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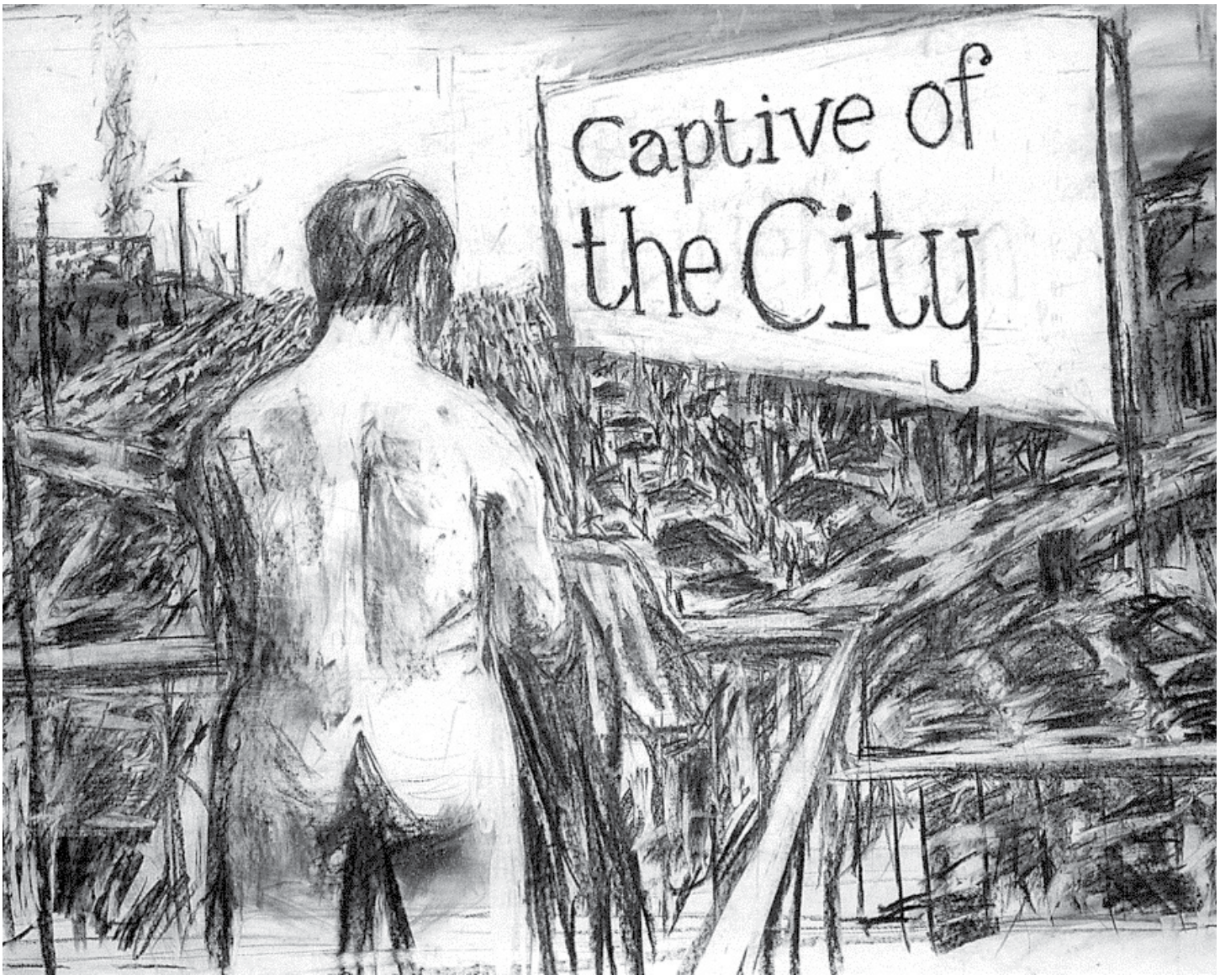

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Contents

The influence of *botho* on social space in Botswana since independence

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Since independence, Botswana has developed from one of the poorest countries in the world to a middle-income country. In spite of rapid urbanisation and global capitalism, the ideology and philosophy of social interaction and ethics known in Setswana as botho, has unquestionably survived as a cultural construct. The most pertinent physical manifestations of botho are the kgotla (meeting place) and the family home. This article explores the current state of these institutions, once exclusively male and female spaces respectively, comparing how the spatiality of these architectural places has reacted to prosperity and change in rural versus urban settings.
Key words: Botswana, *botho, Tswana architecture, kgotla*

Die invloed van *botho* op sosiale ruimte in Botswana sedert onafhanklikheidswording
Sedert onafhanklikheid het Botswana ontwikkel vanaf een van die armste lande ter wêreld tot 'n middle-inkomste land. Ten spyte van vinnige verstedeliking en globale kapitalisme het die ideologie van sosiale interaksie en etiek, in Setswana bekend as botho, ongetwyfeld bly voortbestaan as 'n kulturele bobou. Die mees pertinente fisiese manifestasie van *botho* is die *kgotla* (versamelplek) en die familiewoning. Hierdie artikel ondersoek die huidige stand van hierdie instellings, voorheen uitsluitlik manlike en vroulike ruimtes respektiwelik, en vergelyk hoe die ruimtelikheid van hierdie argitektoniese plekke gereageer het op vooruitgang en verandering tussen landelike en stedelike omgewings.
Sleutelwoorde: Botswana, *botho,* Tswana argitektuur, *kgotla*

The term *botho* has recently become entrenched as a national principle in Botswana's Vision 2016, the country's economic and social development agenda for the 21st century. Mapadimeng (2009: 76) writes that "the first intellectual attempt to define and explain the *ubuntu/botho* culture" was in the 1960s and 1970s by the journalist Jordan Ngubane (1917-1985) as "A philosophy of life and the practice of being humane which gave content to life for African people long before the arrival of white settlers". Madipeng succinctly expands on this: "Its core defining values are respect, group solidarity, conformity, compassion, human dignity and humaneness, collective unity and solidarity, sharing, universal brotherhood, communalism, interdependence, and hospitality". A popular English translation is "a person is a person through other people" (Setswana: *motho ke motho ka batho*).

The aim of this article is to explore how the spatial patterns intrinsic to the two most entrenched physical manifestations of *botho*, namely the customary meeting place, the *kgotla*, and the family home, the *kgoro*, have been reacting to post-colonial socio-economic realities. The fact that the former was the exclusive domain of men in traditional society, and the latter, the domain of women, set against the background of gender equality and rapid urbanisation, add considerable complexity to the investigation.

Why not study the theme in my own country, neighbouring South Africa? After all, South Africa's Setswana speakers vastly outnumber the Setswana speakers in Botswana. The reason is simply that colonialism, and later apartheid (with its discriminatory economic, political and land policies), effectively prevented the existence of traditional villages, undermined cultural practices and severely curtailed the possibility of self-expression. In Botswana, on the other hand, not only did the customs prescribed by *botho* survive, but the Tswana also perpetuated their building traditions in rural villages. Some of these villages have since grown into towns.

Great Zimbabwe was at its height when, during the 14th century, the people known today as the Sotho-Tswana started settling in the north-western and western parts of present day South Africa. Over a period of nearly 600 years the settlements of the Tswana in particular changed from a pattern of dispersed homesteads to one of increasingly larger and denser villages, culminating in agro-pastoral towns with populations estimated by early 19th century travellers to be in the range of 10,000 to 20,000. Most were destroyed during the internal conflicts of the 1820s, known as the difaqane, particularly by the raiders of Mzilikazi, the AmaNdebele chief. By the time the Trekboer settlers moved into their territories, they had all but ceased to exist, and the stubborn survivors – staunchly resisting white overrule – moved further northwest into what became the British Protectorate of Bechuanaland in 1885. There was, however, a high level of missionary activities.

British interest in controlling Bechuanaland was motivated by the need for a corridor around the ZAR to connect the Cape Colony with Zimbabwe and Zambia as they are known today. The hot and dry country with prolonged periods of drought and its subsistence economy offered little for European exploitation. As a consequence, infrastructure development was largely limited to roads that enabled the few white settler farmers to move their produce to markets in neighbouring countries. The British did not build a single high school and even administered the Protectorate from Mafikeng in the adjacent Cape Colony.

Construction of Gaborone, the capital, commenced in 1964 and it was ready for the independence celebrations of 1966 when Bechuanaland was renamed Botswana. At that point, it was one of the poorest nations in the world. The subsequent discovery of huge deposits of copper, nickel, soda-ash and in particular, diamonds, resulted in a booming economy, further underpinned by a robust tourism industry.

The sustained economic success and concomitant infrastructure development is quite unique in post-independence sub-Saharan Africa where mismanagement and a disregard for the welfare of ordinary people have resulted in dependent economies and lack of infrastructure. It is widely asserted that this unique situation derives from the use of the concept of *kgotla* (consensus-based community councils), that is so entrenched that Botswana can claim to be Africa's oldest democracy (Denbow and Thebe 2006: 23).

A United Nations (2008: 19) report recently stated: "The development plans of Botswana have always been based upon the five national principles, which are Democracy, Development, Self-reliance Unity and *Botho*". These principles have also been adopted in the *Long Term Vision for Botswana* (Vision 2016). *Botho* is widely understood as "a social contract of mutual respect, responsibility and accountability", intrinsic to a philosophy – a world view – that demands interdependence, communalism and the subservience of the individual to the welfare of the community as a whole (University of Botswana 2012).

Botswana has a land area of 582,000 sq km of which an area of only approximately 34,000 sq km is inhabited by more than five persons per sq km, where the vast majority of its nearly two million citizens reside. Whereas about 80 per cent of the population are Setswana speakers, Batswana have traditionally dominated approximately 138,200 sq km adjacent to Botswana, in the North West province, where Setswana is the home language of 65.4 per cent of the people (figure 1).

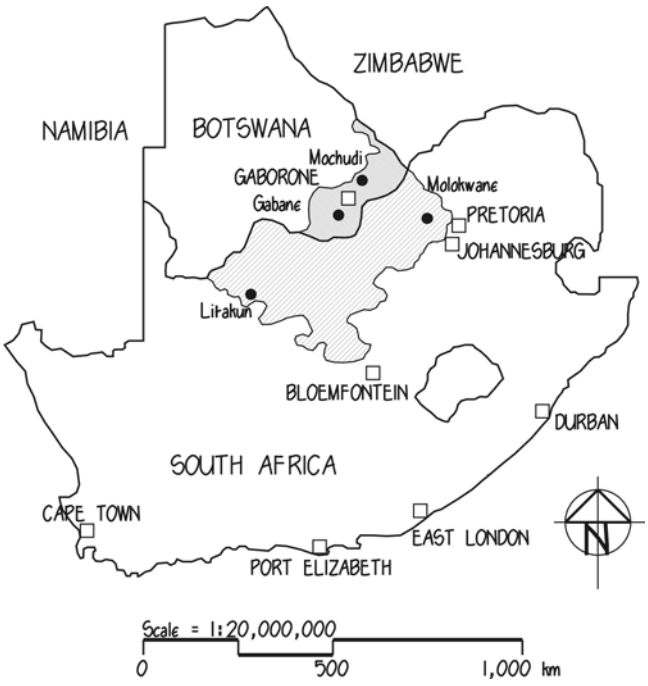

Figure 1
The traditional lands of the Tswana in South Africa and Botswana (drawing by the author).

Theory

Vision 2016 propagates the principle that "*botho* must permeate every aspect" of life in Botswana, and must be central to education, the workplace, national policy, as well as community and home life. Within this framework, following an introduction to Botswana, the concept of *botho* is first examined broadly, followed by overviews of the *kgotla* and the Tswana house in that order. In both instances, urban and rural precedents, as well as current and evolving gender roles in relation to traditional conventions, are compared.

The connected term Sotho-Tswana is often used because of the numerous commonalities in the language and customs, even when referring only to the Tswana. The early settlements are also uniformly described as Sotho-Tswana, but those described in this article are exclusively Tswana.

Focusing on the Tswana was not an opportunistic choice: Not only can the migrations of the Tswana and the evolution of their culture and building traditions be tracked over an uninterrupted period of nearly six centuries into the present; they also built the largest villages in pre-colonial southern Africa, allowing them to be studied in what may cautiously be qualified as urban settings.

Early origins

Samuel Daniell, in 1801, was the first European visitor to Litakun to record his observations. Also referred to as Dithakong, it was the capital of the Sotho-Tswana tribe known as the Bathlapin and was situated approximately 70 kilometres east of present day Kuruman. William John Burchell visited this area in 1812 and published a vivid, graphic and written account, entitled *Travels in the interior of southern Africa, Volume 2* (1824), devoting 242 of 619 pages to Litakun. This book is probably the most extensive and scholarly account of pre-colonial Tswana customs and

constructions and is still in print. He described Litakun as a collection of 30-40 little villages each centred on a chieftain and spread over an area of roughly 2.5 by 3.2 km. He estimated approximately 700 to 800 "circular huts" and a population conservatively estimated at "nearly 5,000 souls" (1824: 284). Burchell's view from the entrance to Litakun illustrates the size and spread of the town (figure 2). It depicts the *kgotla* beneath the tree beyond the oxen and the chief's dwelling to the left. From Burchell's (1824: 514) description, it is evident that the layout and spatial relationships are not incidental, but the result of a ritualised, replicable process.

Burchell did not use the word *botho* once, but in a chapter *General Description of the Bachapins* (1824: 529-599) he writes extensively about codified rites and customs under headings that include "Government", "Policy", "Law", "Nature of their chief's authority", "Women" and "Marriage". He did not use the word *kgotla* either, but instead referred to the "*Móotsi*, or Public Enclosure, in which the Bichuänas usually assemble and hold their *pítcho*" [*pitso* = Setswana for *kgotla* meeting] (1824: 371). He described it as a circular space 25 to 30 metres in diameter enclosed with a rough timber palisade and located close to the chief's house. He notes that it was a "place of public resort for men, but not for women". Burchell sketched "The Chief and his party, sitting in the *Móotsi*" (1824: 381) and also observed such enclosures at compounds of lesser households scattered throughout the village.

Figure 2
Entrance into Litakun by William Burchell (1824: 464).

Burchell (1824: 514-15, 521) was also the first to survey and draw bilobial dwellings and describe them as the domain of women (figure 3). He observed:

> There is one quality for which the Bachapins, and probably the other tribes of Bichuanas are greatly to be admired, and in which they excel more than all the southern inhabitants of this part of Africa; the neatness, good order and cleanness of their dwellings.

All huts had outer circular fencing defining two courtyards. Huts were generally 2.5 to 4.0 m across while the chief's hut had a diameter of approximately 5.0 m. The roofs of the larger houses were approximately 8.0 m in diameter and the space formed by the veranda, between the poles and the wall, provided shaded space (Burchell 1824: 518). Burchell was also the first to note the difference between the semi-private front lobe (he called it the "public section") and

the private rear lobe. The wall inside the doorway that obstructed the view to the interior of the hut is also significant since this is not a standard configuration.

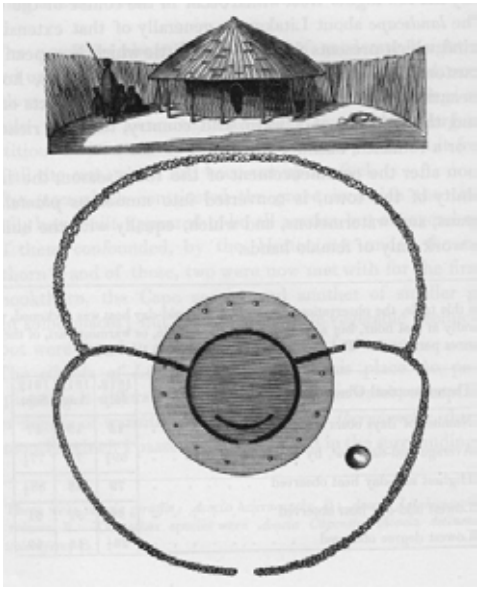

Figure 3
William Burchell's engraving of a bilobial homestead (Burchell 1824: 528).

Since Litakun was constructed with earth, grass, logs and reeds and all traces have vanished, its locality has not yet been identified. On the other hand, Kaditshwene, capital of the Bahurutshe, whose stonewall ruins were located by Jan Boeyens (2000), and described by Boeyens and Plug (2011), was visited by John Campbell in 1820; his depictions of the town and the chief's compound are well known (figures 4 and 5). Also known as Kurreechane, this large agro-town was situated 25 kilometres north-east of Zeerust, and approximately 40 kilometres from the Botswana border. The population was estimated by Campbell (1822: 277), in his *Travels in South Africa*, at approximately 16,000 people.

Figure 4
Kaditshwene by John Campbell in 1820 (source: Boeyens 2000: 11).

Figure 5
The chief's compound at Kaditshwene as depicted by John Campbell, 1820
(source: www.kaditshwene.com).

Analyses of the ruins of Kaditshwene and other abandoned Tswana towns reveal a consistent pattern of connectedness and spatial relations between the chief's dwelling, his *kgotla* and its courtyard and ceremonial kraal, as well as the relationship of these to the other homesteads in the village (Boeyens et al 2011: 6). There is without doubt an intrinsic interrelationship between space and social organisation. Boeyens and Plug (2011: 7) state significantly that "the replacement of the cattle kraal by the *kgotla* as the public assembly area of the chiefdom marked the development of greater political complexity and the emergence of large-scale decision-making units". He quotes the eminent Norwegian social anthropologist, Gulbrandsen: "the *kgosi* [chief] and his court, the *kgotla*, were the focal point of the state, politically, economically, ritually and spatially". During the mid-1820s Kaditshwene – like all the stone-walled agro-towns – was destroyed in the *Difaqane*. The Bahurutshe never again built a town and today remnants of this tribe are still found scattered around Lehurutshe. Other tribes (Setswana: *morafe*) migrated to the region known today as Botswana.

Botswana

Comaroff et al (2007: 61) note that:

> The overall design of Tswana towns remained fairly resilient throughout colonial Bechuanaland, their proportions changing relatively little with the passage of time. Even after the independence of Botswana (1966), the larger chiefdoms retained strong architectural traces of the past; they still do.

Mochudi, a large village founded in 1871, 37 km north of Gaberone, is the quintessential example. The capital of the Bakgatla, it has a population of approximately 40,000. Significantly, Seretse regards the Bakgatla "as the foremost custodians of the Setswana culture". He notes that, although the Bakgatla were the first to build European-style houses "it is possible that the oldest buildings in Botswana are to be found in Mochudi" (2007). The legendary anthropologist, Isaac Schapera (1905-2003), wrote profusely on all aspects of Tswana life and visited Mochudi regularly between 1929 and 1950. His photographs of village architecture and scenes during that era have been ordered and edited by the renowned team of anthropologists, John and Jean Comaroff, assisted by Deborah James (2007) and is a precious source of information.

The Phuthadikobo Museum contains a fascinating exhibition of narratives, photographs and models depicting the development of the village from its founding. The morphology depicted in the late 19th century photograph of Mochudi (figure 6) is the same as that of Kaditshwene, but soon the geometry changed from circular to semi-circular, retaining the kgotla and cattle stockade in the centre (figure 7).

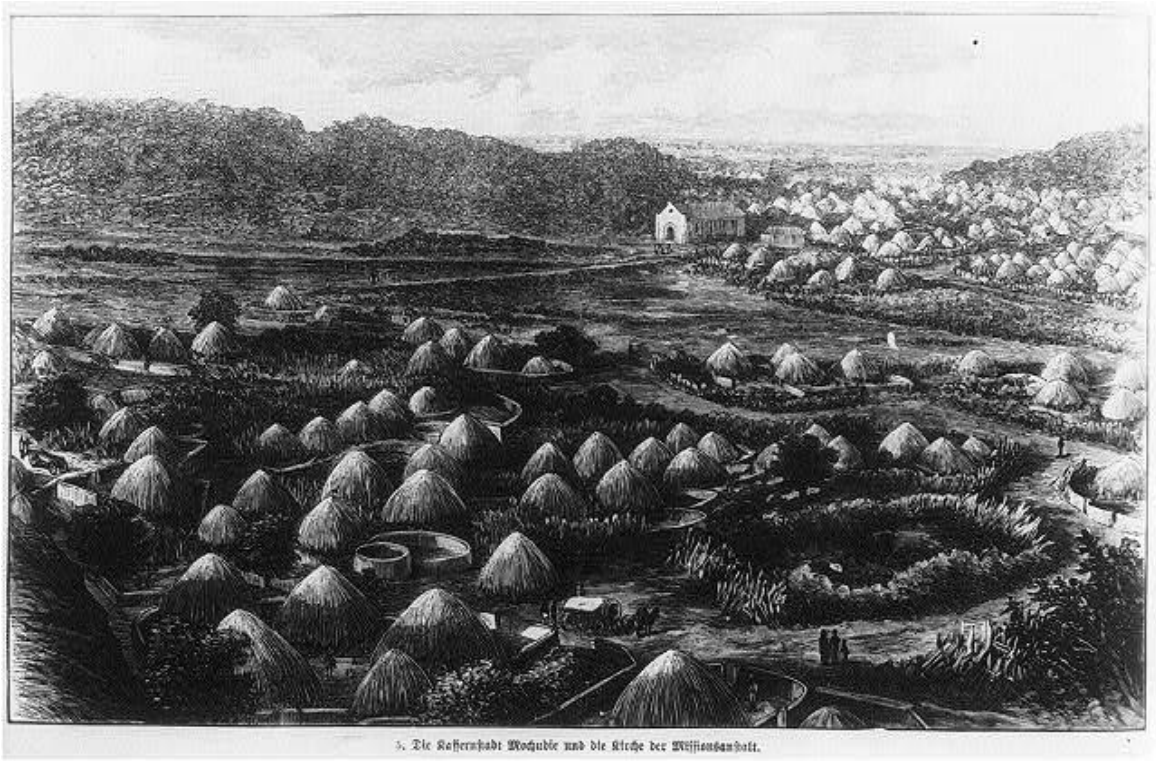

Figure 6
An image from 1899 entitled The Kaffrarian city Mochudi and the mission church (source: Library of Congress Prints and Photographs Division Washington, D.C.).

Figure 7
Kgotla and cattle stockade as centre of horseshoe-shaped cluster of dwellings (photograph by the author).

This pattern illustrates the most striking difference between rural and urban forms, and by implication, mode of social interaction. The layout of rural villages where people of kin are

neighbours is organic and based on choice and incremental growth. As Denbow and Thebe (2006: 92) explain: The "semicircular homestead-corral units were simply multiplied over and over again as the population grew", adding that towns were laid out around the chief's compound "in a specific order of seniority", all linked by a network of pathways and open spaces. Furthermore, rural land is often still communally owned and the people living there are often related (Denbow and Thebe 2006: 102).

Until the mid-1970s the majority of Batswana peoples lived in thatched round huts (colloquially called *rondavels* in southern Africa) in traditional villages (Grant et al 1995: 33), but the urban population as a proportion of the country as a whole has been growing exponentially, from 9.1 per cent in 1971 to 54.1 per cent in 2001 (Gwebu 2004).

Rural form and relationships are in stark contrast to the situation in cities where the streets lie in a grid, lined with residential plots occupied by unrelated households. With *botho* based on communitarianism, is it not threatened by urbanisation? Of course! Many families, in fact, respond by regarding their "real homes" to be in a village, where they would often have a house and cattle (Denbow and Thebe 2006: 93).

Botho

Schapera was a prolific author and wrote extensively about every conceivable aspect of Tswana life. He never used the word *botho*, but his writings about initiation rites, cattle magic, medicines, sexuality, married life, praise-poems, rainmaking rites and land tenure – all highly ritualised and codified behaviour – describe in detail the essential elements of what is today widely recognised as the philosophy of *botho*.

There is currently a plethora of recent scholarly articles on *botho* and its Nguni equivalent, *ubuntu*. Current themes range from law and morality to education and economics, but literature on architecture in the context of *botho/ubuntu* is sparse. An immutable relationship, however, is not disputed and it is generally accepted that culture, simplistically defined as a particular community's entrenched way of life, organises both people and space (Huntar 1992: 36), and that socio-cultural forces shape built form, spaces and their relationships (Rapoport 1969: 46). The point is that architecture is not universal and is not value-free. *Botho/ubuntu* constitutes a worldview that focuses on the wellbeing of the community, whereas Western ideology – that has been producing much of our built environment – stresses the rights of the individual. As Denbow and Thebe (2006: 42) succinctly explain: "The conceptual fields of African thought and cosmology do not always fit well in the categories familiar to westerners."

The concept of *botho/ubuntu* is not limited to southern Africa. In fact, Metz and Gaie (2010: 274) use the term "Afro-Communitarianism" to describe similar philosophies found all over sub-Saharan Africa. As Jenkins (1991: 18) succinctly puts it: "In the African situation, group identity and relational obligations are paramount. In the West, things are very individualistic. Westerners believe in rights, not obligations."

Debra Percival's interview with the prominent Motswana architect Moleta Mosienyane (2009) on the Setswana use of space is particularly enlightening. She quotes him as saying: "Many Setswana concepts relating to space and place were embodied in the concept of *botho* – respect for the sanctity of the human being and a human beings connectedness to other people as well as the natural environment and the spiritual realm."

Kgotla

The function, form and materiality of the *kgotla* depicted by Burchell – the enclosure of upright logs set into the ground serving as the open-air chief's court – was not only transferred to present-day Botswana during the second half of the 19th century, but it is the most prevalent arrangement to this day (figure 8). Interestingly, it changed from a fully enclosed circle to a semicircle. And as Denbow and Thebe (2006: 90) confirm: "There was (and still is in rural villages) a specific relationship between the compound of the chief, the corral and the kgotla." Many *kgotla* are situated in the shade of large trees, but Mochudi seems to have been one of the first to construct a canopy for the *kgosi* and his advisors (figures 9 and 10). More recently, many *kgotla* have been completely covered with the sides left open (figure 11).

Isaac Schapera's seminal book of 1938, entitled *A Handbook of Tswana Law and Custom*, a publication that has been reprinted many times, is still available and referred to in the customary courts of Botswana. He refers to the *kgotla*, no less than 75 times, as a place where disputes and transgressions are adjudicated. The kgotla, as the seat of customary law, is immutably embedded in Botswana's legal system. Sharma (2004: 7) found that "The customary courts handle approximately 80% of criminal cases and 90% of civil cases in the country." A United Nations (2002: 20) review describes the dispensation:

> Botswana's legal system is plural, comprising Roman-Dutch common law and statutory law, together with customary law ... The Roman-Dutch and customary law systems co-exist. ... Customary law is administered by the chief (*kgosi), and cases are generally dealt with at the kgotla.*

It is often claimed that the kgotla is largely responsible for Botswana's rare (for sub-Saharan Africa) and relatively stable democracy. This notion is increasingly being contested since ethnic minorities and women are generally not allowed to attend kgotla meetings. In many instances where women are involved with hearings, they are represented by a man (Denbow and Thebe 2006: 92). This is changing very slowly. Mosadi Seboko of Ramotswa is the first woman *kgosi* in Botswana to serve as a village leader and representative to the House of Chiefs since 2000.

Figure 8
The *kgotla*, Kanye, Botswana (then Bechuanaland), by Gustav Fritsch, August 1865 (source: SUNScholar Research Repository, http://hdl.handle.net/10019.1/4926).

