 mm by 100 mm to paintings of 300 mm by 350 mm in size.

The region

Several place names occur on the drawings Mayer made during his travels, supporting the perception that these drawings and paintings were not merely executed for aesthetic and recreational purposes but also as a personal record of his travels. They depict places of significance along his route. It is assumed that his travels were not simply planned by map but fused a deliberate personal objective to record the landscape with an aesthetic and artistic experience of the journey. Each artwork became a destination in itself. He used his drawings in a similar way that contemporary digital records of places and events are recorded.

The region he travelled through is generally referred to as Namaqualand but the names of the surrounding regions and sub-regions commonly used by residents are often references to vast cultural landscapes ("mental-scapes"). They were not defined by legal boundaries but as perceived geographic areas. The names are thus intangible cultural attributes of the landscape rather than places defined trigonometrically by a land surveyor or a single person such as a land owner.

The macro region Mayer travelled through is today still known as Namaqualand. It is both a region by association (with no formalised boundaries) but it is also a magisterial district with formal boundaries in the Northern Cape Province. After Gordonia in the Northern Cape,

it used to be the largest magisterial district in South Africa. It is also referred to as Little Namaqualand to distinguish it from Great Namaqualand (also known as Namaland), which is located in Namibia. The western border of Little Namaqualand is the cold Atlantic Ocean and the northern border the Orange/Gariep River (see map in figure 1). Namaqualand officially became a separate district in 1856.[1] The first farms were legalised in 1850. The area is subdivided into the Sandveld, Little Bushmanland and the more mountainous Hardeveld. This is an arid region with rainfall below 250 mm and in some years as little as 50 mm per annum. Storage dams are of little use in this climate and its associated landscape and water is obtained from boreholes and springs. The region is well-known for its succulents but timber is by-and-large absent. Live stocking rate is low and the farms are extensive, most are approximately 3 000 hectares in size. There is virtually no surface water run-off. These climatological factors, for the most, defined and guided decisions regarding the form, building materials and techniques inherent in the vernacular architecture among the frontier farmers of the early twentieth century.

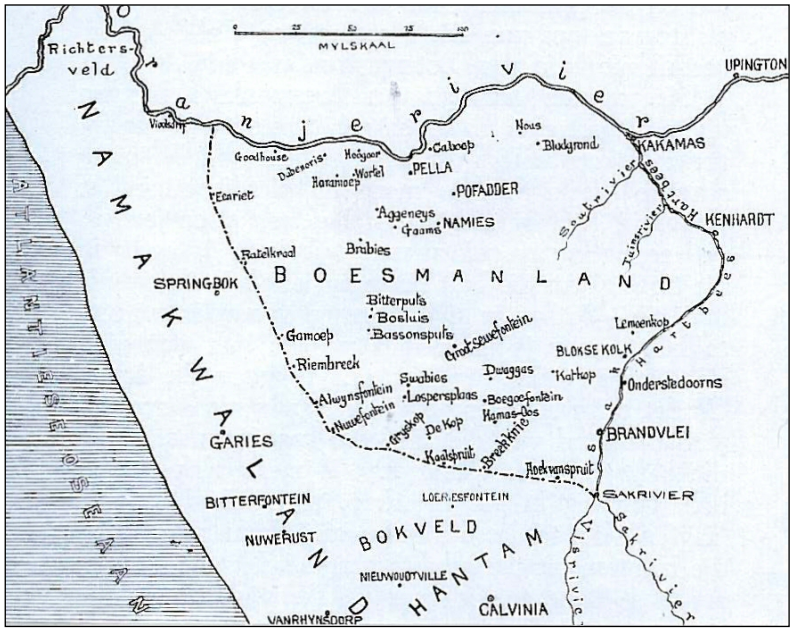


Figure 1
Map of the South African west coast indicating the location of the Namaqualand region, including the sub regions of the Bokveld, Hantam and Bushmanland (Afrikaans: *Boesmanland*)
(source: Van der Merwe 1947: 25).

Due to the isolation of the various villages and distances between each farm and village, any building or simple settlement creates a significant node reflecting human endurance and survival during those earlier years. Travel by wagon and living under these conditions can almost be considered an achievement of human perseverance. In 1876, a 2ft (0.60 m) gauge railway line was built to carry copper ore from Okiep, a small town in the Northern Cape Province, to Port Nolloth, a seaport in the Namaqualand region on the northwestern coast of South Africa. It covered a distance of about 175 km and traction was provided by mules. The line was lifted in 1944. In 1925 the railway line was extended from Cape Town to Bitterfontein

[1] *Standard Encyclopaedia of South Africa (SESA)* 8. 1974. Cape Town: Nasou Limited: 28.

about 180 km south of Springbok. Important villages between Bitterfontein and Springbok are Garies and Kamieskroon.[2]

Another regional name which appears on Mayer's drawings is the Hantam. The name also refers to a region located east of the area known as Namaqualand. The Hantam is situated on a high plateau in the Calvinia district in the Northern Cape Province. The region is surrounded by the Bokkeveld and Namaqualand, the Renoster River and Bushmanland in the north and the Roggeveld Mountains in the south. The Hantam is divided into the front Hantam and rear Hantam by the Hantam Mountain, which is orientated from the west to the north-east. The town of Calvinia lies at the foot of the mountain. The name Hantam is probably derived from the indigenous term *!hot!hani* meaning "the land on the mountain where the red tulips grow".[3]

Mayer also depicted scenes in what he refers to as the Roggeveld. This is a sub-region in the northwest and refers to a plateau about 32 km wide extending from Komsberg in the Sutherland district to the neighbouring Middelpos in the Calvinia district. Farming pioneers settled in this area early in the eighteenth century and named the region after a plant, a species of wild rye (Afrikaans: *rog*), which is indigenous to the area.[4]

Mayer made several drawings of urban scenes and streetscapes of small villages such as Kamieskroon, Springbok and Doornrivier all now in the Northern Cape Province. Kamieskroon is a small town in the Kamieskroon mountain range about 67 km south of Springbok. Kamieskroon has its origins on the farm Wilgenhoutskloof. The village that developed on the farm was later relocated to Kamieskroon about 7 km north. Kamies may be derived from the Nama word *kam* meaning two - an assumed reference to the two mountains.[5] The painting in figure 2 of a dwelling in Kamieskroon in the Northern Cape reflects Mayer 's casual watercolour technique, a style used to interpret the landscape rather than capture architectural detail of the buildings

Figure 2
Erich Mayer, *In Kamieskroon*, 1930, watercolour, 105 mm x 125 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-283).

[2] *Standard Encyclopaedia of South Africa (SESA)* 8. 1974. Cape Town: Nasou Limited: 30.
[3] *Standard Encyclopaedia of South Africa (SESA)* 5. 1972. Cape Town: Nasou Limited: 425.
[4] *Standard Encyclopaedia of South Africa (SESA)* 9. 1974. Cape Town: Nasou Limited: 391.
[5] *Standard Encyclopaedia of South Africa (SESA)* 6. 1974. Cape Town: Nasou Limited: 288.

The village of Soebatsfontein features quite often in Mayer's drawings. It is an area located, about 80 km south-west of Springbok and about 48 km north-west of Kamieskroon. The area has a very low rainfall recorded to be about 125 mm per annum. Soebatsfontein is located at a spring at a point where seven farms meet. According to legend the name originates from a tragedy dating back to 1798. Hendrik Sievert a farm assistant of a certain widow Van der Westhuizen fell into the hands of Bushmen/San. He had to plead (Afrikaans: *soebat*) with them to save his life but was eventually killed. The land was later bought by W.A.C. Smith and in 1961 it was surveyed and subdivided into smaller plots. In 1960 Soebatsfontein became a local area and developed into a small village with a school, church hall, hospital and several dwellings. The village did not develop into a sizable town as the water from the spring contains too many mineral salts and is too brackish for human consumption.[6] The pencil drawing in figure 3 highlighs a cluster of palm trees with a number of isolated buildings in the background.

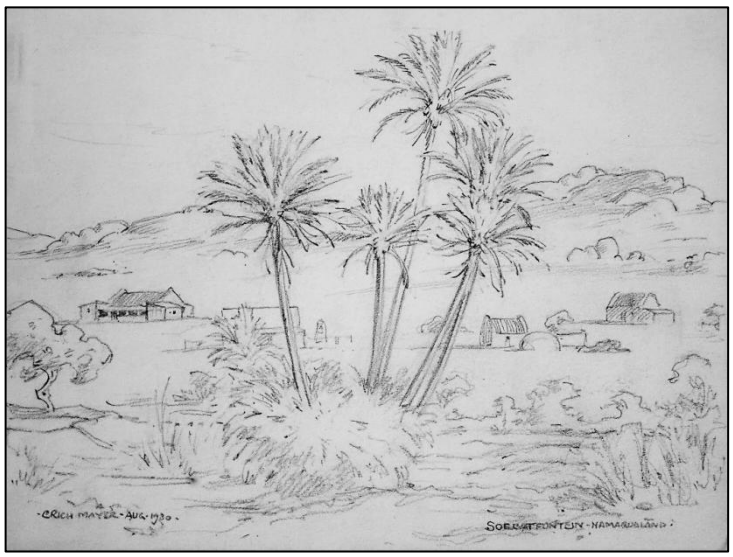


Figure 3
Erich Mayer, *Soebatsfontein – Namaqualand*, August 1930., 190mm x 253 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-288).

Figure 4
Detail of the drawing depicting Soebatsfontein (see figure 3)
containing some of the small core dwelling types.

[6] *Standard Encyclopaedia of South Africa (SESA)*10. 1974. Cape Town: Nasou Limited: 41.

The exact location of Mayer's reference to a place called Doornrivier remains vague as two farms with this name exist in the region. The one spelt as a single word and the other as two words. The depictions of buildings at Doorn Rivier (two words) suggest the existence of a small village but Amschwand (2013a: 14) indicated that it was a farm situated north-northwest of Niewoudtville on the road to Loeriesfontein. This reference (orientation) is questioned because on a map published in the same publication by the authors Maggs and Amschwand (2013: 3), Doorn Rivier (two words) is located north-northeast of Niewoudtville. Another farm by the name of Doornrivier (one word) is located south-east of Niewoudtville along the Oorlogskloof River.

The drawing in figure 5 is exceptional as it depicts Doornrivier as a set of buildings in a linear arrangement along the horizon, allowing ample space for the pig and cock in the foreground to suggest distance and open space. The animals are treated with less detail than the architecture in the background, accentuating the general observation that the architecture rises directly from the landscape. This is an exceptional perspective of a linear arrangement of buildings suggesting the existence of a street at Doornrivier

The second view of Doornrivier depicting a street view of a village (figure 6) is more conventional. The buildings are all slightly elevated from the street and are set on aprons and *stoeps* without veranda roofs. The urban character of the setting is evidenced by the presence of a planted post that may have served as lamppost or telephone pole.

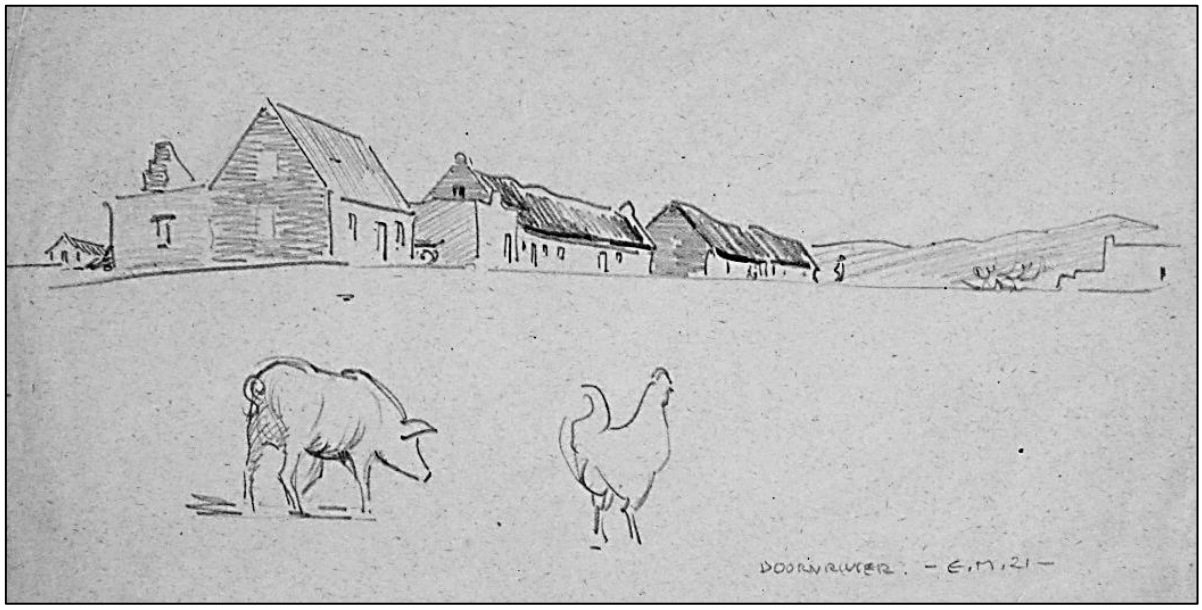


Figure 5
Erich Mayer, *Doornrivier*, 1921, pencil drawing, 130 mm x 213 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 9014-285).

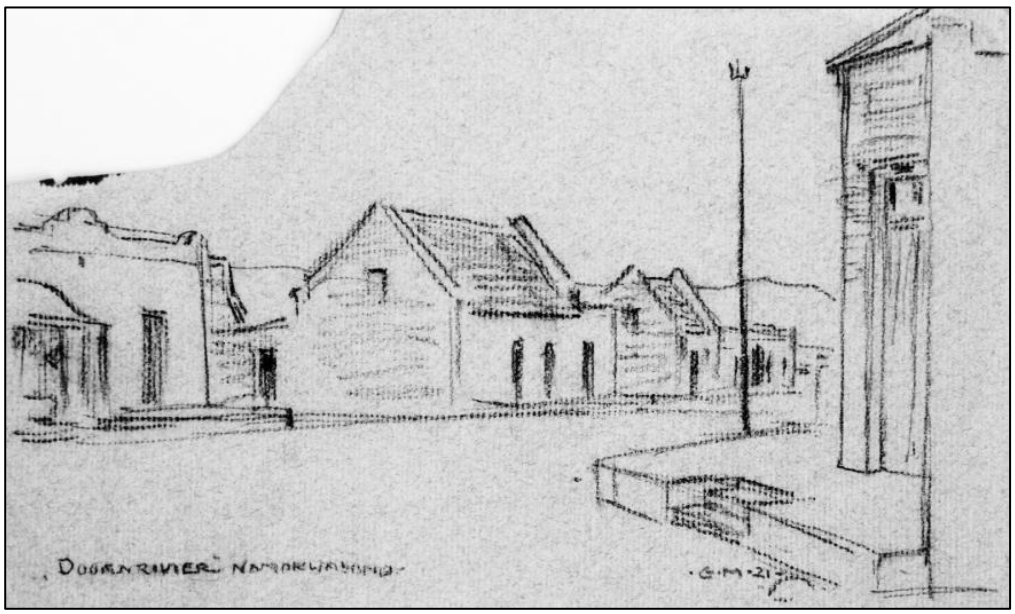


Figure 6
Erich Mayer, *Doornrivier Namaqualand*, 1921, pencil drawing, 140 mm x 231 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-338).

The name Doornrivier may also refer to a farm with this name as another drawing (figure 7) depicts a small farm dwelling with several extensions added to its sides. The drawing depicts what seems to be quite typical of the farm dwellings in the region. There is a core dwelling, as defined by the section within parapet gables, a lean-to at the back and another extension with a flat roof on one side-gable. It is assumed that the kitchen is located in the lean-to at the back as a tall chimney extends high above the lean-to roof.

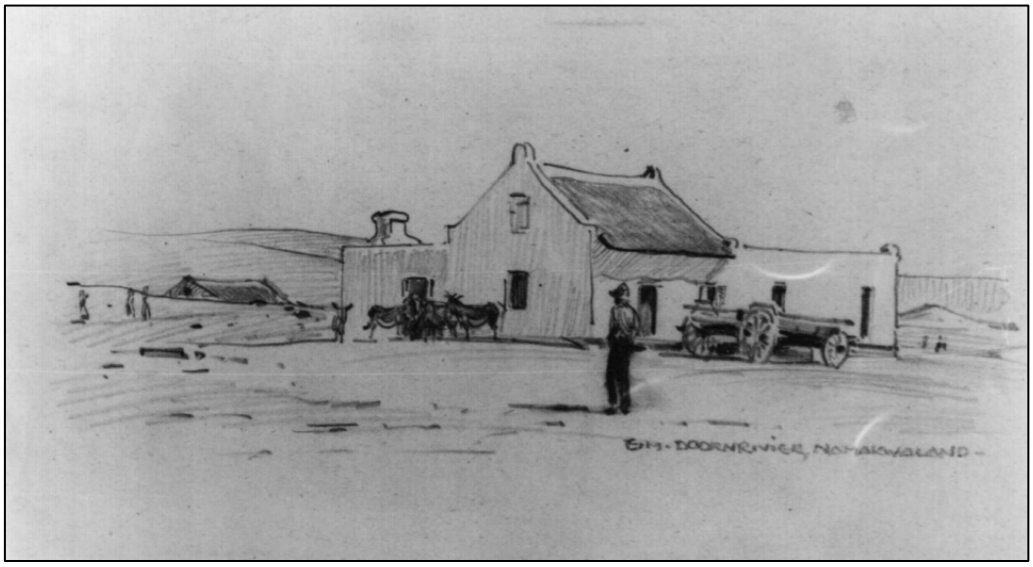


Figure 7
Erich Mayer, *Doornrivier*, *Namaqualand*, pencil drawing, 130 mm x 210 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-284).

Springbok in the Northern Cape Province is considered the principal town of Namaqualand and is located about 565 km north from Cape Town on the way to Namibia. It was first known as Springbokfontein but the name was altered in 1911, becoming known only as Springbok. The town was established due to the founding of small copper mines in the area. The presence of copper is known since 1685 - the time of the Cape Governor, Simon van der Stel. The town was laid out in 1862 but the first management board was only established in 1922. Until 1942 the land on which the town was situated belonged to several mining companies. In 1942 the municipality purchased the land from the mining companies.[7]

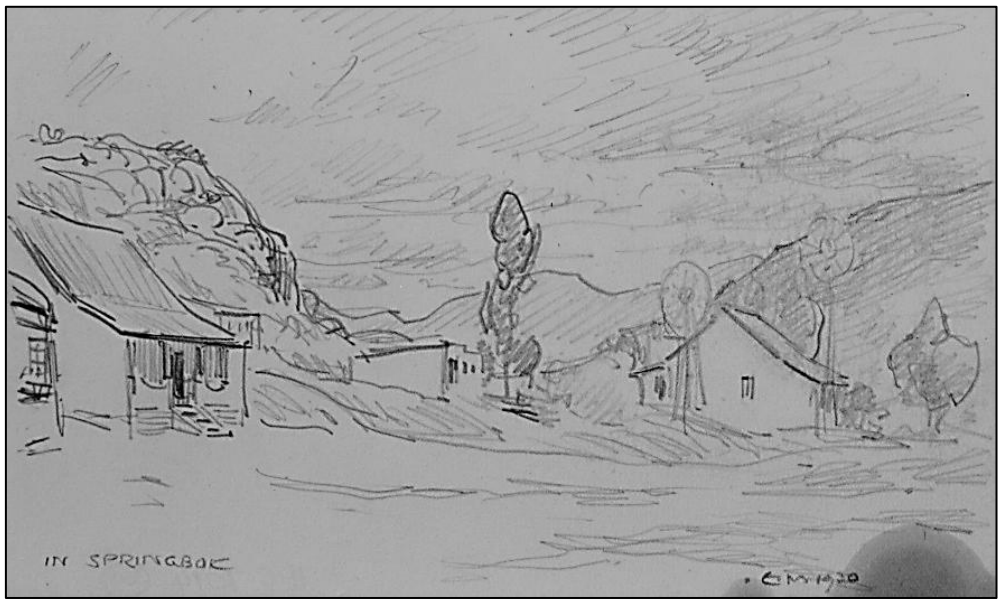


Figure 8
Erich Mayer, *In Springbok*, 1920, pencil drawing, 110 mm x180 mm.
Street view with dwellings facing the street in the village of Springbok
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-330).

Vernacular architecture

Whenever vernacular architecture is investigated, the tendency is to consider a vernacular trend as a way of thinking by a community or a group of people. The term originally referred to a phenomenon common in the study of linguistics, when a group of people spoke a dialect of an existing mother or basic language and the dialect is restricted to a small area within a macro region where the basic language occurs.

A vernacular trend in architecture has similar characteristics. Similarity in scale, style, building materials and construction techniques in a small area or sub-region would indicate a vernacular trend. However, no artefact created individually or as single entity is the same as the next and differences in detailing are usually common – allowing the existence of the folk artefact within a vernacular tradition. This differentiation between what is common and what is unique, is not usually clearly discerned by authors on vernacular architecture. The assumption of this social phenomenon remains that a society consists of individuals while every individual also exists within a community, creating an interaction that allows for individualism but also commonality among the members of the surrounding society.

[7] *Standard Encyclopaedia of South Africa (SESA)*10. 1974. Cape Town: Nasou Limited: 231.

In the case of the dispersed settlements and farms in the Namaqualand and surrounding landscape during the first fifty years of the twentieth century, the validity of this statement and a quick-fix definition cannot be concluded in simple terms. Each farmer had to rely on his own skills for survival and making a living. Creating a shelter for the family was an individual event rather than a communal or collaborative exercise. This forced the farmer to rely on his own knowledge and crafting skills to erect a semi-permanent or permanent dwelling. If each farmstead and farm dwelling could be investigated *in situ* by analysing every architectural detail, the differences would become obvious. The same exercise would also expose the commonalities among the dwellings on the surrounding farmsteads. For the purposes of this paper, only the drawings of a particular incidental traveller (not a field researcher) are used as reference material and the scholar has to rely on the trustworthy depictions of the artist and recorder, such as Mayer.

It concluded that the examples of buildings depicted by Mayer would contain both unique folk elements and commonalities or vernacular aspects. It is therefore assumed that vernacular trends will include folk traditions and unique aspects – if they can be found in the depictions. This paper introduces both variety and general types derived from Mayer's depictions.

Domes and *matjies* huts

As the farmers had to move around with their stock to find water and appropriate grazing, temporary stays at a particular point in the landscape was the norm. This was reflected in the dwellings they lived in. These were not permanent structures but temporary structures that were transported with the farmer and his stock. A timber frame covered with grass mats served this purpose. The Namaqualand region has become known for the *matjies* hut and Mayer's depictions indicate the use of the wagon and *matjies* huts as shelters during such nomadic existence.

The *matjies* hut was a dome-shaped structure constructed with laths that could bend. During construction the structure was shaped by bending laths into simple arches that crossed each other. These were tied together with strips of hide or thongs and held in place in this way. The structure was not anchored to the ground and merely stood on top of the ground. The frame was then covered with several grass mats of different sizes, also held in place by tying them to the lath structure with thongs (Ferreira 1986: 70-2).

Mayer recorded several of these domed *matjies* huts. They were usually recorded in context or with other aspects of folk life such as individuals with traditional dress and *kappies* (figure 9), or in a context where the geographic, environmental and spatial context suggest the type of landscape where these huts occurred. The matjies hut with the two seated individuals at the entrance, depicted in figure 9, also gives a relative indication of the size of the hut.

Figure 9
Erich Mayer, 1930, pencil drawing, 280 mm x 200 mm
(source: DITSONG: National Museum of Cultural History, HG 7014-316).

Matjies huts were not erected only in the fields while looking after stock. They were also erected as outbuildings at more formal farmsteads and as additional closed space among other dwelling types. In figure 10 the *matjies* hut occurs together with a small rectangular dwelling constructed with timber and covered with canvas. The entrances to both the *matjies* hut and square dwelling are closed by *matjies*, which were rolled down at night and rolled up during the day. Two depictions allow some general observations regarding the *matjies* huts, such as its form, size and building materials. More details regarding the use of these huts, their practicality and permanence can be deducted. Its size varied and in one of the depictions its diameter is almost the same as that of the adjacent rectangular dwelling while in another (figure 11) the hut is small, only allowing a single bed to fit inside.

In one of the drawings (see figure 11) a man is sitting on a chair halfway into the entrance of the hut. What is significant, is that the entrance to the hut is located along the southern elevation – the shady side. A small water barrel with tap is also located on this side of the hut allowing the barrel to remain on the cooler side of the structure.

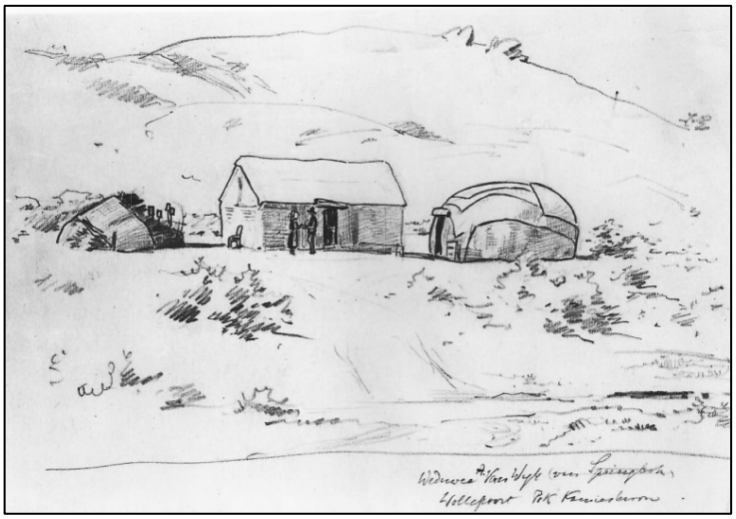


Figure 10
Erich Mayer, *Weduwee van Wyk (van Springbok) Wolkpoort PK Kamieskroon*, pencil drawing, 173 mm x 255 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-310).

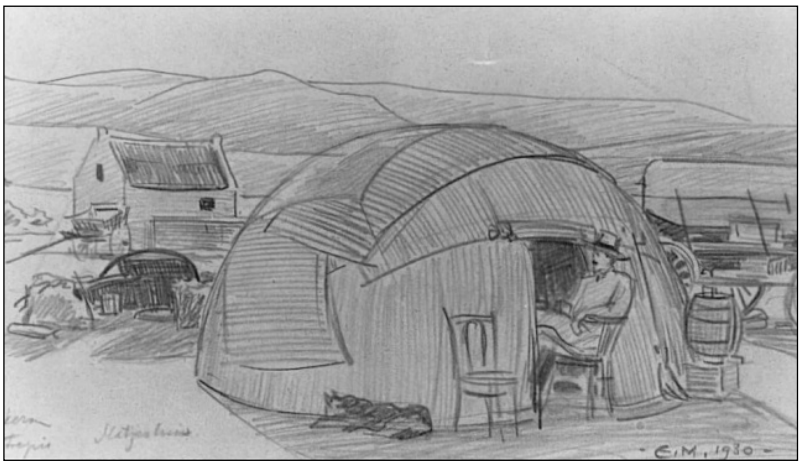


Figure 11
Erich Mayer, *Matjieshuis.*1930, pencil drawing, 110 mm x 222 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-313).

Farmsteads

Contrary to the nomadic lifestyle and the construction of temporary structures such as a *matjies* hut, the sure sign of permanent settlement was the establishment of a farmstead. In general, the farmstead is the place on a farm (not necessarily in the centre) where all the administrative and managerial aspects of farming are centred. It is also the point where the landowner and his family reside. This is a universal phenomenon but farmsteads differ depending on geographic location, region and the lifestyle of each family. The farmstead in the dry regions in and around Namaqualand reflected no lush vegetation suggesting that the farmstead served as an almost utilitarian node rather than an oasis in the otherwise barren landscape. Mayer's depictions record the visual and aesthetic character of these farmsteads: a single building or a cluster of small buildings that consisted of a dwelling and single supporting outbuilding such as a barn and various smaller supporting structures such as a detached kitchen, a cooking screen, a

detached bake oven and other minor structures associated with household activities and farm activities.

On farms where the family had been residing for more than one generation the dwelling became an amalgamation of extensions and additions (rooms) added to the original core dwelling. On all depictions an annex had been added to the original farm dwelling.

None of the farmsteads contains extensive kraals suggesting that stock were kept elsewhere. The farmsteads are void of tall trees and extensive planted vegetation. One of the depictions reveals the presence of shrub-sized trees at the back of the dwelling within the confines of a yard wall. It is assumed that these were fruit trees. The farmsteads reflect the treeless landscape.

The occurrence of the farm dwelling in an almost barren landscape suggests it to be simply a temporary occurrence of human presence rather than extensive activities. This isolation, almost surprising presence and almost intimate scale of each farmstead within the landscape seem to have intrigued Mayer. As the farmsteads are not defined by vegetation and tall trees, the visitor has no clear indication of where the entrance or principal façade to the farmyard is located, where any other entrances and exits to the farmstead are located and where the front and back of the steading is supposed to be. The farmstead depicted in figure 12 is set on a slope without any tall trees or other manmade features surrounding it. This reinforces a perception of isolation and desolation. The farm dwelling has expanded sideways into a "mansion" while the surrounding farmyard has remained without trees, the common indicator of the age of a farmstead in other regions.

Figure 12
Erich Mayer, *Kookfontein*, 1930, watercolour, 155 mm x 255 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-278).

The yard as buffer

On some drawings low walls extend from the dwelling outwards (see figures 13, 14 and 15) It is assumed that the dwelling in figures 13 and 14 is the same building. This dwelling had a small yard defining the front of the building, which seems to be an exception rather than the rule. Where the front of the dwelling is enhanced and defined by the presence of a low courtyard

wall it suggests the creation of an additional space and as a buffer area, allowing some privacy or to keep animals away from the entrances.

This observation also highlights another architectural element, or rather the lack thereof, namely the absence of a *stoep* (or covered veranda). A covered stoep does occur in figure 17. In general, a stoep is a small area in front or at the back of a dwelling with an elevated surface extending the entire width of the façade. It is normally two or more steps above the ground, placed on an axis with the front or back entrance.

Considering the climate and harsh sunshine in the region, the (evolutionary) logical form-giving element in these dwellings would be the protection of the façade, front entrance and interior by the addition of a *stoep*. This would have served as a buffer between the outside (hot dry climate) and the interior of the dwelling. To some extent the absence of the veranda (a stoep area protected with a roof) can be directly related to the absence of a *stoep* or apron in front and at the back of the dwelling. The presence of some form of shading including the presence of a pergola, would have served as some protection for the façade of the dwelling.

The presence of the trees inside the courtyard suggests the need for shade, rendering this open space with some level of comfort during hot days.

Figure 13
Erich Mayer, 1921, pencil and colour wash, 130 mm x 222 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-323).

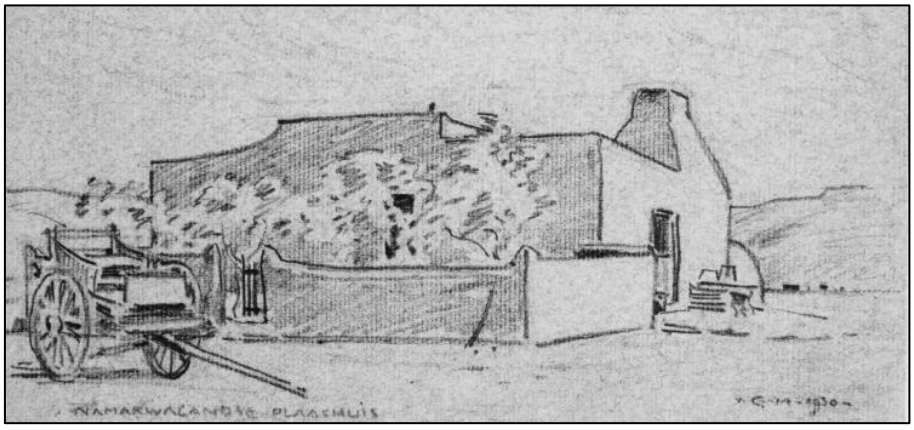


Figure 14
Erich Mayer, *Namakwaland Plaashuis*, 1930, pencil drawing, 140 mm x 230 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-425).

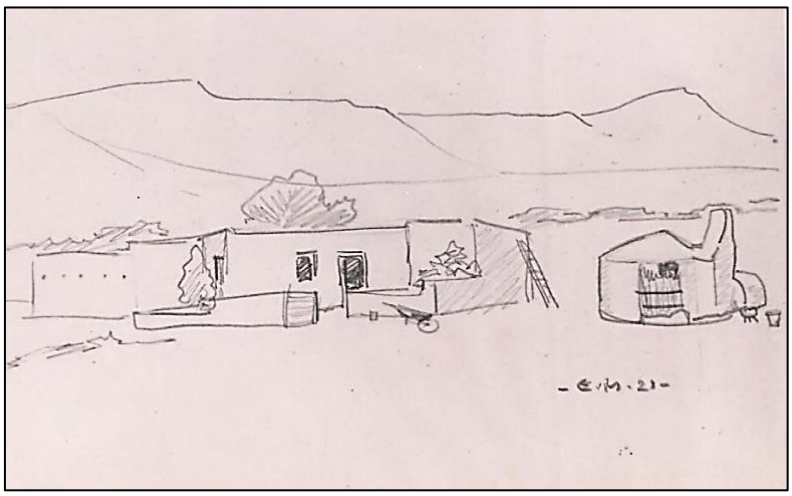


Figure 15
Erich Mayer, 1921, pencil drawing, 130 mm x 212 mm. Small flat roof dwelling with front yard and detached outdoor kitchen
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-326).

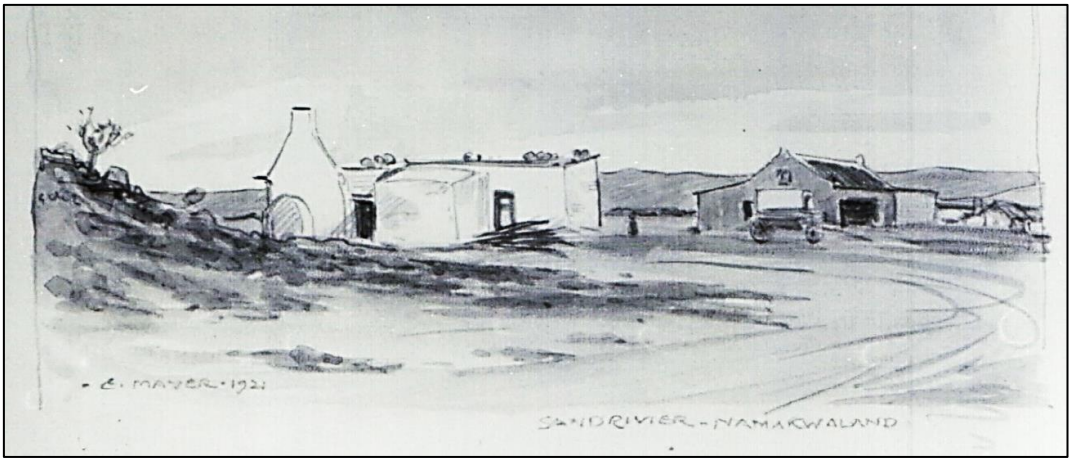


Figure 16
Erich Mayer, *Sandrivier - Namaqualand*, 1921, watercolour, 127 mm x 200 mm. View towards the back of a flat roof dwelling, a large barn and other buildings in the background
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-322).

The farm dwelling

Investigating the drawings in detail reveals an intriguing aspect regarding the vernacular character of the farm dwellings. The buildings reflect a directness and almost abrupt presence in the landscape. All the farm dwellings appear to have emerged from the ground. The dwellings tend to be set flat on the ground without elevated foundations or floors. Entrances also open directly onto the surrounding yard and ground level. This architectural characteristic is not necessarily directly derived from the nomadic *matjies* hut being placed directly on the ground, but reflects the persistence of a logic continued long after the *matjies* hut was no longer in use. This closeness to the almost flat landscape creates an intimate association between the building, the landscape and its setting that informed the regional vernacular of its residents.

The region and landscape are dry and the builder could obviate the need to protect the dwellings from flooding. Elsewhere, in moister regions, *stoeps* and elevated floors are more

evident and almost typical as they allow rainwater to drain around and away from the structure. The *stoep* would also have served as a measure to manage rainwater from the roof, serving as a wide apron in front or at the back of the building (not necessary along the gable ends).

The dwellings depicted by Mayer all reflect one similarity in form and structural evolution – the presence of a core structure with later extensions and additions. This arrangement occurs in a variety of forms: the original building having a flat roof with later extensions executed in the same style; a core with gable roof and extensions with flat roof or a core with a gable roof and later extensions done in the same style as the gabled dwelling. These extensions take on a variety of forms mostly depending on where they were added. Some dwellings were extended along the gable end while other additions were added along the front and back elevations, resulting in those dwellings getting a typical lean-to side elevation profile (core building in the centre with lean-to roofs at both sides).