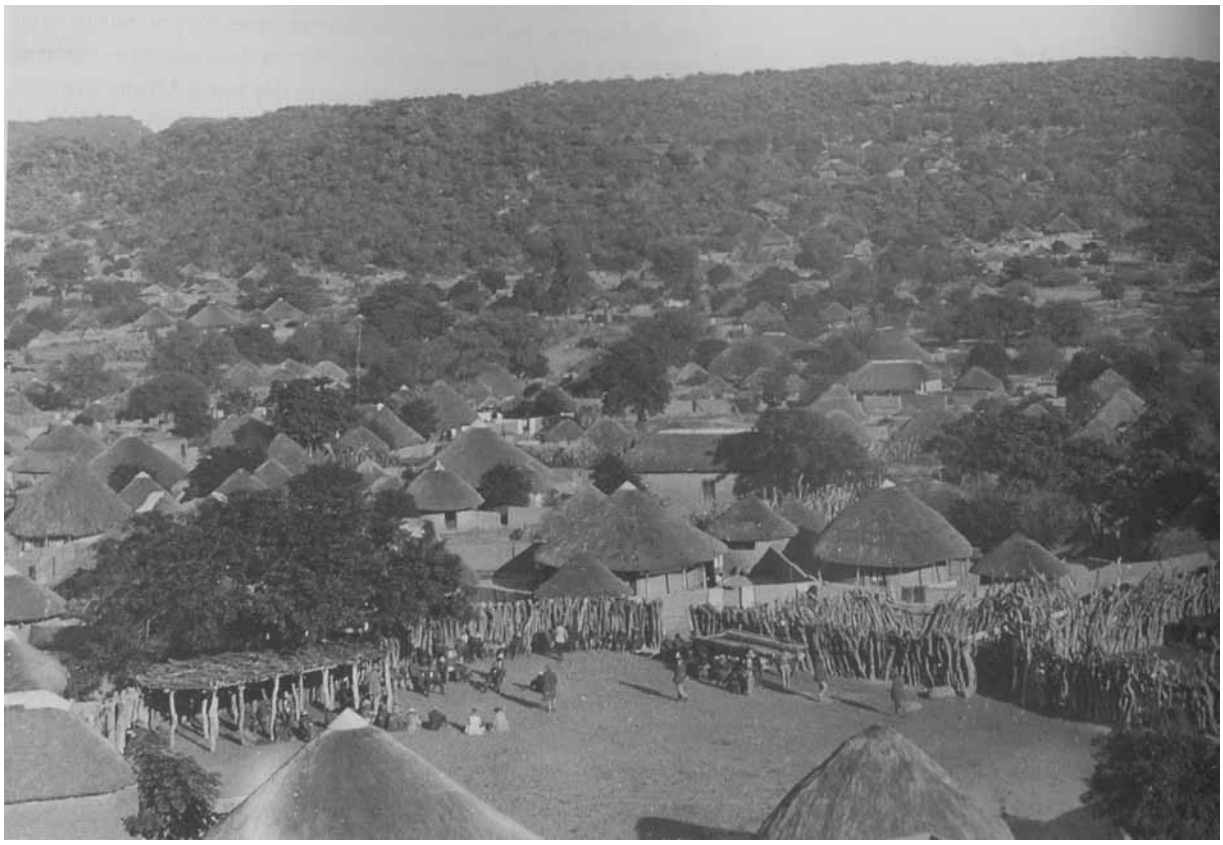

Figure 9
The *kgotla*, Mochudi, Botswana (then Bechuanaland),
by Isaac Schapera, 1929 (source: Comaroff et al 2007: 62).

Figure 10
The *kgotla* in Mochudi
(photograph by the author).

Figure 11
The *kgotla* in Gabane, a rural village south of Gaborone
(photograph by the author).

However, as Denbow and Thebe (2006: 224) explain, the kgotla is not only the venue for customary law. It is above all the "institution through which Tswana communities govern themselves in family and community matters, [as well as] the physical place where political discussions are held".

Botswana's Parliament, as an institution is, therefore, perhaps the ultimate embodiment of the idea of the kgotla. It consists of the National Assembly and the House of Chiefs. Whereas the former is the lower house consisting of elected lawmakers, the House of Chiefs is the upper house partly consisting of elected representatives and partly, the chiefs of the larger tribes inside Botswana. Christensen (2011), in his "Worldwide guide to women in leadership" (updated September 2011) lists fourteen women who have been appointed as ministers, assistant ministers and ambassadors since 1966. The first woman speaker was also recently appointed. Sikuka (2009) points out that the government is committed to a 50 per cent female representation in Parliament by 2015, a target it is unlikely to achieve. This is not so much because of systemic resistance, but simply because women do not seem very interested. With approximately 403,000 women registered as voters out of the total of 725, 000 voters (Sikuka 2009), they form a powerful force, and now have the opportunity to take advantage of the democratic benefits inherent in both and participate more actively in government.

Moleta Mosienyane (2009), whose firm designed the Parliament Building (figure 12), declares that his work is based on "the kgotla system", explaining that it is an "imaginary space" where decisions are taken, and that the kgotla "fosters community". He seems imply that the concept of kgotla bears much more relevance than just being the venue for customary law. Conceptually, it represents social space as the organisational focus of a building complex.

Figure 12
The existing Parliament Building by Mosienyane & Partners International, completed in 1994 (photograph by the author).

Tswana family home

Denbow and Thebe (2006: 141) very precisely explain the role of family in Tswana life:

> The family household of husband, wife, and children forms the basic building block of Tswana society. Among the Tswana, groups of households, affiliated agnatically [relatives descended from the same man] around a kgotla and animal corral (kraal), are the grassroots, political and economic institutions that are organized into larger wards and sections that make up a morafe [tribe].

The family home, therefore, is patently not an isolated enclave. It is not only a domestic organisation, but also has spatial implications and relationships beyond that of the family home. As noted, the clustering of related families around their own kgotla – the essence of Tswana communal life – only occurs in the rural village.

In traditional Tswana architecture the *lelapa* (plural: *malapa*) is the equivalent of the living room, or as Walton (1956: 144) explains: "[A *lelapa*] is in fact the main living quarter of the wife and her family and the huts are used as sleeping rooms, store-rooms and fire-huts in inclement weather." The Grants (1995: 14) point out that an individual house may have a small *lelapa*, while a large *lelapa* could incorporate several buildings. They also remind us that the word also means "a family, a home and a household", and "the physical *lelapa* is an essential architectural feature because it binds together the component buildings comprising the traditional home". A family dwelling in Gabane (figure 13) illustrates the two types of *lelapa* side-by-side, as well as the clustering of separate buildings.

Even within the traditional residential typology, new houses that are often "modern" constructions with concrete block walls and corrugated iron roof sheeting, usually share the perimeter of the family *lelapa* (figure 14). Interestingly, in both instances the *malapa* are physically defined complete with low walls, gateways and thresholds, but claim space in a larger demarcated territory. In both instances, the layering and hierarchy of spaces are very noticeable.

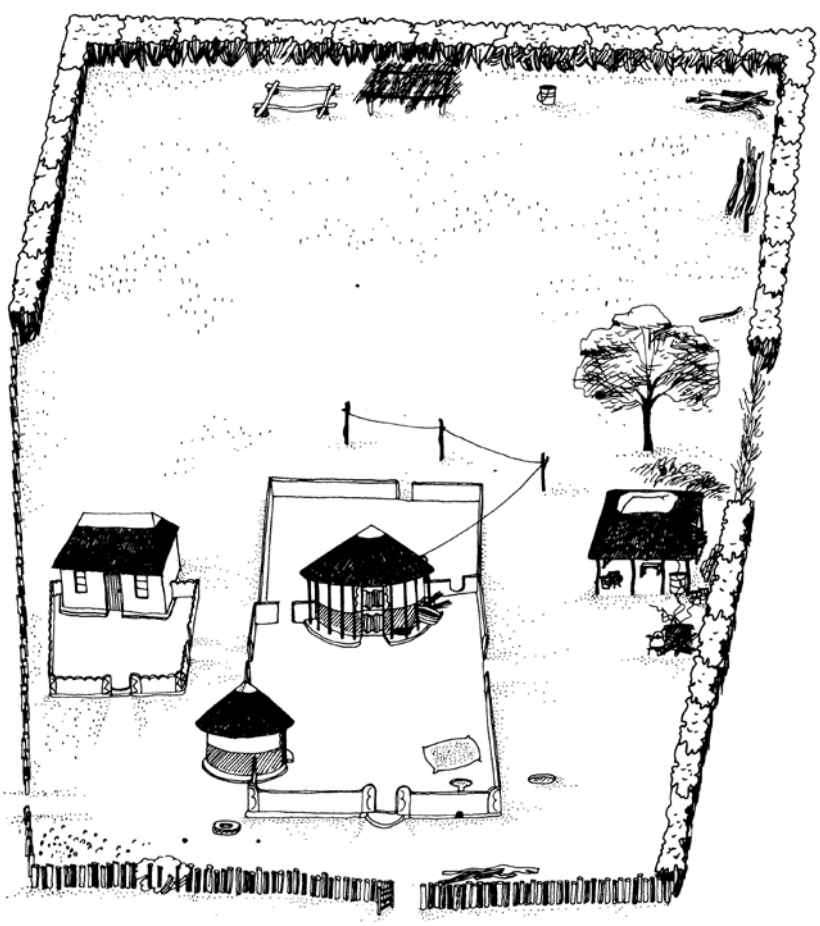

Figure 13
A contemporary village compound in Gabane, Botswana
(source: Larsson 1984: 157).

Figure 14
A family homestead in Mochudi
(photograph by the author).

Interestingly, because Bechuanaland was governed from Mafikeng in South Africa, there are only a few Victorian buildings still to be found (Denbow and Thebe 2006: 98). The result is that porches and the wrap-around verandas that were so eminently suited to the climate were never absorbed into the Tswana vernacular idiom, as the "modern" house above illustrates. To compensate for this, the owner built a thatched shading pavilion enfronting the *lapa* in order to achieve protected outdoor living space. The lack of integrated veranda is strange considering that the traditional Tswana veranda *rondavel* is much older than its colonial equivalent.

Grant and Grant (1995: 118) observe importantly that:

> The home is traditionally the woman's; it is her domain and it is her responsibility to maintain and decorate it. It is with good reason, therefore, that Batswana traditionally identify a home by the name of the wife and not by that of her husband.

In that capacity, women have been responsible for building and finishing the traditional earth-walled buildings in villages, with the men doing the thatching. They also decorated the walls. With the advent of concrete block walls and corrugated iron roof sheeting, men are now responsible (Denbow and Thebe 2006: 98). In a conservative society, this disempowerment inevitably reduces the status of women in the community. Moreover, the dilemma facing women goes deeper than being deprived of traditional responsibilities. Female-headed households now constitute approximately half of all households in Botswana (United Nations 2002: 5), yet women are not allowed to protect the interests of their families at *kgotla* meetings. This is problematic since a significant number of households are headed by females (Denbow and Thebe 2006: 22).

In addition, urbanisation is the cause of a host of other challenges. Foremost is the loss of the *lelapa*. Outdoor socialising around a fire is popular to this day, even in urban areas. The reason is not only the small living rooms, but certainly also the "cultural appeal" (Denbow and Thebe 2006: 97). The only solution is larger patios and balconies. South African speculative developers tend to apply minimum space standards and avoid transitional indoor-outdoor spaces, and unfortunately, those in Botswana seem to have inherited that attitude. Even in the Netherlands, a country with inclement weather, generous balconies are the norm most of the time.

Finally, people are customarily buried out of the family home, to where the corpse would have been brought the previous evening (Denbow and Thebe 2006: 185). This has consequences for planning. As Grant and Grant (1995: 40) put it: "All families need sufficient space for the large-scale social set pieces of marriage, death and remembrance, and for a playing area for children". Again, these are not difficult to solve, but current forms and layouts of urban housing simply do not satisfy these needs.

Reviewing the issues

In spite of laudable progress and enviable prosperity, Botswana faces three serious problems, according to the United Nations (2002: 23). They are the high incidence of poverty and HIV/AIDS (Botswana apparently has the highest HIV prevalence rate in the world) and environmental degradation due to "unsustainable levels of natural resource utilization", as well as "the consequences of global climate change".

However, if the seven "pillars" of Vision 2016 can be achieved, Botswana will be transformed into a model state (United Nations 2008: 20). The seventh pillar is to build a united and proud nation, which means a society "under-pinned by resilient family values with a strong

sense of tradition and pride in its history". In other words: A society sharing the common ideals, values and symbols of *botho*.

Botho is patently not exclusively a Batswana concept. Mapadimeng (2009: 76) uses the terms *ubuntu/botho* interchangeably, with *ubuntu* used in the Nguni languages (isiZulu and isiXhosa) and botho in the Sotho languages (Setswana, Sesotho and Sepedi). Even though the culture and its material manifestations survived in Botswana and there is a growing awareness of *botho/ubuntu* in South Africa, it is still under threat by what Mapadimeng (2009: 87) refers to as "global capitalism" and the resulting cultural "homogenisation". There is abundant evidence of black people in influential positions who, rather than promoting the well-being of the community, exploit their positions to enrich themselves and their relatives.

Eighty per cent of the Batswana – the Setswana speaking portion of the citizenry – has been guided by *botho* while it has been the indisputable ideology of an integrated rural society. But can it survive in socially, economically and spatially fragmented urban landscapes? Can it survive as government policy as proposed by Vision 2012?

As Denbow and Thebe (2006: 93) write: "Even though they often incorporate traditional beliefs, the religious and worldviews of the Tswana are not static but undergo redefinition and transformation in the context of a changing world."

A powerful Tswana faction who is debating exactly the same issues is the wealthy Bafokeng tribe, whose administrative capital is Phokeng, near Rustenburg in South Africa. In its quest to promote Tswana culture and "consolidate national identity", it talks of "an *Afromodernist* culture under construction", noting that the King's mother declared that "Tradition is not static" and "Everyone has to adapt" (Comaroff et al 2009: 112-114).

The *kgotla* is perhaps the most important social space in Tswana society. Just like *botho*, the *kgotla* is not a unique Tswana institution either, and this system of assembly is variously known as *pitso* in Lesotho and *imbizo* in Zulu (Schapera 1937:177-184). Meetings take place under strict protocol of representation, precedence and procedure. The preceding illustrations provide evidence of a tentative evolution of its built form. And while it is recognised that the Tswana can adapt to various spaces, I believe much more research is necessary in order to reaffirm not only its desired physical characteristics (ambience, acoustics, privacy, sense of enclosure, sight lines, aesthetics, access control, seating, etc.), but also its aesthetic and symbolic qualities.

The fact that family homes are now increasingly situated in cities and far removed from the traditional territory of the clan undeniably threatens the traditional relationship between relatives. Having a home in the city and returning to a village home over a weekend partly compensates for this dilemma, but how many households can afford to maintain two homes and to travel regularly between them?

While arrangements to remain within the sphere of the clan are beyond the scope of this study, the architecture of urban housing is not. Rantao's (2006: 21-7) highly informative book entitled *Setswana Culture and Tradition* contains a chapter headed "The role of manners in the Tswana homestead." It describes a wide range of rituals and ceremonies, requiring very specific spatial patterns rarely found in speculative houses. Such shortcomings are particularly critical in townhouses and apartments which may not be expanded or altered. The problem is aggravated by the fact that the ritual of making a home is also a consideration.

Conclusion – the role of architecture

In traditional African environments, culture – as exemplified by a community's way of life – is such a powerful force that behaviour shapes territory and space in an inseparable dynamic. *Botho* is such a culture, but adhering to its principles does not imply a nostalgic search for the past. Just as Muslim architects such as Rasem Badran incorporate principles of Sharia in a condition of modernity and progress, so does Mosienyane reinterpret the tenets of botho (figure 15): "In Setswana culture, each place, each space is influenced by spirituality, and this gives solidarity as well as protection of the environment, which is both cultural and natural".

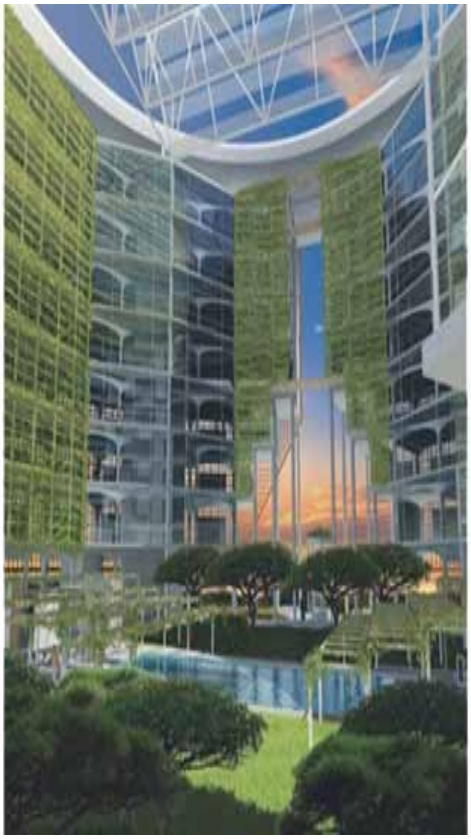

Figure 15
Interior courtyard of the Botswana Innovation hub
(source: www.mpidesign.com).

Moleta Mosienyane recognises that every form of social behaviour – particularly when ritualised – alludes to an associated ideal space, and that it is the responsibility of the architect to translate that into real space. However, several practical, cultural and economic obstacles are facing Batswana architects in this regard.

Designing a 21st century *kgotla* with which the constituency can associate is difficult enough and will require great awareness and sensitivity. The real challenge will be to define the contemporary house in its urban setting. Rolling out rows of terrace housing or blocks of flats in response to a housing shortage in cities is not the answer. The Tswana inhabitants cannot be expected to occupy these European dwelling types without severely compromising the fundamental tenets of *botho*.

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Typological form in the architecture of Gabriël (Gawie) Fagan (1925-)

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Gabriël (Gawie) Fagan (1925-) is a leading South African architect. His architecture is regionally rooted and can be described as a "new" architecture that mediates between a love of the Cape vernacular, functional requirements, site responses and a Modern Movement architectural education. Fagan has assimilated, transformed and mediated the two distinct (although at times formally similar) architectural typologies in his search for appropriate local architectural form. In this article, the antecedents and resolution of Fagan's architectural typologies are investigated through the medium of his domestic oeuvre. The article will outline how Fagan responds to both generative and productive typologies, how he assimilates these, through his imaginative abilities develops them and creates new formal and functional typologies, constantly reworking his own approaches.
Key words: vernacular, Modern Movement, typologies, generative typologies, productive typologies

Tipologiese vorm in die argitektuur van Gabriël (Gawie) Fagan (1925-)
Gabriël (Gawie) Fagan (1925-) is 'n vernaamde Suid Afrikaanse argitek. Sy argitektuur is gebiedsgebonde en kan beskryf word as 'n "nuwe" argitektuur wat 'n liefde vir Kaapse inheemse argitektuur, funksionele vereistes en 'n opvoeding in Modernisme bemiddel. Fagan het die twee afsonderlike (hoewel op tye formeel soortgelyke) argitektoniese tipologieë geassimileer, getransformeer en bemiddel in sy soeke na toepaslike plaaslike argitektoniese vorm. In hierdie artikel word die voorlopers en oplossings van Fagan se argitektoniese tipologieë deur middel van sy huislike oeuvre ondersoek. Die artikel verduidelik hoe Fagan op beide generatiewe en produktiewe tipologieë reageer, hoe hy hierdie benaderings assimileer en deur sy verbeeldingryke vermoë ontwikkel, nuwe formele en funksionele tipologieë skep en voortdurend sy eie benaderings herbewerk.
Sleutelwoorde: volksboukuns, modernisme, tipologieë, generatiewe tipologieë, produktiewe tipologieë

The search for appropriate local architectural form by the South African architect Gawie Fagan has been guided by two main influences, namely the Cape vernacular and a mediated Modern Movement education at the University of Pretoria in the 1940s. This search has resulted in the assimilation, transformation and mediation of two distinct (although at times formally similar) architectural typologies, together with the architect's own inventions. The search for form has its parallels in the dialectic of precedent that Fagan's hero, Le Corbusier (1887-1965), had similarly faced.

> Like Adolf Loos, Le Corbusier found himself caught between two rival typologies: on the one hand the irregular, asymmetrical Arts and Crafts tradition of the yeoman house, with its L-or U-shaped plan; on the other, the regular, symmetrical prism, stemming from Palladio ... (Frampton, 2001: 70).

The inherited Cape vernacular is formally signified by an object building. Its determinants are disputable but technology and an inherited formal tradition certainly played a role in the generation of the one-room-deep building typology (figure 1). The Modern Movement typology was driven mainly by functional and technological requirements, resulting in a similar object type that in its International Style phase often negated context. Later, however, the effects of climate and function often resulted in an attenuated plan and a bi-nuclear planning typology[1] (figure 1).

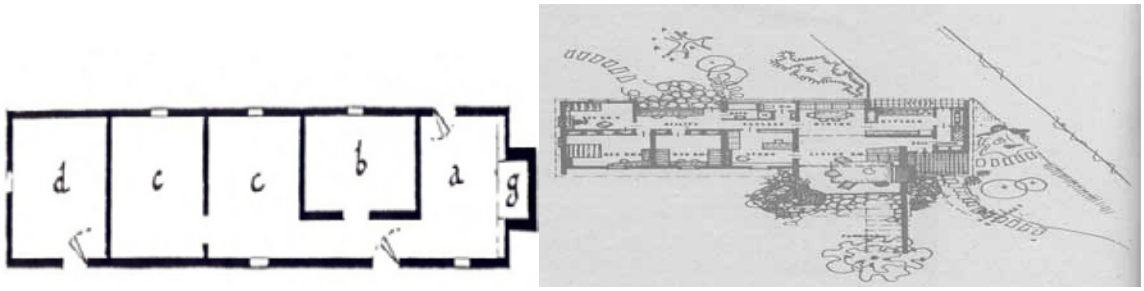


Figure 1
Left: One room deep extended rectangular cottage at Oudekraal Fontein in the Cape (Walton, 1995: 36). Right: Stauch and Wepener's Marriott residence in Johannesburg built in 1947 with north orientation to all living rooms and a bi-nuclear planning layout (Anon, 1952: 198).

This article will briefly outline the importance and history of architectural typologies and will then describe vernacular and Modern Movement typological concepts (generative and productive) that have influenced Fagan's domestic architecture. Lastly, the article will outline how Fagan has responded to, and assimilated these concepts, and through his imaginative abilities has developed his own formal and functional typologies that have been reworked throughout his career. As Curtis (1996: 425) notes when referring to the work of Le Corbusier, each project has become a "testing ground for new ideas, as well as an extension of old ones".

Typological concepts

> Architectural typologies have been formulated and passed down in theoretical treatises and the work of famous architects. It is therefore legitimate to postulate the question of typology as a function of both the historical process of architecture and also of the thinking and working processes of individual architects (Argan, 1997: 242).

The importance of typology lies in its relationship to the history of architecture and architectural ideas, and to the human aspect of association providing a sense of continuity, connectedness or rootedness. Lewcock (2006: 201) indicates that typologies and archetypes have meaning through their continued existence in our memory. An emotional trigger creates an association in our consciousness when we are faced with archetypes. These types of experiences are created through a combination of genetically produced and learned processes.

Fagan's two main architectural influences, namely the Cape vernacular and a mediated Modern Movement, are formally typological. The Cape tradition is a stereotomic[2] and cellular linear box while the mediated Modern Movement typology is exemplified by local climatic manipulations of the canonic 'free plan'. Fagan has developed new typologies that rework and refine these influences through a process of mediation. The mediations are not reductive or simplistic interpretations of their antecedents. They mediate an understanding of the principles that generated the original typologies and the forms that have become associated with them.

Etymology and history

'Type' is derived from the Greek typos meaning variously 'model' or 'mould'. Type, as a system of classification, originated in subjects such as entomology and ornithology (Porter, 2004: 211), and gained currency during the Enlightenment as a scientific method for categorization. Typology in

archeological terms refers to the classification of types according to common characteristics. In architecture the term refers to formal similarities such as organization and geometry.

The most direct and lucid architectural description of type is that by Quatremere de Quincy in his Enclyclopédie Méthodique published in 1825. Here he defines 'model' as an exemplar, something to be directly copied, while 'type' is seen as adaptable, a process-driven interpretation and development. The typological approach reinforces aspects of tradition to foster historical linkage. As Goode notes (1992: 2), Quatremere de Quincy's intention was the

> recovery of a culturally authentic language of built form and space or access to its memory. This is accomplished through recourse to the characteristic forms with which such authenticity has been associated.

A typological approach should also have a recognizable lineage. Theorists such as Vidler refer to the idea of 'type' as an antecedent:

> Everything must have an antecedent … Also we see that all things … have conserved … this elementary principle, which is like a kind of nucleus about which we are collected, and to which have been co-ordinated over time, the developments and variations of form to which it is susceptible (Noble 1997: 1-2).

There are iconic typological antecedents to be found in the history of architecture. In 1753 Laugier referred to the primitive hut as a natural (and tectonic) precedent, while prior to this, Vitruvian treatises on architecture highlighted formal and functional typological possibilities. Palladio's four books on architecture Quattro Libre followed a practical approach through the analysis of examples and extraction of principles. Frampton (1995:4) points out that in his 1851 lecture Gottfried Semper departed from the Vitruvian triad of architectural influences to postulate architecture as defined by four elements. This challenged Laugier's neoclassic stance as it was based on a real Caribbean hut that he visited at the London exhibition of 1851. Semper's analysis is more vernacular than naturalistic:

> Moreover, one comes to the view that nature in her multiplicity is ever simple and sparse in basic ideas, as she constantly renews the same basic forms, graduating formation and modifying creatures a thousand-fold within the limits of being, by shortening some parts and lengthening others. Likewise, I say that architecture also has certain normal forms at its basis, that are governed by an original idea, by which a few forms reappear in endless variation, conditioned by special purposes or by local determining circumstances (Mallgrave et al 1983: 24).

Later, the neoclassical work of Boullee and Durand (the Précis) formalized typological notions in a graphic manner through a generative process. The theorist Vidler has suggested that three historical typologies have influenced architecture since the 18th century.

> From the middle of the eighteenth century, two distinct typologies have informed the production of architecture. The first developed out of the rationalist philosophy of the Enlightenment, and initially formulated by the Abbé Laugier, proposed that a natural basis for design was to be found in the primitive hut. The second, growing out of the need to confront the question of mass production at the end of the nineteenth century, and most clearly stated by Le Corbusier, proposed that the model of architectural design should be founded in the production process itself ... [W]e might characterise the fundamental attribute of a third typology as an espousal of not of an abstract nature, nor of a technological utopia, but rather of the traditional city as the locus of its concern (Vidler 1997: 260).

It can be argued that three aspects influenced the development of Modern Movement typologies. Firstly, Laugier's primitive hut as a tectonic influence evidenced in Le Corbusier's domino principle, but defined earlier by architects such as Soufflot, Labrouste and Perret who built in steel and reinforced concrete. Secondly, Semper's four elements as vernacular influences but

related to the Modern Movement search for a new architecture that prevented a stagnation of tradition. Vernacular architecture, it was assumed during this time, was as close to first principles as possible, representing an architecture of authenticity.

> An argument can be made that Le Corbusier owed this interest[in the vernacular] to Rousseau's ideas on the natural life: the more basic and paradigmatic, ancient or vernacular a solution is, the closer it gets to being "natural" and "original". In this sense, one could talk of the vernacular as a reserve of "original" architectural solutions (Passanti, 1997: 439).

The third influence on typological development was the production process and the search for form from function. Leupen et al (1997: 137) note that this typological approach was used in two ways: firstly, as a way of classifying building function (for example Nikolaus Pevsner's A History of Building Types) and secondly, as a model where type was seen as the development of a set of standards rather than the outcome of historical development.

Venturi (1988: 16) notes that Modern Movement architects revered the primitive at the expense of the diverse and the sophisticated, and this critique (amongst others) resulted, more often than not, in a scenographic Post-Modern typological approach. Ironically, during the same period writers such as Oliver and Rudofsky returned to the vernacular for inspiration, this time in a less scientific and more haptic manner.

Typological sources

This section will highlight typological sources in history that are relevant to Fagan. Thereafter it will be explained how these have been adapted and manipulated in his domestic oeuvre. Fagan's architecture is not structured by a simplistic use of typologies, but by a mediation between the principles and values that these typologies represent. The first typological similarity is generative (Lewcock 2006: 200 and Leupen 1997: 132) in nature as it provides new solutions that build on history (with an emphasis on the vernacular in Fagan's case). They are also generative in the sense that they are starting points for a new architectural language. The second typological similarity is productive through its derivation from functional and scientific processes, developed as a set of standards and not as the result of a historical development. Leupen et al (1997: 137) note that standard types formed prototypes for new solutions.

Generative typologies

Gottfried Semper's The Four Elements of Architecture: A Contribution to the Comparative Study of Architecture (written in 1851) was one of the most important contributions to the renewal of architecture at the time. Semper attempted to revitalize architecture through a critical understanding of theory and design (Semper, 1989: 3). Through observation of the Caribbean hut at the London Exhibition of 1851 he proposed an understanding of the 'primitive' circumstances of human settlement as a guide towards the formation of a new architecture. Semper (Curtis, 1996: 29) argued that an appropriate way to develop new architectural form was by relying on genetic recombinations where natural adaptation was crossbred with historical progress. Four independent elements were described (Semper, 1989: 102 and Semper & Mallgrave, 1986: 33). The most important was the hearth which was defined by three 'defending' constituents, namely the roof, the wall (an enclosure created by the craft of the matmaker) and the substructure or the mound. Semper also suggested that the ways in which the four elements were combined depended on socio-cultural and natural influences. A further assertion is that the wall as enclosure had its origins in mat and weave making[3]. Parallels can be drawn with indigenous South African

architecture, where climatic and material differences resulted in delicately woven reed and branch structures and similar clay covered examples (figure 2).

Figure 2
Progression of framed and reed structures. Left: A circular matjieshuis, Ou Tuin, Kamiesberg (Walton, 1997:18). Middle: Rectangular reed-walled cottage, Oudekraal Fontein (Walton, 1997:30). Right: L-plan reed-walled cottage, Oudekraal Fontein (Walton, 1997:31).

Semper (1989: 103) described the fireplace as the most important generative element as it provided warmth, energy and a place for the formation of alliances, while acting as a starting point for the development of religion through customs. He further postulated that man's technical skills developed around these four elements – ceramics and later metalwork from the hearth, water and masonry works from the mound, and carpentry from the roof. Rashmere (sic) (1965: 11) describes further cultural associations of the generative tectonic typology:

> The wall that encircles the family is an echo of the perimeter wall arranged for defence; but more significantly, it draws the family together round a common, central focus, the hearth. This is their common source of comfort and the form of the roof reflects and strengthens this focus. Each element contributes to the sense of oneness within. The wall, the roof, the hearth, are each individual forms of different origin and function. Together they are a complete statement of spatial unity which lends emphasis to the togetherness of family.

Lewcock (2006: 203-212) expands on the influence of the vernacular through his classification of a range of generative typological concepts, four of which are pertinent to the study on Fagan.

The cave exemplifies man's first non-nomadic shelter. These spaces were not only to be found in natural hollows in mountains but also in vertical and horizontal burrows in flat plains. The importance of this typology is a connectedness with the earth and a sense of being protected while surrounded by rock on all sides. The second and related typology is the hearth. Although Semper postulated that the hearth connected with three other architectural elements, the fireplace can survive as a typology on its own through an understanding of its functional and symbolic roles. The third typology is the covered courtyard, a development of the cave typology, as it was often found in areas of rocky outcrops. The Etruscan house, as an example, eventually formed the model for the early Roman atrium house (figure 3). Here an enclosed space is surrounded by buildings on all four sides. The fourth generative typology is the open courtyard house mostly seen in hot and dry regions. Its development from the original Etruscan model is described by Lewcock (2006: 210) as an opening up of the roof ridge initially to allow smoke to escape. Eventually the roof was completely removed due to the replacement of the fireplace with an internal pool or impluvium, providing an open connection to the sky. The courtyard typology is formed by a group of surrounding buildings or by a combination of buildings and enclosing walls.

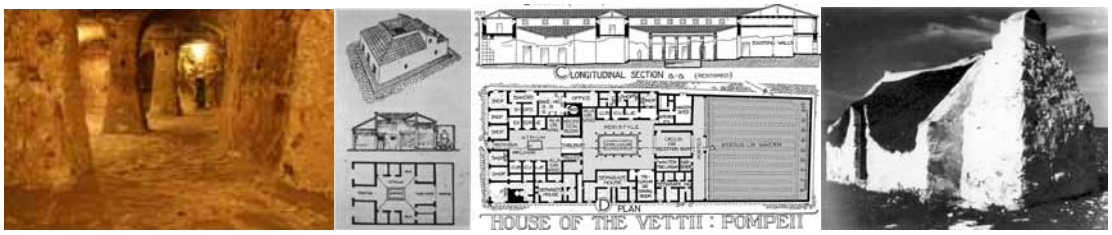


Figure 3

Top left: Cave: Derinkuyu underground city in Turkey dating from the 8th to 7th century B.C. (http://www.istanbuldiary.com/images/turkey/tours/cappadocia/Derinkuyu.jpg [Accessed 1/05/2012]). Second from left: Covered courtyard. Pompeii, Italy. Early Roman house c.250 B.C. (Lewcock, 2006: 208). Bottom Second from right: Open courtyard. House of the Vetti in Pompeii with impluvium (Fletcher, 1946:199). Right: Hearth. A shepherd's one-roomed cottage. Bottekloof, near Stilbaai (Walton, 1997: 67).

Productive typologies

The Modern Movement search for a new architecture was influenced by a dominant voice, that of Le Corbusier. At the heart of his and other Modern Movement architects' theories were ideas of efficiency, economy and health. These ideas led to the development of his five points for a new architecture. This influence loomed large in Fagan's University of Pretoria education and the course focussed on pragmatic ways of solving problems within a mediated Modern Movement canon, more regional in nature and later inspired by Brazilian Modern trends. Despite Le Corbusier's

> … rejection of facile revivalism, he felt that the modern architect should reinvigorate archetypes within tradition. In his own creations he emulated the appropriateness and harmony that he saw in nature. Le Corbusier tried to reconcile conventions that he thought right for the modern condition with 'constants' that he thought basic to the art of architecture (Curtis 1987: 13).

Constants[4]

Three constants can be identified in Le Corbusier's work. First is his exploration of primary form, as can be seen in his illustration from L'Esprit Nouveau, which suggests that simple forms release constant primary sensations (of association) to which each individual responds, depending on their culture or secondary sensations (Jencks, 1985: 145). But Frampton, (1996: 152) argues that this approach also satisfied functional needs. Curtis (1996:163) suggests that Le Corbusier's penchant for pure form had originated from an understanding of nature through his art teacher L'Eplattenier, but was probably also influenced by the typological teachings of Le Doux and the necessity of looking to the past for general lessons (figure 4), just as Fagan has done with the Cape vernacular. Although Le Corbusier appreciated the value of historical precedent in his search for primary form he also revered the simple harmony of grain silos, factories, cars and ships (Curtis 1996: 169). But it was the relationship of function to form that drove his investigative search for an appropriate modern form.

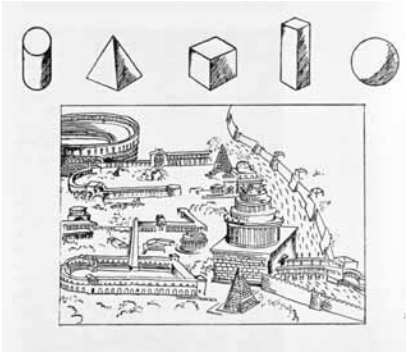


Figure 4
Le Corbusier's sketch of primary forms alongside a view of ancient Rome (Curtis, 1996:28).

The second constant was the continuous development of type through a mediation between function and economics. Le Corbusier's famous photo collage of the temple of Paestum and the Parthenon and the Humber and Delage motor cars highlighted (figure 5), as Curtis notes (1996:169), the importance of standards in architecture. Le Corbusier's hope was that the type forms of wheels and lamps and their relationships within a system could be so refined through an understanding of their requirements that they would reach the same perfection as that of the classical examples shown. This led to the development of housing types and the introduction of the Dom-Ino system that would dominate Le Corbusier's architectural output for years thereafter.

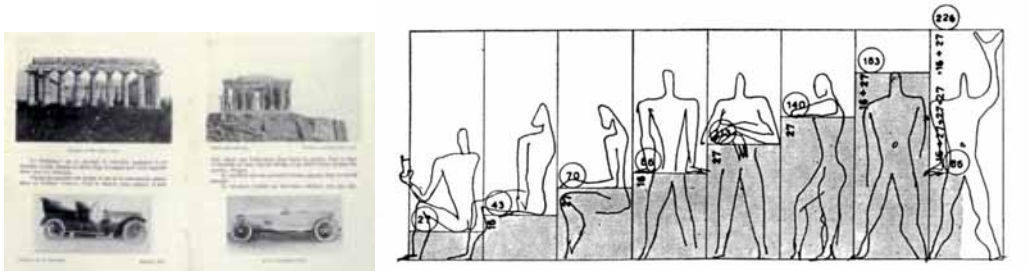


Figure 5
Left: Greek temples and cars from Vers Une architecture, 1923 (Curtis 1996: 169).
Right: Le Corbusier's Modulor Man (1946) (Frampton, 2001: 162).

The third constant was the use of proportion. Le Corbusier developed his own system called the Modulor mainly based on the golden section, the Fibonacci series and human dimensions. Just as he had attempted to distill the underlying principles of traditional and even classical architecture, so he tried with his modular system to extol the virtues of natural systems so that in his search for perfection they could be applied to buildings and other objects.

The conventions[5]

Le Corbusier's generation of the five-point plan for a new architecture was developed from his initial work on the Dom-Ino system (figure 6). This structural system was allied to standardization in the building industry but also, as the name infers, a repetition in housing typology (Frampton, 1992: 152). The system allowed for the possibilities of a free plan, strip windows, roof garden, pilotis and a free facade. But this patent pursuit of standardization provided a platform for Le

Corbusier's more latent search for a set of generic architectural conventions formulated to deal with the problems of poor late 18th century housing. In his view these required that architecture be efficient, economical (sparing in the use of resources) and provide healthy environments.

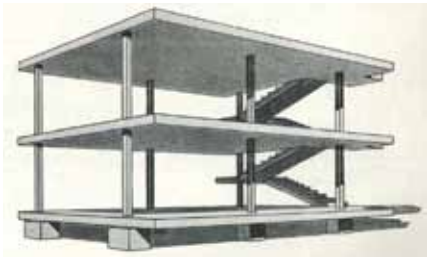


Figure 6.
The Piloti system (Le Corbusier & Jeanneret, 1943: 23).

Le Corbusier argued that architecture should be efficient in terms of organization, planning and use of materials. The development of the free plan created possibilities for multiple uses of space with the economy of a number of smaller spaces collapsed into one. Spaces designed around specific activities could be made as small as necessary. Similarly, architecture had an economic imperative, delivering good value in terms of resources used. Lastly, architecture needed to provide healthy environments through the provision of good solar access and adequate natural lighting for various tasks, while being well ventilated.

Fagan's generative architectural responses

Semperian approaches (the defensive[6] elements)

The hearth (and the symbolic mound)

In Semperian terms, the fireplace is the most important architectural element of the home as it has a long history of providing warmth for inhabitants and heat for food preparation. Traditionally it also formed the kitchen cum gathering space of the house. The climate of the Mediterranean region is such that fireplaces are not that essential for warmth in winter. Fireplaces in original Cape vernacular houses were used mainly for cooking and were tacked on the ends or sides of buildings. As Fagan (1985: 10) remarks "the kitchen with its hearth was the accepted nursery and work place of the house".

Fireplaces were engaged with walls and formed a unity with the building and, as Semper explains (1989: 102), they formed part of the mound (or ground) on which the house was built. Le Corbusier's 'vernacular' leanings also fostered similar approaches:

> In the 1930s Le Corbusier's fireplaces acquire a more plastic quality, serving as a means to anchor the house more emphatically to the ground. Such fireplaces can be found in the house of Mme. de Mandrot, in the Errazuris project, and in the house at Mathes, not to mention his numerous unexecuted projects (Serenyi 1965: 18).

Fagan employs the fireplace both functionally and symbolically. Functionally, it continues to provide warmth but is seldom used to cook in. Symbolically it acts as focus to the home, either through its extended dimensions, as at Die Es (1965) (figure 8), or at the climax of the roof in living spaces, such as in House Neethling (1983) and House Swanepoel in Hermanus (1990).

In winter, you can join those sitting literally in the fireplace, the true centre of the house, as also indicated by its name - Die Es or The Hearth (Fagan 1985: 14). The genesis of the fireplace at Die Es has its roots not only in the vernacular but also in the largeness of form envisaged by Fagan. He has remarked (Fagan: 2008a) that he made a very small sketch of the house on the back of a cigarette box when returning from an overseas trip. When he tried to draw the house from the sketch the size of a conventional fireplace would not work. He then scaled the small sketch exactly which resulted in the size and extent of the chimney which formed a winter room. Sketches found in Fagan's archive suggest that the fireplace form was influenced by the old lime at Mowbray, Cape Town (figure 7).

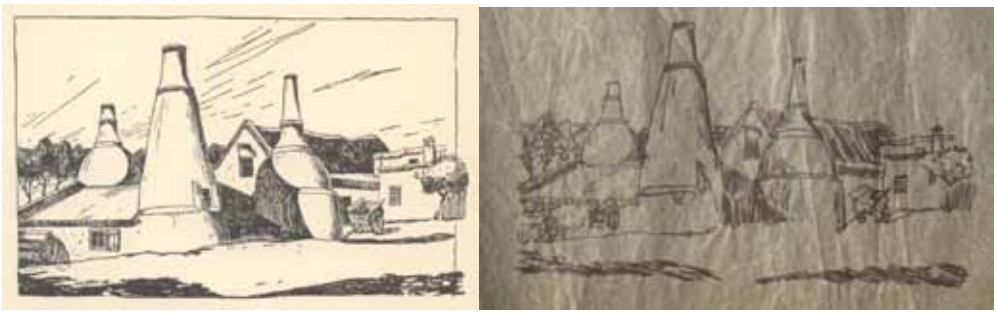


Figure 7
Left: Lime kilns at Mowbray, Cape Town (Pearse, 1933: 23). Right: Fagan's sketch of the lime kilns presumably copied from Pearse (Fagan archive, Die Es - Job No. 656, undated).

Figure 8
Left: Fireplace at die Es as viewed from road side garden (Author, 2008). Middle: Cantilevered external fireplace to dining court of Die Es (Author, 2008). Right: Fireplace to Fagan's farmhouse at Kameeldrif around 1963 (Author, 2008).

Fagan's fireplace extension to the house and smallholding in Kameeldrif, Pretoria that he bought from his lecturer at Pretoria University, Basil South (1925-1952), (figure 8) is reminiscent of the first fireplace he designed and built for his parents in Keurbos (1951). The forms are similar but the treatment of the stone is very much in keeping with the Highveld aesthetic, which demonstrates Fagan's respect for context.

In most cases when a plastic design expression is sought (and the fireplace is externally located), the fireplace forms a unit that is part of the building. But an interesting mediation between vernacular uniformity and a Modern Movement tendency to separate elements is achieved in Die Es (1965), where the fireplace (when viewed externally and frontally) reads

as part of the house, but on closer inspection is actually separated from the living space by a narrow window on the left and a glazed rooflight above (figure 9). Similarly an external fireplace cantilevers precariously from the sea facing courtyard wall (figure 8).

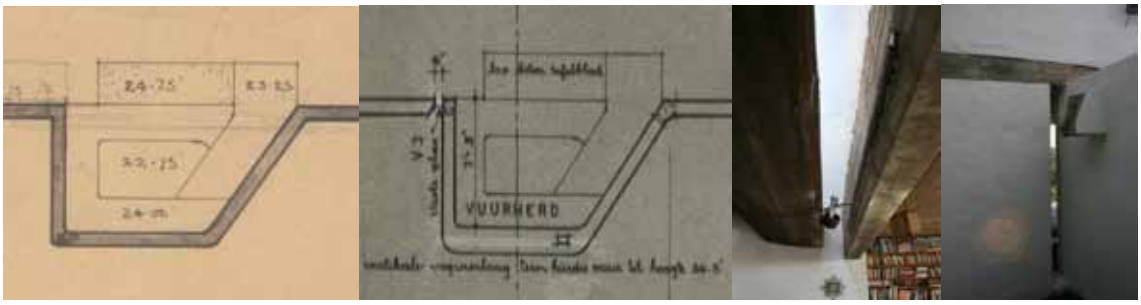


Figure 9
From the left: Fagan's sketch plan for Die Es (1965) (Fagan archive - Job no. 656 undated); Fagan's working drawing plan of Die Es showing addition of window to partially divorce the fireplace and from the main block (Fagan archive job no. 656, undated); View from hearth looking up at wired glass skylight separating fireplace and main building (Author, 2008) and view of slit window alongside fireplace (Author, 2009).

In contrast, in houses with less plastic expression and an internal hearth, the fireplace is separated into its constituent parts, with the Semperian mound still evident in the heavy base. It can be argued that Fagan, in a Modern Movement way (perhaps to achieve material and functional efficiency), expresses the varying functions of the fireplace by separating the hearth from the flue. In House Raynham (1967), the pinnacle of the roof rests on a concrete column against which a separate steel flue is supported (figure 10). In House Beyers (1998), a stand-alone steel fireplace extends into a stainless steel flue which seemingly supports the roof pinnacle above as it rises through a balanced steel collar (figure 10). These limited internalized configurations could possibly have been influenced by the houses of Fagan's lecturer Cole Bowen (1915-1952), who often used the fireplace as a room-dividing element. Similarities can also be seen in those designed by Marcel Breuer (1902-1981) whose Modern Movement leanings downplayed the dominance (yet independence) of the hearth and flue.

Figure 10
Left: Fireplace flue as roof support to House Raynham (1967) (Photo courtesy of the Raynhams, 2009). Right: Fireplace at House Beyers (1998) (Author, 2009).

There is, however, no clear formal development in the fireplaces that Fagan has designed that suggests a move from stereotomic to tectonic resolution. It is the requirements of overall

form and spatial definition that mainly dictate the outcome, as Fagan mediates the concerns of function, symbol, focus and response to tradition.

The wall

Fagan's predilection for the stereotomic quality of the Cape vernacular wall results in his use of masonry architecture that acts both as structure and enclosure. Fagan asserts (2012) this is necessary in a Mediterranean climate to provide sufficient thermal mass. The most developed approach occurs in houses such as Ida's Valley (1975), Lückhoff (1981) and Paradys (2003) (figure 11), where a complete stereotomic and plastic expression is achieved. Here the barrel vaulted roof structures require support at both edges. Fagan cuts limited openings in these supporting walls, leaving a substantial beam and edge to define each space. In House Lückhoff the openings are arched to extend structural and formal integrity but in Paradys they are post and lintel configurations most likely to foster a continuity of space.

Figure 11
Top and bottom left: Exterior and interior views of barrel vaulted roofs at Houses at Idas Valley (1975) (Author, 2008). Middle: Exterior and interior views of barrel vaulted roofs at House Lückhoff (1982) (Author, 2008). Right: Exterior and interior views of barrel vaulted roofs at House at House Paradys (2003) (Author, 2009).

Fagan follows a vernacular approach when forming smaller openings in external walls. Here he creates punctured elements with splayed reveals reminiscent of many of the old Cape Dutch homesteads, but he organizes the shape and location of these elements to suit the interior requirements. In House Keurbos (1951) a splayed window to the servant's room (figure 12) provides privacy for the rest of the inhabitants while allowing a dominance of wall over opening on the western façade. An extended version can be seen in the recent proposal House van der Linde (2011) (figure 12). This approach contrasts with the vernacular where similar window sizes and shapes were used to suit all purposes. Where large openings are required for views or exterior contact, a Modern Movement approach is taken as walls are interrupted by large floor-to-ceiling openings. But the structural and formal continuity of the wall is retained where it acts as a ground floor support, such as at Die Es (1965), where large openings are formed with rounded edges (figure 12).

The planar nature of Modern Movement architecture is also echoed in the separated planes of Fagan's walls. Fagan uses this device to cleverly disguise service entrances that may fall within public view. The strategy also allows walls or other elements to read independently from one another to limit continuity or create hierarchies. House Raynham's (1967) front boundary walls are set back from one another to provide for a service gate to the yard (figure 12), while they rise but do not meet the external wall of the house. The same approach to boundary wall and house is used in houses Lückhoff (1981), J.J. Fagan (2008) and both Swanepoel houses (1980 and 1990) (figure 38).

Figure 12
Top left: Splayed window to House Keurbos (1951) (Author, 2009). Top middle: Floor to ceiling windows with rounded corners to Die Es (1965) (Author, 2009). Top right: Layered boundary wall to House Raynham (1967) (Author, 2008). Bottom: Model of House van der Linde (2011) showing extended splay window (Author, 2012).

Fagan employs a woven brick wall externally at houses Keurbos (1951), Langgeluk (1963) and Die Es (1965) (figure 13). The back of the carport wall at Die Es is made with a front face of vertical bricks and a rear face of horizontally laid bricks. These are reminiscent of Norman Eaton's (1902-1966) and Cole Bowen's experiments with brickwork (figure 13). As Semper (Semper & Mallgrave 1986: 130) remarks:

> In many cases brick construction permits an ornamentation that also corresponds to wickerworks and the joint bonding of stone, for which there occur very beautiful and noteworthy examples in the early Italian style of architecture.

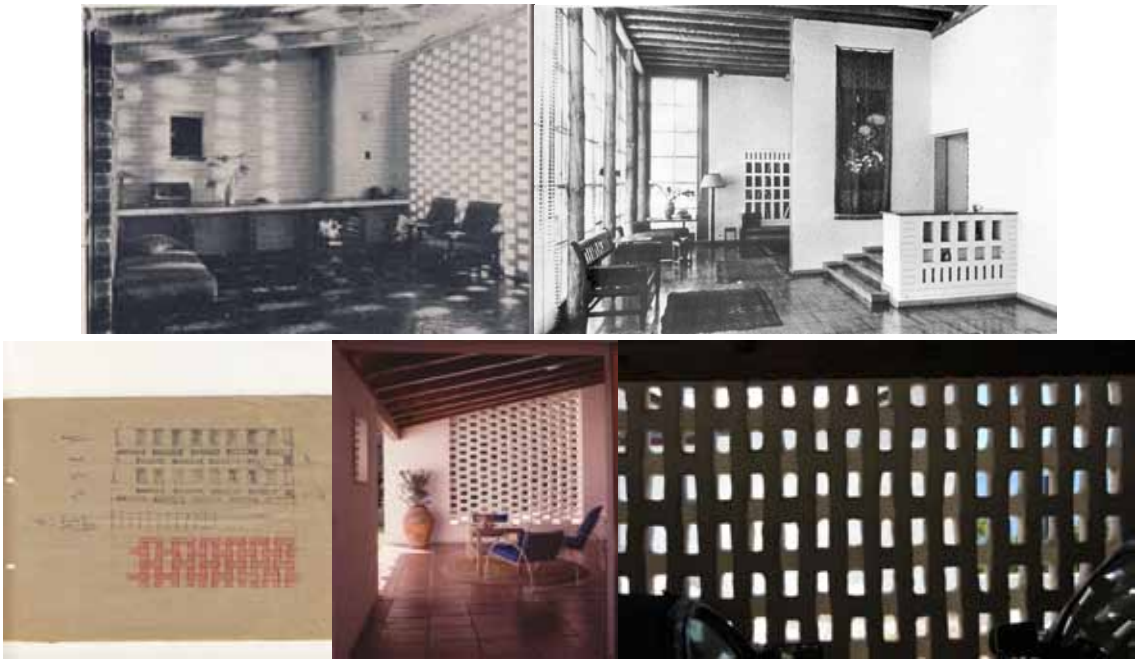


Figure 13
Top left: Honeycomb wall between living and dining rooms in House Collins (1951) by Cole Bowen (Cole Bowen, 1953: 49). Top right: Brickwork wall niches in living room and study of Eaton's Anderson house (1949-1950) (Harrop-Allin, 1975: 80). Bottom left: Fagan's sketches of screen wall to Die Es (1965) (Fagan archive job. no. 656, undated). Bottom middle: Keurbos original patio wall (Fagan, 2012). Bottom right: Rear wall of carport to Die Es (Author, 2012).

Externally, Fagan uses the principles of a woven wall through the redefinition of the vernacular shutter. The timber screens which provide sun protection, privacy and security are almost always made with slots between the timber to allow light and ventilation. The fact that they slide provides a range of spatial opportunities not possible with a static masonry wall and echoes the planar nature of Modern Movement architecture. They also echo those designed by Eileen Gray (1878-1976) for her Lou Pérou house in Chapelle-Ste-Anne, built between 1954 and 1961 (figure 14). This approach demonstrates how architects in completely different contexts interpreted vernacular elements in Modern Movement ways.

Figure 14
Top left: Sliding shutter to window of Eileen Gray's House Lou Perou (1954-1961) (Constant, 2007: 194).

Fagan also creates a woven wall internally through the use of natural timber balustrades, bookcases or storage units and sometimes curtains to divide spaces. In houses Levin (1969) and Fagan in McGregor (2005) (figure 15) the balusters are extended upwards to meet the roof and provide partial privacy between the double volume living space below and the bedrooms above. At Keurbos (1951) (figure 15) the dining area is screened off from the entry way by horizontally slatted shelves and cupboards and the living area from a bedroom passage by way of bookcases. At House Swanepoel in Cape St. Francis (1980) and Paradys (2003) (figure 15) cupboard spaces are hidden by curtains.

Figure 15
Top left: Balustrade as screen wall in House Fagan in McGregor (2005) (Author, 2009). Middle: Cupboard as screen between hall and dining area of House Keurbos (1951) (Author, 2008). Top right: Curtained cupboard to bedroom of House Paradys (2003) (Author, 2009).

The roof

Semper (Semper & Mallgrave, 1986: 111) suggests that the roof developed as a prime element of shelter from its humble beginnings as a tent or cover over a hollow in the ground, gradually being raised to become an element on columns or walls. This tectonic tradition is expressed in the Cape vernacular mainly as a reed-covered and timber-framed pitched roof directly attached to the walls. Fagan has developed two distinct roof typologies, both influenced by local vernacular sources.

The stereotomic tradition of brick-vaulted roofs has been used in the farmworker's houses in Idas Valley (1975), Houses Lückhoff (1981), Paradys (2003) (figure 11), the unbuilt Van Zyl in Swellendam (2007) and a proposal for House Visser (2011). Here roof, wall and floor attain a complete plastic unity. But these interpretations are probably also, in part, related to the influence of Le Corbusier's interpretations of the Mediterranean vernacular in his 1935 weekend houses in Paris and Petite Maison de Weekend (Villa Fèlix, 1935) at La Celle-Saint-Cloud (figure 16). Fagan (2008) sees the roof as a potentially important design element, be it in folded planes as in the Raynham house, or moulded plaster as in Paradys, in both cases relating to and explaining the plan. It is the plasticity and whitewall surfaces that relate to our traditional architecture and sit so well in our landscape, rather than the separated rigid forms dictated by the typical wings of a Cape Dutch homestead.

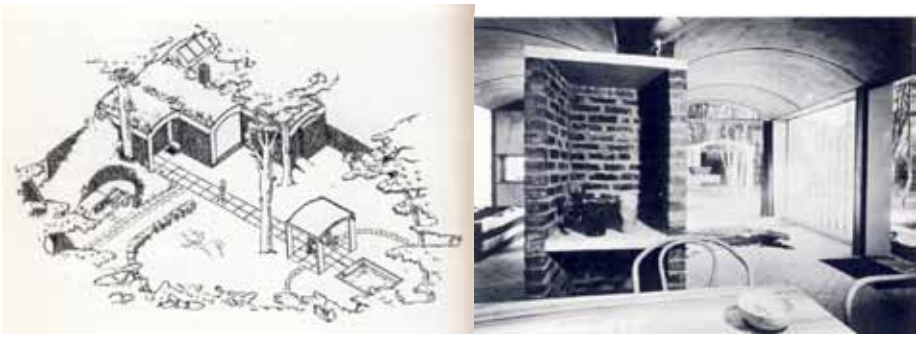


Figure 16
Left: Le Corbusier and Pierre Jeanneret: Maison de Weekend, La Celle-St-Cloud, 1935: isometric (Frampton, 2001: 136). Right: Le Corbusier and Pierre Jeanneret: Maison de Weekend: interior (Frampton, 2001: 136).