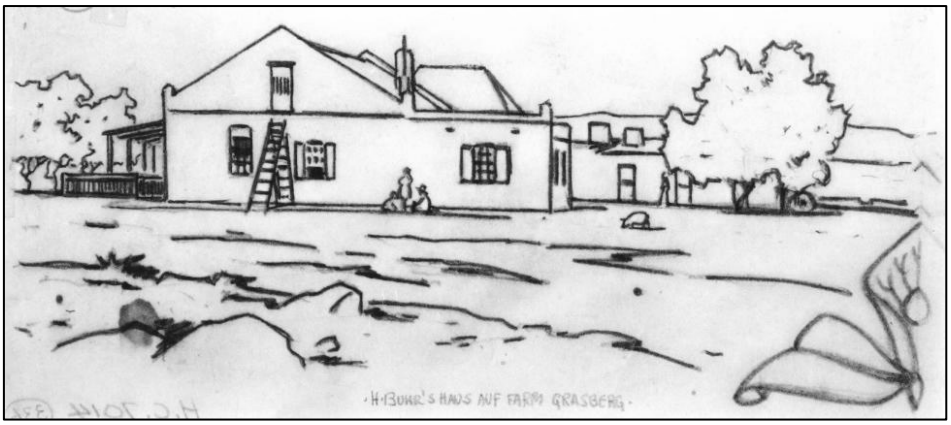


Figure 17
Erich Mayer. *H. Buhr's haus auf farm Grasberg,* pencil drawing on tracing paper, 87 mm x 181 mm. Extended farm dwelling with a lean-to at the back and a veranda in front (source: art collection, DITSONG: National Museum of Cultural History, HG 7014-336).

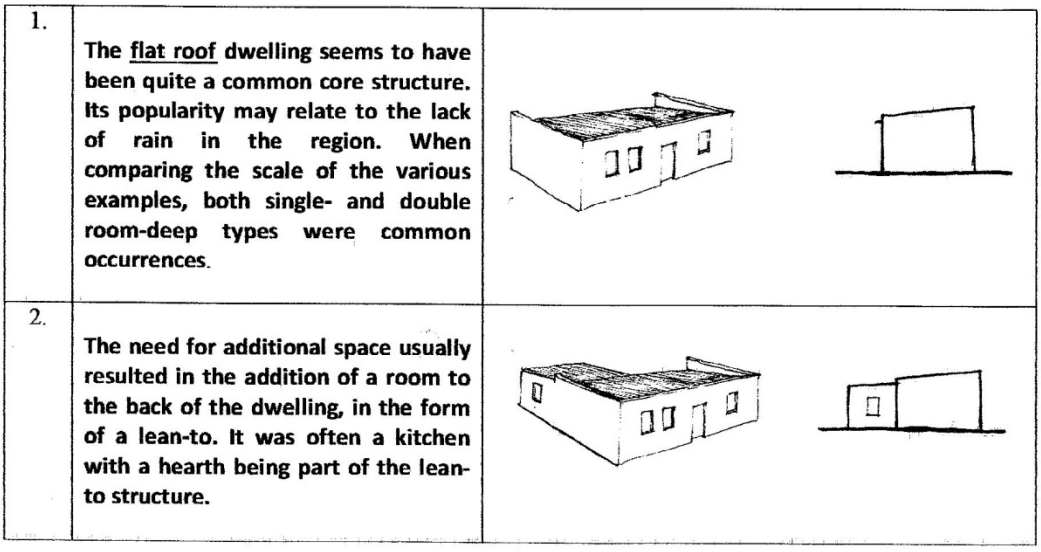


Figure 18
Extensions and additions to the flat roof dwellings (drawing: M. Naudé 2018).

A significant aspect when studying vernacular architecture of a region is the identification of the front and back of a dwelling. These elevations tend to connect with and serve as interface between the interior, the front and backyard. Mayer's Namaqualand farm dwellings do not always project this distinction definitively. One of the elements suggesting the back of the dwelling is the location of the kitchen. This was usually defined by the presence of a hearth and chimney.

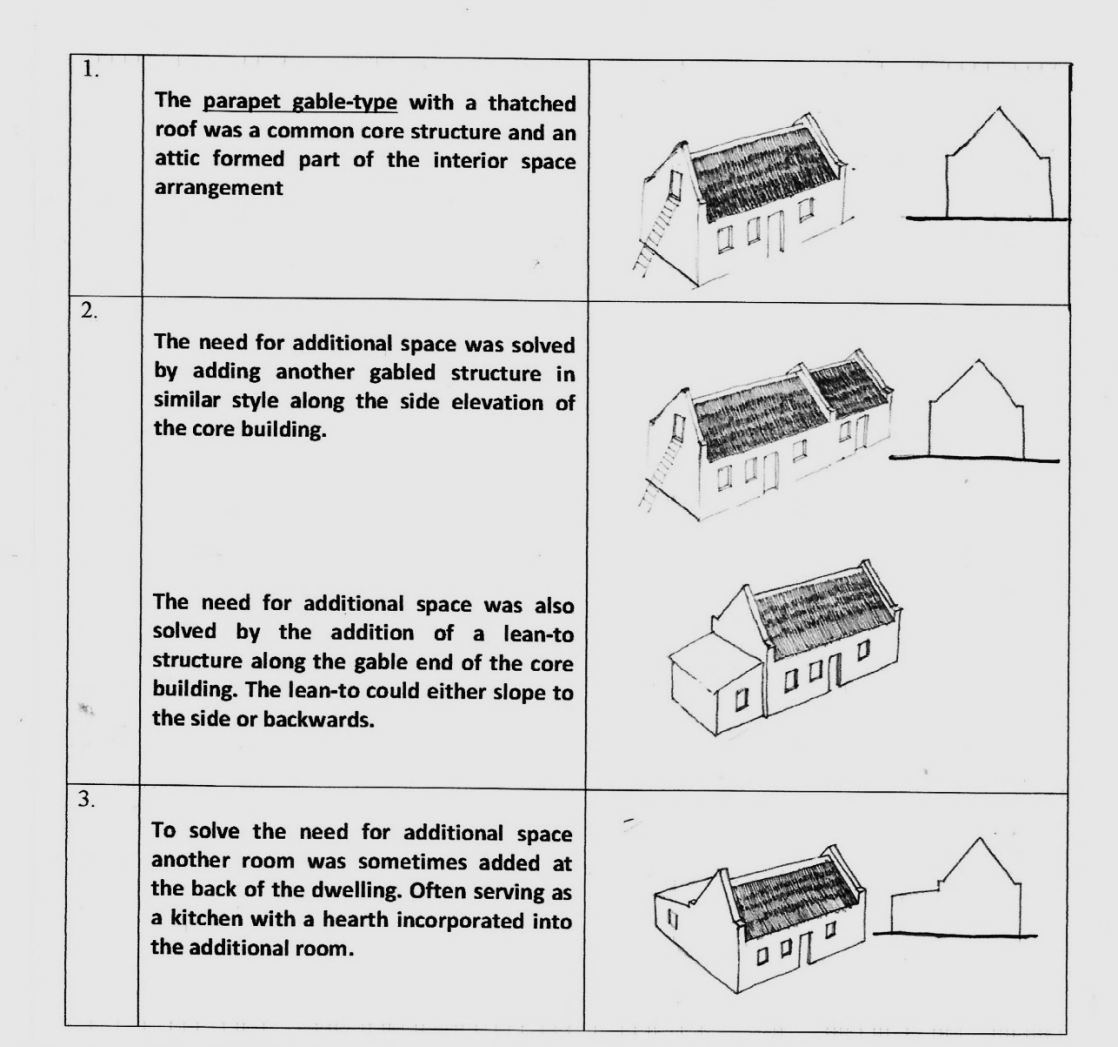


Figure 19
Extensions and additions to the parapet gable dwellings
(drawing: M. Naudé 2018).

One of the curious occurrences is Mayer's preference to depict dwellings from the back or from a vantage point which renders the building more sculptural. Buildings are seldom depicted directly from the front or the back, which would have resulted in these elevations appearing flat and one dimensional.

The original dwellings were not designed (envisaged) or constructed with kitchens and hearths; the latter functional spaces and architectural elements were usually added later. The kitchen was usually added at the back of the dwelling. A hearth with an attached bake oven was added to the kitchen or formed part of the kitchen extension. This configuration gave the building a strong sculptural aspect.

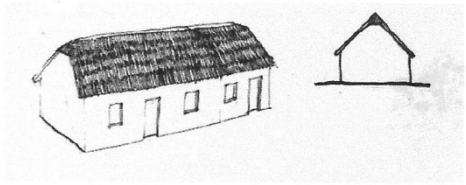
1.	Dwellings with a half-hipped thatched roof were large double-room-deep types and seldom small cottage type structures.	

Figure 20
Dwellings with half-hipped roofs were rare
(drawing: M. Naudé 2018).

The introduction of the kitchen

Typical of the oldest and original frontier dwellings, was the absence of kitchens. Food was prepared outside, either on an open fire or in a detached outdoor oven. This resulted in the creation of cooking screens (*scherms*) varying in size and diameter according to the preferences of the housewife.

Outdoor cooking remained a tradition for quite some time. There was no need for a kitchen to be indoors. As it seldom rains in the region, the fire could be made outside without the danger of an unexpected rainstorm. A fire inside would also create an additional risk of sparks lighting the thatched roof of a building.

On some farms a lean-to was added to the back of the dwelling and the kitchen was introduced within this extended structure along the back of the dwelling. In figure 21 the back and gable-end elevations demonstrate the location of a kitchen (with hearth, chimney and oven) forming part of a lean-to structure. The location of a kitchen could normally be observed by the presence of a hearth, a chimney and an attached bake oven at the back of the dwelling and forming part of an exterior wall of the lean-to room.

Figure 21
Erich Mayer, *Namakwalandse plaas*, 1921, pencil drawing, 114 mm x 176 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-332).

On some farms the open cooking screen was replaced by a small building completely detached from the dwelling. This building would serve as an outdoor kitchen. It was a single room structure with walls and a roof and in the Namaqualand region, the kitchen would boast a large hearth opening inwards. It served as a large separate room for every kind of food preparation, including baking and cooking. The detached outdoor bake oven was replaced by attaching it to the hearth allowing baking to become an indoor activity. One of the reasons for this symbiotic association was the use of the same hot coals for both cooking and baking: when the coals were removed from the bake oven, they were placed in the hearth.

The detached kitchens were quaint simple buildings as they consisted of a single room with a single entrance, often also with a single window. The hearth sometimes had the same width as the entire gable wall but could also be narrower. In more recent times the hearth cavity has become the location for a coal or wood stove using the original chimney.

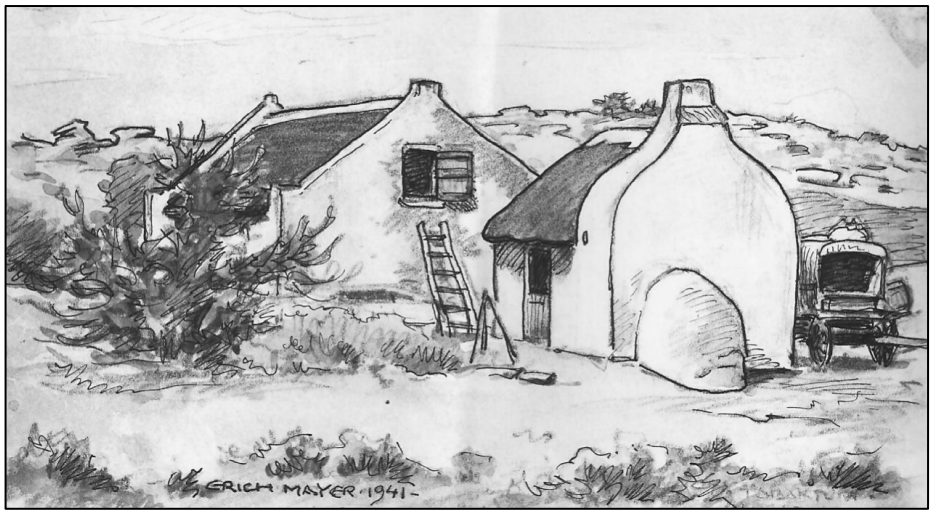


Figure 22
Erich Mayer, 1941, watercolour, 105 mm x 180 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-259).

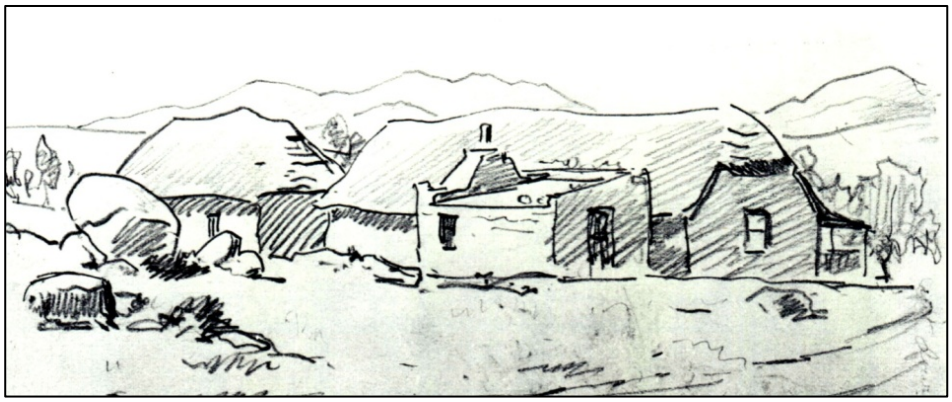


Figure 23
Erich Mayer, pencil drawing, 120 m x 180 mm. Elongated farm dwelling with a half-hipped roof and a detached kitchen located at the back
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-290).

Associated scenes

The earliest farm dwellings only served as residences and fulfilled the need for privacy. These dwellings had no kitchens and bathrooms or ablutions. Food was prepared outside the dwelling. As the region seldom experienced any rain, food could be prepared outside on an open fire. In more primitive situations, food preparation was done on an open fire and baking was done in an outdoor oven.

Baking was done in a detached bake oven and these activities and associated structures were often combined by enclosing the cooking area and bake oven within a cooking screen. Cooking screens cannot be considered architecture in a formal sense, as they were not constructed with formal walling, a roof, doors and windows, but were constructed mainly with some timber laths and bushes serving as wind breaks to protect the open fire from draughts and breezes. However, they need to be assessed in the context of the subject of farm buildings, structures and the functioning of the dwelling in particular. Several activities and structures associated with the dwelling and household were also depicted by Mayer. All these activities tend to be located at the back of the dwelling – the workers' side and the housewife's domain of the household (as an extended function of the dwelling).

Within the history of development and evolution of the farm dwelling, cooking screens fit into a category of their own. Cooking screens did not only serve a single function and use – that of a cooking area detached from the dwelling, but it also served as an area for socialising. Mayer depicted several scenes where individuals were socialising in the enclosed area. Even though these screens seem to vary in diameter from about 3 m to as wide as 5 m (author's approximation), they also served as an open area where women sat and executed other chores such as needlework and conversing in a normal household manner, suggesting that the cooking screen also served as a social space detached from the dwelling. As some cooking screens are depicted with small stools and boxes to sit on and also used as storage units (figure 24), the presence of these pieces demonstrates the multi-functional character and value of this space. The same depiction indicates the presence of an outdoor bake oven detached from the cooking screen, suggesting that cooking screens did not always contain an oven. The cooking screen was a permanent additional space to the dwelling. The dry climate ensured that little damage would be incurred to the structure of the screens due to natural elements such as rain and wind, There was therefore no need for a roof over this space.

Figure 24
Erich Mayer, 1921, ink drawing, 144 mm x 230 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-374).

Some of the cooking screens included a bake oven, but this was not the rule. The bake oven could either be inside or outside the cooking screen. Often the outdoor oven served as the principal food preparation structure and a low wall was erected in a semi-circle around the front of the oven. The oven seems to be the principal feature and the walling merely serves as a screen. In figure 25 the distance between the outdoor oven and the dwelling can be seen. A low semi-circular wall defines the activity area in front of the oven.

The outdoor oven was no cosmetic annexure to the kitchen activities. It was a specialised structure erected for a specialised function. The floor of the oven was elevated, guaranteeing easy loading and removal of bread loaves, mainly to a height somewhere between the knee and the hip.

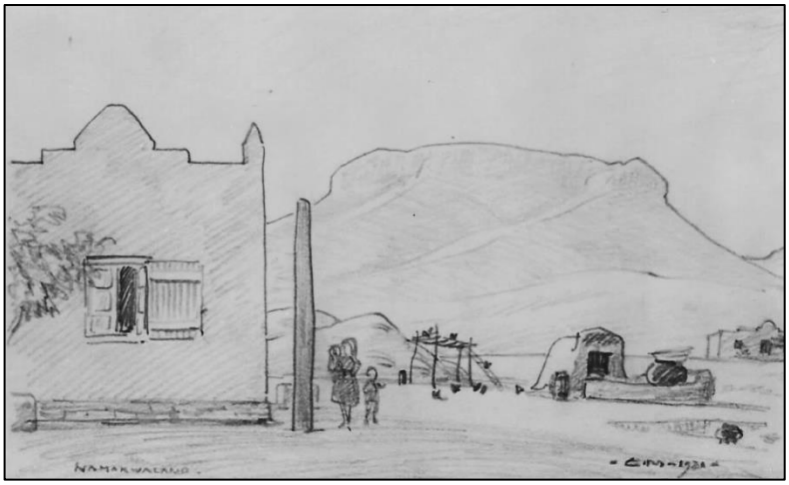


Figure 25
Erich Mayer, *Namakwaland*, 1921, pencil drawing, 112 mm x 177 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-324).

Figure 26
Erich Mayer, pencil drawing, 178 mm x 156 mm. Woman preparing the outdoor bake ovenfor baking bread
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-438).

Other activities represented in structures in and around the farmsteads included the threshing floor and the water reservoirs. The threshing floor was a circular area defined by stones planted along the periphery of the circle defining a relatively flat area.

One of the farmsteads (in figure 27) contained a barrel-shaped water reservoir constructed with stone, which was filled by a wind pump directly adjacent to the reservoir. A circular threshing floor is also depicted. The construction of circular structures with tapering sides is quite common in the macro region as corbelled structures occur widely from the Namaqualand eastwards to Carnarvon and Williston in the Northern Cape and southwards as far as Beaufort West in the Great Karoo region of the Western Cape. No drawings of corbelled huts recorded by Mayer occur in the Museum collection.

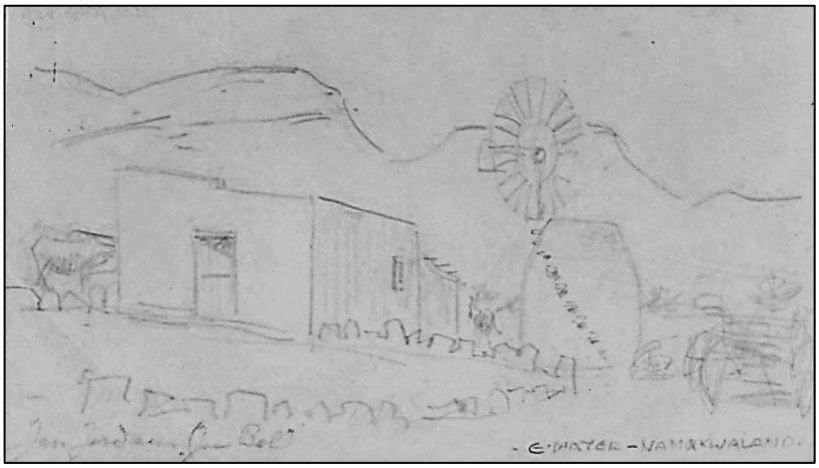


Figure 27
Erich Mayer, *Namakwaland,* pencil drawing, 113 mm x 20 mm
(source: art collection, DITSONG: National Museum of Cultural History, HG 7014-459).

Conclusion

Although the work of Erich Mayer is not considered of serious art historical significance, to the cultural historian and architectural historian, his depictions of buildings and structures in the Namaqualand region contain a treasure of information. The delicate details of the farmsteads and buildings in the landscapes only become evident once the depictions have been photographed and enhanced electronically. His keen eye for detail allows many small aspects to contribute to the cultural historical pool of knowledge inherent in the drawings (Basson 2006).

To the architectural historian interested in vernacular architecture, the small buildings and other structures represent not only the region's architecture but also present aspects of the lifestyles of these frontier farmers. Although very little regarding the building materials and techniques can be reconstructed or defined in much detail, the depictions reveal simple form-giving aspects such as scale, shape, arrangement of doors and windows and in some instances on the spatial orientation of individual farm dwellings.

In the real landscape the simplicity of the architecture represents elementary aspects of frontier living and the types of abodes erected to serve the purposes of frontier living. It also represents the lack or absence of some elements that projects something of a lost rural lifestyle, and in particular the adaptation of these farmers to the arid climate. Some of these include the common occurrence of the flat roof for dwellings, the size of core structures, the presence of

several extensions and additions to these core structures, the selection of small windows in the dwellings and the lack of *stoeps* around the structures. The landscape directly surrounding the dwellings remains barren and unimpressive because of a complete lack of planting that may include the presence of tall trees, mature shrubs or any sign of formal gardening.

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Mauritz Naudé holds a Master's degree in architecture from the University of the Witwatersrand and has been engaged in heritage management, conservation and museology since 1980. He served as researcher and curator for historic buildings at DITSONG Museums of South Africa (Pretoria) from 1984 until 2020 and lectured at various universities between 2000 and 2020, Since 2000, Naudé has focused on heritage impact assessments, with expertise in evaluating historic sites and buildings. His combined background in archaeology, vernacular architecture, conservation and heritage legislation has made him a valuable consultant on interdisciplinary projects, aiding archaeologists, architects and developers with assessments and permit applications. More recently his interests have expanded into the conservation of industrial buildings and urban heritage sensitivity projects. Naudé has published more than 50 peer-reviewed papers and more than 60 popular articles on topics such as architectural history, building conservation and heritage legislation.

The dialectics of ordinary architecture: Towards an epistemological review

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It is ordinary architecture that shapes the true character of our cities, yet it is often overlooked by the architectural discipline as it lies outside its area of interest. This is an insightful topic of study in Brazil, where academic discourse remains strongly focused on modern architecture. This essay explores this theme by combining an analysis of theoretical texts with works of art related to architecture. The central question guiding the discussion is: what, or who, determines what counts as knowledge worthy of consideration within the academic field of architecture? While most of the references discussed are Brazilian, the topic has broader relevance, particularly in the Global South, where colonial legacies are deeply entrenched in urban and architectural spaces, as well as in the production of knowledge. This essay's main intention is to challenge architecture's epistemological boundaries, developing architects' critical awareness and consequently enhancing their professional performance in meeting societal needs.
Keywords: ordinary architecture, epistemological frameworks, colonial legacies, intersections between art and architecture

A dialética da arquitetura ordinária: por uma revisão epistemológica
Arquitetura ordinária pode ser entendida como aquela que molda o verdadeiro caráter de nossas cidades, mas que é também muitas vezes ignorada pela disciplina da Arquitetura por estar fora de seu campo de interesse. Essa é uma questão de estudo particularmente interessante no Brasil, onde o discurso acadêmico continua fortemente focado na arquitetura moderna. O artigo explora o tema, através do cruzamento entre a análise de textos teóricos e de pesquisas em arte relacionadas ao campo da arquitetura. A questão central que orienta a discussão é: o que, ou ainda quem, determina o que constitui conhecimento digno de consideração no campo acadêmico da arquitetura? Embora grande parte das pesquisas e autores discutidos sejam brasileiros, o tema tem relevância mais ampla, particularmente no Sul Global, onde os legados coloniais permanecem profundamente enraizados nos espaços urbanos e arquitetônicos, bem como na produção de conhecimento. O objetivo maior desse ensaio é questionar os limites epistemológicos do campo da arquitetura, com o intuito de desenvolver a consciência crítica das arquitetas e arquitetos e, por consequência, melhorar a sua atuação profissional no que se refere à sua função social.
Palavras-chave: arquitetura ordinária, enquadramentos epistemológicos, legados coloniais, interseções entre arte e arquitetura

In 2010, architect and professor Enrique Walker published the book *Lo ordinario* [The Ordinary].[1] It is a selection of texts by authors who have focused on the theme of the "ordinary" in architecture over the last few decades.[2] We are particularly interested in the book's introductory text. In it, Walker suggests that the writings he has selected share a common theme: the "appropriation and instrumentalization" of so-called "existing conditions" by the field of architecture. As well as "ordinary", he relates other terms to these "existing conditions": "banal", "everyday", "found", "popular" (Walker 2010: 7). With this, we can say

[1] The publications' titles will be presented in their original language. If this is not English, the translated title will be shown in square brackets. All quotations from non-English publications are our own translations.

[2] The book was published in Spanish by Gustavo Gili publishing house. The authors of the collection are: Alison Smithson, Cedric Price, Denise Scott Brown, Junzo Kuroda, Momoyo Kaijima, Paul Barker, Peter Hall, Peter Smithson, Rem Koolhaas, Reyner Banham, Robert Venturi, Stefano Boeri, Toyo Ito, Willem Jan Neutelings and Yoshiharu Tsukamoto.

that “ordinary architecture” would then be that which, whether designed by architects or not, is the “order of the day”, because it is everyday, the majority, and therefore responsible for the true shape of our cities.

Still in relation to Walker’s definition of “ordinary”, there is another aspect that we are interested in exploring. According to the author, the term is also related to a kind of otherness, or to what the discipline of architecture “puts at a distance because it cannot digest, understand or accept it as part of its field” (Walker 2010: 7). In short, “ordinary architecture” is also that which architects consider inferior or unworthy of note or value.

The dialectics Walker (2010) points out is in line with ideas that Beatriz Colomina and Mark Wigley present in the preface to *Everyday Matters: Contemporary Approaches to Architecture* (2022), in this case in relation to the term “everyday”, which, as we have seen, is aligned with the term “ordinary” in terms of meaning. According to the authors,

> [...] the everyday is by definition blind. That which literally happens every day is so ever present, ever repeated, that it paradoxically goes unnoticed. The everyday is in this sense environmental, like water to fish – which is precisely what makes it so crucial to architects but also what torments them (Colomina and Wigley 2022: 6).

In short, we will consider “ordinary architecture” to be that which is both very common and a source of discomfort for architects. Throughout this essay, we will explore this contradiction and its significant potential for investigation.

“Our” architecture

In the essay *Documentação Necessária* [Required Documentation], published in the first issue of the *Revista do Patrimônio Histórico e Artístico Nacional* [Journal of National Historical and Artistic Heritage] in 1937, Lúcio Costa (1937: 38) criticises Brazilian architecture as it was being produced at the time. According to the architect, a certain “disorder” stood out, stemming from an unfortunate combination of factors. These included shortcomings in architectural education, which – grounded in a technical-decorative methodology – had led to a profusion of architectural “styles” resulting from cultural appropriation without solid technical foundations. This scenario also involved clients who, influenced by the globally booming film industry, sought to mimic foreign cultures in the architecture of their homes, commissioning “bungalows, Americanised Spanish houses, castles, etc.” from architects. Costa (1937: 39) complains ironically: “pretending for the sake of pretending – if only we could pretend to do something of our own”.

In the same text, Costa (1937: 31) pointed to a possible way out of this decline. In his view, Brazilian architects had failed to look attentively at “our old architecture”, in search of its essential qualities. By “ours”, he meant architecture produced in Brazil in earlier centuries shaped by vernacular Portuguese traditions. For Costa (1937: 37), this architecture embodied a purity worth reclaiming. He therefore proposed a return to the “good Portuguese tradition of not lying”, in search of the fundamental characteristics of superior architecture as he saw it: the “sturdiness” of buildings that were “rough yet cosy”; and the “correctness of proportions and absence of ‘make-up’, presenting perfect plastic health” (Costa 1937: 31). Although he does not state it explicitly in this text, Costa identifies the moment of this architectural discovery in another piece of writing. It occurred during a research trip to the city of Diamantina[3] in 1922.

[3] Diamantina is a historic city in Minas Gerais, south-eastern Brazil. Established in the eighteenth century during the peak of regional gold and diamond mining, it is notable for its well-preserved Portuguese-influenced architecture. The city was listed as a UNESCO World Heritage Site in 1999.

He writes, “When I arrived there, I fell straight into the past in its most stripped-down, purest sense: a real past I had been unaware of; a past that was brand new to me” (Costa 1995: 27).

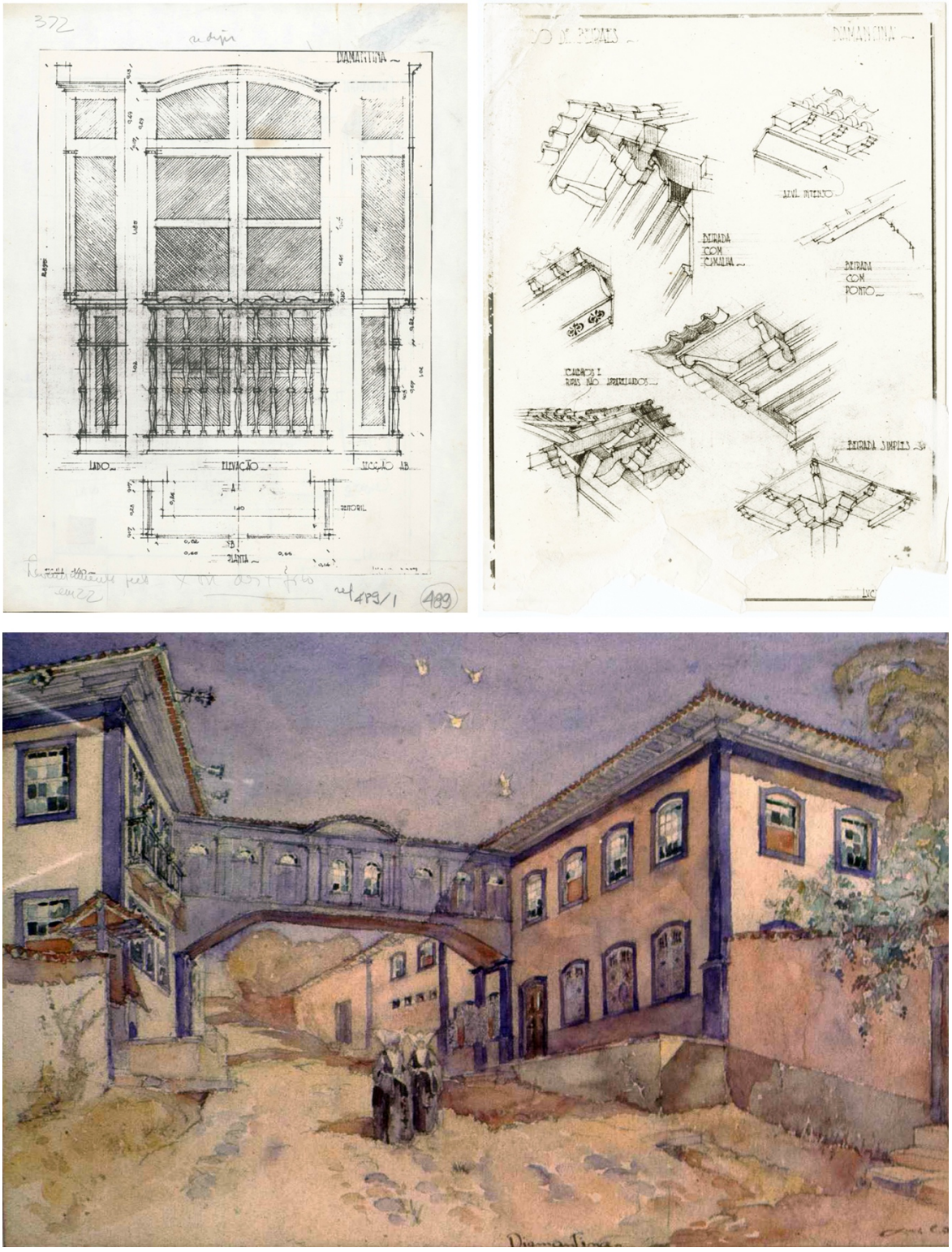

Figure 1
Technical drawings and a watercolour produced by Lúcio Costa during his 1922 visit to Diamantina, documenting the architecture of the city
(source: courtesy Arquivo Casa da Arquitectura).

Costa's critique of early twentieth-century Brazilian architecture highlighted another distinctive feature in the adaptation of Portuguese vernacular architecture to Brazilian territory and culture. Engaging directly with Gilberto Freyre's thought,[4] Costa (1937: 31) identified what he termed a certain "softening"– a technical and stylistic loosening evident in the country's buildings. This concept conveyed how European architectural standards, when transferred to Brazil, had lost some of their rigour due to local conditions. In his text, Costa (1937: 31) traces part of this phenomenon's origin to what he describes as the "at first gormless condition" of the local workforce – predominantly enslaved indigenous and Africans or their descendants. His position remains dialectical, as while acknowledging that these adaptive solutions were not without merit – exhibiting "an ease of expression that in no way corresponds to reality" (Costa 1937: 31) – he ultimately adopts a nostalgic tone, advocating a "return to the origins" to the Portuguese architectural tradition. He says "it is now up to us to recover all that lost time, reaching out to the master builder, always so dismissed, to the 'old *portuga*'[5] of 1910, because – say what you will – it was he who single-handedly kept the good tradition" (Costa 1937: 39).

Us and the others

Between 1976 and 1997, the artist Anna Mariani travelled through the countryside of north-eastern Brazil on 26 occasions, taking over 1,200 photographs of vernacular houses in small towns. Working with systematic rigour, Mariani documented limewashed façades in vivid colours with geometric relief designs, particularly on the parapet walls. Her compositions were deliberately distanced and uniformly framed, excluding human presence and contextual distractions. This resulted in a visual archive that highlights the luminous colour spectrum and expressive geometric richness of these façades (figure 2).

This research led to the publication of the book *Pinturas e platibandas* [Paintings and Parapet Walls] (2010).[6] Alongside Mariani's photographs and writings, the edition features essays by Ariano Suassuna, Caetano Veloso, and Jean Baudrillard, all of whom celebrate the photographic work and the architecture it depicts.[7] Suassuna (2010: 7) interprets these façades as social statements: "The poor people's houses were, like the clothes worn by Black dancers, a protest against the misery, greyness, ugliness, routine and monotony of their lives". Veloso emphasises their painterly quality: "The camera does not intend to interpret its signs, but to enter into a kind of loving state with the delicacy of its poetry. The photographs are like

[4] Gilberto Freyre (1900–1987) was a Brazilian sociologist and essayist, best known for his work *Casa-Grande & Senzala* [The Masters and the Slaves] (1933). In this book, he advanced an interpretation of colonial Brazil's social and cultural relations centred on racial mixing and the purported coexistence between enslavers and enslaved people. His theories on national identity formation had significant influence on mid-twentieth century debates on Brazilian culture and race, even though contemporary scholarship widely critiques his framework for naturalising social hierarchies and obscuring the violence of slavery.

[5] The term *portuga* is an informal, and at times slightly pejorative, colloquialism in Brazilian Portuguese used to refer to Portuguese immigrants or those of Portuguese descent. In this context, Costa employs the expression nostalgically, evoking the figure of the traditional Portuguese builder – idealised as the custodian of authentic architectural values and constructive practices.

[6] Year of the second Brazilian edition of the book. First published in 1987.

[7] Ariano Suassuna (1927–2014) was a writer and playwright, known for his commitment to Brazilian North-eastern popular culture. Caetano Veloso (b. 1942), an important Brazilian musician, has also distinguished himself as an essayist and cultural critic. Jean Baudrillard (1929–2007), a French philosopher and sociologist, is best known for his influence on cultural and aesthetic studies through his theories on mass media representation.

monalisas painted by Volpi[8]" (2010: 225). Conversely, Baudrillard (2010: 226) states that they are "pure objects", or even portraits that are "exact reflections of their needs". For the author, this could be termed an authentic architectural response to contextual conditions, integrating technical, cultural, and aesthetic dimensions (Baudrillard 2010).

Figure 2
From top to bottom, left to right, records made by Anna Mariani in the municipalities of: Pindoba (Bahia, 1983); Queimadas (Paraíba, 1975); Cabedelo (Paraíba, 1985); Valente (Bahia, 1986) (source: *Pinturas e platibandas* 2010).

Years later, the vernacular architecture of this same Brazilian region became the subject of another photographic study. In 2018, the graphic designer and writer Gustavo Piqueira undertook a visit to 15 municipalities across the states of Bahia, Pernambuco and Piauí, inspired by his reading of the book *Pinturas e platibandas* (2010). In *Desvios* [Detours] (Piqueira 2018), he expresses how discovering Mariani's work weeks before departure fostered expectations of mythical encounters with "simple, authentic façades that revealed to me a

[8] Alfredo Volpi (1896–1988) was an Italian-Brazilian modernist painter whose work stands out for its chromatic research with tempera and for synthesising forms of vernacular visual culture into a modern pictorial language, such as the use of rhythmic geometries inspired by architectural elements.

popular, naive and profoundly Brazilian expression. Voices of struggle against exclusion, lost links with modernity" (Piqueira 2018: 13).