Fagan's interpretation of the Cape vernacular tectonic tradition of trussed or raftered roofs is guided by the singular nature of form that he wishes to represent. After Modern Movement experiments with flat roofs in South Africa, many architects like Douglas Cowin (1911-?) began to use roofs more inspired by Frank Lloyd Wright (1867-1959). Large overhangs protected houses from rain and sun and although this approach is appropriate for the Cape, Fagan resists the obvious solution and mainly uses pitched roofs with no eaves to achieve a holistic plastic solution. Only two houses have used extended eaves, namely House Auldearn (1992) and a new proposal, House van der Linde (2011) (figure 17). Even the flat roof is avoided[7], Fagan preferring the possibilities of volume, space and light inherent in pitched roof spaces.

Figure 17
Previous page left: Pitched roof to House Raynham (1967) ((Photo courtesy of the Raynhams, 2008). Previous page right: House Levin (1969) (Author, 2008). Left: Frank Lloyd Wrightian roofs to house Auldearn (Author, 2009). Right: Model of House van der Linde (2011) (Author, 2012).

Fagan often connects roof and floor (tectonic and stereotomic) elements through the use of a timber column which also helps to demarcate spatial zones. It was first used at Keurbos (1951) (figure 18 and 19) to define the starting point of the ramp, and was later used for the carport roof at Die Es (1965) (figure 37). In House Swanepoel in Cape St. Francis (1980) these ideas were extended through the use of a similar internal column but also through the provision of external roof supports on the sea-facing edge (figure 18).

Figure 18
Top **left: House Keurbos (1951): column support for main roof over dining and living areas (Author, 2008). Top right: Column support to carport at Die Es (1965) (Author, 2008). Bottom: Roof supports to House Swanepoel in Cape St. Francis (1980) (author, 2005).**

The cave (the cellar)

Earth is the building bearer, nourishing with its fruits, tending water and rock, plant and animal (Heidegger, 1975: 179).

The cave can be described as an embryonic space where man connects with nature in the closest possible way. Fagan's haptic sensibilities (possibly developed through his childhood exploits of trench digging in his garden and his appreciation of the stereotomic qualities of

the Cape vernacular) coupled with his pragmatic bias have fused to create innovative ground/building connections in his houses (figure 19) – Keurbos (1951), Bertie-Roberts (1966), Raynham (1967), Paradys (2003), Die Es (1965), Auldearn (1992) and Fagan in McGregor (2005).

Figure 19
Top left: View from living room in House Keurbos (1951). The stone clad wall can be seen behind the bookcases (author, 2008). Top right: House Bertie-Roberts (1966). View from the garden showing stone retaining wall. (Fagan archive - job No. 644, undated). Bottom left: House Auldearn (1992). View from car court to entrance portico (author, 2009). Bottom right: House Fagan in McGregor (2005). Concrete retaining walls anchor the house to the ground (author, 2009).

These buildings are either entered from or sit within the ground in order to, at a functional level, facilitate service spaces to be located out of sight and, as Fagan notes (2008b), to partially hide 'unsightly' garage doors. Another major advantage is the reduction of building bulk and partial raising of the building to gain better access to views or sunlight. This strategy was employed in House Swanepoel in Hermanus (1990), where a large accommodation schedule had to be fitted onto a very small site and a distant sea view could be exploited. The strategy is also indicative of a symbolic approach in which the visitor is physically or visually re-associated with the earth. In some instances the slope of the site has assisted in facilitating these strategies but in houses Raynham and Swanepoel in Hermanus the sites were relatively flat and had to be excavated to achieve the desired result. The original owners of House Raynham (1967) indicate (2009) that this strategy was used to raise the ground plane of the house to get better solar access. Fagan heightens the connection to nature in these semi-basement spaces by using rougher natural materials, as on the walls at Keurbos and on the floors at Die Es.

> You will also notice that the house, like that in the parable, is built firmly on the rock, and that the sandstone cobbling now takes a more sophisticated appearance. Gwen [Fagan's wife] laid every single stone, sometimes washing them down with her tears (Fagan, 1985: 13). The floor material changes from rough sandstone outside, to the smoother and smaller scaled cobbles of the same material (off the site) (Fagan, 2008).

At Paradys (2003) (figure 20) the east-facing retaining wall of the sunken courtyard is painted red, expressing a mythical connection with the earth. But Fagan also exploits the earth-sky connection in a Heideggerian way:

> The sky is the sun's path, the course of the moon, the glitter of the stars, the year's seasons, the light and dusk of day, the gloom and glow of night, the clemency and inclemency of the weather, the drifting clouds and blue depth of the ether (Heidegger, 1975: 179).

At Die Es the connection to the sky is expressed through a small skylight in the entrance hall (reminiscent of those in the bathrooms at Villa Savoye) (figure 20), while in House Raynham (1967) there is an oblique connection to the mountain and sky through a tall window (Figure 20). In House Swanepoel in Hermanus (1990) the connection is made through a large courtyard rooflight (Figure 20).

Figure 20
Top left: View from roof of House Paradys (2003) into courtyard at road edge (author, 2009). Top right: House Die Es (1965). Rooflight over entrance hall (author, 2008). Bottom left: House Swanepoel in Hermanus (1990. Glazed courtyard roof providing connection to the sky (author, 2009). Bottom right: House Raynham (1967). Window connection to Table Mountain (author, 2008).

The covered courtyard (the partial sky)

Fagan's preference for a singular form in the landscape has fostered a mainly subtractive approach to the making of form. He uses the covered courtyard in a number of ways to foster a connection between earth and sky and to facilitate exterior contact within a controlled external form. Similar approaches can be seen in Le Corbusier's Villa Savoye where the box form is subtracted to form a series of partially covered and open courts.

In House Keurbos (1951) (figure 21) the roofs of both the entrance hall and dining room are glazed, allowing both light and sun to enter the spaces. Fagan (1985:6) notes that it also allows a view of the mountains beyond. The extensive planting and glazing to the southern roof pitch assist in mediating between inside and outside. A bathroom court is also formed in the northern

wall of the house and here no overhead protection is provided save for the continuation of the roof eaves (figure 21). The external wall frames a view towards the mountain while providing adequate privacy to the outside shower. On the eastern side of the house a smaller covered patio (which has now been glazed in on its northern edge) provides a protected open-air sitting area. Here the roof is opaque and connection with the exterior is frontally organized (figure 21).

Figure 21
Top left: Glazed rooflight to dining area at House Raynham (1967) (author, 2008). Top right. Bathroom to House Keurbos (1951) as it was originally designed and built (author, 2008). Bottom left: Original covered terrace to House Keurbos (1951) now enclosed (author, 2008). Bottom right: Bathroom at House Keurbos altered by owner in 2010 and designed by Bert Pepler Architects (photo courtesy of Leon Krige, 2010).

In House Swanepoel in Hermanus (1990) the glazed courtyard roof connects the interior volume to the sky while providing much needed light and ventilation within the constricted plan (Figure 22). A bathroom courtyard, similar to that of Keurbos (1951), provides privacy, light, ventilation and a view of the stars at night (figure 22). Security is provided by closely spaced reinforcing rods at the same pitch as the roof. Small rooflights to internal bathrooms extend the cellar and sky theme (figure 22). In House Auldearn (1992) in Elgin, a small internal planted courtyard creates a focus at the end of the passageway to the bedrooms (figure 22). The glazed roof allows light and sun to enter and provides a connection to the sky above.

The closest connection to Lewcock's description (2006: 210) of the opening up of the roof in vernacular buildings to accommodate the fireplace is the relationship that Fagan establishes between the flues and roofs in Houses Beyers and Swanepoel in Hermanus (1998). In both these examples the roof sections around the flues are glazed to establish a connection to the sky while allowing the flues to read as free-standing elements, Fagan creating an innovative mediation between the necessity for a singular form and the requirements of physical and climatic contact with the exterior.

Figure 22
Left: Main bathroom courtyard at House Swanepoel in Hermanus (1990) (author, 2009).
Middle: Bathroom rooflight at House Swanepoel in Hermanus (1990) (author, 2009).
Right: Rooflight over small internal garden to House Auldearn (1992) (author, 2008).

The open courtyard (the sky)

Fagan remains true to the climatic considerations for courtyard design but frames spaces in a manner that suggests the influence of Modern Movement thinking. The only courtyard that is completely surrounded by buildings is an unbuilt one designed for the hot, dry climate of the Tanqua Karoo area of the Cape (figure 23). Here an almost Spanish style ensemble of buildings surrounds an internal pooled courtyard. In the Ceres area (which lies between the Tanqua Karoo and Cape Town), the courtyard of House Wolfaardt (1965) is surrounded by buildings on three sides[8].

Figure 23
Top left: Fagan's unbuilt Oudebaaskraal with central courtyard (1984) (Fagan, 2005: 94). Top right: Courtyard from dining room at die Es with 'woven wall" and slit to sea view beyond (author, 2008). Bottom: Plan and approach view of House Wolfaardt at Skaaprivierplaas (1965). The plan shows a partially defined courtyard (Fagan archive - Job No. 653, June 1965).

In the Mediterranean climate of Cape Town, Fagan favours a singular formal statement with large courtyards as extensions to or smaller courts as subtractions from the main form. The approach is a mediation of a generative (and introverted) open courtyard typology and a Modern Movement interpretation of continuous inside and outside space. In Die Es (1965), Fagan extends the dining space through a glazed wall to form an outside patio which also covers the partly subterranean garage (figures 23 and 24). It is reminiscent of the relationship between living room and raised courtyard in the Villa Savoye. The courtyard space is entirely walled in, save for a slot in the western wall which allows a glimpse over the sea while strengthening the enclosing power of the eastern and northern walls. The courtyard is not only connected to the sky but also to the higher mountain views to the east.

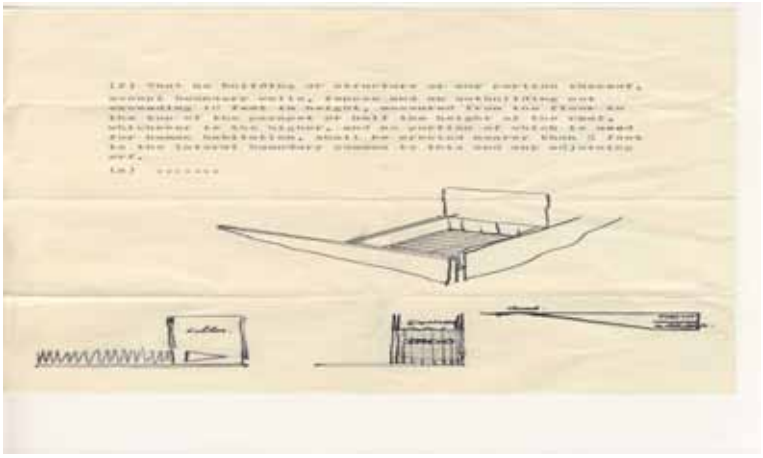


Figure 24
Left: Fagan's sketch of the dining courtyard prepared for the local authority (Fagan archive- Job No. 656, undated).

A similar mediation between inside and outside is achieved in the stepped glazing at House Blommaert (1982) in Stellenbosch (figure 25), where a sun-filled courtyard extends onto a stepped passageway linking two independent blocks.

Figure 25
Left: Glazed walkway to bedrooms at House Blommaert (1982) (author, 2009).
Right: View from courtyard to glazed walkway at House Blommaert (1982) (author, 2009).

The private subterranean courtyard at Paradys (2003) in Langebaan provides protection from the chilly winds (figure 26). Its edges are formed by the surrounding earth and through glazed openings the space becomes an extension of the dining/living and kitchen spaces. In House Patterson (1966) Fagan uses a garden wall and three building blocks to define a courtyard hidden from the road and to foster the reading of a single form (figure 26). Connections to the courtyard are limited, in a vernacular sense, to punctured openings, save for the original extensive open connection at the pottery studio end.

Figure 26
Left: Partly submerged courtyard at House Paradys (2003) (author, 2009).
Right: Courtyard to House Patterson (1966) (author, 2008).

Productive typologies

Constants

Primary form

So strong is Fagan's conviction concerning the use of singular forms (figure 27) that he resists the design tendencies of his university lecturers Hellmut Stauch (1910-1970) and Cole Bowen to separate buildings into independent elements. Fagan relies on a subtractive architectural approach to maintain the primacy of the singular form. This seems to have been a Cape tendency influenced by the inherited and mediated architectural tradition.

> For those households with permanent maids, the maids' rooms and bathrooms are usually planned as part of the house with interleading doors for possible later conversion into a guest room or to enable the maid to baby sit without having to sit up. It is probably only this variation which distinguishes the Cape plan from its upcountry counterpart as ... the arrangement and relationships of the rooms, like many small houses throughout the world to one another, is similar (Munnik & Visser, 1965: 38).

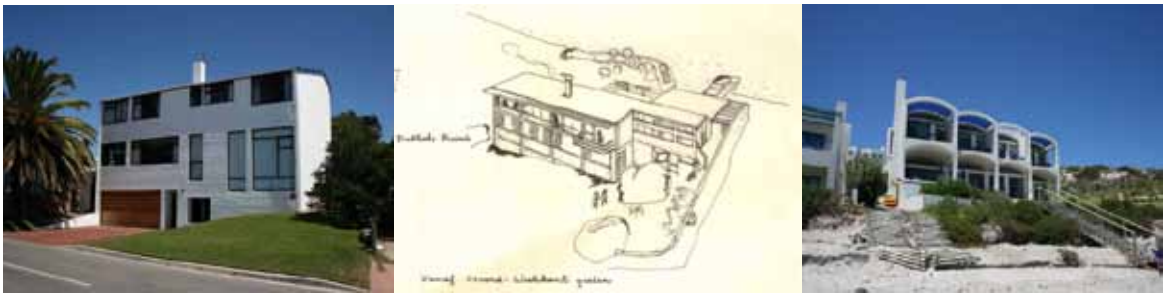


Figure 27
Some of Fagan's lesser know buildings which all illustrate the formal principle of a singular statement.
Left: House Levin in Saldanha Bay (1969) (author, 2008).
Middle: Fagan's sketch for House Gardiner in Camps Bay (1972) (Fagan archive job no. 7203, 10/4/1972).
Right: House Brink (2002), Langebaan (author, 2008).

Fagan's reliance on primary form represents a congruency[9] between that of the Cape vernacular tradition and the Modern Movement cubist influence. It is thus perhaps fortuitous that Le Corbusier's Mediterranean influences and his cubist creations were, in a formal sense, analogous with the Cape vernacular long-house. Fagan also relies on the sensory associations of primary form through his use of recognizable traditional elements such as the pitched roof and the chimney. But these elements are abstracted to elicit their purest and most functional intentions and located to serve more than their practical purpose.

Type

> So the Cape farmhouse, in its forms and the organization of its internal spaces, lends expression to the significance of the family ideal, and the importance of a focus, a strong unifying element or space, was simply but beautifully stated by our forefathers (Rashmere, 1965: 12).

Fagan's intimate knowledge of the Cape vernacular has allowed him to understand its development and refinement over time. His development of a set of ten 'lessons from the vernacular' is analogous with Le Corbusier's search for form in the Mediterranean vernacular. But just as the influence of engineering structures played a large role in the development of Le Corbusier's formal typologies, so has Fagan's understanding of the elements through yachting and flying modulated his approach to the making of form. Fagan's development of a fourth Cape vernacular[10] typology represents a mediation between the concerns of formal significance, functional requirements and context. His continual refinement of this new typology has resulted in an attainment of type that surpasses the universalist tendencies of his hero[11].

Proportion

Fagan notes that (Fagan, 1983: 8) in his early work he used proportional systems, based on Hambidge's book, to organize his design solutions. These bear many similarities to the inheritances of Le Corbusier's Modulor, but as Alford (1955: 113) points out,

> Le Corbusier has developed and applied a theory of architectural proportion which is precisely that which Jay Hambidge believed he had discovered in the design of the Parthenon and in Greek vases, and which he published about thirty years ago under the title of Dynamic Symmetry.

Fagan has derived his understanding of proportional systems from three sources. A direct influence would have been Hambidge's Dynamic Symmetry (figure 28), as the system was taught at the University of Pretoria during Fagan's studies. Both Johan Jooste (2008) and Carl Gerneke

(2008) note that Fagan's university friend Karl Jooste (1925-1971) used similar approaches in his work. Fagan would also have been exposed to Le Corbusier's Modulor through teachings and his book purchases. But more direct and tangible were Renaissance influences on Cape Dutch architecture.

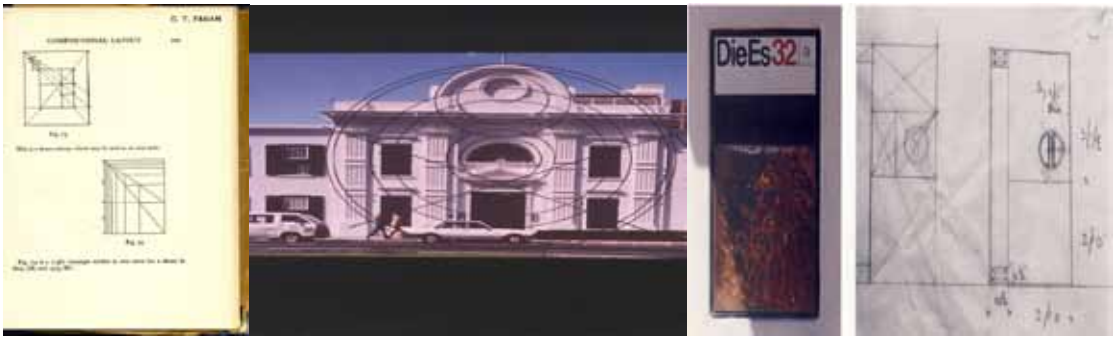


Figure 28
Left: Proportional layout system in Hambidge's book Dynamic Symmetry with Fagan's office stamp in top right corner (Hambidge, 1932: 101). Middle: Lewcock's proportional systems placed over various Cape Town Cape Dutch buildings (Fagan after Lewcock, 2012).
Right: Proportional layout for door to Die Es (1965) (Fagan, 2005: 36).

Fagan does, however, recognize that

> although lending a coherence and dignity to our traditional buildings, these ratios are very restrictive and generally lack the flexibility required by today's designs, and I have interested myself over the years in applying a system based on the Fibonnacci (sic) series as evolved by Hambidge. Instead of calculating it arithmetically, however, I find that working visually on the drawing board with various diagonals, gives a better control over the result. This is a highly personal matter that I have found impossible to apply generally in the office, and can only use it in those (unfortunately now rather rare) cases where I myself draw the plans, sections, and elevations, plus all details which obviously require to be related on the same system. This is hardly the time to argue the merits of formal proportioning but that if it does nothing more than train the eye to become completely aware of its importance, it might already be justified (Fagan, 1985: 8).

For Die Es (1965) proportional systems were used to organize all aspects of the house from the general plan to the details.

Conventions

Economy

Fagan has developed economical design approaches to both space and the use of materials. Along with Modern Movement attitudes towards functional appropriateness, these are based on an appreciation of the simple technologies of the Cape vernacular, where limited materials were at hand and inventive approaches had to be sought. These approaches were coupled with economic circumstances in South Africa after the Second World War when resources were in short supply. Peters (1998: 187) remembers that Stauch was adept at building a lot with a little and this attitude must have influenced Fagan through Stauch's teachings at the University of Pretoria. Fagan's knowledge of boat building and the compromises that need to be reached between weight and durability versus speed has played a significant role in his material choices.

He often employs the flitch beam where larger spans would make the size of timber uneconomical and bulky, the latest example occurring at House Mitchell (2005) (figure 29). Here he combines timber with plate steel to form rafters. He also employs cross beams to limit the size and span of rafters. The positions of these cross beams also help to define and demarcate spaces, such as at the junction of living and dining rooms in Keurbos (1951) (figure 29), the loft spaces in House Swanepoel in Cape St. Francis (1980) (figure 29) and at the carport in Die Es (1965). Fagan also limits building depth as in vernacular buildings, where limited timber lengths determined spans.

Figure 29
Left: House Mitchell (2005): Flitch beams in living area (Author, 2009). Middle: House Keurbos (1951) where cross beams are used to reduce span and define spaces (Photo courtesy of Leon Krige Architect, 2010). Right: Column supports for thatch roof at House Swanepoel in Cape St. Francis (1980) (Fagan archive - Job No. 8011, slide collection IC, undated).

The limited internal space in a yacht has also influenced Fagan's designs. A recurring theme is the nautical bathroom[12], a tight (and sometimes unforgiving) internal space often with roof light over, which is entered by stepping over a raised cill. The entire space is designed as a shower complete with duck boarding. The tightest configuration can be seen in Paradys (2003) (figure 30). Fagan recalls (Fagan, 2009) that he stood on a piece of paper and described the tightest arc that he thought would be suitable. The earliest nautical example is in Die Es where the Plexiglas skylight is reminiscent of that of a yacht (figure 30). A raised cill and curved corners extend the approach.

Figure 30
Left: Main bathroom to House Die Es with Plexiglas skylight over (1965)(Author, 2009).
Middle: Bathroom entrance to House Lückhoff (1981) (Author, 2009).
Right: Bathroom off bedrooms to House Paradys (2003) (Author, 2009).

Fagan also reuses materials, such as for the front door of Die Es (1965) which was salvaged from old copper boilers (Fagan, 2012) (figure 31) and Japanese fishing net floats at Die Es (figure 31), which was built by himself and his family achieving huge monetary savings. The limited brick palette at Paradys (2003) and the 1981 Lückhoff house fosters economical construction. The front door to House Paradys (2003) was "bought at a rummage sale in Tulbagh after the 1969 quake, but its precise provenance is unknown, except that it was apparently picked up in the veld on the farm Middelpos" (Fagan 2012) (figure 31).

Figure 31
Left: Japanese fishing net floats as light fixture in second bedroom of Die Es (1965).
Middle: Front door to Die Es (1965) made from copper boilers (author, 2009).
Right: Front door to House Paradys (2003) (author, 2009).

Efficiency

The convention of efficiency is closely related to that of economy. In Modern Movement terms there had to be a direct relationship between the functional requirements of space and what was used in architectural terms to give effect to that space. Le Corbusier believed that effective and functional design would naturally give rise to beauty. Fagan (c.1991: 15) alternates in his approach to this attitude, firstly agreeing:

> The primary responsibility of the architect is not to satisfy his sculptural instincts. The primary responsibility of the architect is to design an effective living environment – that is, a building that works, that uses materials well, that uses energy effectively,

but then disagreeing:

> Again, it is only ignorance that can explain the belief, so useful to shield behind, that a structure will automatically be beautiful if it is fit for its purpose. Bridge design especially illustrates that fine aesthetic sensibility is essential for full success, as numerous detail design options that make equal structural and economic sense, will present themselves and a harmonious end result comes only through the developed aesthetic sensibility of the design engineer.

Fagan's approach to efficiency is technological, spatial and functional. Materials are always used in their purest form. In situ reinforced concrete is left as is, sans plaster or paint, even when it could possibly compromise the integrity of the overall form such as at Die Es (1965) (figure 32), where the first slab is exposed on all edges. Brickwork is bagged and painted (figure 32), an aesthetic tendency Fagan must have inherited from mentors such as Stauch and Eaton who employed similar approaches, but also from the rough textured nature of the Cape vernacular.

Roof timbers are varnished (figure 32) but doors are often painted to give symbolic expression to their interior and exterior nature (figure 32).

Figure 32
Top Left: Exposed first floor concrete floor slab to House Die Es (1965) (author, 2008).
Top right: Bagged and painted brickwork to House Blommaert (1982) (author, 2009).
Bottom left: Differing internal and external colours to doors at House Swanepoel in Cape St. Francis (1980) (Fagan archive - Job. No. 8011, slide collection IC, undated).
Bottom right: Bagged and painted brickwork and timber beams and ceilings to House Blommaert (1982) (author, 2009).

In spatial and functional terms service zones are tightly organized and combined so that more space is available for living and sleeping. Volumes are exploited to provide mezzanines for sleeping or storage[13], while passages become study and play spaces. Fagan mostly adopts a centrally entered plan which limits the length of circulation routes (figure 33).

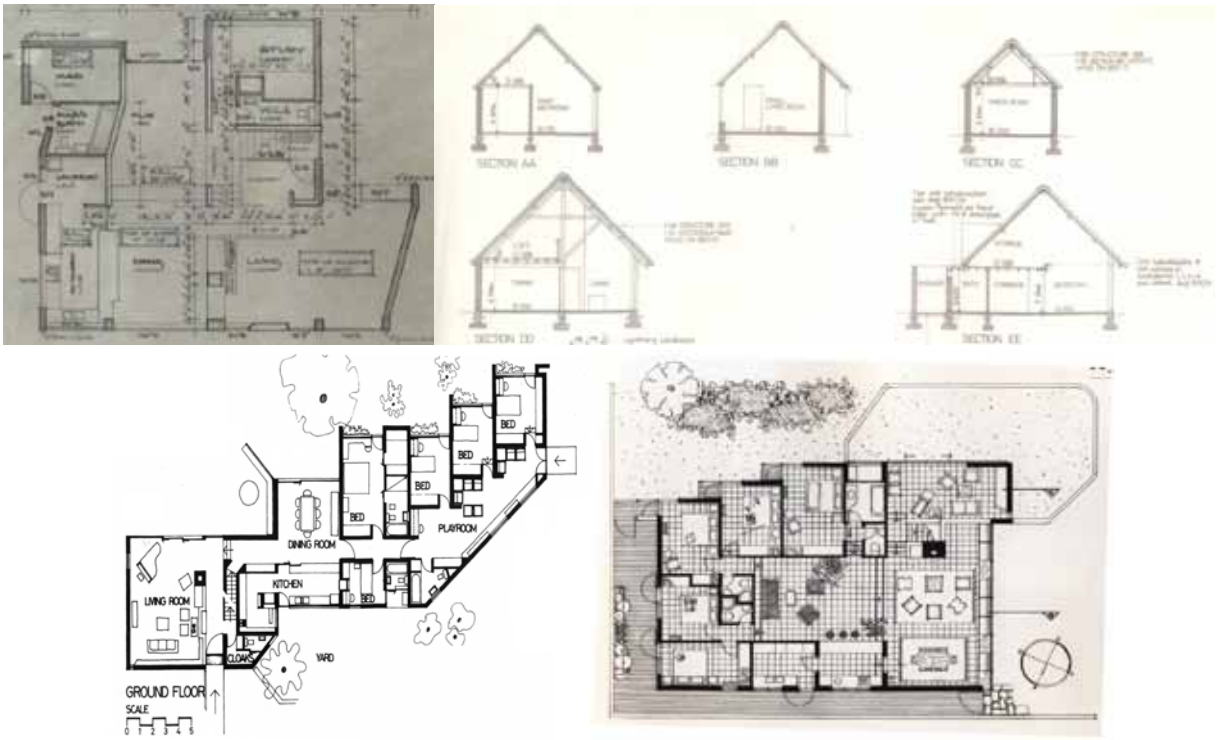


Figure 33
Top left: Fagan's sketch plan for House Levin (1969) with central circulation core (Fagan archive - Job No. 6910, 24/07/1969). Top right: Various sections for House Swanepoel in Cape St. Francis (1980) showing loft and storage spaces (Fagan archive - Job No. 8011, 18/11/1980). Bottom left: Part plan of House Raynham showing extension of passageway into playroom (Fagan, 2005: 52). Bottom right: Plan of House Swanepoel in Hermanus showing tight service and generous living spaces (1990) (Fagan 2005: 103).

Health

Initial Modern Movement concerns for the health and well-being of inhabitants led to the development of many of Le Corbusier's architectural principles. The roof garden and courtyards or balconies together with volumetric exploration and an increased building height provided light, sun and adequate ventilation to occupants. The necessity for solar orientation later resulted in the attenuated plans of architects such as Marcel Breuer (1902-1981). Developments by local architects such as Eaton and Stauch influenced other architects and lecturers such as Cole Bowen and South.