However, his findings differed markedly. Instead of the delicately pigmented, limewashed façades he had anticipated, Piqueira documented high walls that were completely covered in ceramic tiles displaying printed patterns, such as geometric designs, wood grain or stone simulations, and even replicas of Burle Marx's Copacabana promenade mosaics[9] (figure 3). Where one might have expected simple solid wooden doors and windows, he found metal railings, gates, and window frames. When not completely sealed, these were built from heavy-duty profiles, resulting in stark geometric grids. With some self-deprecating humour, Piqueira (2018: 31) recounts his initial dismay: "Where was that monochrome purity, so suited to my supposedly refined taste? And what about the parapet walls, with their formally rigorous geometric compositions punctuated by spontaneous deviations? Where were they?"

Figure 3
Samples of the architecture found by Gustavo Piqueira on his trip to north-eastern Brazil (source: *Desvios* 2018).

[9] Roberto Burle Marx (1909–1994) was a Brazilian landscape architect and artist who gained international recognition for his pioneering work on tropical gardens and modernist urban projects. One of his most celebrated creations is the wave-patterned Portuguese stone mosaic pavement that lines Rio de Janeiro's Copacabana waterfront. Designed in the 1970s, this four-kilometre promenade has become one of Brazil's most distinctive and frequently reproduced visual landmarks.

Costa might well have echoed Piqueira's reaction were he to visit contemporary Portugal in search of the vernacular purity he championed in his writings. His consternation would prove particularly acute along the route documented by Álvaro Domingues – geographer and professor at the University of Porto's Faculty of Architecture – in his book *A Rua da Estrada* [The Roadside Street] (2009). This publication established his research strand examining contemporary patterns of Portuguese territorial occupation, focusing on urban-rural transition zones and on the landscape paradoxes of peripheral modernity.[10]

In his book, Domingues (2009) specifically analyses the dynamics of occupation along intercity motorway corridors through photographic documentation and critical essays. The buildings he examines embody a fundamental hybridity, reflecting their position at the intersection of urban and rural contexts. Residential structures that have been adapted for commercial use, such as cafés, ceramics stores, car showrooms and steakhouses, exemplify this transformation. Among other terminologies, Domingues (2009) coined the term "*montra*-buildings" (where Portuguese *montra* equates to "showcase") to describe buildings modified to exhibit merchandise ranging from furniture and lighting fixtures to bicycles and even larger vehicles.

The study also documents various strategies for utilising public spaces, particularly unconventional advertising signage, as well as buildings in a variety of styles that replicate architectural motifs from the medieval period to more contemporary approaches. Domingues' *Rua da Estrada* emerges as a Portuguese counterpart to the American Las Vegas Strip, as envisioned by Denise Scott Brown, Robert Venturi, and Steven Izenour in their Yale University research project, which culminated in the publication of *Learning from Las Vegas* (1977). Domingues (2009: 19) explicitly engages with this dialogue through the subtitle of his book: "*O problema é fazê-los parar!*" [The problem is getting them to stop!]. This directly invokes the visual cacophony and "excess of stereophony, vanity and craving for attention" that characterises these structures. Conceptually, this aligns with Scott Brown's reading of Las Vegas as a vast, urban-scale advertising system that serves its highway network.

[10] See also *Paisagem portuguesa* [Portuguese Landscape] (2022. Lisbon: FFMS), *Portugal possível* [Possible Portugal] (2022. Lisbon: Museu da Paisagem), *Paisagens transgénicas* [Transgenic Landscapes] (2021. Lisbon: Museu da Paisagem), *Volta a Portugal* [Around Portugal] (2017. Lisbon: Contraponto), and *Vida no campo* [Country Life] (2012. Porto: Dafne).

Figure 4
From top to bottom, left to right, selected architectural typologies classified by Domingues: *Café dos navegantes* [Sailors' Café]; *Para que se vê de longe* [To Be Seen from Afar]; *Ferradura amarela* [Yellow Horseshoe]; *Comércio tradicional* [Traditional Commerce]; *Casa com* piercing [Pierced House]; *Calças voadoras* [Flying Trousers] (source: *A Rua da Estrada* 2009).

Who are we?

The works and ideas presented so far raise several compelling questions. Why did Costa praise ancient Brazilian architecture while rejecting contemporary examples from his own time? What explains the admiration for Mariani's photographed façades compared to our discomfort

with those documented by Piqueira, despite both coming from the same Brazilian region? Would Costa (1937: 37) have maintained his interest in Portuguese vernacular architecture and his admiration for the "good Portuguese tradition of not lying" had he been faced with the buildings Domingues presents in *A Rua da Estrada* (2009)? What qualifies certain architectural knowledge as relevant to the disciplinary canon, while other forms are excluded?

Costa presented his ideas during the most productive period of modern architecture – a connection that is neither accidental nor hidden. His nostalgic view of "our old architecture" is related to his rationalist approach, as well as to the approach of some of his colleagues.[11] Costa's interest in Portuguese colonial architecture is, on the one hand, technical. A substantial portion of *Documentação necessária* (1937) focuses on the construction methods he admired, such as reinforced clay, which he compared to modern reinforced concrete, as well as humidity control techniques, floor plan solutions, roof structures and wooden window frames. On the other hand, his writings also reveal an ideological stance. Beyond appreciating the technical precision and tectonic clarity of historical buildings, Costa repeatedly asserts that "original" Portuguese vernacular architecture was "purer" – and therefore more authentic and superior – as well as more "ours" than the other architectures being produced at the time. These two assertions merit further examination.

The belief that purity is a superior value, a key premise of modernist discourse, has been subject to sustained criticism across disciplines for decades. Anthropologist Néstor García Canclini in his book *Culturas Híbridas: Estratégias para entrar e sair da modernidade* [Hybrid Cultures: Strategies for Entering and Leaving Modernity] (1990) demonstrates how notions of cultural purity, often invoked to assess symbolic expressions, fundamentally misrepresent contemporary cultural dynamics. As he argues: "It would be possible to make more progress in our knowledge of culture if we abandoned the sanitary preoccupation with distinguishing between what is pure and uncontaminated in art and crafts, and if we studied them from the point of view of the uncertainties that their intersections evoke" (Canclini 1990: 228).

Costa's assertion that Portuguese vernacular architecture is "ours" also raises further questions. What about the architectural traditions developed by indigenous populations long before European colonisation? And who constitutes this "we", given that indigenous peoples, Africans and mixed-race communities – who together represented a significant proportion of the Brazilian population even when Costa wrote[12] – were excluded from this category on the basis of not being Portuguese or from Portuguese descent?

These concerns connect to broader international debates about race, colonialism, and modernity. The anthology *Race and Modern Architecture: A Critical History from the Enlightenment to the Present* (2020), edited by Irene Cheng, Charles L. Davis II, and Mabel O. Wilson, provides crucial insights. Contributors systematically demonstrate how racial discourses fundamentally shaped modern architecture, despite its claims to universality. In her

[11] Regarding this shared interest, the *Brazil Builds* exhibition merits particular attention. Organised by New York's Museum of Modern Art (MoMA) in 1943 under Philip Goodwin's curatorship, it showcased samples of Brazilian architecture from colonial to modernist styles. Both the exhibition and its accompanying catalogue reinforced internationally the perceived continuity between Portuguese-Brazilian vernacular construction and modernist rationalism, while elevating figures like Lúcio Costa, Oscar Niemeyer, and Affonso Eduardo Reidy to global prominence.

[12] According to the 1890 Census, Brazil had around 14.3 million inhabitants, of whom approximately 47% were black or brown and around 9% indigenous. Today, while Brazil's population has grown significantly – the official count carried out in 2022 indicated around 203 million – the presence of the black and brown population has grown even more (10.2% and 45.3% respectively), while the indigenous population has decreased significantly (0.9%). Source: Brazilian Institute of Geography and Statistics (IBGE), the official body responsible for national censuses in Brazil.

essay *Structural racialism in modern architectural theory*, Cheng (2020) explores how racial thinking was integral to the conceptual framework of modernism, which implicitly privileged white, male, European norms through ideals of pure form, rational order, and linear progress.

In the Brazilian context, architect and researcher Paulo Tavares (2022) launched the provocative book *Lúcio Costa era racista?* [Was Lúcio Costa a Racist?]. This work forms part of Tavares' broader investigation challenging hegemonic narratives of Brazilian modernity, exposing the erasures that have shaped national architectural identity.[13] In the publication Tavares examines Costa's idealised visions of the past and their potential role in obscuring the colonial violence foundational to Brazil's development. As he argues: "Although stripped of the more explicit white supremacist foundations of neo-colonial discourse, Lúcio Costa's articulation of modernity and tradition remains haunted by the racialised lens through which colonial architecture came to be defined as 'traditional Brazilian architecture'" (Tavares 2022: 69).

Although Costa's views on Brazilian architecture are considered controversial today, this mindset continues to influence architectural academia in Brazil. Rather than a direct celebration of Portuguese vernacular as an ideal model, what persists is the enduring notion of a "legitimate" architecture that is superior to the "everyday" or "ordinary" architectures that constitute most Brazilian urban spaces. This represents an aesthetic and disciplinary ideology that, cloaked in the technical neutrality inherited from modernism, continues to be imposed from the outside – as if Brazil were a *tabula rasa* awaiting a civilising project from abroad that never materialises. Quantitative evidence underscores this imbalance. A basic search of the CAPES thesis repository reveals stark disparities.[14] Results for terms such as "*arquitetura ordinária*" [ordinary architecture] (13 occurrences), "*arquitetura cotidiana*" [everyday architecture] (436), "*arquitetura popular*" [popular architecture] (1,066), "*arquitetura vernacular*" [vernacular architecture] (92), "*arquitetura indígena*" [indigenous architecture] (62), and "*arquitetura afro-brasileira*" [Afro-Brazilian architecture] (26), contrast significantly with 2,372 occurrences of "*arquitetura moderna*" [modern architecture] and 2,207 occurrences of "*arquitetura modernista*" [modernist architecture]. While methodological limitations apply,[15] these results reveal the disparity in academic focus between modernist paradigms and other constitutive forms of Brazil's architectural realities. This analysis does not question the quality of modernist architecture itself, but rather the symbolic dominance of a specific discourse that marginalises other cultural expressions and maintains institutional knowledge hierarchies and power dynamics.

Returning to Mariani's photographic work, one can identify the same anchoring in the ethical-aesthetic matrix of European Rationalism, both in her production and, in particular, in the readings developed by her critics. To some extent, this may have facilitated the acceptance

[13] His work also includes *Desabitat* (2021), an editorial project that critically reinterprets *Habitat* magazine, originally edited by the architect Lina Bo Bardi between 1950 and 1954. Tavares further developed these investigations as co-curator (with Gabriela de Matos) of Brazil's 2023 Venice Architecture Biennale pavilion. Their *Terra* [Earth] project addressed political reflections through the study of Afro-Brazilian and Indigenous architectures, earning the edition's Golden Lion award.

[14] CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior). 2025. Catálogo de teses e dissertações. Retrieved from https://catalogodeteses.capes.gov.br/catalogo-teses/#!/ on 19 June 2025.

[15] Search conducted on 19 June 2025. The expressions were entered in Portuguese and in brackets, in order to identify works in which the term was applied directly. No information was available regarding the search engine's indexing criteria, but the results suggest that the search extended beyond the titles of the works, capturing content within abstracts or full texts. The search was carried out in the CAPES Thesis and Dissertations Catalogue – a national database maintained by Brazil's federal agency for the development of higher education personnel (CAPES), which compiles academic works from postgraduate programmes across the country.

of her work within art and architecture institutional systems. Among the artistic strategies adopted by Mariani, one stands out for employing formal parameters familiar to Western modernity: her "Becherian"[16] methodology of photographing façades. Mariani adopts a highly disciplined and systematic approach marked by repetition, the absence of human figures, minimised contrast between light and shadow, and frontal framing – all of which invoke the notion of typology and a certain visual order. These strategies bring the compositions found on popular façades closer to the geometric and abstract formal vocabulary of modern art and architecture, thereby rendering them legible to an eye trained by rationalist *gestalt*.

In terms of the critical reception of her work, although Veloso (2010) establishes links between the façades depicted by Mariani and Leonardo da Vinci's Mona Lisa, as well as the paintings of Alfredo Volpi (2010: 224), he also warns against judging a cultural expression that was not created through such a lens from a white Western perspective. According to Veloso, this approach may lead to superficial interpretations: "It's complicated: seeing these houses reduced to their formal essence in frontal portraits [...] I wonder what kind of teaching they might offer". He then offers a more provocative counterpoint to Suassuna's reading, which saw the façades primarily as a gesture of overcoming poverty and monotony, suggesting a more inspiring approach: "The men who developed this visual style in such a poor region of Brazil show us that there are many unknown levels and mysterious aspects to the relationship between the masses and what is known as modernity" (Veloso 2010: 224).

Assuming the hypothesis that the façades photographed by Mariani were broadly accepted within the intellectual establishment because they could be interpreted through the grammar of high culture, Piqueira's work once again proves particularly useful in challenging this assumption. Comparing his own aesthetic judgement of Mariani's façades and those he encountered on his trip, he writes: "And now? What do I do? Do I revise my grammar rules and standardise what I considered to be a gross error?" He goes on: "Could it be that my aesthetic repertoire – until then resolute and arrogant – is nothing more than an automaton, limited to appreciating only what the 'regulatory bodies' of culture and good taste authorise it to admire?" (Piqueira 2018: 31).

Building on his self-critique, Piqueira (2018) concedes that, while the façades he documented may be visually jarring, they are, like Mariani's, an authentic, "true" response – recalling Baudrillard's words – to the era in which they were created. That is to say: "Each one was executed in its own time, reflecting the possibilities, limitations, and values of its present moment. But essentially, they are all the same: façades of popular houses in north-eastern Brazil, designed by the residents themselves or, at most, by a local master builder" (Piqueira 2018: 31).

To illustrate Piqueira's hypothesis, consider the use of pigmented limewash, which was predominant in the houses photographed by Mariani, but has been replaced on today's façades by ceramic tiles. While limewashing was a low-cost, easy-to-execute solution with high expressive potential in the 1970s, offering simple geometries moulded in the mortar itself and the application of pigments for an immediate formal result, today ceramic tiles have taken over. Produced on an industrial scale, they are affordable, durable, and aesthetically versatile, offering a wide range of design possibilities while solving technical problems.

With specific reference to the contemporary façades portrayed by Piqueira, it should be noted that the use of ceramic tiles can be seen as a direct heir to the tradition of Portuguese

[16] Ernst Becher (1938–2007) and Hilla Becher (1934–2015) were German photographers renowned for their systematic documentation of industrial structures across Europe and the United States. Their photographic series adhered to strict formal criteria and are associated with the tradition of New Objectivity, as well as the visual rationalism characteristic of the Düsseldorf School.

tiling, a practice that was widely disseminated during the colonial period.[17] Historically, Portuguese tiles served both to decorate and protect the external surfaces of buildings, combining functionality and symbolic prestige. Reinterpreted in the contemporary context, ceramic tiles retain this hybrid function: they are both a technique solution and an aesthetic expression. Thus, the application of such tiles can be seen as a continuity rather than a cultural rupture. Proof of this is the presence of this same feature in some of the contemporary constructions found by Domingues (2009) in Portugal.

Finally, it is worth mentioning another symbolic layer. The geometric compositions found on the parapet walls photographed by Mariani were produced, among other things, from references to *art deco* elements – a common style in Brazil in the 1940s to 1960s – and ornamental patterns from indigenous and African roots. When combined, they evoked a kind of invented memory, mixing an urban culture that never really reached those villages – informed by the mass media of the time – with the identity of the local population, mostly of mixed African, indigenous and European descent. On the other hand, in the case of the façades recorded by Piqueira, by choosing, for example, a geometric pattern that simulates the mosaic of the Copacabana promenade, a connection is projected with a cultural and urban repertoire that was not available locally either, but was also widely disseminated by the mass media. Thus, although produced at different times, both compositional operations reveal an interesting articulation of diverse visual repertoires, organised using the materials and constructive logics available at the time.

According to Canclini (1990), practices such as those described above reveal a cultural logic in which vernacular and global forms of symbolic production not only coexist but actively interact. Therefore, both façades documented by Mariani or Piqueira can be understood as spheres of negotiation where different temporalities, aesthetics and value systems overlap and engage. The geometric patterns, colours, reliefs, and other compositional elements found on historical and contemporary façades are not merely functional ornaments: they represent aspirational signs, aesthetic choices made in dialogue with market forces, cultural memory, and desires for social distinction. These choices are not naive but strategic – embodiments of cultural consumption guided by frameworks that may transcend traditional critical categories. With that in mind, the essential task becomes recognising this semantic plurality, rather than dismissing it in pursuit of a mythical purity.

The architecture on *Rua da Estrada*, as documented by Domingues, also reflect this contemporary *zeitgeist*. These buildings and urban spaces clearly demonstrate key concepts in current urban and architectural discourse, such as fragmentation, simultaneity and simulacrum.[18] The author's comparison to Las Vegas, the quintessential postmodern city, is hardly coincidental. However, unlike 1970s Las Vegas, which appeared as a fully realised urban construct despite its recent development, *Rua da Estrada* emerges as a kind of adolescent space in perpetual tension, whose "fluctuating identity finds stability not in what it is, but in what it has ceased to be or is not yet" (Domingues 2009: 13). Essentially, *Rua da Estrada*

[17] The use of tiles on façades has been an established tradition in Portugal since the seventeenth century, when enamelled ceramics began to be applied not only to interiors but also to the external surfaces of churches, public buildings, and urban residences. This practice was transplanted to colonial Brazil, where it was used primarily in coastal urban centres such as Salvador, São Luís, and Belém.

[18] In short, "fragmentation" denotes the dissolution of spatial and functional unity within urban environments (Koolhaas 1995); "simultaneity" characterises the coexistence of multiple temporalities and usage patterns in shared spaces, a hallmark of globalised urbanisation (Augé 1992); "simulacrum" describes the substitution of reality by its symbolic representation (Baudrillard 1981).

embodies the continuous "state of becoming" that Marshall Berman (1982) identifies as a defining condition of modernity in *All That Is Solid Melts into Air*.

What's more, if on the one hand that building complex is a kind of transgenic space, without a clear identity of its own, "which assimilates and reprocesses elements that once belonged to one or the other, rural or urban" (Domingues 2009: 13), it also bears specific marks. *Rua da Estrada* is one of the possible architectural results for a peripheral country in Europe, historically lacking in infrastructure as a result with intermittent urban policies. As Eduardo Andrade Gomes (2009: 9) observes, the landscape reveals "the disorder of those who should be promoting order, the intelligence of the 'cunning entrepreneur' dressed up as a promoter, the carelessness of those who should be watching and look the other way, the instinct of those who have no alternatives but have the 'example'".