Fagan has adopted the attenuated plan but it is not only employed for adequate solar penetration. Views play an even bigger role in the development of the linear form, such as at houses Raynham (1967) and Swanepoel in Cape St. Francis (1980) where mountain and sea views dominate. Fagan uses light not only to provide comfortable conditions but also to accentuate the architectural promenade. The seemingly incongruous internal position of bathrooms in many of Fagan's designs mitigates against good light and ventilation. Fagan is perhaps uncompromising in these situations, preferring to maintain a tightness of form which gives preference to light and ventilation for bedroom and living spaces[14]. But perhaps the Corbusian influence remains prominent as can be seen in the internal bathrooms designed for Maison Loucheur (1929) (figure 34). Fagan does, however, manipulate the roof in innovative ways to allow solar gain and views where necessary. House Levin (1969) incorporates rooflights and breaks centrally to allow light to penetrate the circulation volume, while a simple angled roof light provides adequate light to

the kitchen in House Wolfaardt (1965) (figure 34). House Swanepoel in Hermanus (1990) has three different roof light configurations – over the courtyard, around the chimney (figure 34) and a series of bathroom domes.

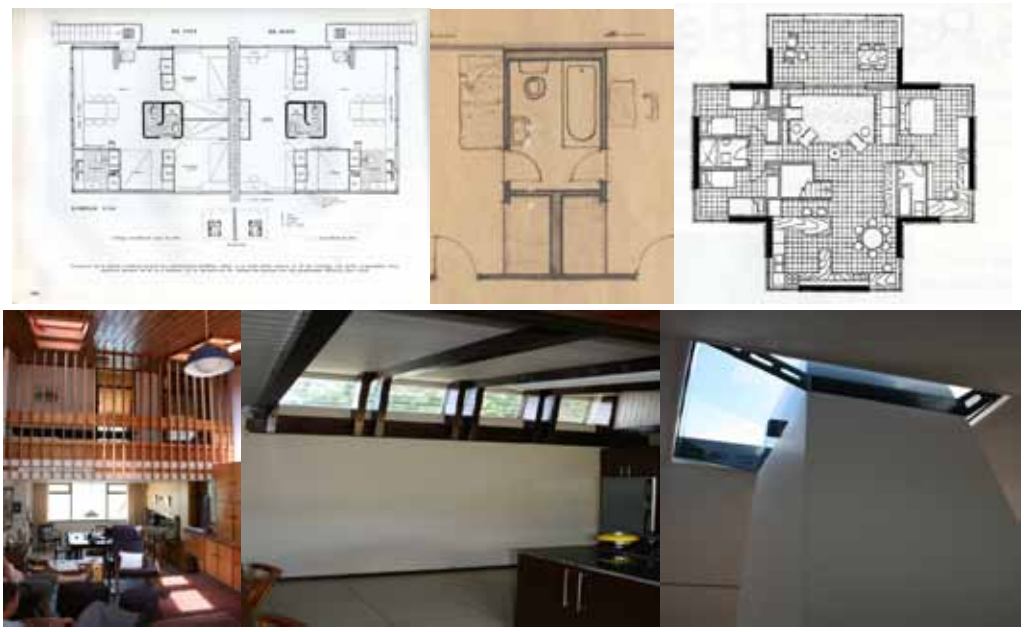


Figure 34
Top left: Plan of Maison Loucheur by Le Corbusier (1929). Note the tightly planned bathrooms (Le Corbusier & Jeanneret, 1943: 198). Top middle: Plan of main bathroom at Die Es (1965). Top right: Plan of House Beyers (1998) showing the tightly planned bathrooms (Fagan archive - Job No. 9813, undated). Bottom left: View of rooflights to upper floor bedrooms at House Levin (1969) (Author, 2009). Bottom middle: View of angled rooflight to House Wolfaardt (1965) (Author, 2009). Bottom right: View of rooflight around chimney to House Swanepoel in Hermanus (1990) (Author, 2009).

Fagan adopts an innovative approach to ventilation which is reliant on the Modern Movement principles of the separate requirements of view, solar gain and ventilation for windows. At Keurbos the glass louvres, sliding windows, and frameless glazing panels (figure 35) between exposed rafters provide ventilation. Paradys (2003) has a frameless pivoted glass window above the mezzanine level and portholes in the bathrooms (figure 35).

Figure 35
Left: Sliding glazed panels between rafters at House Keurbos (1951) (Author, 2008).
Middle: Window to mezzanine over passage at House Paradys (2003) (Author, 2009).
Right: Porthole at House Paradys (2003) sea facing bathrooms (Fagan, 2012).

New and renewed typologies

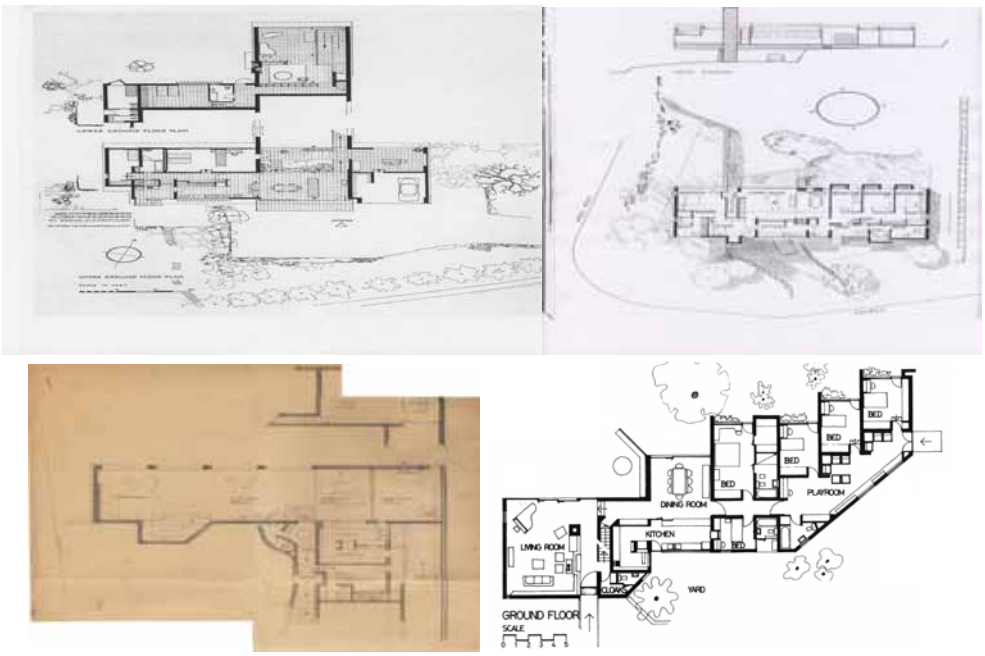
> Cape Dutch architecture. The pitching of the roofs, the gabling of the ends and centres, the use of the same types of door and window similarly divided and shuttered, the whitewashed plaster, the wooden ceilings and red-tiled floors – these and many other details they had in common, formed the simple theme upon which a thousand gently dissimilar but beautiful variations were played. It was all so simple, so practical, so unvaryingly beautiful, so 'right' (Harrop-Allin quoting Eaton, 1969: 26-28).

Fagan has built on Cape vernacular traditions as well as mediated Modern Movement influences to form his own typological patterns or formal themes in his domestic architecture. These have been extended through a personal typological approach. This has been developed over time through a constant reworking of an idea in order to perfect it, the reuse of approaches that have worked well and nostalgic leanings This has created a recognizable architecture almost at the limits of a style − not aesthetic, but formal or functional. This approach informs Fagan's 'new' architecture but it does not dominate or dictate the final architectural response.

The linear (attenuated) plan (figure 36).

This device is mainly derived from the mediated Modern Movement principles of climatic orientation and function but also has its origins in the long-house plan of the Cape tradition.

Keurbos (1951) is clearly organized around the principle of served and servant spaces so that the living and bedroom spaces face the view and north. House Bertie-Roberts (1966) follows the same pattern in a much more rigid linear form. Fagan's own house, Die Es (1965), is less rigidly organized at first floor level but the views and slope form the linear plan. Houses Raynham (1967), Swanepoel in Cape St Francis (1990) and Neethling (1983) are all organized in a linear manner but more amorphously as the houses try to straddle the concerns of view, site orientation and northern sun. The attenuated plan of House Swanepoel in Cape St. Francis (1980) is also the result of the limitations of a steeply pitched thatch roof which would become too high if the plan were too wide (Fagan, 2008c). Paradys (2003) responds to the slope of the ground and the sea views, allowing all bed and living rooms to face outwards and have exterior access.



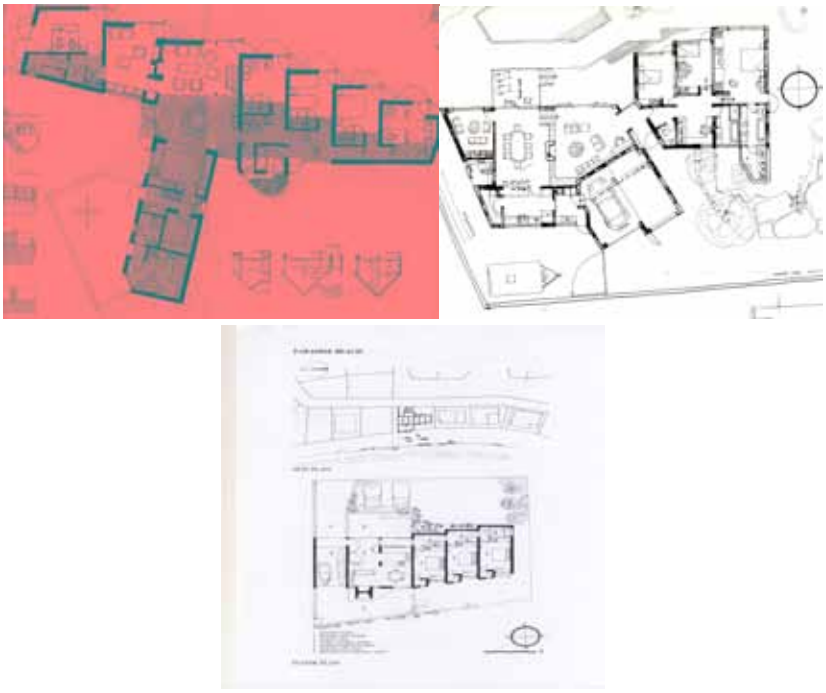


Figure 36
Top left: House Keurbos (1951) (Wale c1964:50).
Top right: House Bertie-Roberts (1965) (anon 1968: 12).
Second from top left: House Die Es (1965) (Fagan archive - Job No. 656, undated).
Second from top right: House Raynham (1967) (Fagan 2005: 52).
Second from bottom left: House Swanepoel in Cape St. Francis (1980) (Fagan 2005: 73).
Second from bottom right: House Neethling (1983) (Fagan 2005: 83).
Bottom: House Paradys (2003) (Fagan 2005: 125).

The guided entrance

The approach to many vernacular Cape buildings was axial in nature. In Fagan's houses there is a similar but more directed approach as the path 'grows' out of the ground, increasing in definition as the front door is approached. In House Bertie-Roberts (1966) (figure 37) the entrance route is guided from below by the sides of garden retaining walls that lead under a cantilevered edge of the house above. Here ground and house meet in an open riser staircase slung along the side of a concrete retaining wall. At Die Es (1965) a low white wall guides the visitor from the street, while a simple steel handrail on the carport edge (figure 37) extends continuously downwards to the front door.

Figure 37
Left: House Bertie-Roberts entrance stair from carport (Fagan archive - Job No. 644, undated).
Right: Entrance wall, carport column and steel rod handrail leading to front door (author 2009).

At House Raynham (1967) the approach starts with a path perpendicular to the street. As the house is angled in respect of the street the path meets a ramp extended from the house at a point of change in direction. The ramp is raised and edged by a low wall, cutting off the view to the garage below and guiding movement towards the recessed front door and top light above. The entrance to House Swanepoel in Cape St. Francis (1980) is defined by an extended wing of the main building and a curved bathroom courtyard wall. House Neethling (1983) is similar in that the edge of the projecting garage and garden wall define the entry route, while House Swanepoel in Hermanus relies on a low garden wall and slightly downward sloping ramp. At Paradys (2003) and Fagan in McGregor (2005) retaining walls are used to form a descending route. Entry is partially hidden by the perpendicular approach to a garage door and only on reaching the garage is the front door revealed (figure 38).

Figure 38
Top left: House Bertie-Roberts(1965) (anon, 1968: 11).
Top right: Model of Die Es (1965) (Fagan archive - Job. No. 656, undated).
Second from top left: House Raynham (1967) (author, 2008).
Second from top right: House Swanepoel Cape St. Francis (1980) (author, 2005).
Third from top right: House Swanepoel in Hermanus (1990) (author, 2008).
Second from bottom right: House Neethling (1983) (author, 2009)
Bottom left: House Paradys (2003) (author, 2009).
Bottom right: House Fagan in McGregor (2005) (author, 2009).

Building/earth relationships – typological and topographical (figure 39).

The Cape vernacular tradition is formally composed of white rectangular forms which, through their shape and colour, provide a strong counterpoint to the linear landscape. Many orthodox modernist forms share this formal similarity while also responding to the landscape in a classical manner. Fagan's houses draw on these similarities but provide tension through a more romantic and physical connection with their surroundings. The junction between earth and house is, in most cases, where entry occurs and a conclusion could be that Fagan wishes to re-associate the visitor with his earthly beginnings before entering the private realm. House Bertie-Roberts (1966) literally hovers between earth and sky as the box form, carried on two concrete u-shaped channels, cantilevers over stone and concrete retaining walls. But the building is grounded by its walled connection to the earth.

Figure 39
Top left: House Bertie-Roberts (1965) (Fagan, 2005:19). Top right: House Bertie-Roberts (1965) (Fagan archive - Job No. 644, undated). Previous page bottom left: House Die Es (1965) low garden wall (author 2008). Middle left: House Raynham (1967) sunken garage (Author, 2008). Middle right: House Swanepoel in Hermanus (1990) (author 2008). Bottom left : House Paradys (2003) (author 2009). Bottom right: House Fagan in McGregor (2005) (author 2009).

The house is both dug in and raised up at the same time and the crossing point forms a logical position for the entrance. Die Es (1965) steps down with the site and seemingly forms itself out of the plastic white walls that grow from the garden. In House Raynham (1967) the garage is submerged out of sight, anchoring the building in the ground while the hovering ramp provides a sense of disconnection from the earth. House Swanepoel in Hermanus (1990) anchors itself to the earth through the partially submerged garage and stone retaining wall to the north. A low garden wall to the south completes the framed "base" while the rest of the house perches above in unison. Houses Paradys (2003) and Fagan in McGregor (2005) are connected to the earth in similar ways as their garage and front door entry points merge in the earth. Paradys is less submerged but in both cases a strong link to the earth is formed at these points.

The chimney as focus (figures 40 - 42)

The chimney is an important vernacular element both in terms of its formal importance as a recognizable feature and because of its physical and spiritual function as the hearth of the home. Fagan has recognized the nostalgic associations and in Die Es (1965) exaggerated this feature to create a fireplace room and a focus point externally. House Patterson (1966) has a similar fireplace room but the chimney is not as evident in the formal composition. Here the counterpoint to the monopitch roof bears similarities with Keurbos (1965). The chimneys to houses Paradys (2003) and Brink (2002) provide a counterpoint to the linearity of the houses. There is also a subtle distinction in the relationship of chimney to wall. In houses Keurbos (1951), Patterson (1966), Auldearn (1992) and Brink (2002) the chimney engages with the adjoining wall surface, while at Die Es (1965), Paradys (2003) and House Lückhoff (1981) the chimneys maintain differing degrees of independence from the main form.

Figure 40
Top from left to right: Chimneys at House Die Es (1965) (author, 2009), House Patterson (1966) (author, 2008). House Keurbos (1951) (author, 2009), House Paradys (2003) (author, 2009). Bottom from left to right: Chimneys at House Brink (2002) (author, 2009), House Auldearn (2002) (author, 2009). House Lückhoff (1981) (author, 2009).

But in houses Neethling (1983) and Swanepoel in Hermanus (1990) the chimney takes on a new role as structural support for the roof. In these houses the chimney becomes both the physical and functional hearth of the home and provides both an internal and external focus point. The plasticity of the column chimney is innovatively explored in House Neethling, where the chimney twists to accept the tapering roof beams. House Beyers (1998) is also centered at the roof pinnacle but does not act as a structural member. Here as in House Swanepoel in Hermanus (1990) light filters into the living spaces through glazed connections between chimney and roof.

Figure 41
Left: House Neethling (1983) (Author, 2009). Middle: House Swanepoel in Hermanus (1990) (author, 2009). Right: House Beyers (1998) (author, 2009).

In House Bertie-Roberts (1966) the chimney takes on many roles. Although the cantilevered floor structure is supported on the grounded wall, the position of the chimney visually assists in a supporting role. Apart from its functional role as hearth, it defines the entry area and serves as a 'lookout' tower, a requirement of the owner who was a fisherman. Access to the outside of the chimney was gained from the study. The chimney also acts as counterpoint to the linear box form and as focal point to the building.

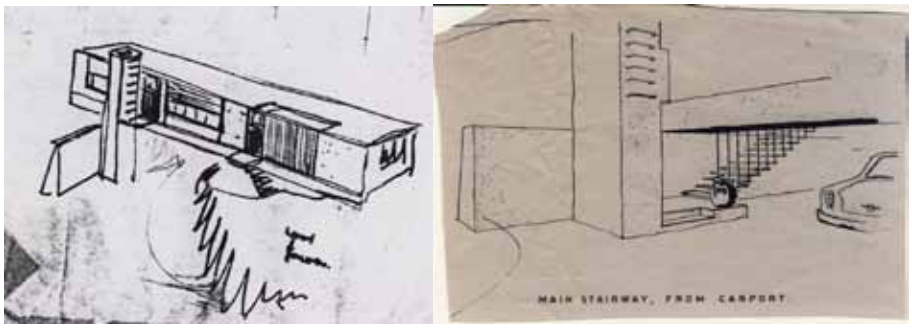


Figure 42
Fagan's sketches for House Bertie-Roberts (1965) showing supporting role of chimney on left and access on right (Fagan archive - Job No. 644, undated).

Bedroom privacy and external contact (figure 43)

Fagan once remarked (1996) that bedrooms should never suffer from the 'Holiday Inn syndrome' explaining that once you left your bedroom and stepped on the balcony you were there for all the world, including your neighbour, to see. In House Bertie-Roberts (1966) the first evidence of

the creation of private spaces outside bedrooms can be seen. Fagan extends the cupboard areas outwards to create private recesses. In House Raynham (1967) the stepped plan was used for the first time and Fagan (2008c) remarks that here he had space to be able to step the plan and create a private space for each bedroom, which made an enormous difference to the qualities of the interior space. In houses Swanepoel in Cape St. Francis (1980) and Hermanus (1990) the stepped plan encompasses a corner window. In houses Raynham (1967), Blommaert (1982) and Neethling (1983) the bedrooms have a more direct relationship with the garden, a similar approach to that of Paradys (2003). Here, for the first time, the bathrooms are used (together with the stepped plan) to create privacy for each room.

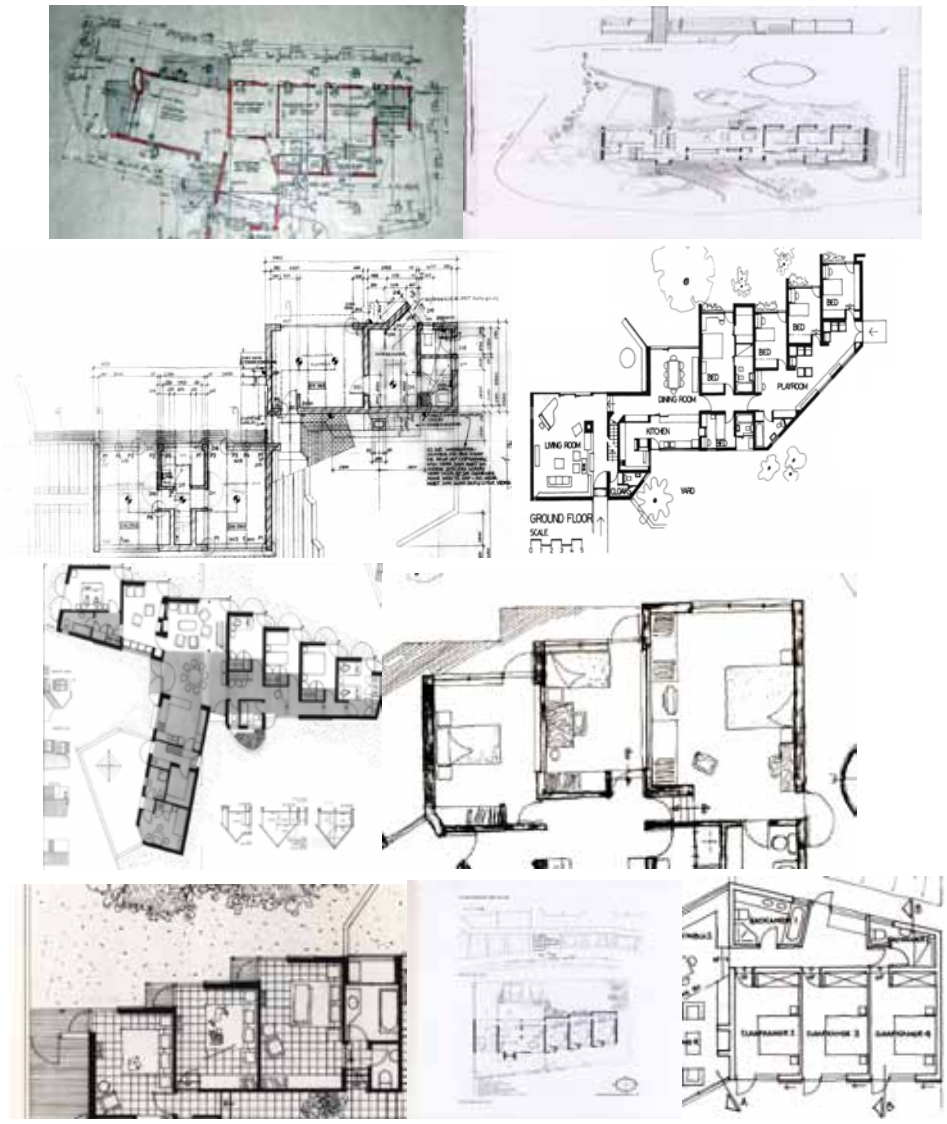


Figure 43

Part plans showing relationship of bedrooms to the exterior. Top left: House Lombard (c.1960s) in Nylstroom by Fagan's contemporary Karl Jooste - note the slight wall splay at each bedroom (Courtesy of Cultural History Museum Pretoria). Top right: House Bertie-Roberts (1965) (Anon, 1968: 12). Second from top left: House Blommaert (1982) (Fagan archive - Job No. 8204). Second from top right: House Raynham (1967) (Fagan, 2005: 52).Second from bottom left: House Swanepoel in Cape St. Francis (1980) (Fagan, 2005: 73). Second from bottom right: House Neethling (1983) (Fagan, 2005: 83). Bottom left: House Swanepoel in Hermanus (1990) (Fagan 2005: 103). Bottom middle: House Paradys (2003) (author, 2009). Bottom right: House Fagan in McGregor (2005) (Fagan archive - Job No.0507, undated).

Functional separation (figure 44)

Many of the interior organizations of Fagan's houses echo the bi-nuclear planning arrangement used by Marcel Breuer[15]. The 1951 Keurbos house clearly separates living from sleeping areas on both levels. In Die Es a vertical separation is used but the regularity of the bi-nuclear arrangement is returned to in houses Bertie-Roberts (1966), Raynham (1967), Neethling (1983), Paradys (2003), and Mitchell (2005). In houses Swanepoel in Cape St. Francis (1980) and Fagan in McGregor (2005) the living space becomes a mediator between sleeping spaces on each side. Most plans also rely on a served and servant arrangement, with bathrooms and kitchens positioned on the colder and less open side of the site.

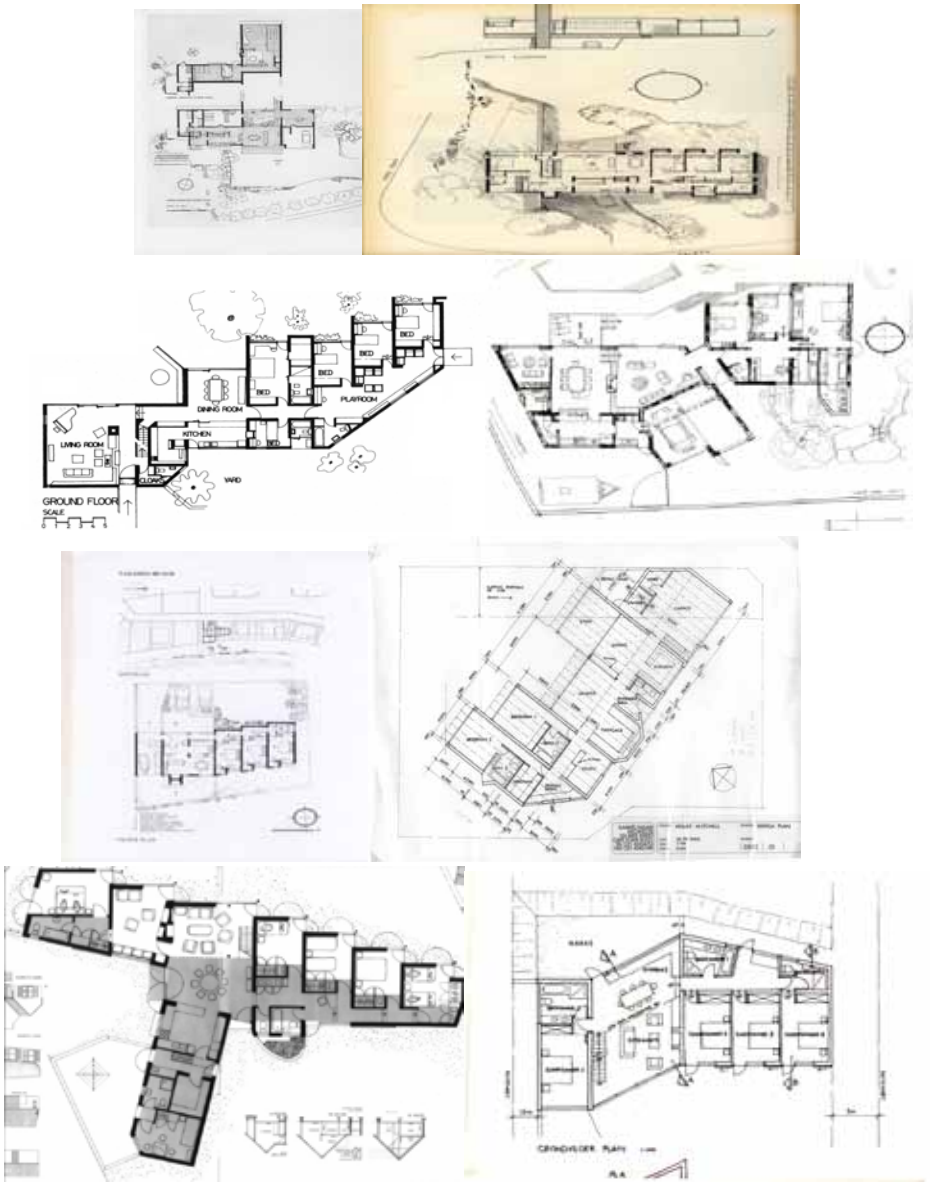


Figure 44
Blue areas indicate bedrooms and associated spaces. Top left: House Keurbos (1951) (Wale, c.1964: 50). Top right: House Bertie-Roberts (1965) (anon, 1968: 12). Second from top left: House Raynham (1967) (Fagan, 2005: 52). Second from top right: House Neethling (1983) (Fagan, 2005: 83). Second from bottom left: House Paradys (2003) (Fagan, 2005: 125). Second from top right: House Paradys (2003) (author, 2009). Bottom left: House Swanepoel in Cape St. Francis (1980) (Fagan, 2005: 73). Bottom right: House Fagan in McGregor (2005) (Fagan archive - Job No.0507, undated).