In essence, *Rua da Estrada* is a landscape made up not only of materials and infrastructure, but also of survival strategies and institutional precarity. Furthermore, it is worth noting that its kaleidoscope of visual information, its hybridisations and design conflicts relativise Costa's unrestricted commitment to the truth, purity and constructive precision of the vernacular architecture produced by the "old *portuga*". Perhaps the taste for such "messiness", which he complained about so much, came from Portugal itself, disguised as a colonialist discourse of superiority.

Beyond the frames

Judith Butler's *Frames of War: When Is Life Grievable?* employs the metaphor of "framing" to expose mechanisms of social erasure. She argues we must challenge "the 'frames' that work to differentiate the lives we can apprehend from those we cannot" (Butler 2010: 3), revealing how that "the frame never quite contained the scene it was meant to limn, that something was already outside, which made the very sense of the inside possible, recognizable" (Butler 2010: 9).

Butler's metaphor of framing is relevant to the proposed discussion. Let's explore it in the context of architecture. As we have seen, it seems that there is a chronic "framing mismatch" in architectural epistemology, which often places much of the urban built environment outside its field of interest. Consequently, the architecture discipline may be cultivating an unhelpful distance from the majority of the population that produces and uses this built environment, thereby endangering its social function.

Clearly, the problem of the distance between architectural debates in academia and the reality of our cities' built environments is highly complex, even extending beyond the realm of architecture's field. However, let us set aside this complexity for a moment and consider the following: what would happen if we suspended, or even rejected, the criteria that determine what is valuable and what is not in architecture? What if "ordinary" ceased to be a category for excluded architectures and instead simply described the everyday environments constituting our lived experience? Crucially, this call for a framework-free approach neither simplifies nor flattens our perspective; rather, it cultivates a fluid gaze that recognises these "other" architectures as fundamentally ours.

In summary, we can bridge the gap between architects' ideals and what is actually achieved in cities by suspending our value judgements about ordinary architecture, reviewing the limits of our field of study, and incorporating this subject into intellectual and academic debate in a non-stigmatising way. The motivation behind this proposal is that if there is a chronic discrepancy between the research, debate and teaching in academia and the actual production of built spaces in cities, shedding light on the topic of ordinary architecture could

improve our understanding of this aspect of our material culture. One positive consequence would be the development of a critical apparatus better adjusted to reality, allowing architects to perform better in their respective societies. It is important to note in this hypothesis that there are no nostalgic, fetishist or romanticised intentions. The underlying issue is pragmatic: understanding reality is a basic condition for acting on it effectively.

Thus, an invitation stands: to expand our vision and recalibrate our relationship with the architecture around us. Only through such clarity can we architects hope to intervene meaningfully in the world.

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Heidedal and the industrial buffer: Metaphoric engagements with the tropes of apartheid city planning

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The South African author, Karel Schoeman, described how, in 1919, the Bloemfontein City Council decided to plan the layout for a separate "coloured community" to the east of the city. The community, later known as Heidedal, would be hemmed in between the railway line, sewerage works and the Dewetsdorp road. Schoeman described these as "dreary landmarks". This article will explore how the author, an architect, has responded to the urban dissonance created by these buffer zones between Heidedal and the industrial area which it flanks. It will aim to show how the author reinterpreted industrial tropes scattered throughout this industrial landscape through scenographic and metaphoric engagements with the place through art and architecture. The article aims to comment on the non-landscape and urban dissonance related to buffer zones in marginalised communities. It further aims to explore William Kentridge's book on *Six Drawing Lessons*, which architects can reinterpret within their own creative processes. Finally, the synthesis of the architect's studio with the artist's atelier will be investigated. These themes will explore and analyse the work of contemporary South African artists such as William Kentridge and Themba Khumalo, and architects such as the South African architect, Carin Smuts, the Japanese architect, Fumihiko Maki, and the American illustrator and architect, Hugh Ferris.
Key words: Heidedal, apartheid city planning, industrial buffer zones, William Kentridge, Themba Khumalo, Fumihiko Maki

Heidedal en die nywerheidsbuffersone: Metaforiese ingesprektreding met apartheidstadsbeplanning
Die Suid-Afrikaanse skrywer, Karel Schoeman, beskryf hoe die Bloemfonteinse Stadsraad in 1919 besluit het om die uitleg van 'n aparte woongebied vir die "kleurling gemeenskap" ten ooste van die stad te beplan. Dié woongebied wat later bekend sou staan as Heidedal, sou half-ingedruk wees tussen die spoorweglyn, die rioolaanleg en die pad na Dewetsdorp. Schoeman beskryf dit as "troostelose grensbakens". Hierdie artikel deur die skrywer, 'n argitek, gaan poog om sy (die skywer se) respons tot die stedelike dissonansie wat te weeg gebring is deur hierdie buffersones tussen Heidedal en die aangrensende industriële gebied, deeglik na vore te bring. Die oogmerk is om te wys hoe die skrywer die industriële tropes wat wyd verspreid is deur die industriële landskap, te her-interpreteer by wyse van scenografiese en metaforiese ingesprektreding met die plek, deur middel van kuns en argitektuur. Die doel is ook om kommentaar te lewer op die nie-landskap en stedelike dissonansie wat verband hou met die buffersones in gemarginaliseerde gemeenskappe. Verder wil dit gedagtes uit William Kentridge se boek *Six Drawing Lessons* aan die bod stel, wat argitekte binne-in hul eie kreatiewe prosesse kan her-interpreteer. Ten laaste sal die sintese van die argitek se ateljee met dié van die kunstenaar ondersoek word. Hierdie temas sal die werke van kontemporêre Suid-Afrikaanse kunstenaars (soos William Kentridge en Themba Khumalo) en argitekte (soos die Suid-Afrikaanse argitek, Carin Smuts, die Japanse argitek, Fumihiko Maki, en die Amerikaanse illustreerder en argitek, Hugh Ferris, ondersoek en analiseer.
Sleutelwoorde: Heidedal, apartheid stadsbeplanning, industriële buffersones, William Kentridge, Themba Khumalo, Fumihiko Maki

The author, grew up in the locale of Heidedal, a place that shaped his spatial intelligence and had a profound influence on the way that he practises architecture. His rootedness in and affinity for this place is expressed through metaphoric engagements with utilitarian structures such as electric pylons, sewer works, a railway bridge and concrete sleeper bollards. These explorations touch on the ability of creatives to see anew and reinterpret the infrastructural nuances of the remnants of apartheid city planning found along industrial buffer zones flanking marginalised communities. The Norwegian architect and author, Christian

Norberg-Schulz (1985: 9), writes about this embedded way of dwelling as he reflected on the character of Knut in the short story *Last Man Home* by Norwegian writer Tarjei Vesaas.

In their article, *Architecture as an art of care in historically marginalized communities: the case of Heidedal, South Africa,* Hendrik Auret and David van der Merwe (2021) posited an "approach which promotes appropriate poetic responses to the established ways of life in marginalised communities, challenge old conflicts and thereby strive towards new forms of contentment and dignified dwelling". The article demonstrates that architecture can serve as a remedy to the historical segregated planning policies by reinterpreting the tropes of industry. This is demonstrated through a renovation of a home in Heidedal where the author was raised (figure 2). "The design reinterprets the tropes of industry, like the clerestory windows, lack of traditional ornamentation, and applies raw materials like bricks, steel and corrugated sheeting, in a domestic setting". For the author, growing up in the community of Heidedal and becoming aware of the industrial imagery and buffer zone which flanks the neighbourhood, this imagery was part of his own spatial intelligence and became a source for metaphoric engagements with the industrial.

Figure 1
Map showing Heidedal and the industrial buffer zone
(adapted from Google Maps, 2025 *Satellite image showing sewer works near Heidedal - 29.12627960764131, 26.24700634995391. http://maps.google.com).*

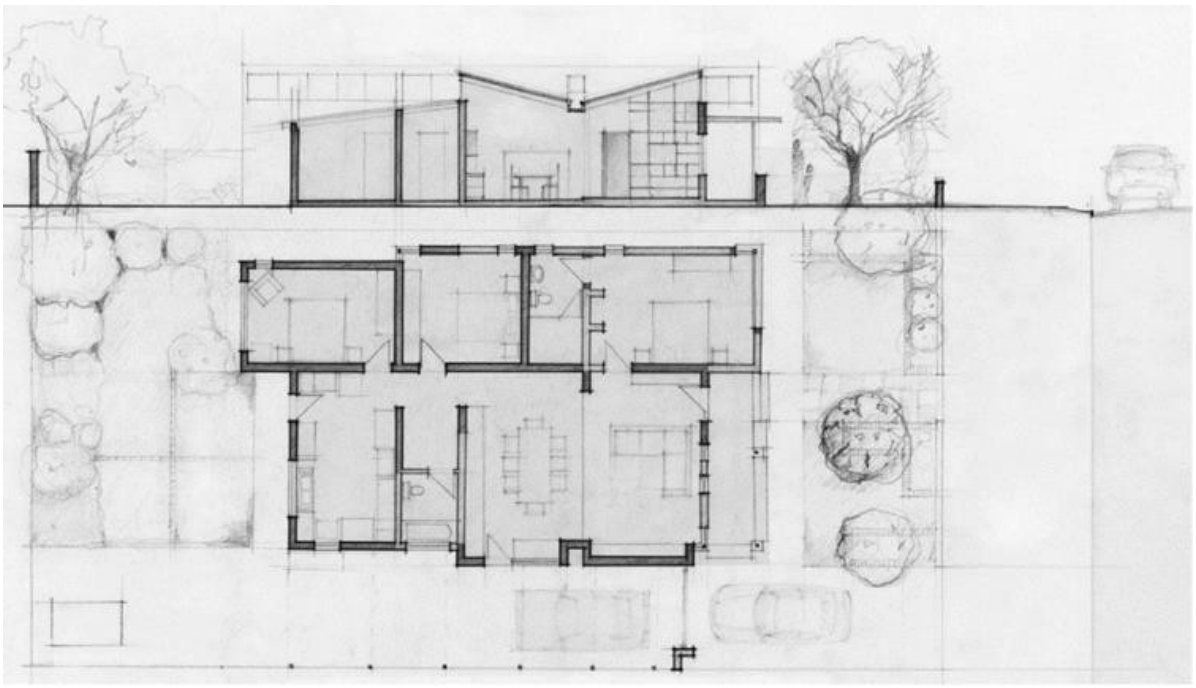

Figure 2
Plan and section of author's home renovation showing additions and existing materials in darker shade (drawing by the author).

Figure 3
Autoethnographic artwork showing moments of domestic calm (drawing by the author).

William Kentridge: Charcoal as a tool of unearthing hidden narratives

The work of the South African artist, William Kentridge, born on 28 April 1955 in Johannesburg, South Africa, has inspired the author to pursue creative artworks that give expression to his own metaphoric engagements with the industrial buffer zones of Heidedal and his lived experiences within the community. Kentridge's work and his method of working with charcoal seemed to the author as something that would capture the atmosphere of the industrial edge flanking the Heidedal landscape. His work speaks to unearthing hidden narratives; this strategy becomes especially important when considering the heritage of the community. Kentridge writes the following on memory, imperfect erasure, and the use of charcoal to capture this. The study of the work of these artists inspired the author to create his own animated charcoal drawings reflecting on his lived experiences.

> Charcoal and paper are not perfect substances. The paper is tough and can be erased and still hold its structure — but not without showing its damage. The erasure is never perfect. A grey smudge of charcoal dust lodged in the paper fibres remains as the ghost of the image before its alteration. In the camera, the film records the altercation and the ghost of the history of the altercation; they are embedded in the camera. Time gets transformed into the charcoal dust (Kentridge 2014: 95).

The work of Kentridge and other South African artists who work with the medium of charcoal has inspired the author to reconstruct memories of lived experiences within the community of Heidedal. These autoethnographic reflections and creative engagements completed by the author as part of his doctoral research has led him to conclude that things are never quite lost in a fire and the remaining ashes are pregnant with the memories, which (although reconstructed) are embedded in the charcoal sticks and ash that remain (figure 3). Similar to these artworks, architectural drawings also add to the latent narratives waiting to be discovered. Doing work for people in the community of Heidedal, the author has discovered many architectural drawings which, like these artworks, also tell a continuous story because of the different architects and authors who have worked on these house plans at the different time periods, as families grow, or their needs change. The drawing technique, often by hand, carry the creative signature and identity of its author and often of community members, teachers or draughtsmen who have lived in the community their entire lives, their names recorded in the marginalia of the drawing title blocks. The blueprints often show signs of weathering and the many folds over time, which display a sense of agedness. Yet the latest increment and extension oppose the plans' final senectitude and breathes life into its future, alluding to an ongoing history of the community continuing from generation to generation. Figure 4 demonstrates this incremental approach and figure 5 speaks to the lived experiences of the author.

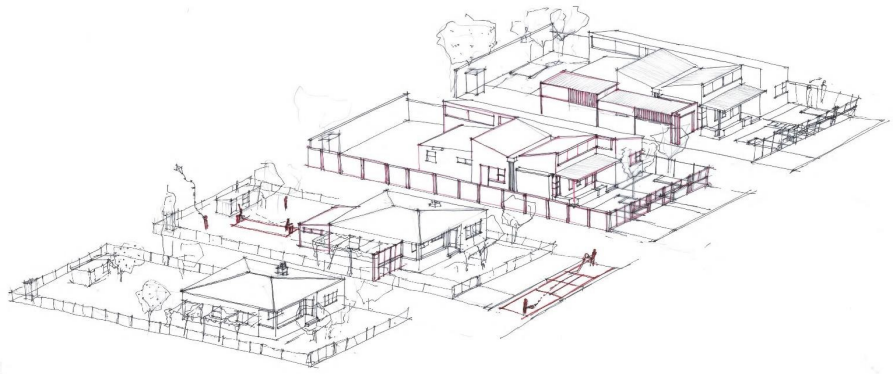

Figure 4
Freehand sketch of author's home renovation showing the home's incrementaldevelopment (drawing by the author).

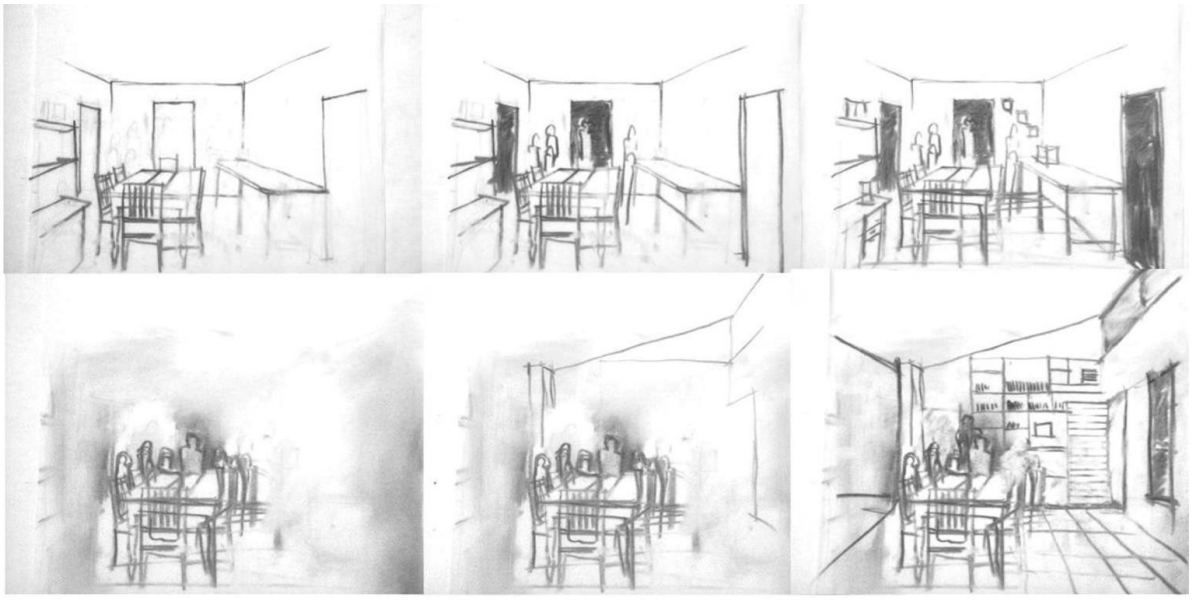

Figure 5
A series of autoethnographic drawings showing the transformation of the author'sfamily home (drawings by the author).

The non-landscape, an alternative phenomenological reading of site

Kentridge speaks of the non-landscape and how through drawings he could represent the qualities of the non-landscape. He points out how the non-landscape is not picturesque but irrespective of this, his drawings became images of traces in the landscape-drawings structured by lines and objects, abandoned civil engineering works, pipes and culverts. Kentridge highlights how his own pastoral conception of how he saw art was challenged as he described the Johannesburg industrial mining landscape:

> This was the opposite of what we had. No mountains; the grass a parched desaturated yellow in winter; no rivers, at best a culvert (Kentridge 2014: 81).

It's easy to become enamoured with the beautiful sandstone heritage buildings that sit like gems within the Bloemfontein's iconic President Brand Street (figure 6). In contrast to this, William Kentridge encourages us to draw the less iconic but no less important industrial landscapes of the margins. In my opinion the work of William Kentridge has captured the atmosphere of our post-apartheid landscape. The terminology "non-landscape" seems negative and should be reinterpreted by seeing it through the inclusion of more complex, sometimes less understood landscapes, by broadening the scope of the notion of the picturesque, allowing for the inclusion and reinterpretation of the industrial as it pertains to the buffer zones of marginalised communities. In doing this we will be broadening the phenomenological reading of sites. In a sense we legitimise the experiences of people in these landscapes and how they have through poiesis reinterpreted these spaces. The author is of the opinion that through his art focusing on these less picturesque landscapes, Kentridge was attempting to legitimise that which was a non-landscape as a landscape.

> However unstructured by the dictates of the picturesque, in the drawing I could record this non-landscape. The drawings became images of traces, of tracts in the landscape, drawings structured by lines and objects, abandoned civil engineering projects, pipes, a culvert (Kentridge 2014: 82).

Figure 6
Photograph of one of the east towers of the City Hall in President Brand Street, Bloemfontein (photograph by Gwen Smith van der Merwe, 2021).

Themba Khumalo

The work of the South African artist Themba Khumalo, born on 16 February 1987 in Soweto, Johannesburg, South Africa, seems to resonate with this approach of relating to the landscape in a metaphoric way. His work often depicts pylons and engineering structures, but he gives them an anthropomorphic quality. William Kentridge speaks of this anthropomorphic quality which is present in angular structures and objects such as a compass or "scissors, dividers, hinged rulers, the divided roots of a mandrake" (Kentridge 2014: 65). According to Kentridge this anthropomorphism that we observe comes quite naturally to us and is something that is "not imposed". According to him "anything hinged at the centre suggests legs" (Kentridge 2014: 65). The author understands this "irresistible" leaning towards the anthropomorphic in his interpretations of electric pylons. For him they are giant sentinels in the landscape keeping watch over the community. They could be read as metaphoric monuments to the many community leaders, past and present (figures 6-7). In doing so the author can learn from Khumalo's art which seeks to explore and challenge society's perception of land, inviting the viewer to contemplate the profound connection between land and identity (Lelaka 2023). Khumalo's artwork *Red Ants* (2019) highlights the precarious, fragile, and impermanent nature of living in informal settlements in South Africa, with the constant threat of forced removals. It brings to light the challenges faced by people who live in informal housing and was inspired by a violent confrontation between Emfuleni informal settlers and the Red Ant security company. It uses charcoal and coffee stains to evoke sense of displacement.