The roof as holding element (figure 45)

The double pitched moulded roof typology is used by Fagan most successfully to create a sense of plasticity and unity. Houses Raynham (1967) and Neethling (1983) are similar in their copper forms rising to the focal point of the chimney in the living room. The roofs form almost awkwardly at times but are strong elements that control and hold spaces below. A volumetric interaction between room and roof space occurs and boundaries are seemingly blurred in a continuously flowing interior space. This continuity is less evident in House Swanepoel in Cape St. Francis (1980), but the roof still holds powerful sway over the internal spaces and external walls, allying itself to the slope of the dunes below. At Die Es (1965) a sinusoidal roof form holds the upper floor spaces together. Glazed sections above the internal doors foster a spatial continuity that allows the roof to lightly control and hold the private spaces.

Figure 45
Top left: House Raynham (1967) (Photo courtesy of the Raynhams). Top right: House Neethling (1983) (author, 2009). Bottom left House Swanepoel in Hermanus under construction (1990) (Fagan archive - Job No. 9020, undated). Bottom right: House Die Es (1965) under construction with Fagan and his son Hennie working (Fagan archive - Job No. 656, undated).

In early sketches of House Simpson (figure 46), Fagan organizes a series of independent roofs that rise to the climax of the chimney in a very Frank Lloyd Wrightian way – Taliesin West is mentioned on one of the sketches.

Figure 46
Fagan's sketch of the roof to House Auldearn (1993) with reference to Frank Lloyd Wright's Taliesen (Fagan archive - Job No. 9302, undated).

Conclusion

Fagan has manipulated the influences of the formal, spatial and functional canons of the Cape vernacular and a mediated Modern Movement to create his own typologies. His design solutions mediate between generative interpretation and productive invention, and in so doing create a new and appropriate local architectural language that synthesizes new and old. The new patterns are convergent solutions in the sense that they are constantly used but are reworked in each new design and although they provide the architecture with a recognisable signature they avoid stylistic monotony. A new and timeless architecture appropriate for the Cape is created by a synergous relationship between an inherited tradition and mediated Modern Movement influences.

Notes

1 Attenuated refers to the 'stringing' out of functions along a line (often facing north) while bi-nuclear refers to a planning organization where living and bedroom spaces are mediated by entry and circulation spaces.

2 Frampton (1995: 6,7) defines the distinction between stereotomic (cut from stone) and tectonic (framed) construction as being that of heavy and light.

3 Allied to this is the use a curtain to visually separate spaces.

4 After Curtis (1996: 13).

5 After Curtis (1996: 13).

6 After Semper (Semper & Mallgrave 1989: 111).

7 Fagan has used a flat roof to connect independent elements in Die Es and on House Brink but both are punctured by roof lights.

8 The owners have subsequently added a roof to part of the courtyard which takes away light from some of the spaces.

9 In this instance there is less need for mediation as the forms of both influences bear many similarities, partly due to their, often, common Mediterranean inheritances.

10 Greig (1970: 17) defines two vernacular traditions in South Africa - the first being developed through the influence of the Dutch and the second through the British. The author postulates that a third was formed through the influence of Baker and the Arts and Crafts movement while fourth was developed through the influence of the mediated Modern Movement in South Africa and expressed in the work of architects such as Revel Fox (1924-2004), Pius Pahl (1909-2003) and Gawie Fagan.

11 For a detailed understanding of Fagan's development of type see the section on new and renewed typologies that follow.

12 These configurations seem to be used most often when the houses are in close proximity to the sea.

13 This is very much in line with Stauch's efficient use of space and his ex business partner

Nation's comment (2001) on Stauch that no space should ever be wasted. Stauch's own house Hakahana in Pretoria has a similar mezzanine configuration.

14 He is also uncompromising in his definition of external form, so much so that the possibility of windows in external walls to bathrooms in House Beyers (1998) were not explored or instituted. This caused much consternation to the clients (Beyers, 2009).

15 Fagan clearly describes how Breuer achieves this separation in the 21 April 2008 interview, but explains that client requests drove the programmatic separation. Although this may be the case, the formality of the linear organization follows Breuer's approach very closely.

16 The author suspects that the surname should read Rushmere.

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David Hicks at Riversfield Farm – the closing of a chapter

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David Hicks, internationally renowned British interior designer, author and garden designer, designed only three gardens in South Africa of which Riversfield Farm in the KZN Midlands was his last and uncompleted by the time of his death in 1998. In 2005 the owners, with the assistance of prominent South African landscaper Jan Blok, commenced with the construction of the *potager* at Riversfield Farm; the only unbuilt part of Hicks's design. In the article the interpretation of the Hicks sketch plan design by South African landscaper Jan Blok, construction constraints and the completed project are described and illustrated. This project, which can be considered significant in the South African landscape architecture context, is discussed from the perspective of Hicks's own published design approach.
Key words: David Hicks, kitchen garden, *potager*, garden design, Jan Blok, landscape architecture

David Hicks by Riversfield Farm – die afsluiting van 'n hoofstuk
David Hicks, internasionaal erkende Britse binne-ontwerper, skrywer en tuinontwerper het slegs drie tuine in Suid-Afrika ontwerp, waarvan Riversfield Farm in die KwaZulu-Natalse Middellande sy laaste en onvoltooide projek was ten tye van sy afsterwe in 1998. In 2005 het die eienaars, met die hulp van bekroonde Suid-Afrikaanse landskappeerder Jan Blok, begin met die konstruksie van die *potager* (kombuistuin) by Riversfield Farm, die enigste onvoltooide deel van Hicks se ontwerp. In die artikel word die interpretasie van Hicks se ontwerp, konstruksiebeperkings, en die voltooide projek beskryf en illustreer. Hierdie projek, wat beskou kan word as van beduidende belang in die Suid-Afrikaanse landskapargitektuurkonteks, word bespreek uit die perspektief van Hicks se eie gepubliseerde ontwerpbenadering.
Sleutelwoorde: David Hicks, kombuistuin, *potager*, tuinontwerp, Jan Blok, landskapargitektuur

David Hicks (1929–1998), internationally renowned British interior designer and author, was described by Janet Ramin (2008: 1) as the "superstar designer of the 1960s and 1970s – sought after by royalty and the privileged". He was also one of the best known and prolific contemporary garden designers who designed gardens all over the world; South Africa can boast three: the gardens at Stellenberg in Cape Town, House Gordon in Johannesburg and the Riversfield Farm in the Kwa-Zulu Natal Midlands. In his foreword to Hicks' *My Kind of Garden* (1999), H.R.H. the Prince of Wales states: "...Hicks' international reputation was built on his talents as an interior designer but … gardening had always been an underlying passion. In the latter part of his life he devoted his attention more and more to gardens, designing both for himself and for others around the world"

The article gives the historical background to the Riversfield Farm project; discusses the interpretation and implementation of the Hicks designed *potager* (a *potager* can be described as a kitchen or vegetable garden often arranged in beds separated by pathways), based on limited drawings and specifications and from examples of other Hicks designs and the precedent set at Riversfield Farm to motivate the implementation decisions that had to be taken.

The objective therefore is to give a historical perspective of this South African landscaping project by arguably one of the most prominent garden designers of the 20th century and to complete the record of his South African *oeuvre*.

Background

David Hicks was appointed by the owners of Riversfield Farm in 1996 to redesign the garden of the historic farmstead. He prepared a design that included a brick pool pavilion with gothic arched windows, a hipped corrugated iron roof and a swimming pool enclosed by clipped viburnum hedges south of the main house. *Parterre* gardens and smaller pavilions are situated east and north-east, a *potager* to the north and a dove cote in a forested area close by. Shantall (2009: 145) describes the Hicks designed garden as "A sprawling Midlands garden… brought into order and given architectural rigour…"

The work, except for the *potager*, was completed in 2005, seven years after his death, by various plantsmen, including Keith Kirsten, well known South African landscaper and author of gardening books. The Hicks design for the *potager* is shown in figure 1. From the annotations on this drawing it is clear that he intended the garden to be more of a *potager fleurie* (flowering *potager*) than purely a garden for growing vegetables for the kitchen that originated in 17th century Europe. It is not clear if Hicks intended the garden to be a *potager aromatique* (a *potager* with aromatic herb filled borders) as well, since there are no indications on the drawing or from discussions with the owners.

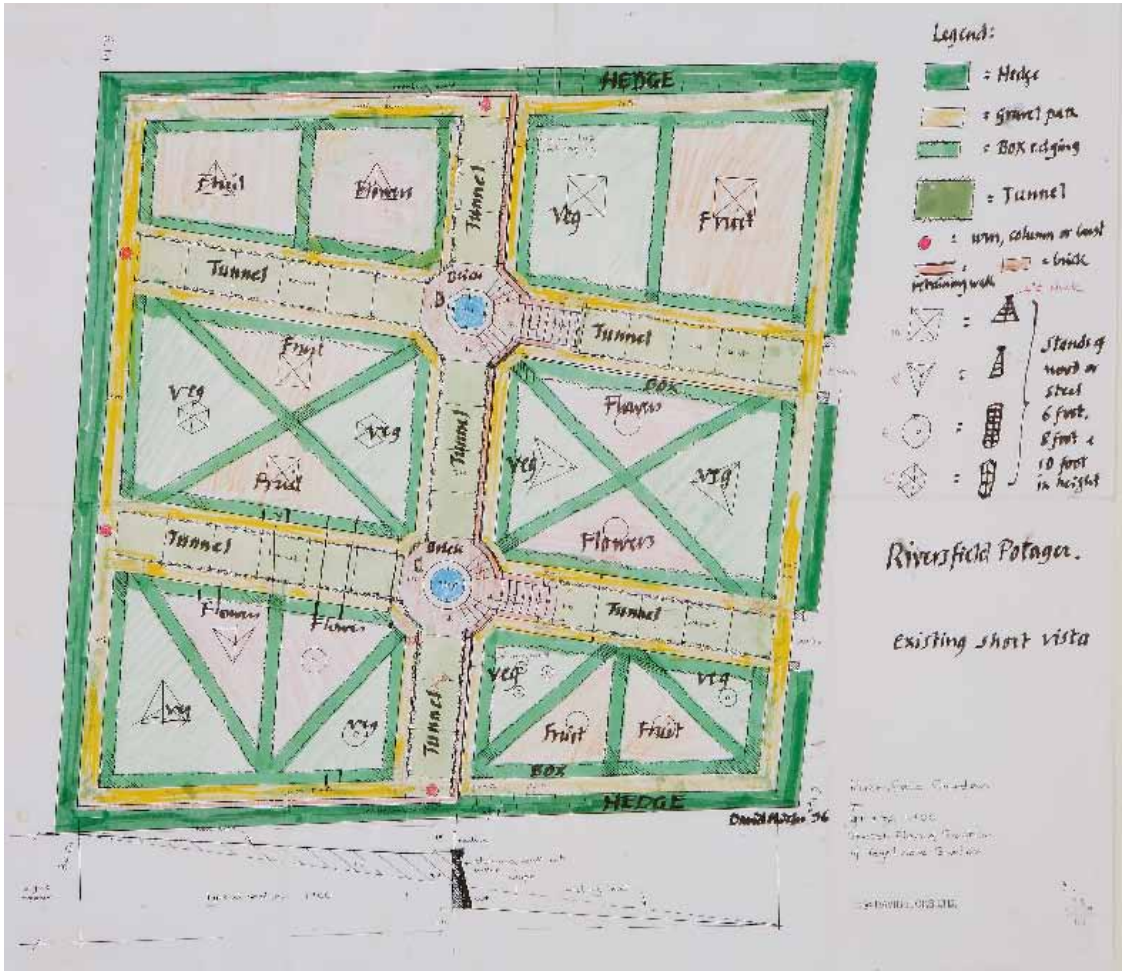

Figure 1
Plan of the Riversfield *potager* by David Hicks 1996
(reproduced with the permission of the David Hicks Estate).

In 2005 the owners commissioned Jan Blok, an acclaimed South African landscaper, to complete the *potager* in accordance with the original Hicks design. The plan by Hicks was not specific about the plant species to be used, merely describing the planting as "flowers, veg and fruit" (refer to figure 1), nor of the details for retaining walls, pergolas and planting stands. Blok interpreted the Hicks drawing with the intention to construct it as closely as possible to the original design. By that time David Hicks had already died (on 29 March 1998). No additional information or drawings were available. However, the design shows that Hicks could well have intended to create a garden of "…mixed beds of vegetables and flowers…so full they border on the cacophonous; gravel paths and precise squared hedges impart calm and order" (Heyman, 2001: 71, describing the *potager* design of John Scharffenberger in Philo, North California).

David Hicks considered the renaissance gardens at the Château de Villandry (circa 1536) near Tours in France as one of the "seven wonders of the world" (1999: 19). He was impressed by the reconstructed (started in 1906) 16th century ornamental vegetable, flower and medicinal garden with its metal framed rose arbours, contrasting with the symmetrical planting beds. In commenting on the Villandry gardens Hobhouse & Taylor (1990: 99) find that "Although this is a garden of great complexity it is never overwhelming. Despite the grave formality of its design, there is about it much vivacity and variety" Jan Blok echoes this description in his own comments on Hicks's Riversfield Farm *potager* design when he said "I am an ardent admirer of the man's work, especially its formality, symmetry and the slightly 'off-beat' approach that set him apart from other designers" (quoted in Gray & Thunder, 2009: 68).

Hicks (1999: 12) referred admiringly to other prominent garden designers such as Geoffrey Jellicoe, Lutyens and Gertrude Jekyll who interpreted formal garden designs with their own very original styles. In this regard he states: "I am so passionate about design, formality, straight lines, symmetry, that I find almost tragic the work of Capability Brown who destroyed so many fine avenues and marvelous English gardens…in order to make the idyllic parkland look of the 'classic English garden'" He in fact describes the popularity of the picturesque garden design approach as "a vulgar decay" (1999: 12)

At Riversfield the partly walled *potager*, with pergolas or planted tunnels over the two entrance axes and the single east-west axis, was perhaps inspired by the Old Rectory in Sudborough England, which Hicks described (1999: 14) as reminding him of an early monastery garden, consisting of compartments of herbs and flowers divided by brick paths and water. The Riversfield trelliswork forming the tunnels and the geometric metal trellis stands, such as pyramids and cylinders, are perhaps inspired by his designs for the gardens at Stellenberg in Cape Town and the Vila Verde on the Algarve in Portugal; the latter which he considered (1999: 208) his *chef d'oeuvre*. Hicks described his design for the Riversfield gardens to be "in the manner of the 18th century English garden" (1999: 220).

Another aspect of Hicks's designs for Riversfield Farm, and about which very little has been published, is the beautifully detailed dovecote in a clearing in a dense forest, immediately north-west of the *potager* (see figure 2). The richly detailed metalwork, in the Chinese Chippendale style, combined with the roof reminiscent of Chinese pagodas and Gothic-style arches between the columns at ground level, all reminiscent of the designs for his own house and garden called The Grove in Oxfordshire, make this building one of the most delightful landscape structures that Hicks ever designed. He however died before it was completed; his friend and colleague Krynauw Nel oversaw the completion thereof.

Figure 2
The Hicks designed dove cote in a clearing in the forest next to the *potager* (photograph by author 2008).

The *potager*: design and construction

At Riversfield the nature of the *potager* project is primarily functional, i.e. a garden for growing vegetables, fruit and cut flowers for the homestead, as opposed to the primarily aesthetical design considerations of his other South African works namely the Stellenberg Estate in Cape Town and House Gordon in Hyde Park Johannesburg. Despite these functional differences, the formal, geometrical and mostly symmetrical design approach of Hicks remains apparent. In the design of the *potager* one could have expected a purely functional layout determined by the conventional, but in this case the eccentricity of Hicks comes out in the form of the slight off-set from the expected parallel and the perpendicular lines and in the asymmetry of the two water features and the *Buxus* dividing hedges. His approach to most of his garden designs was based on the classical formal gardens but Hicks' trademark "stamp" of juxtapositioning some elements in contrast to the symmetry of the rest is clearly apparent in the detail design.

Along its western boundary the *potager* is enclosed by a 700mm high brick wall, plastered and painted white, whereas the southern and eastern boundaries are hedged with *Viburnum odoratissimum*. A dense stand of pin oaks along the eastern boundary forms a backdrop to the *potager*. The southern boundary contains the two entrances, each flanked with white-painted brick columns supporting simple "Indian red" painted steel Chinese Chippendale pierced gates (figure 3). "Indian red" is the colour specified by Hicks for all the metalwork at Riversfield, including the roof of the pool pavilion. These gates offer a partial view of the *potager* to the visitor approaching from the south. The *potager's* northern edge is not walled; a cut-off berm and swale divert storm water runoff from the hill.

Figure 3
View of the entrance to the eastern south to north axis
(photograph by J. Blok 2008).

Figure 4
Approach from the south to the higher terrace
(photograph by author 2008).

The *potager* is laid out in the shape of an equal-sided (32m in length) parallelogram (figure 1). The main south to north axes are not perpendicular to the south boundary (they are off-set by 4º) and the east-west axis intersects the south to north axes with an off-set of 5.7º. These off-sets resulted in the two upper flights of each staircase not being symmetrical; prompting Jan Blok to comment (pers.com., 2008) that to set out and construct the steps and to make the varying steel balustrades, were some of the more challenging aspects of the project. This asymmetry is not immediately noticeable. Hicks's motivation for these off-sets remains debatable. Shantall (2009: 147) ascribes this asymmetry to Hicks's tendency towards the idiosyncratic and for the express purpose of adding more character. She however adds (2009: 147) "yet character is the one thing that that this special garden does not lack, despite being neither too smart, nor too manicured"

The vistas along the two main south-north axes and the east-west axis (refer to figure 6) were intended to terminate in focal points; a column or a bust, but these had not been installed at the time of the author's visit.

The two water features at the intersections of the south-north axes and the east west axis are symmetrical in positioning but dissimilar in form; the western pond is circular with eight small jets spouting water inwards to a larger central spout (figure 5), whereas the eastern pond is octagonal with only a central spout (figure 7). Both water features form a visual barrier to someone approaching from the southern main entrance axes, and the north-looking vistas along the tunnels are only re-established once the visitor has ascended the staircase and went around the ponds.

Figure 5
View from the circular fountain southwards towards the entrance (photograph by author 2008).

Figure 6
View along the west to east axis on the upper terrace
(photograph by J. Blok 2008).

Figure 7
Octagonal water feature at the eastern end of the west-east axis
(photograph by author 2008).

In 2005 Jan Blok, after re-interpreting Hicks's design and suggesting some changes to accommodate the terrain's gradient (which was steeper than what was shown on the Hicks drawings), commenced with construction work and completed the hard landscaping elements in 2006.

The retaining wall dividing the *potager* into an upper and lower terrace was constructed with steel reinforced brickwork. The wall was plastered with wide recessed horizontal joints every fourth brick courses and finished in white paint. Steel wires are strung along the face of the wall to support planting (refer to figure 8), in this case espaliered apple trees.

Figure 8
The espaliered apple trees against the retaining wall
(photograph by author 2008).

The steel portal frames forming the tunnels along the two south-north axes and the single east-west axis were manufactured off-site and erected on site using mobile cranes. The portals were made of steel square tubing and the arches pointed. Horizontal steel wires were strung between the portals to support the *Wisteria sinensis*. The steelwork, although galvanised, was painted in the same "Indian red" colour as the other buildings' roofs and the steelwork in Hicks's original constructions. Planting for the pergolas commenced in 2006 and when the author visited Riversfield Farm in March 2008, the wisteria had established well, almost fully covering the pergolas as can be seen in figure 9.

Figure 9
Wisteria covered trellis archway over the red brick pathways
(photograph by J. Blok 2008).

The pyramid, trihedron, hexahedron and cylinder shaped stands were specified by Hicks to be of wood or steel, with heights varying between 3.05 m for the pyramids, 2.44 m for the trihedrons and 1.83 m the cylinders and hexahedrons. Blok decided to use steel square tubing with flat steel bar for the curved components - all finished in the same "Indian red" as the other steelwork (figure 10). These steel stands are intended to support planting and are placed in the centre of each pocket created by the dividing box hedges.

The Hicks design indicates most of the shrub beds edged and diagonally or perpendicularly divided by boxed hedges. Blok used *Buxus sempervirens* for these, but they were not yet of a size to be boxed when the author visited the site. The lines created by the diagonal and perpendicular boxed hedges, edged pathways, the pointed arch pergolas and the planting stands are the typical Hicks trademark that Anne Massey (cited in Matthew & Harrison, 2004: 26), when describing Hicks' interior designs, refers to as "his use of bold, geometrically patterned carpets and textiles" Hicks (quoted in the foreword to *My kind of garden*, 1999) himself describes his " approach and appreciation of gardening with straight lines, rather than cultivated informality" as "very personal"

Hicks' selection of plant species for his other work at Riversfield, typically the square cut *Viburnum* hedges around the pool area and the rose filled *parterre* garden next to the homestead are typical of his European background and one would have expected that trend to continue had Hicks been able to oversee the *potager's* completion. In this regard Jan Blok's choices of plants follow the trend. This should be appreciated in the context of the time (the 1990s) when South African landscape designers were to a large extent moving towards using only indigenous plants for reasons such as drought resistance, better commercial availability and ecological sustainability and planting those in a more natural setting, as opposed to the classical, formal and geometrical layout traditionally used in Hicks' garden designs.

Since the plant species were not specified by Hicks on his drawing, Blok and his team undertook a detailed research into plants that Hicks had used on similar projects elsewhere and selected context and site appropriate species from the wide variety that Hicks would typically have used in his *potager* design. For flowering species the focus was on cut flowers for the manor, and species that Blok planted include delphiniums, Iceland poppies and irises. Vegetables include spinach, peas, beans and rocket. Fruit for the house come from pomegranate, quince and the apple trees, mostly in the beds or espaliered against the retaining wall. The owners have however been forced to reconsider some of the fruit and vegetable species planted since a local troop of vervet monkeys discovered this delightful source of food!

The Hicks drawing was also not clear on the type of paving to be used under the pergolas along the three main axes, Blok decided to stay with the red brick paving used in the earlier parts of the Riversfield Farm landscape. The bricks were laid in a herringbone pattern with header course edges. The rest of the pathways were finished with a gravel layer, with a 110mm wide red brick surround.

Conclusions

The Hicks design for the *potager* has been successfully implemented by Jan Blok. The decisions that Blok had to make in the absence of more detailed specifications or prescriptions by Hicks are well founded and ensure that the original design intention could be met. Examples of similar landscape designs that Hicks had visited in his life and which he commented on in his book *My Kind of Garden* acted as inspiration and guide to Jan Blok. The completion of the *potager* also brings to a visible conclusion the vision that Hicks had for the Riversfield Farm.

Although the *potager* is still relatively young, one can already experience the sense of enclosure and shade imparted by the pergola tunnels; the play of shadows under them, with glimpses of the sun-bathed fruit, vegetable and flower gardens. Moving through the pergolas opens up vistas of the espaliered apple trees on the retaining wall, of the grassy hill to the north and of the dense pin oak forest to the east.

Figure 10
View in a north-easterly direction to the retaining wall and planting stands (photograph by J. Blok 2008).

The rich and varied palette of flowering plants selected by Jan Blok will ensure that there is always an abundance of cut flowers for the homestead throughout the year. The contrasting setting of the colourfully planted *potager* with the white walls and "Indian red" painted steelwork, in an area of the farm characterised by verdant undulating grassy hills, punctuated by clusters of cedars and oaks, heightens the visitor's appreciation of the garden designs for which David Hicks achieved international acclaim.

Acknowledgements

After David Hicks's death in 1998, his son Ashley completed and edited the book started by his father and published it in 1999 under the title *My Kind of Garden.*

My gratitude is expressed to Jan Blok Designs & Landscapers for information and images of the project, as well as arranging the memorable visit to Riversfield Farm.

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Worshipping with the fourfold at the temple complex at Delphi, Greece, the Inner Shrine at Ise, Japan, and St. Peter's Basilica at Rome

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The aim of this article is to critique Martin Heidegger's fourfold as a static concept and to reformulate it as a dynamic concept to be applied as a criterion to assess the architectural excellence of the temple complex of Apollo at Delphi, Greece, and the Inner Shinto Shrine at Ise, Japan, both exemplifying nature religions, as well as the Basilica of St. Peter's in Rome, the most influential Christian church.
Key words: Heidegger's fourfold reformulated, temple complex of Apollo at Delphi, Inner Shinto Shrine at Ise, St. Peter's Basilica at Rome

Verering by wyse van die viervoud by drie heiligdomme: die tempelkompleks by Delphi, Griekeland, die Ise-binneheiligdom, Japan en die Petrusbasilika, Rome
Die doel met hierdie artikel is om Martin Heidegger se viervoud as 'n statiese konsep te kritiseer en as 'n dinamiese konsep te herformuleer, wat dan toegepas word as 'n kriterium vir die beoordeling van die argitektoniese meriete van die tempelkompleks van Apollo by Delphi, Griekeland, en die Shinto-binneheiligdom by Ise, Japan, wat albei natuurgodsdienste beliggaam, asook die Petrusbasilika in Rome, die invloedrykste Christelike kerk.
Sleutelwoorde: herformulering van Heidegger se viervoud, tempelkompleks van Apollo by Delphi, Shinto-binneheiligdom by Ise, Petrusbasilika in Rome

In his essay, "Bauen Wohnen Denken" (1954), Martin Heidegger postulates that "the world" is revealed as a fourfold (*das Geviert*) comprising a mirror-play heaven, the earth, the gods and earthly beings in relation to each another. Unfortunately, as Graham Harman points out, "there is no easy way to clarify the fourfold on the basis of Heidegger's own explicit statements, which are infamous for their obscurity and preciousness".[1] Therefore, the fourfold has been explained in various ways that are not helpful in its application to architecture as the term *Bauen* in Heidegger's essay would imply.[2] Harman's critique of Heidegger's fourfold that manifests in "things"[3] thus affords an opportunity to reformulate the concept as a criterion to assess architectural excellence in three religious contexts: the temple complex of Apollo at Delphi, the Inner Shinto Shrine at Ise, and St. Peter's Basilica at Rome.

Harman contends that Heidegger's fourfold is a static system. To clarify the fourfold he identifies the two great axes of the world according to Heidegger. The first axis constitutes the dualism of "the constant interplay of veiling and unveiling, absence and presence, concealing and unconcealing, sheltering and clearing, thrownness and projection, ready-to-hand and present-at-hand, *Ereignis* and *Enteignis*, being and beings, or being and time", that is "the axis that divides the shimmering façade of an object's present-at-hand surface with the underground rumbling of its enigmatic depth".[4] The second axis of the world, according to Heidegger as interpreted by Harman, "is the difference between any thing's *specific* character and the fact that it is something at all".[5] Harman states that "from the intersection of these two axes, the fourfold results", and concludes: "The fourfold cannot be identified with the four extremes of the two axes. Although Heidegger always pairs earth with sky and gods with mortals, these are just the tense diagonal relations across the diagram of the world. For him, all members of the fourfold mirror each other equally: Earth goes with gods and mortals no less than it does with the sky".[6] Thus, at each pole the of the world mortals, earth, gods and sky mirror each other, but as

Harman points out, "Nowhere does Heidegger discuss the exact mechanics of the mirror play". Consequently, the most serious problem with Heidegger's fourfold is "its lack of dynamism".[7] Located in the four quadrants formed by the intersecting axes of the world, they merely mirror each other, i.e. are static. Therefore Harman suggests that the fourfold becomes more interesting if Heidegger's "philosophy of human access" be abolished "because he remains convinced that philosophy only has anything to tell us if some human being is on the scene, and nothing about the interaction of things when no humans are present". The result will be that, "Instead of being just a more pretentious version of the analytic of human Dasein, the fourfold now has a chance to describe the relation between objects themselves".[8]

Reinterpreted anew as a dynamic, interlocking unitary structure of mortals, the earth, gods and the sky, that reflects the identity as well as the differences between the components the fourfold may be recognised in works of architecture in which the components interact reciprocally. This architectural "world" may be interpreted as a cosmology that echoes Socrates's theory, expounded in Plato's *Gorgias* (507 E; written 350 BCE), that heaven and earth, the gods and human beings, are bound together and that the universe is therefore called a cosmos.