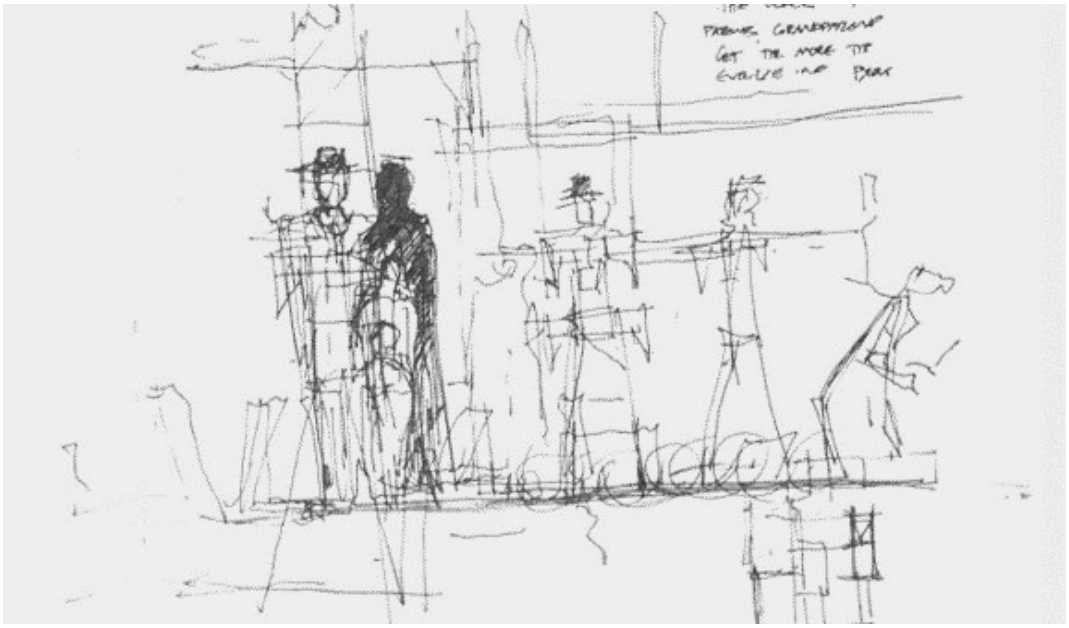

Figure 6
A sketch exploring the anthropomorphic qualities of electric pylons (drawing by the author).

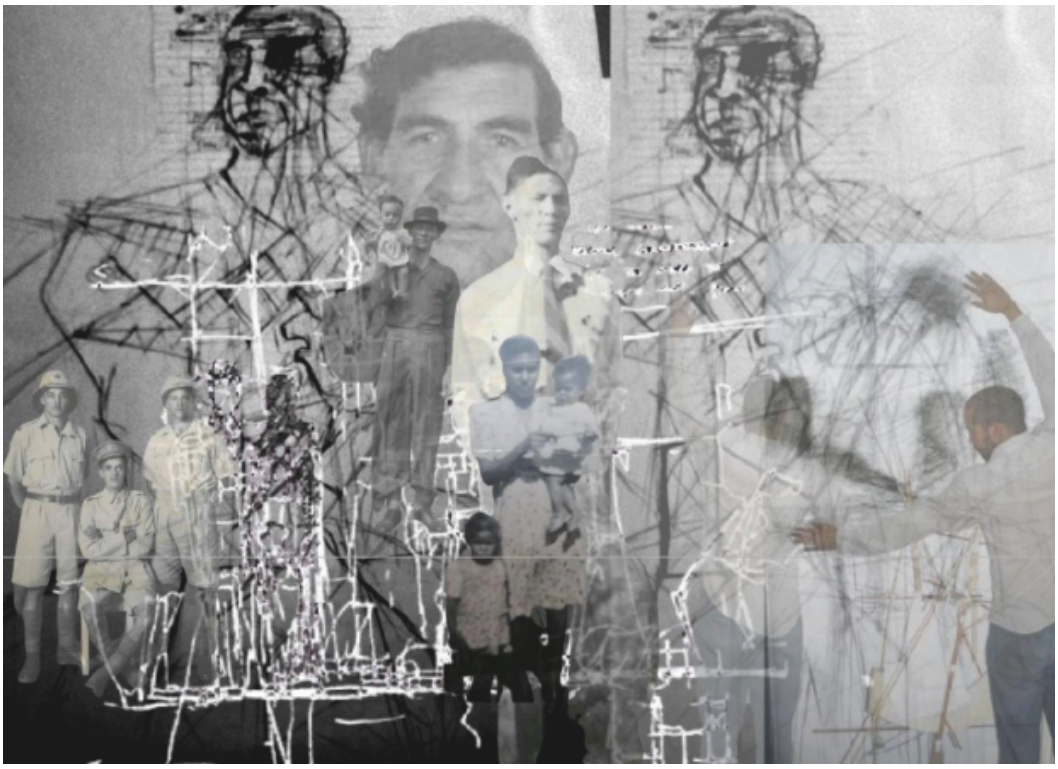

Figure 7
Ghostly pylons and their anthropomorphic qualities (drawing by the author).

Carin Smuts: Laingsburg Community Centre

A project which captures the industrial iconography of its landscape is the Dawid Klaaste multi-purpose centre, designed by CS Studio Architects led by the South African architect, Carin Smuts. The project is situated in Laingsburg, a rural Karoo town 280 km from Cape Town, the legislative capital of South Africa, renowned for its dramatic and picturesque scenic beauty. Laingsburg's enigmatic beauty is born out of the immense starkness of the Karoo Landscape, contrasted by its the man-made tropes, such as the railway lines and many rusted windmills. The windmill is seen as "a symbol of the Karoo" (Joubert 2009: 64). This metaphoric symbolic gesture was used in the design for the multi-purpose centre (figures 8-9). Driving through the Karoo landscape *en route* to Cape Town, the landscape is flat, but in the distance, the more dramatic mountain ranges begin to emerge, showcasing the contrasting and wondrous beauty of the Karoo.

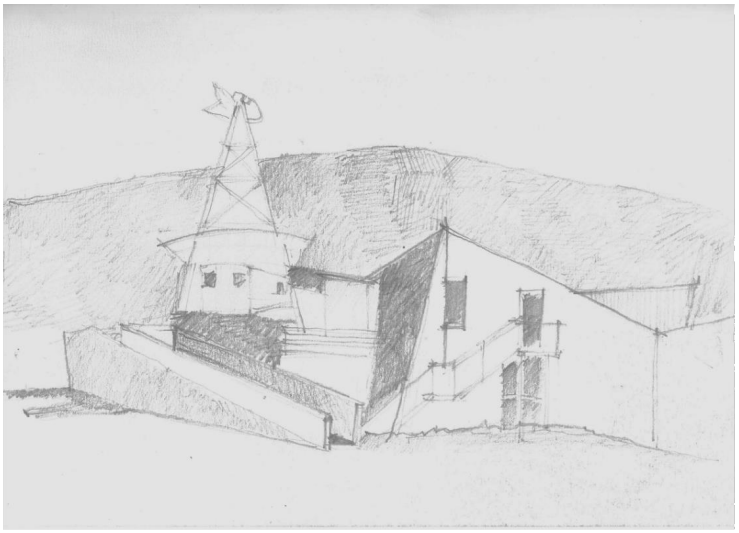

Figure 8
A sketch of the Dawid Klaaste Community centre, CS studio architects (sketch by the author).

Figure 9
The Dawid Klaaste multi-purpose centre (CS Studio Architects: online).

On approach one is confronted with "the ghostly traces" of the Anglo Boer War, also known as the South African War. A military blockhouse is situated along the railway line. The square, stereotomic nature of the well-preserved block house and its heavy imagery are contrasted by the rusted railway bridge in the backdrop. The strong geometry of the block house punctured by the small openings with the "tensegrious" nature of the bridge, conjured up in the author an image of the Bianchi house designed by the Italian architect Mario Botta. On entering the town, one sees the community in the distance, and it almost feels situated in a basin that one peers into from the highway, adjacent to the railway line that meanders through the town. Between these transportation routes and the distant hills, sparsely populated with Karoo fauna, lies the Dawid Klaaste Multi- purpose centre, situated in "a historically non-white area".[1] I am struck by the strong angular, shed-like structures scattered amidst the many colourful government "matchbox" houses (figure 10). On travelling back from Cape Town, it's a completely different experience. Moving away from the mountainous areas the landscaping gradually flattening out. I was struck by the rhythm of the overhead electric lines for the automotive locomotives which pass through this landscape, held up by the rusted steel armed structures extending and cantilevering over the railway lines. These structures embodying an anthropomorphic quality remind me of the humanoid imaginings the author attributed to the many electric pylons which populate the buffer zones of his own community in Heidedal.

Figure 10
The Dawid Klaaste multi-purpose centre situated in Laingsburg, Western Cape (image courtesy of Carin Smuts).

The emotive drawings of Hugh Ferris

The graphic work of the American architect and Illustrator, Hugh Ferris captured the rise of the skyscraper in the 1920s and 1930s. The chiaroscuro technique of both Kentridge and Ferris seemed an appropriate medium to capture the gritty environment of Heidedal. Although Heidedal does not have skyscrapers, the author intended to explore and find expression for the sculptural and monumental qualities through his own drawings of pylons, silos, sewer works and other industrial elements. What also inspired the author about the work of Ferris was that his drawings were futuristic but not impractical. In a certain sense, his work was more prophetic of the designs of Antonio St Elia as of the New York Skyline of today. The skyline actually resembles his visionary drawings. Emotive drawings that represent "reality in an exciting way" is explored in his work (Schank Smith 2005: 109). Although Ferris did not design the buildings, he did representations thereof, and he "created the method" by which these buildings could be understood (Schank Smith 2005: 109). According to Canadian Professor of Architectural

[1] Smuts, Carin 2002. *CS Studio Architects* (https://csstudio.co.za/laingsburg.php).

Science, Kendra Schank Smith (2005: 109): “Ferris resembles St Elia who seduced an ideal and appealed to an emotional position”.

One of his most striking drawings was the one done for the Hoover Dam. Ferris uses the impression of “strong light emitting from below” to accentuate the height of the dam’s observation tower. The dam’s curved wall is brought into prominence through his expertly worked fading technique. This way of working inspired the author to reveal the monumentality of Heidedal’s own industrial tropes. Schank Smith says the following on the work of Ferris:

> his methods strongly speak of an architecture of masonry, of mass and solidity. His sketches were less about accuracy and more about seduction in an attempt to influence the perception of architecture (Schank Smith 2005:109).

The synthesis of the architect’s studio and the artists atelier

The Japanese architect Fumihiko Maki (2000: 13) speaks of the experiences he had with the well-known modernist architect, Kenzo Tange: “Tange’s *kenkyushitsu* had qualities of both the atelier of an artist and the laboratory of a scientist. The artistic side of design studies was then and is today well understood, but the scientific laboratory’s mode of investigation required the existence of issues that could be clearly tested and resolved.” Maki’s past reflection of practicing architecture reveals the relationship between art and architecture and the juxtapositioning and overlaying of more measured and analytical drawings with more artistic expressions. The author’s own emergent practice finds congruence with Maki’s approach as he strives to merge and juxtapose more measured and analytical drawings with creative works which are imbued with a sense of artistic expression (Van der Merwe 2025: 275).

Figure 11
Photograph of the author in the process of making charcoal stop motionartworks (photograph taken from video by author).

The author’s way of practicing architecture involves the use of artistic drawings, such as charcoal and pen drawings, which help him to relate to the place, through creating an emotive connection with the locale (figure 11). These drawings, together with the more analytical and empirical drawings, assists him in establishing a deeper analysis of the context through a

process of deep mapping. This can be prior to the design process or afterwards as tool of analysis or a mode of reflection. The artworks or expressive drawings do not have to give rise to a design concept; it may be an end in itself, but it's not limited in that way – it also can produce a conceptual approach. These drawings capture layers that are in a constant state of flux, layers that may not be present tomorrow. The author discovered this as he did drawings of historical houses in Heidedal. These houses were some of the original houses built in the community in the late 1920s and early 1930s, but many of them have been altered or have fallen into neglect.

Deep Mapping: A revelatory discovery of place through alternative site readings and analysis

As the sun sets in Heidedal, the muted light has a unique quality. Its haziness is characterised by a mixture of smoke or dust, amplified during the winter months as a thick cloud that seems to hover over the community like a winter blanket. This soft authentic light contrasts the very harsh mast lighting found in some areas, especially in the informal settlements. This seems to mimic the institutionalised lighting over the sewer work (figure 12). Certain qualities of a space or a locale cannot be captured through conventional architectural representation. They require an immersive discovery of place through reflective and deep observation. This is part of the deep mapping process, which also involves overlaying conventional mapping with the lived experience of the community.

Figure 12
Mast-lighting over sewer works
(photograph by the author, 2024).

Artwork -Sewer works, a lesson in monumentality

In his artwork, *Sewer Works* (figure 13), the author depicts the purification plant on the edges of the community of Heidedal. During his *flâneur* through the industrial buffer, the author

reflects on his experiences. On approaching the sewer works (figure14-15) near Heidedal, the author is reminded of the Giza pyramid complex in Cairo, Egypt and the parliamentary buildings in Dacca, Bangladesh, designed by the American architect, Louis Kahn. The Kahn building in Dacca and the Pyramids of Giza are both symbols of monumentality. Kahn himself was inspired by the monumentality of the pyramids, which he explored through his art.

Growing up next to these sewer works, their morphology and monumentality have become strong components of the visual library that informs the author's spatial intelligence. This highlights the importance of one's own spatial intelligence and what it brings to one's own understanding of architecture. Schools of architecture need to tap into these lived experiences as they receive many creative people from marginal communities with similar experiences. It is time that this kind of lived reality is approached with the same level of reverence as architects have in the past reserved for pastoral landscapes or even "the farm" as design informants. In a lecture entitled "Fresh Air", American architectural theorist, David Leatherbarrow also alludes to this important question:

> How can professional studies take account of the architectural knowledge that exists at the limits of the discipline in the pre professional, which is to say broadly cultural knowledge which entering students bring to their programmes and the post professional or interdisciplinary understanding that exists elsewhere in the university often serving as fascinating research in the humanities and sciences (Leatherbarrow 2016)?

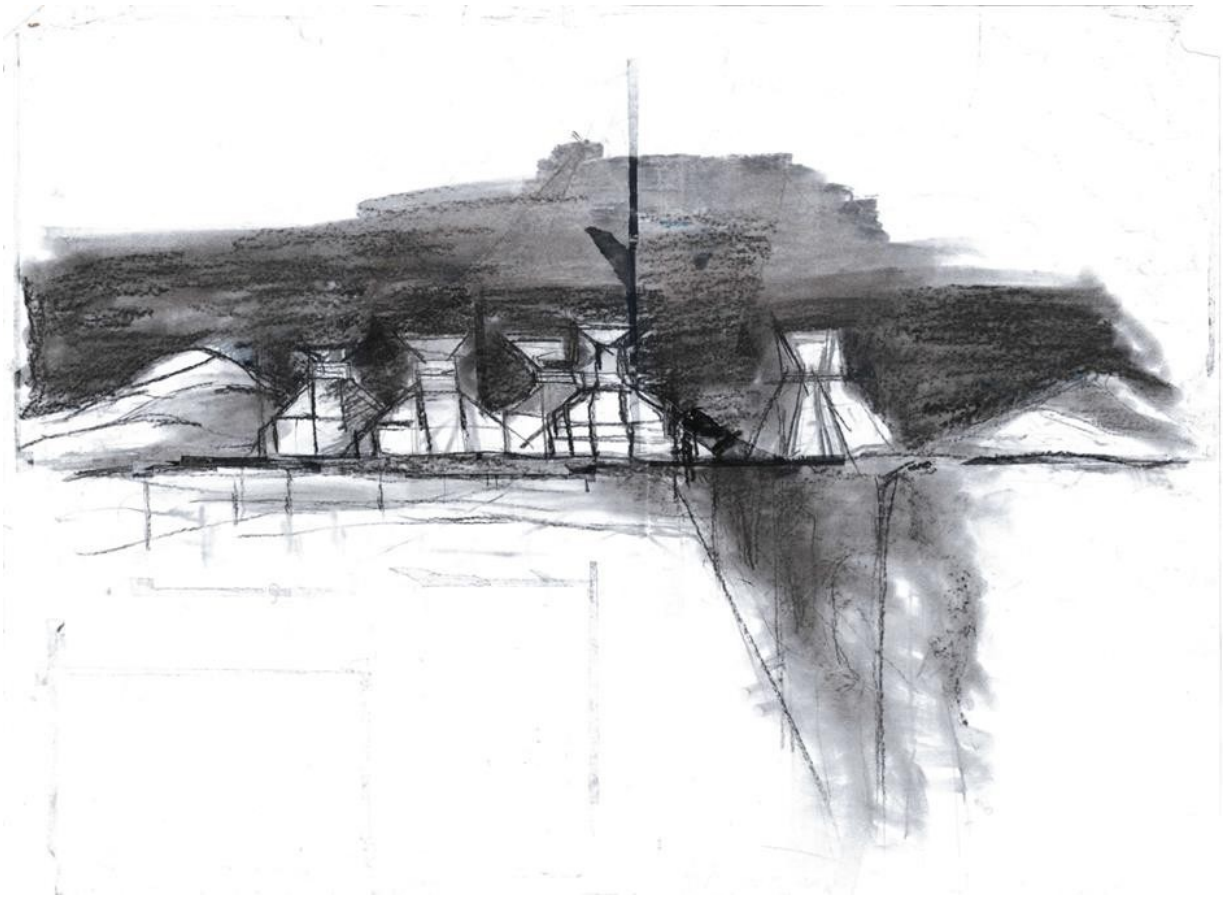

Figure 13
Charcoal drawing of *Sewer Works*
(drawing by the author).

Figure 14
Sewer works, lessons in monumentality
(photographs of author taken by Gwen Smith van der Merwe, 2021).

Figure 15
Photograph of sewer works
(photograph by the author 2024).