When applied to works of religious architecture one may expect both the unity and the differences between heaven and the gods and the earth and mortals, referring to what is above and what is below, to be reflected in those works that form the context in which mortals, who are earthbound, find their fulfilment in "dwelling".[9] Dwelling in full awareness of the fourfold are often most intensely experienced in places of worship, which requires an earth clearing and a bounded space in which an engagement with a cosmology or belief system is expressed in a concrete manner.

The fourfold clearly manifests in the two culturally dissimilar places of religious worship – the one Western (Delphi, Greece) and the other Eastern (Ise, Japan) — that are chosen for discussion. These two places, created by their architectural structures, are similar in that they both represent nature religions and in the "clearings" that their architectural structures occupy both affirm their total engagement with the fourfold. However, in St. Peter's, in the urban setting of Rome, the greatest Christian church in which only one God is acknowledged, the exterior link is in the form of a dome, a structural form that encloses a symbolic interior that nevertheless engages the total fourfold.

The temple complex of Apollo at Delphi, Greece

One may concur with Heidegger that the Greek temple "embodies the world of a people" and that, like a work of art, it "erects a world": "Standing there the edifice rests on rock. [...] It elucidates, at the same time, that on which and in which man founds his existence. We call it the earth."[10] The rock, which is a dense and impenetrable substance, belongs to the earth. The earth as foundation of human existence also supports the temple, which in turn, brings into view the realm of the sky in its alternating seasons and phases of night and day. In the same vein Vincent Scully points out that the apparently stereotyped design of the classical Doric temple produced "an unmatched dialogue between oneness and separateness, men and nature, men and the facts of life, men and the gods.[11] The meaning of the dialogue, however, is uniquely dependent upon the geographic location and cultural meaning of the temple site, as Scully explains: "All Greek sacred architecture explores and praises the character of a god or gods in a specific place. That place is itself holy and, before the temple was built upon it, embodied the deity as a recognised natural force."[12] According to this criterion, one of the supreme examples of Doric architecture

is the Temple of Apollo at Delphi. Geographically Delphi is situated about 150 kilometres northwest of Athens, close to the northern shore of the Corinthian Gulf, on the foothills of Mount Parnassus. The temenos of the Temple of Apollo is set on the north slope of the Pleitos Torrent Gorge within a natural amphitheatre of limestone cliffs which soar precipitously to a staggering 300 metres above it, enclosing it on three sides and then opening onto the valley of Amphissa and the Gulf of Itea (figure 1). However, the Greek builders intended it to be mythically situated at the centre of the universe that, since remote times, had been marked by an *omphalos* or navel stone (now lost).

Figure 1
The landscape setting and ruins of the Temple of Apollo at Delphi, Greece (photograph by the author).

The preexistent, pre-Apollonian site is vividly described by C. Karouzos in apocalyptic terms: "It is as if the earth had been cleft asunder by some cosmogonic spasm; the valley is a vast and profound chasm [...]."[13] The temple where Apollo, the god to whom it is dedicated, was invoked is situated where "the most awesome characteristics of the old goddess of the earth and her oracle were made manifest", and while the archetypal goddess presided over the interior secrets of the earth, "the temple of the young god was placed, and generally so oriented as not only to complement but also to oppose the chthonic forces".[14] Apollo embodied the noble faculty of reason, but was also regarded by the Greeks as the god of prophecy. At Delphi, "he, too, cannot come to grips with the earth without being touched by it".[15] Therefore, in the layout of his temple, the god assumes some of the darkness of the existing cavern and also its oracular power, even though he deposes the old way of the earth goddess by opening the new way, that of the Olympian gods. At Delphi Apollo, an immortal divinity who, according to Heidegger, represents "unperturbed calmness"[16] and hence (having conquered the chthonic goddess) the concept of complete openness or "open overtness".[17] However, the soothsaying Pythia who lived in the temple and was inspired by the sulphur vapourss rising from the bowels of the earth remained as the priestess of the new sun god.

The architects of the temple, the brothers Trophonios and Agamedes, saw dramatic contrasts in the landscape features and endeavoured to show them to best advantage in designing the sacred way to the temple (figure 2). According to Scully the Temple of Apollo and its precinct, which includes the sacred way, are so "organized as to create, out of that basic conflict, a conscious and humanly perceptible drama, in which the god's code of 'Nothing to excess', is finally to emerge in the teeth of nature's irrational power."[18]

Also heaven, the element of the fourfold that is the complementary of the earth, manifests its presence at the temple. This totality can only be experienced by the visitor who enters the site and, by degrees, becomes aware of the temple, its earthly setting and the overarching bright sky, since heaven and earth seem to be in tumultuous contention, each element confirming its essence in a dramatic way but without disturbing the essential balance. When worshippers followed the processional way which meanders from below among man-made and natural objects up to the temple, "the precarious footing of human existence in nature was temporarily forgotten",[19] and upon arrival at the temple's main facade mortal beings most probably experienced a sense of unity with the power of the god (figure 3). One may speculate that psychologically the ritual of approaching the god's precinct restored a sense of balance in nature's immensity to set the worshippers' minds at ease.

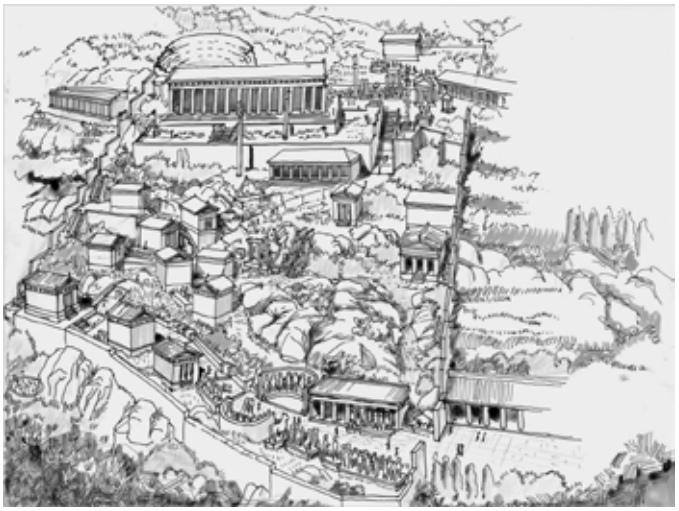

Figure 2
Temple of Apollo at Delphi, Greece, designed by Trophonios and Agamedes, and auxiliary buildings (drawing by Atanasios Rapanos; copyright E.A. Maré).

Figure 3
Facade of the Temple of Apollo at Delphi, Greece designed by Trophonios and Agamedes (drawing by Athanasios Rapanos; copyright E.A. Maré).

The temple was built by mortals who exerted restrained control over the topography of the site. By altering certain features of the earth and leaving others intact the builders exerted self-control, which implies the achievement of harmony between disparate elements. They neither submitted to an excess of formal order, nor to the labyrinthine darkness of the earth or the domination of the vast sky above the craggy mountain. Thus, the total manifestation of the Temple of Apollo and its sacred precinct at Delphi is expressive of the Greek sense of democracy. The emphasis of the temple design is on the open collocation of its elements so that spatially it is available to all people. Only a small, secluded, *naos* was reserved for the god, but on the temple exterior the pediment sculpture celebrates Apollo's apotheosis of elevated beauty and moral superiority.

The Inner Shrine *(Naiku)* at Ise, Japan

The most sacred collection of Shinto sites at Ise, collectively called *Ise Jingu*, centre on the *Naiku* (Inner Shrine) and the *Geku* (Outer Shrine), situated some four kilometres apart. A millennium ago these shrines had been in existence for almost two centuries. It is most remarkable that for more than 1300 years, from the time of Emperor Temmu, who reigned from 672 to 686 CE, the *Naiku* (and the *Geku*) have been rebuilt in twenty-year cycles, most recently in 1993, for the sixty-first time, as Jonathan Reynolds observes: "Although there are some differences between the appearance of Ise Shrine at the beginning of the 17th century and the present, the differences are not [...] extreme [...]."[20] This is because the preservation of the shrine buildings at *Ise Jingu* is important since they are the first great architectural achievement of the Japanese people, even though their model was the modest raised-floor storehouse. According to John Burchard the present shrine buildings are "very old and very new".[21] In 2013 they will be rebuilt for the sixty-second time (figures 4-5).[22]

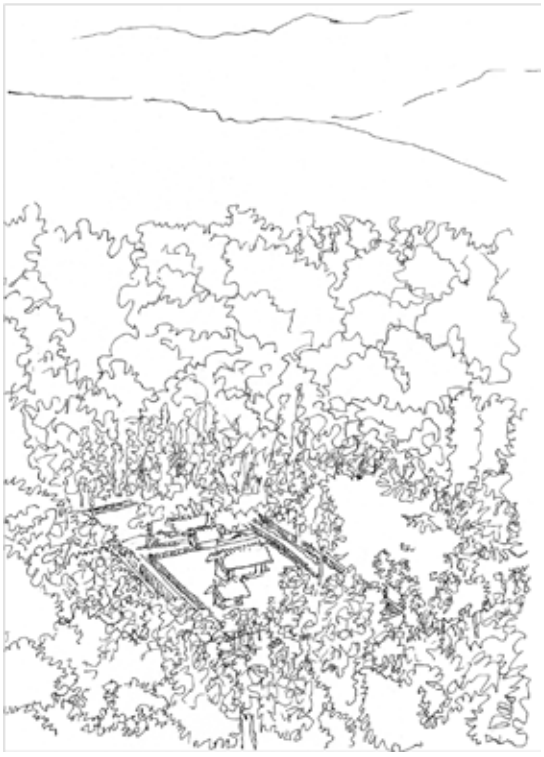

Figure 4
Aerial view of the Inner Shrine (*Naiku*) at Ise, Japan
(drawing by Athanasios Rapanos; copyright E.A. Maré).

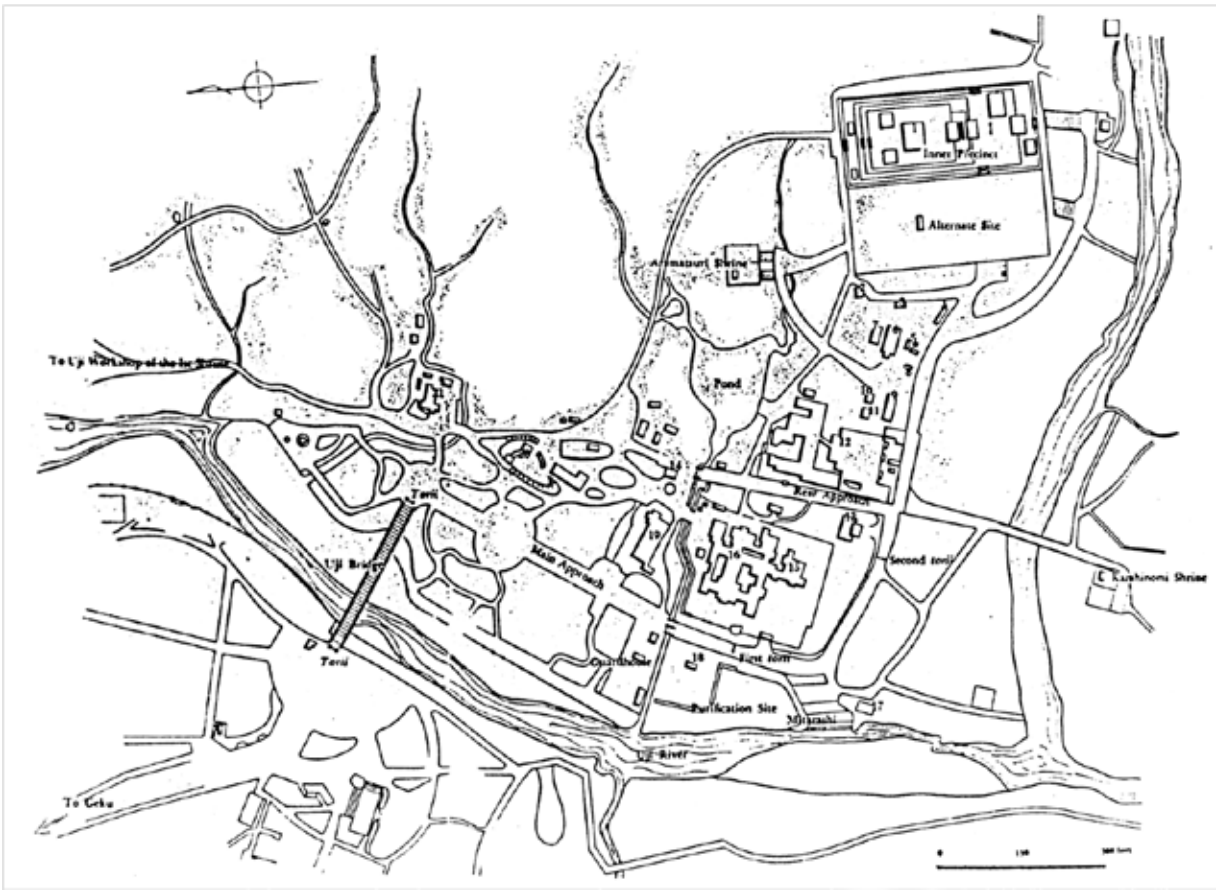

Figure 5
Site plan of the Inner Shrine (*Naiku*) at Ise, Japan, showing its alternative site (drawing by Athanasios Rapanos; copyright E.A. Maré).

According to legend *Ise Naiku* was founded in the reign of Emperor Suinin (249-280 CE). Suinin's daughter, the Princess Yamato-hime, went from place to place in search of a good location for the worship of the Great Deity. When she came to the Ise area she received the following oracular message: "Since this land of Ise is a land where no turbulent tempests blow, and is a peaceful land where the twang of the bow and the hiss of the arrow are never heard, I desire to rest in this land."[23] The princess then erected a shrine for the Great Deity, the Sun Goddess Amaterasu O-mi-Kami, who was worshipped as the foundress of the Japanese imperial line and guardian of the nation. This goddess has her dwelling at the main building of the *Naiku* (figure 6), in a sacred mirror, which rests in a boat-shaped container.[24] As in many ancient mythologies, the boat can be interpreted as an archetypal symbol of rebirth, which is very apt at Ise with its cyclical renewal of building complexes.

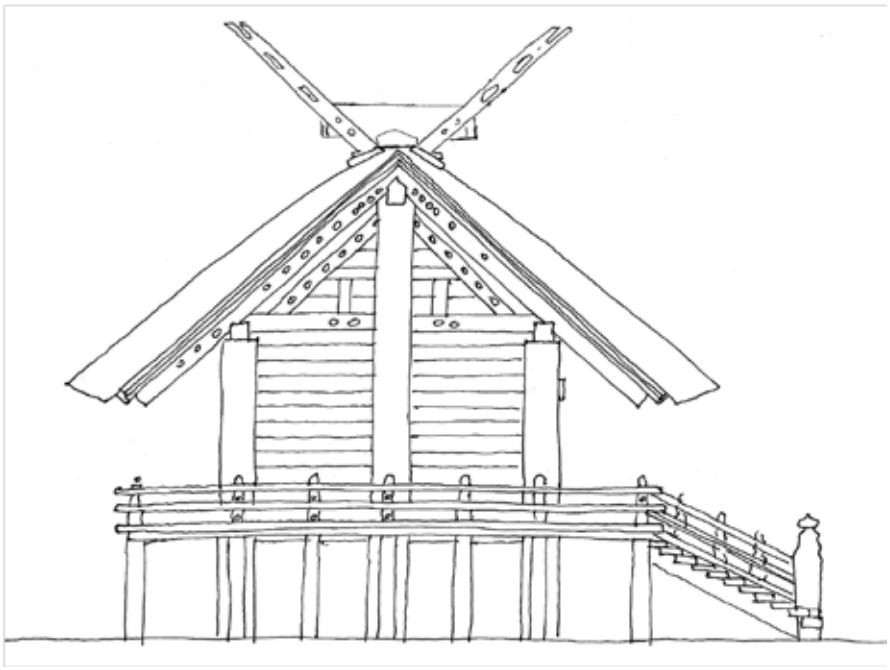

Figure 6
Side elevation of the main Inner Shrine (*Naiku*) sanctuary building at Ise, Japan (drawing by Athanasios Rapanos; copyright E.A. Maré).

The structural materials used at the Ise shrines are mainly cypress, cedar and thatch with metal ornamentation. There are no sculptures and no intricate spaces to fathom, but the refinement of detailing grips the attention. However, more profound meanings than materiality and decoration should be given priority in the discussion of *Ise Naiku*. This shrine embodies an architectural endeavour that makes the presence of human beings as creators of order visible to the deities who are invited to dwell in these earthly places and, in their turn, manifest their presence in an abode created by mortals. In the layout of the *Naiku* a sensitive awareness of the presence of mountains, forest and sky is retained so that the origins of the Shinto religion can still be sensed there. The trees, a waterfall and other natural features that surround the *Ise Jingu* clearings complement the architectural forms, in which there exists a harmonious relationship between elements of the earth such as stone, wood and water, and air and wind which belong to the sky.

The *Naiku* is approached by means of a wooden bridge which spans the Isuzu River; at the end of the bridge a *torii*, or gateway, announces the entrance to a Shinto sacred place. The pathway to the enclosed shrine is paved with small pebbles which cause footsteps to sound *zaku-zaku*, an audible reminder to visitors that the profane space on which they tread is demarcated as separate from the sacred space of the divine presences. Throughout the *Naiku* precinct rocks are corded by ropes and white fluttering paper along either side of the path, thus enhancing their visibility while bearing witness to the care and respect Shinto worshippers lavish on natural elements that are venerated as sacred abodes. Kenzo Tange and N. Kawazoe believe that "in these stones and rocks the ancient Japanese saw something of the mystery dwelling within nature and natural phenomena".[25] They adumbrate the arrangement of rocks in later traditional Japanese Zen gardens of great artistic beauty that are replete with symbolic meaning.

The arrangement of the shrine buildings on the sites within clearly defined boundaries was symbolic of how the divine presences ranked within the hierarchy of the supernatural world.[26] During the Nara period (645-794 CE) the *Naiku* had seventy subsidiary buildings, in addition to the main sanctuary and the east and west treasure houses. The extensive development of the site

testifies to the splendour of the religious festivals of the time and the rich and varied existence imagined for the deities dwelling there. At present the shrines comprise only four rectangular buildings: the *Shoden* or main shrine building (primarily intended as a place of repose for the divine spirit), two treasure houses behind the innermost fence, and a meeting hall for priests between the second and third fences. The fence surrounding the level clearing of approximately 18 x 39 metres and the three innermost fences clearly demarcate the hierarchy of sanctity, and are reminiscent of Heidegger's "clearing of Being", previously referred to (figure 7).

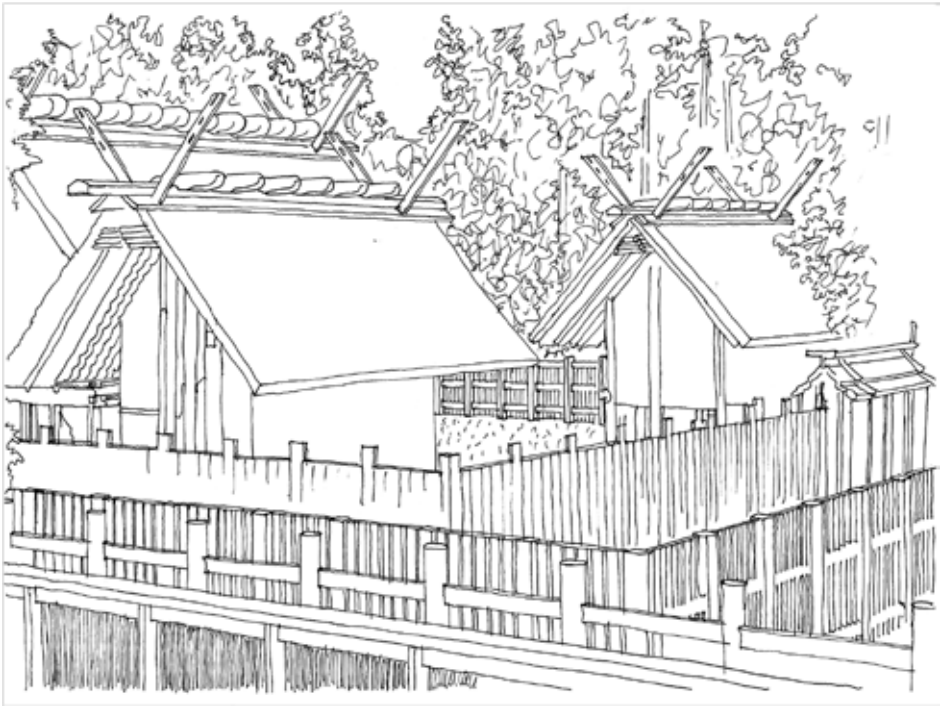

Figure 7
Inner Shrine (*Naiku*) buildings at Ise, Japan, surrounded by four enclosures (drawing by Athanasios Rapanos; copyright E.A. Maré).

The *Naiku* complex is surrounded by four enclosures. Only the first is marked by a gateway which is open to the public. Selected people of high rank are admitted to the second enclosure, but the third and fourth enclosures are reserved only for the Emperor, who is also the high priest. The privileged pilgrim may be led by a priest to a position facing the inner shrine where he or she bows deeply and claps hands three times for the *kami*, which signifies that "reverent respect has been paid to the Emperor and the august ancestors of the Japanese nation".[27]

In the persistence of an architectural pattern one may identify a supreme example of how mythologising thought can imbue an established concept with timeless validity. Since the Ise complex became the prototype for all Shinto sanctuaries elsewhere in Japan, one may say that the repetition of the same basic design and layout pattern reveal acceptance by the Japanese Shinto believers that the unity of human beings and the divine presences is authentically manifest in the shrine architecture. It therefore comes as no surprise that Tange expresses his awareness of the meaning of the established shrine layouts and their periodic restructuring in mythical terms, referring back to the intentions of the original builders: "When the Japanese people try to glimpse the divine, this form becomes the symbol. Or perhaps one should say that the Japanese see in this form the divine. The energy that sustained the creation of this form was also the energy that welded the Japanese into one people; it reflects their primordial essence."[28]

At *Ise Naiku* (and *Ise Geku*) the fourfold is in perfect balance. The natural and the supernatural worlds are brought close together, but in such a way that each retains its separate identity. This manifests in their clearly bounded space, because the demarcation of a boundary is a prerequisite for building and dwelling. Betty Rogers Rubenstein makes the point that "although human hands have tended each stone, and care has been lavished on each pebble [at *Ise Jingu*], nature rules here – not humans".[29] At Ise humans both revere an control nature. Since the layout of the shrine buildings and their precinct enclosures are basically symmetrical, Japanese thought and planning are said to be characterised by extreme formality that contrasts with the natural forms of the environment. However, there is no architectural display of the dominance of a powerful Shinto clergy.

Even though heaven and earth are different they belong together and are, so to speak, locked in a dynamic equilibrium: nature excludes neither humans nor divinities, but is inclusive of all that is mortal and transcendental. In their unity they reflect the eternal cycles of nature. Likewise, the Ise shrine structures – which do not change visibly over time because they are periodically rebuilt and belong to the cycles of nature which reveal, as Noboru Kawazoe says, a "simultaneous opposition and accord".[30] This view stresses the mimetic interaction of human beings with nature.

St. Peter's Basilica at Rome

While both the Shinto shrine and the Greek temple complex reveal a close relationship with nature, St. Peter's Basilica in Rome, the most renowned of Christian sacred places, is located in an urban setting in the Vatican enclave. Its most notable feature, the dome, designed by Michelangelo Buonarroti (1475-1564), is the most important landmark of the city.

Most visitors reach St. Peter's on foot. The approach to the building is along a processional way, part of which is the Ponte San Angelo across the Tiber (figure 8). In 1667 Pope Clement IX commissioned Gian Lorenzo Bernini (1598-1680) to decorate the bridge with ten bronze angels, represented as meditating on the instruments of Christ's passion. The presence of these figures symbolically transforms the bridge into a *Via Crucis* (Way of the Cross) along which the thoughts of pilgrims are focussed on the sacred purpose of their journey while they traverse from the secular to the sacred realm. This processional way, together with the bridge, forms the main axial approach to the piazza and the facade of St. Peter's itself. Later Benito Mussolini authorised the demolition of all obstructing buildings, allowing the processional way also to lead visually into the vast oval piazza which Bernini flanked with a roofed double colonnade that curves around it on either side, and which he likened to embracing arms gathering the faithful (figure 9).[31]

Figure 8
View of Ponte San Angelo, the approach to St. Peter's Basilica at Rome (photograph by the author).

Figure 9
View of Bernini's colonnade, St. Peter's Basilica at Rome (photograph by the author).

The processional way or "surface world" ends at the monumental portico of St. Peter's, designed by Carlo Maderno (1556-1629), which separates it from the interior or "depth world".[32] Although the pilgrim may pause at the awe-inspiring entrance of St. Peter's, he or she proceeds further on an inward journey, that is quite different from the urban approach. The inner, otherworldly, space is reached by continuing along the nave to its climactic intersection with the transepts under the dome. The Christian church is unique in that the pilgrim's journey does not end at the main facade or at a closed entrance, as is the case with the Greek temple and the Ise shrines. Not only priests are privileged to enter into the inner sanctuary, but all worshippers are brought into the sanctuary. Proceeding along the nave, which is an extension of the exterior horizontal axis, the pilgrim arrives at the *baldaccino*[33] for St. Peter, behind which the *Cathedra Petri* is visible in the apse (figure 9). This offers the climactic religious experience of arrival at the place where the horizontal axis intersects with, or more correctly, is transformed into a vertical axis of transcendent encounter. The horizontal, earthbound, progression terminates at the intersection of the nave and transept. The pilgrim reaches the spot where, according to I. Lavin, "a topological transfusion" of Jerusalem to Rome takes place.[34] Here the death of St. Peter – whose first basilica stood over this site – is symbolically linked to the crucifixion of Jesus. It is the place where, for Roman Catholic believers, salvation continues to occur and is also the place where, under the dome which admits mediated daylight by means of the lantern's openings, the horizontal way of mankind is transformed into the vertical or transcendent way of God. The dome is the physical model of the sky, as Thomas Kuhn (1979: 28) notes: "Connecting the vault above the earth with a symmetric vault below gives the universe an appropriate and satisfying closure". But actually the dome forms an enclosure that excludes a view of the natural sky; instead it symbolises heaven, the celestial realm and its protection as a divine favour. Under the dome architecture becomes mystical, closed and unreal in a perceptual sense. It is revealing that Michelangelo intended the lantern which crowns the dome to be dark, to obscure the light of day. His intention was to express his personal sense of separation from God's light. The detail was never executed. Instead, according to Duvignaud, the light inside St. Peter's is an appeal to God to "entice him into the labyrinth of human exchanges and to involve Him again in a world which He seemed to be disdaining".[35]

Proceeding to the bronze *baldaccino*, designed and sculpted by Bernini to rise above the altar over St. Peter's tomb, the pilgrim has a view in the apse of the *Cathedra Petri*, also designed by Bernini, that is raised on a high pedestal (figures 9 and 10). There the pilgrim stands "where earth and heaven meet in a burst of glory".[36] The light shines down through a stained glass window onto the spot where the Holy Spirit descends from above in the form of a dove towards the place where the apostle's grave is located. "Thus tomb, dome and heaven are linked through the architectural design, with light acting as the connecting catalyst."[37] But the light is mediated and diffused; it is transmuted and otherworldly, designed to appear mystical, as if shining from the *Cathedra Petri* itself.

Figure 10
Gian Lorenzo Bernini, *baldaccino* in St. Peter's Basilica
(photograph by the author).

Figure 11
Gian Lorenzo Bernini, *Cathedra Petri* in St. Peter's Basilica
(photograph by the author).