A concrete sleeper: An unassuming threshold

Heidedal is sometimes referred to as Cairo by the community, but what would the place and its people have in common with the Egyptians? The author as *flâneur* through the buffer zones flanking the suburb of Heidedal, will strive to answer that question. On his journey to the sewer works situated a few hundred metres away from the place where he grew up, the author was gripped with a sense of trepidation and excitement. Growing up rather sheltered, he was never allowed to go on the many adventures some of his friends embarked on – to the ponds on the other side of the railway lines. His curiosity was stirred by their many tales of adventure and he could only try and imagine what they may have been like.

He recently attended the memorial service of a gentleman who lived in the community of Heidedal his entire life. This man's friend recalled an incident from their youth. He explained how the region now occupied by light industry was lush farming land with many fruit trees, probably a green area filled with all kinds of fruit trees: quince, peaches and apples. He recounted an incident when they tried to get some fruit but were chased by the farmer's dogs. These tales of conquest sounded like the ones the author had heard from his friends, even though these tales were a generation earlier. As he looked on the concrete sewer works with their heavy, cylindrical shapes, their permanence contrasted the temporal nature of the history of the once lush farmlands they now sit on. The author reflected on the name Cairo and the vindicative spatial planning of the apartheid regime. He imagined the pyramids in Egypt and the slaves who built them. He thought of South Africa's own struggles and how the community of Heidedal like many marginalised communities, were labour stockpiles for the apartheid regime. He pondered on the monumentality of the sedimentation tanks and compared them to the monumentality of the pyramids, musing on their ruin-like qualities.

For the author, these concrete cylinders were his lessons in geometry – the changing of the guard signalled by the dawn of democracy in South Africa. But the ruin-like cylinders remained remnants of a time and era gone by and the author imagined them to be the backdrop to a dystopian scene from H.G. Wells' novel, *The War of the Worlds* (1997) (figure 16). These fantastical imaginings make the author wonder if he is clutching at straws, trying to find inspiration (architectural inspiration) from something so depressing as sewer works, or is he merely a product of his environment seeking to find dignified ways of dwelling within the harsh urban realities of this place.

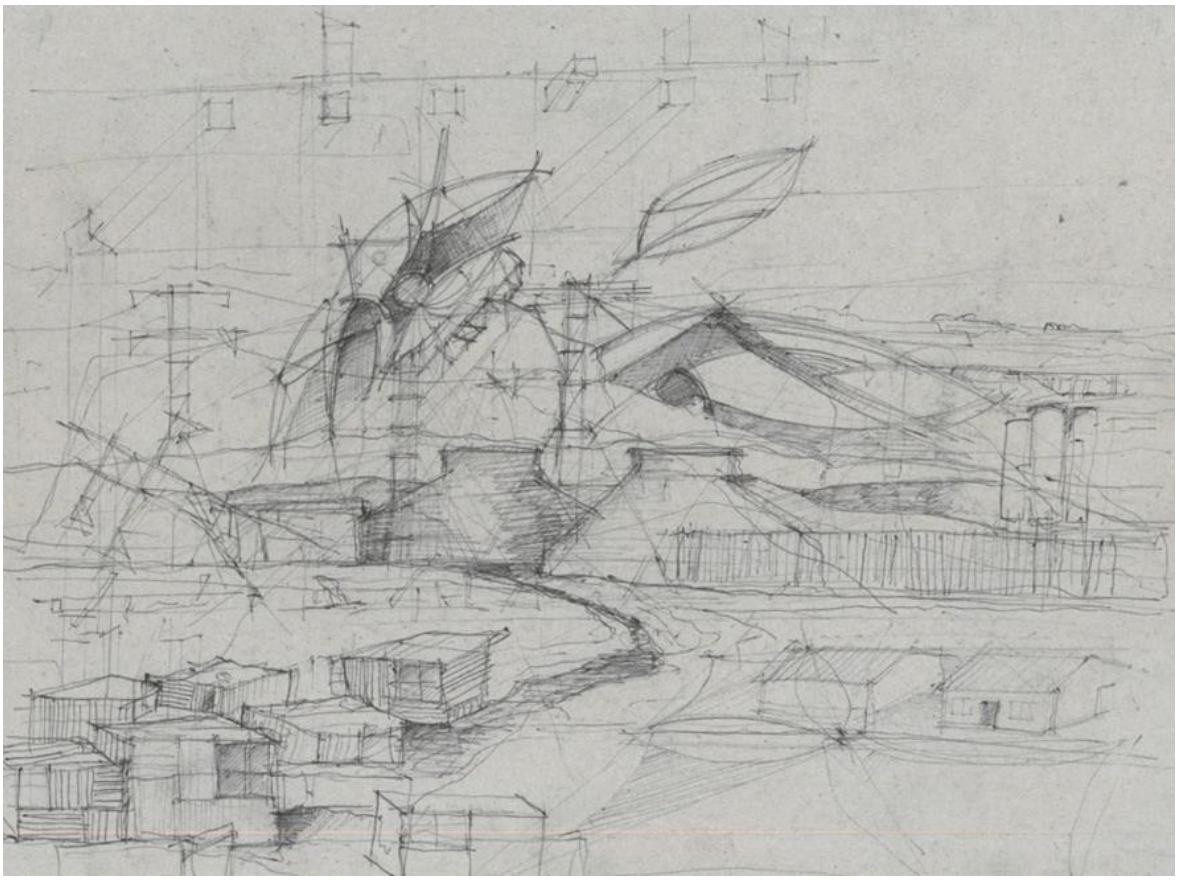

Figure 16
war of the worlds
(drawing by the author).

Figure 17
The threshold of concrete sleepers
(photograph by the author 2022).

Briefly, he imagined the reclamation of this industrial site. Engineering structures like the cooling towers, monumental concrete structures dominating the Bloemfontein city skyline, will not last forever and are destined to stand as enormous empty vessels. What will the reclamation of an industrial site like this even have to offer? What can it be rescripted as? The author then continued his journey back south, back to the community of Heidedal. In the distance he could see the railway line, the concrete bollards, endless kilometres of upright concrete sleepers forming the threshold into the community of Heidedal (figure 17). But his eye was fixated on another industrial marker, one highlighting the industrial rail heritage: a beautiful sandstone railway bridge that crosses over a stream of water that gently meanders towards the sewer works (figure 18). He walked along the stream; his trousers apprehended by a shrub whose thorns are known in Afrikaans as “polisies” (translated as the police) (figure 19).

Finally, he reached the view he wanted. He stood and observed its detailing and wondered if he would ever get a chance to do a decent sketch of it someday. He noticed a group of boys walking boldly on the bridge, intrepidly balancing between the gaps separating the steel girders. Beneath this bridge there was a steep fall to the water level below, yet they fearlessly hopped across these openings (figure 20). This highlighted the precarious situations that youth living in these marginal communities’ face daily.

Figure 18
Railway bridge
(photograph by the author).

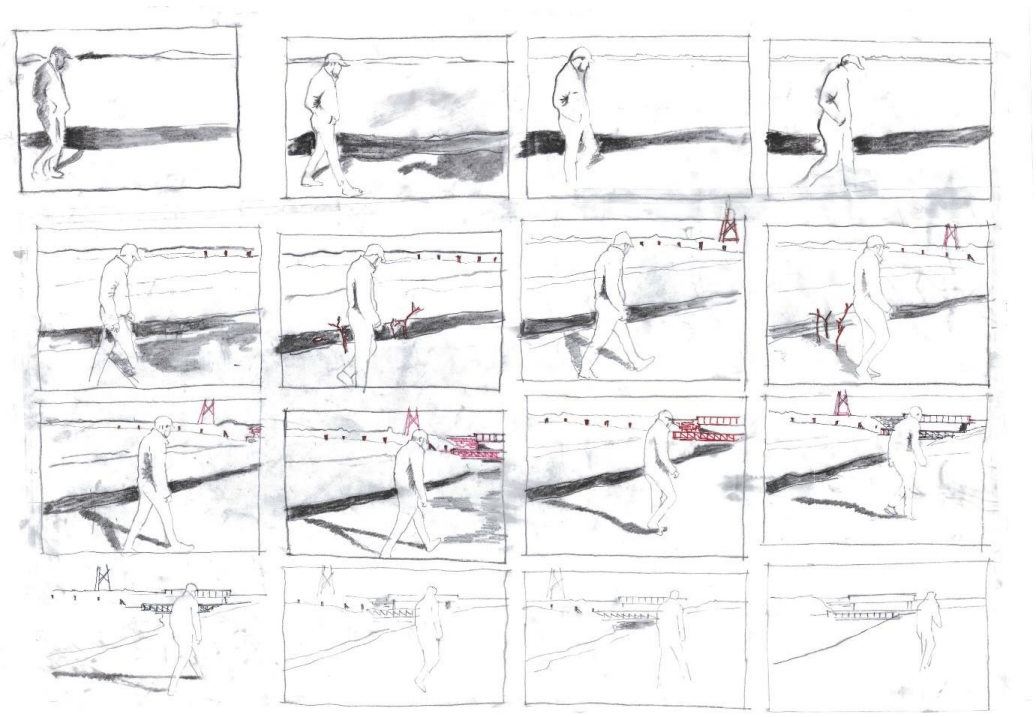

Figure 19
Charcoal drawing of author "flâneuring" through the industrial buffer
(sketches by the author).

Figure 20
Youth playing on railway bridge
(photograph by the author).

Artwork: The concrete sleeper touchstone[2]

If one lives in Heidedal and works in town, one will most likely cross over into Heidedal at a very specific railway crossing, situated just east of the sewer works. At this crossing one is confronted by a very large electric pylon and by the less dominant, upright concrete sleepers that served as a fence to keep pedestrians out. The fence idea did not last long and inadvertently, the sleepers have become industrial markers in the landscape – thresholds into the community. When observing these structures, the author was impressed with their ruggedness, scarification and angular form. These concrete sleepers stood upright within the veld of the buffer zone. The author wanted to capture this and draped fabric over them and with charcoal sticks pressed down and made rubbings on the surfaces of the fabric while it was in contact with the concrete sleeper (figure 21). He looked at its form – the angular nature of one of its sides. The heaviness of the sleeper gave it a sense of permanence, and the author saw the potential for land art and that the sleeper's stereotomic nature would contrast a more tectonic structure which could be augmented onto it.

The design process

The author set out to measure the sleeper. What followed was an iterative design process, that explored the different possibilities and the form that the touchstone could become and how it would attach itself to the existing concrete sleeper. Its indentations, scarification and oval breaches within the concrete offered opportunities for articulation of the connections and details. The various possibilities included a raft which could be floated on the stream leading to the sewer works, showing the nautical possibility it possessed. The touchstone could be interpreted in many ways. It could be a light beacon in the landscape. If a series of touchstones could be built, repetitively positioned atop a series of concrete sleepers and provided with a light source each, then they would become beacons of light for people travelling through this threshold and over the railway line at night. The touchstone could be representative of an architectural concept, as it has traditionally been used at the Department of Architecture of the University of the Free State, inspiring elements of architectural morphology. It could represent a building, the upright column representing vertical elements and the curved skin representing the walls and roof elements.

Figure 21
The draping of fabric over a concrete sleeper
(photographs by the author).

[2] According to the late architectural pedagogue, P.G. Raman, a touchstone is a metaphoric and abstract creative exercise that can be used by architecture students to capture a project's theme or concept which represent the aspirations they have for their designs (Raman, n.d.).

The making of a touchstone

Figure 22 explores the making of a touchstone. The author wanted to be accurate in constructing the touchstone and he drew the existing concrete sleeper on a 1:1 scale. He wanted to explore the anthropomorphic qualities of the touchstone, as this quality embedded within the tropes of industry in the buffer zones was always a theme which he expressed through his metaphoric engagements with place. Kentridge speaks of how we are unable to avoid seeing these anthropomorphic forms. The ideas emanating from these explorations inspired him to insert his own body to bring about the human scale on the drawing and to mimic the curved shapes on the sketches. The curve of his body bending was used to show the relationship of the curve on the sketches, revealing the desire to give these static forms a dynamic human quality. The visual theorist Clifford McLucas started developing the idea of the deep map.

First, McLucas claims that deep maps are "big", that this is core to their evocative capacity.[3] The author found that the larger he worked, the more his whole body became involved until, eventually, the lines seemed to stretch beyond his physical reach (figure 23). It felt like he was not only measuring the place, but also his place in it. As he stood next to the train tracks that was intended to tie so many people to this place, hem in their options by limiting their domain, he felt all the old ties coming into play, forming new, yet familiar knots (figure 24). And yet, the lines he drew, due to their length, due to the extension his arms came to stand for surreptitious gateways unravelling these old knots. The size of the creative act was strangely liberating in that the lines had their own kind of perspective; offering one kind of vision up close, and another when one stood back to take it all in. Next, McLucas proposed that deep maps are "slow" in that they find ways to accompany the weather or even landforms. In Heidedal, the author found that his mapping attempted to accumulate associations over extended periods of time, where projects unfolded around dinner tables and in unrushed conversations with family and neighbours. It took shape in the pauses between his father's thoughtfully considered words and grew with the aroma of each dish taking shape under his mother's knowing hands.

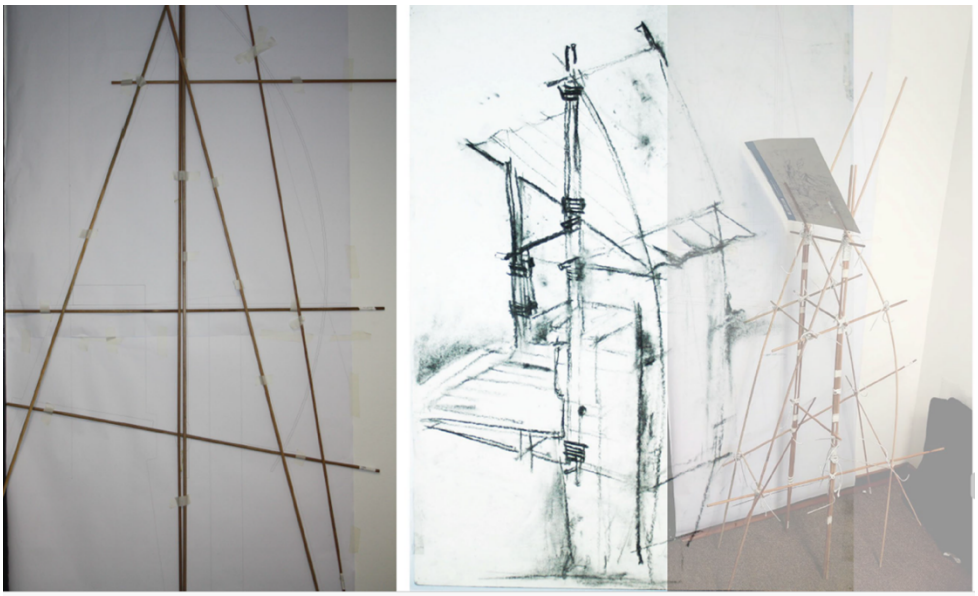

Figure 22
The making of a touchstone
(photograph and drawing by the author).

[3] https://web.stanford.edu/~mshanks/MichaelShanks/51.html.

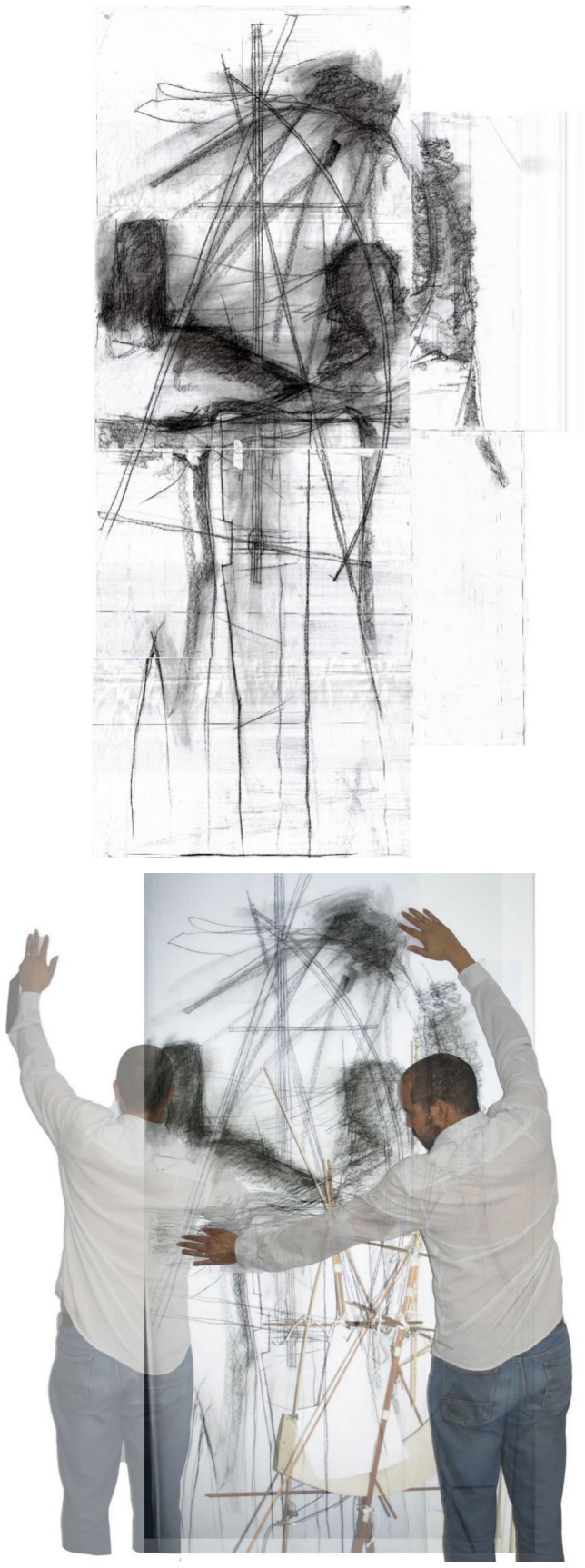

Figure 23
Insert the body, exploring the anthropomorphic qualities of the touchstone (drawing and photograph by the author).

Figure 24
Augmenting the concrete sleeper with the tectonic touchstone (photographs by the author).

Conclusion

If architecture is freed to explore artistic expression, it can liberate the design process into exploring solutions which can break with the ubiquitous nature of historic dehumanising planning processes in previously marginalised communities. Art and architecture can challenge top-down planning processes, allowing bottom-up voices from the community to rise. Legitimising the voice of the artists and creatives within these communities will help challenge the "cookie cutter" approach to planning which has plagued these communities. Architects and creatives working in these locales can see anew through lenses of divergent perspectives and are able to rescript and reimagine the structures and spaces created from an institutionalised and imposed master plan way of thinking, embracing the acquiescent, bottom-up incremental thinking of the marginalised communities found within our South African built environment.

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