The verse from Matthew 16: 18, "You are Peter and on this rock I will build my church. I will give you the keys of the kingdom of heaven", is inscribed in Latin on the inner base of the dome. What are in fact linked in the edifice of St. Peter's are the earth, represented by the tomb of a mortal, and the sky experienced only indirectly in the form of diffused light from above which is spiritualised in the interior. This arrangement is reminiscent of Rudolf Bultman's insight that the worldview of the Bible is mythical: "Die Welt gilt als in drei Stockwerke gegliedert. In der Mitte befindet sich die Erde, über ihr die Himmel, unter ihr die Unterwelt. Der Himmel ist die Wohnung Gottes und der himmlischen Gestalten, der Engel; die Unterwelt is die Hölle, die Ort der Qual."[38] Furthermore the orientation of celebrating mass is oriented eastwards, which is according to the "cosmic sign of the rising sun which symbolizes the universality of God".[39] The interior of St. Peter's is indeed a simulated cosmology based on a symbolic system of belief, enhanced by the brilliance of art and artifice, thus unnatural. The congregation gather there for communal prayer and ritual, to the exclusion of the outside world and nature.

In contrast to the Shinto shrine and the Greek temple, where the symbol or effigy of the deity signifies its actual presence, the Christian God is transcendent ("not of this world", in Christ's words), but in the interior of the Christian church He is evoked by means of symbols, i.e. the structural treatment of the church interior.

Rubenstein points out that, in order to concretise and represent an authentically Christian worldview, a plan was developed which "apparently combined the exterior Solomonic altar of ancient Israel, the circular Roman Marterium, and the axial plan of the imperial basilica".[40] The resulting construction puts the conceptual models together in a design that combines "in one structure the architectural elements of a tomb, a sacrificial altar, an imperial judgement seat, and a meeting place for the congregation".[41] Thus St. Peter's becomes a complex new world that integrates many of the traditional aspects that symbolised secular power before the Christian era with the unique spiritual striving of the Christian religion to establish the kingdom of heaven on earth which in the fullness of time would be transformed into a new heaven and a new earth in which the ideal unity of heaven, the earth, God and mortals is attainable.

Conclusion

In the different epochs of the long history of mankind all architecture — especially in sacred places — has been instrumental in symbolising their builders' worldviews and attitude to nature.[42] This is evident from the brief analyses of three disparate places of worship discussed briefly in this article in which the presence of the elements of Heidegger's fourfold is researched. The act of building in a clearing where the unity of heaven, earth, gods or divinities (or God in monotheistic religions) and mortals may manifest has historically been mankind's affirmation of its physicality and spirituality. The architecture of nature religions exemplifies more than mere functionality and physical construction, especially in the sense that Burchard emphasises: that it is not physically difficult to reach the Ise shrines, but that "The spiritual journey is longer."[43] Similarly, it is not difficult to reach the temple at Delphi, but the spiritual journey towards the attainment of Apollonian ideals is also longer than the physical. And the Christian pilgrimage to St. Peter's is equally only partially physical, but requires of the participant to become like Jesus one with God.

The Greek and Shinto sacred precincts are architectural contexts of wholeness where the human beings interact in harmony and equilibrium with the sky, the gods and the earth. In contrast, the Christian basilica's interior space of supplication under the shelter of the dome,

designed as a mimetic cosmology, offers human beings who seek the wholeness of the fourfold an essentially symbolic experience.

Notes

1 Harman (2009: 294).

2 An example of Heidegger's obscurity may be found in the way he explains the relationship between mortals and Being. Mortals, he contends, are not rulers over Being, they are "thrown" (*geworfen*) by Being itself into the truth of Being, and according to Kockelmans (1984: 36), they do "not decide whether and how beings appear, whether and how the gods, history, and nature come forth into the clearing of Being, come-to-presence or depart". It is in a space that Heidegger refers to as a "clearing" of Being that things – among which, one presumes, works of architecture are "things" (not objects: see note 2) – reveal their presence and relationship. Heidegger calls this coming-to-presence of things the happening of truth and, as mortals, human beings must accept the stewardship of the truth of Being.

Caputo (1970: 35) interprets *das Geviert* as follows: "The world is not a static structure but a process, the process of the four together. The four depend upon one another in order to be themselves; a change in one is 'reflected' in a change in the other. [...] In the idea of the 'gods' Heidegger overcomes the concept of God as the first cause; the gods are messengers of the divine, guiding and advising human activity. The view of man as a 'mortal' exceeds any sociological or biological understanding of man and takes him as a being who sees ahead into death and takes over that possibility in his life. In the foursome [more generally referred to as fourfold], the 'heavens' are viewed not astronomically but as that which charts the course of time and bestows light upon men. The 'earth' is taken not in its molecular make-up but as what sustains and supports men. Should we change one of the four we disrupt the rest."

See also Harries (2007) and Sharr (2010).

3 According to Harman (2009: 294) Heidegger refers to "thing" and "object" as opposing terms, which is unjustified.

4 Harman (2009: 295).

5 Harman (2009: 296).

6 Harman (2009: 295).

7 Harman (2009: 295).

8 Harman (2009: 300).

9 Heidegger (1949: 274). Heidegger appropriates the term "dwelling poetically" (*dicterish wohnet der Mensch*) from the German poet Friedrich Hölderlin (1770-1843), associated with Romanticism. Neither in "Bauen Wohnen Denken", nor in any other of his works does Heidegger explain what a "dwelling" (noun) should be in which "dwelling" (verb) is poetically possible. Critics attempting an exposition of the phrase "dwelling poetically" also leave the enigma unresolved. See for example Cooper (2012) and Lazarin (2008).

10 Heidegger (1959: 30 and 33). The full quotation reads: "Standing there the edifice rests on rock. This resting on the rock makes the rock yield the secret of its unwielding and yet uncompelled power of holding and sustaining. Standing there the edifice withstands the storm raging above and thus reveals the very nature of the storm in its force. The shining splendour of the stone, apparently so bright only by the grace of the sun, actually makes apparent the light of day, the vast realm of the sky, the darkness of the night. The firm towering of the temple makes the invisible space of the air visible. The unperturbed calmness of the structure stands out against the mounting waves of the sea and makes their uproar apparent by contrast. [...] The Greeks very early called this rising and appeasing in itself as a whole Physis. It elucidates, at the same time, that on which and in which man founds his existence. We call it the earth."

11 Scully (1962: 4).

12 Scully (1962: 1).

13 Karouzos in Andronicos (1975: 6). The full quotation reads: "It is as if the earth had been cleft asunder by some cosmogonic spasm; the valley is a vast and profound chasm [...]. And as soon as we reach the foot of the of the Phaedriades, at the exact spot of the Kastalian Spring, we are faced with something that appears like the chasm: the two rocks are separated by a tremendous gorge, narrow

and impassable[:] the Arkoudorema [...] as it is known today which continues all the way down to the slope, deep into the thicket."

14 Scully (1962: 100).

15 Scully (1962: 100).

16 Heidegger (1959: 63).

17 Jaeger (1958: 64).

18 Scully (1962: 100).

19 Scully (1962: 112).

20 Reynolds (2001: 339, note 21).

21 John Burchard, quoted in Tange and Kawazoe (1965: 9).

22 Watanabe (1964/1974: 26) explains the effect of the continued reconstruction on viewers: "In place of the new timbers sported by a recently reconstructed shrine, the viewer is enjoined to imagine the sanctuary as it once was. In other words, while the buildings themselves may have changed, Shinto shrines are built to retain the intent and basic design of the original architecture; it is this ancient structure as it once existed that the viewer is required to imagine."

23 Picken (1994: 309) explains the essence of the cult at Ise as very simple: "It stressed four principles: (1) the authority of the Grand Shrine [the *Geku*], (2) the sanctity of the Imperial Regalia, (3) the self-awareness of Japan as *kami no kuni* (land of the *kami*) and (4) the expression of reverence by prayer, purity, and honesty."

24 Tange and Kawazoe (1965: 37).

25 Tange and Kawazoe (1965: 25).

26 Tange and Kawazoe (1965: 34).

27 Rubenstein (1965: 84).

28 Tange and Kawazoe (1965: 51).

29 Rubenstein (1965: 81).

30 In Tange and Kawazoe (1965: 167).

31 Gian Lorenzo Bernini stated: "[S]ince the church of St. Peter's is the mother of nearly all the others, it had to have colonnades, which would show it as if stretching out its arms maternally to receive Catholics, so as to confirm them in their faith, heretics to reunite them to the Church, and infidels, to enlighten them in the true faith" (quoted by Norberg-Schulz 1975: 287-8).

32 The terms "surface world" and "depth world" are borrowed from an anonymous author of *Meditations on the Tarot*: *A Journey Into Christian Hermeticism*. New York: Amity House, 1985: 512.

33 The *baldaccino* (baldaquin) evokes heaven. Like umbrellas held over the heads of people of high office it symbolises divine protection and favour. Thus, following an ancient custom a little ornamental roof is provided in St. Peter's over the head of the officiating priest.

34 Lavin (1968: 343-5).

35 Duvignaud (1967: 84).

36 Rubenstein (1965: 78).

37 Rubenstein (1965: 79).

38 Bultman (1967: 15).

39 These words by Pope Benedict XVI are quoted from Sparavigna (1209: 1).

40 Rubenstein (1965: 81).

41 Rubenstein (1989: 81).

42 In the Western tradition, Vitruvius (*circa* 80-15 BCE), the Roman writer, architect and engineer, respected what he called the natural correctness of buildings by stressing the importance of placement, shape and orientation of buildings, i.e. with regard to the earth and the sky.

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Drawing and mark making in *Johannesburg 2nd Greatest City After Paris*

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In the animation film, Johannesburg 2nd Greatest City After Paris (1989), of the South African artist William Kentridge, he combines his charcoal drawings and mark makings with photography, in what he calls Drawings for Projection. This article investigates how Kentridge combines the graphic technique of drawing and trace with the photographic imprint, or the chemistry of the hand and the eye. Johannesburg and Paris are two great cities that played important roles in the private life of William Kentridge. Kentridge was born in Johannesburg and is still living there. In essence Johannesburg is a mining city with visible industrial souvenirs like the huge mine dumps, highways, billboards and mine shafts in the desolate landscape - a city built on speculation. By contrast, Paris is the city where Kentridge studied mime (1981 – 1982) at the École Jacques Lecoq and gained international exposure. With this film Kentridge remembers both Soho's capitalist interior and the isolated barren landscape of the miners and the other workers.
Key words: William Kentridge, drawing, Soho Eckstein, Felix Teitlebaum, *Johannesburg 2nd Greatest City After Paris*

Tekeninge in tyd en ruimte: *Johannesburg 2nd Greatest City After Paris*
In die Suid-Afrikaanse kunstenaar, William Kentridge, se getekende animasiefilm, Johannesburg 2nd Greatest City After Paris (1989) kombineer hy merkmaking, houtskooltekeninge en fotografie wat hy Drawings for Projection noem. Hierdie artikel ondersoek hoe Kentridge sy grafiese tekentegniek, spoor en fotografie gebruik het om 'n wisselwerking tussen oog en hand daar te stel. Johannesburg en Parys is beide groot stede wat elk 'n belangrike rol in die lewe van William Kentridge gespeel het. Hy is in Johannesburg gebore en woon steeds daar. Johannesburg is hoofsaaklik 'n mynstad met sigbare oorblyfsels van groot mynhope, mynskagte, reklameborde en hoofweë binne die verlate, barre landskap – 'n stad wat op spekulasie gebou is. Parys, hierteenoor, is die stad waar Kentridge mimiek tussen 1981 en 1982 by die École Jacques Lecoq bestudeer het en internasionale blootstelling verwerf het. Wanneer Kentridge as filmmaker verskillende raampies of stroke film saamvoeg, word die toeskouer binne sekondes vanaf die kapitalistiese interieurruimte waarin Soho hom bevind na die leë landskap van die myners en ander werkers verskuif.
Sleutelwoorde: William Kentridge, tekeninge, Soho Eckstein, Felix Teitlebaum, *Johannesburg 2nd Greatest City After Paris*

In an interview with Michael Auping (2009: 241) Kentridge stated: "My goal was to see how a drawing comes into being […] I started by filming the blank page with the idea of filming each mark as it was added. The idea was that you would see a drawing drawing itself […] changing into different images. I wasn't thinking of it as animation. I was thinking of it as drawing".

Johannesburg 2nd Greatest City After PARIS (1989) is the first in the *Drawings for Projection* omnibus of nine short animation films which was coined *9 Drawings for Projection*. Rosenthal (2009: 40) stated that although "he did not realize it at the time, he had embarked on the first great theme of his career and had found the medium through which to express his complex interests". The title of the film, the setting, the names of the two main personages (Soho and Felix) and the phallic fish in the hand came to Kentridge in a dream (Stone 2005: 21, McCrickard 2012: 27). Soho and Felix represent complementary impulses that coexist within each individual, rather than mutually exclusive types. The setting, characters and theme of this

animated film have been repeated in the other animation films. Geographic and historical location are critical important elements in all Kentridge's films. His charcoal *Drawings for Projection* portrays South African society of the 1980s and 1990s against its socio-political backdrop. This essential inspiration for his contemporary art works is evident in the manipulative blending of historical periods with contemporary time, and imaginary space with known spaces.

In contrast with traditional cel-animation, Kentridge draws his characters directly on white paper. As the characters move over the drawing surface, some parts have been erased and new areas have been drawn and photographed as the process repeats itself. We are in fact watching (projecting) the creation of a drawing and the erasing thereof. The ghost images of previous drawn images remain on the paper, because charcoal seldom erases cleanly. Kentridge (McCrickard 2012: 26) stated that "the first year that [he] was doing animation [he] tried every possible way to get rid of that ghost image […] seemed to me a fault, an inadequacy in my technique". It took him some time to realise that these ghostly, cloudy images that have remained, are indeed as much part of his final work of art and that they also serve as metaphor for South Africa's predicament in the sense that erasing the past is an exercise that can never be completed. By means of these clear traces and ghost images, Kentridge connect the foregrounded signifying complex with history and with the signifiers that have been expressed.

Kentridge uses the animation technique to tell the story in consecutive camera shots and frames. By repeating and placing these still images in sequence Kentridge brings his story to life and he draws the viewer into the drawn images to decode the events. He leads the viewer to see his references and to try and decode them. The story is thus an essential part of his drawing, animation and filming process.

Film title

The viewer can relate to the specific geographic spaces through the title, *Johannesburg 2nd Greatest City After PARIS* (1989). Both Johannesburg and Paris are busy metropoles and have been immortalized in this film. Kentridge was born in Johannesburg and also spent his adolescent years there. Paris, on the other hand, can be seen as his instructor: the city where he studied and came into contact with external and international influences. This could be the reason why he wrote PARIS with capital letters in the title of his film. The title signposts two cities thousands of kilometres removed from each other. Furthermore, the title is also ironic, because Kentridge's "*Greatest"* Johannesburg merely brings into livid prominence all the scars of the mining town days. The central theme of his film is the random and rampant commercialisation of the city and how this affected both man and nature. Boris (2001: 33) stated that Kentridge's work "is insistent on its open-endedness and can be associated with other moments of history, allowing viewers of different backgrounds and experiences to identify with the narrative and the images".

The scene is Johannesburg, a city built on speculation – a landscape of mine dumps, billboards and highways. Kentridge portrays his own space – a space that comes from his childhood days - by means of maps, place names and objects. He tells his own story by means of his huge pastel- and charcoal drawings on white paper which were photographed as they developed. The drawings and images are packed with visual references to known spaces like the Johannesburg skyline and mine dumps. These visual and graphic references can be further decoded in terms of his graphic images and intertitles (almost like silent movies) that move across the screen and which act as signifiers of place and context and advance the narrative. The viewer recognises and decodes his images and drawn titles of Kentridge's references to try to

understand his message. Different themes overlap in each film, but are held together by time as the bonding agent. Kentridge's graphic images contribute to his depiction of time and space and become both reality and the subject of his film.

Time and space

Film is an art form and dynamic medium with movement as its main component. Movement is only possible within the time and space (or time-space) matrix. Space is three-dimensional as well as immobile, while time can only be measured in terms of its never ending passage or sequence of events. The moving element in film transforms time and space to a more convincing reality. By means of references from his own social and political background, which he incorporated into his graphic and filmic works; Kentridge qualifies as a scrupulous visual commentator. To this end he had a good visual vocabulary – metaphors for the reality of daily living. Kentridge's use of the film as medium effectively erase and transcend the limits of time and space. Time is pliable and can be modelled or controlled with precision with film as medium. He manipulates the action, his time, the viewer's time, his emotions, and the dramatic flow of the film. Time is usually contained within a single frame. Kentridge manipulate time by means of filmic montage resulting in movement from one frame to the next. He makes use of time, slow motion, high-speed motion or frame freeze to underline his message. Through these techniques time transforms to a new dimension and message without losing the viewer on the way.

Rhythm and emotional experience go hand in hand – influenced by time just like the real world - minutes, hours, days, seasons, and life - an illusion of the world on film. Each film follows its own pace by means of the drama and frame of mind. The cinematographer decides what is important for the storyline of the film and what must be left out must know the rhythm of his film – each shot or part thereof; the timeframe (action) will set the pace. One becomes accustomed to a particular space through the senses of sight, hearing, feel and smell. For this reason spaces may be seen as series of visual/sensual impressions. In the Kentridge films the spaces portrayed occasionally gives one the impression of real spaces instead of just backdrops for characters, their worthiness or their actions.

Kentridge portrays his characters within his known urban landscape space of Johannesburg. He is very aware of his environment which had a major influence on his life. He remembers how Johannesburg changed before his eyes as a living space. During the fifties high steel gates were erected in Houghton, a suburb of northern Johannesburg - where the artist still lives. During the 1976 uprisings two-metre high walls with nails on top were added. In 1985, when the first *State of Emergency* was announced in South Africa, razor wire was added on top of this. These walls were not broken down with the unbanning of banned persons and organisations, but were topped with electric fencing.

What does the space look like? How is it arranged? The action takes place, for example in the city of Johannesburg, overlooking the highway, around mine dumps, next to the brazier and even inside Soho's mansion. Place names like Johannesburg and Paris may replace unnecessary space compositions. According to Vandermoere (1982:128), "[…] the simple naming of a place may replace a lot of qualifications. The reader knows that New York is not the same as London, Paris or Moscow". The inhabitants of a city may also qualify a space. The description and qualification of different spatial units may not always be correct. Big cities, rural villages, streets and houses all have their own set of common, distinctive features. The more precisely a space is portrayed, the more specific features it will have in common with other places. Although the

drawings of the urban Johannesburg landscape can be perceived and naturalistic, Kentridge does not try to draw specific geographical or moral points but rather approaches and draws the urban landscape and veld with things other than pure nature.

Does this contain known or unknown spaces? Big or small? The answers to these questions will decide if the space of the art work has its own right to be part of something else, like the artist's frame of mind or his social surroundings. The film must be able to survive within the idea thereof - in the viewers' thoughts and dreams (time and space), because they transcend from one space to another by means of their thoughts or imagination. When the cinematographer joins different frames or filmstrips by means of montage or when a far shot is replaced by a close-up camera shot, the viewer will be moved from one space to another.

Character

Characters are known by their characteristics, which is a system of elements that are unique to a particular person. A universal characteristic of all people is that everyone has a personal name. Character is an important element of any narrative structure. Kentridge takes his characters from all walks of life – from the poorest of the poor right up to the rich and famous - beggars, prostitutes, miners, alcoholics, men in evening wear and social outcasts.

The film *Johannesburg* starts by introducing the *dramatis personae*. The main characters are central to the text around which other happenings are scheduled. The main protagonists in this film are Soho Eckstein and his "Weltschmerz alter ego" (McCrickard 2012: 17) Felix Teitlebaum, who portray different aspects of the artist. The third main character, is the voluptious Mrs Eckstein. Kentridge concentrates mainly on the differences between characters, character development (especially emotional growth), and the characters' mutual relationships. His characters do not speak an auditive language. It is rather the image or visual act that 'speaks'. For Kentridge a single image 'speaks' more than a thousand words, and he further enhances the visual image with the addition of suitable music and sound effects.

Without conflict there is no drama, and without characters there is no conflict. Drama may thus be described as the action or conflict between the various characters. You may ask yourself who these characters are and what they portray, but unfortunately there is no simple answer to this question. Kentridge's complex expressiveness combines both satire and allegory with his own personal expression. The meaning of the artist's characters lies in each viewer's own decoding and association with the characters.

Soho Eckstein

The first character to appear in *Johannesburg* is the successful Johannesburg capitalist, industrialist and mining magnate, Soho Eckstein. He smokes his cigars and wears his characteristic pinstripe suit, even in bed. He manipulates the world by means of his monetary wealth. Kentridge uses Soho as a symbol of capitalist greed and corruption. This character possibly derives his name from Hermann Ludwig Eckstein a particularly vicious *Randlord* who lived at the turn of the 20th century. Cartwright (1965:70) stated that Hermann Ludwig Eckstein "[...] was, first and foremost, a business man who never learned to suffer fools gladly […] he was also a man of great charm, whose geniality and tact made him the ideal company chairman. On the Witwatersrand Eckstein had as much prestige as Rhodes had at Kimberley". Soho not only resembles himself, but also his paternal grandfather, Morris Kentridge – see his early linocut, *Muizenberg 1933*

(1976), of his grandfather sitting on the beach in Muizenberg, Cape Town, dressed in his typical three-piece pinstriped suit (McCrickard 2012: 76-77).

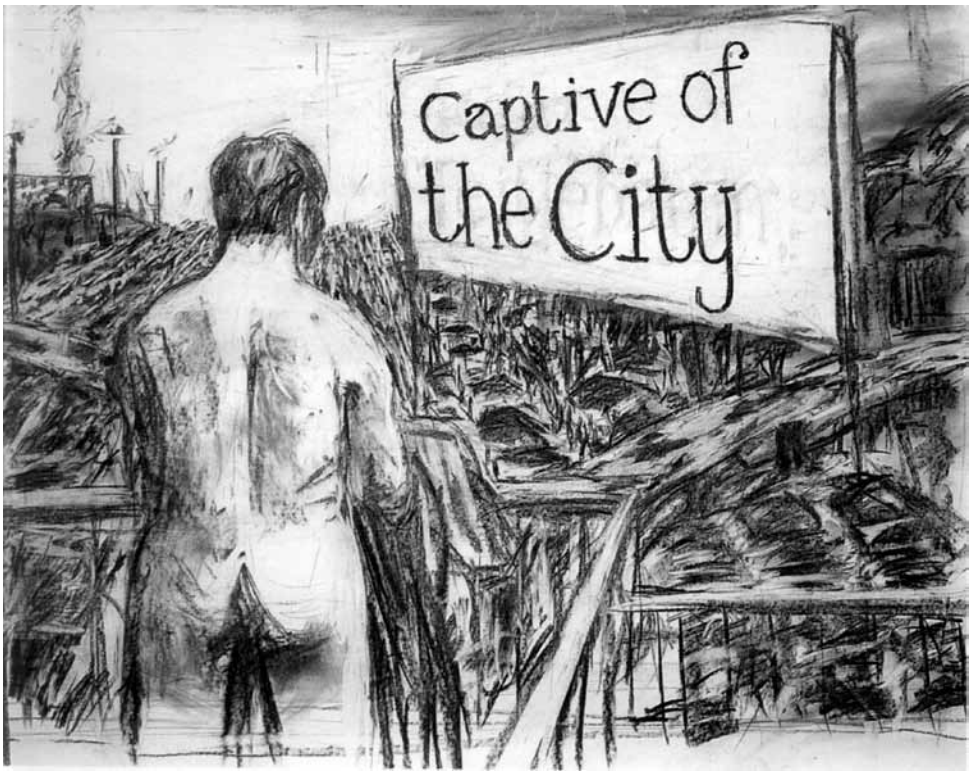

Figure 1
Still image from William Kentridge's, *Johannesburg 2nd Greatest City After Paris* (1989), showing Felix as 'Captive of the city'.

Felix

The next character to enter the film space is Felix Teitlebaum, Soho's antithesis. Felix is a partial self-portrait of Kentridge (McCrickard 2012: 77). In sharp contrast with Soho's swagger, Felix is always portrayed as exposed, vulnerable, sensitive and naked. Felix is caught in desire, defaulting innocence, voyeurism and exclusion. Kentridge uses Felix to portray his relation with reality and coin him on a giant billboard in the landscape as, *Captive of the City* (see figure 1), while Felix stares at the flow of traffic on the highway interchange below. He symbolises not only Kentridge who cannot escape from the city of Johannesburg, but also Eckstein's alter ego and conscience. Soho and Felix are thus "effectively two halves of the same character" (Rosenthal 2009: 41, McCrickard 2012: 77) and are drawn in his exact likeness.

Kentridge jibes at accepted conventions by always portraying Felix naked in contrast to Soho, which he dresses in a pinstripe suit. Convention dictates that one must wear certain clothes for a specific function and behave in a certain manner towards minors. Felix is aware of his bourgeois background in contrast with the poor black mine workers. A class war is clearly signalled by the juxtaposition of characters, scenes and subjects.

In contrast with accepted norms it is more important for white men to be clothed, while white women are frequently portrayed in the nude. The female form (nude or clothed) is usually

an element of beauty. Clothes are so well adapted to her bodily attributes that she can send cultural messages with her body regardless of whether she is clothed or not (Kent, 1985:90). Virginia Woolf stated that men's clothes have a much more important function than ladies' clothes, because they lend dignity and status in the context of western social convention. In recognition of this principle Soho is dressed in a pinstripe suit to mark his authority. There is a reason for Felix's nudity. When he is placed within a specific space there is no reference to the phallus, but rather to his behind (see figure 1). It is clear at a glance that Soho and Felix have opposite views about their surroundings and that this must lead to conflict between them. Felix is a much more complex person than Soho. The potential of the narrative medium has given Kentridge the opportunity to translate these different and contrasting worlds into his own unique visual language.

Mrs Eckstein

The third persona to be introduced is Mrs Eckstein. She is portrayed in a huge perspective space that combines elements of both a public swimming pool and a theatre. The frame intertitle, *Waiting*, informs the viewer that Mrs Eckstein is indeed for ever waiting. Her husband, Soho Eckstein, neglects her while he amasses more fortunes. In the meantime she has become the victim of his ambition. She might also be waiting for her own fulfilment. By the end of the film she has become the central catalyst in Soho's personal redemption. Because she waited interminably for Soho's arrival, she has taken Felix Teitlebaum as her lover. With this action she binds the narrative not only to a whole, but also creates a point of conflict. However, she remains an intellectual solution. The reason why someone falls in love with her, or asks her to return remains a mystery for the viewer.

Anonymous character

The last persona to enter the film action is not formally introduced by a frame title or billboard. For the sake of this discussion one can call this homeless character *Harry*. He is dressed in a jacket with a distinctive herringbone pattern. He moves on crutches towards his brazier where he stops to warm himself. He stands as a symbol of the oppressed masses (miners) and the destitutes in the background. Harry's stance reminds the viewer of a figure in William Hogarth's (1697-1764) *Industry & Idleness* series (twelve engravings). The Harry figure became the symbol of hard labour. (Godby, 1990: 84). William Kentridge made eight etchings for his *Industry and Idleness*-series.

Drama and conflict

The juxtaposition of characters in a drama leads to conflict (clashes) between them in that one crisis usually leads to the next, thus building up to a conflict situation within the dramatic action. Conflict can be labelled as clashes that happen when people with opposing ideas confront each other. Conflict is thus the central distinctive feature that provides the essential impetus of all drama. Conflict builds up towards the last big crisis, or climax, from where the dramatic action takes a much slower pace towards the end of the drama.

The conflict in Kentridge's animation films arises between Soho, Mrs Eckstein, and her lover, Felix Teitlebaum, because of their clashing personalities, ideals and depictions – Soho is always depicted from the front dressed in his famous suit, Felix in contrast is always naked and

mostly seen from behind. Soho and Felix have opposite ambitions: Soho forms and builds a city from nothing, while Felix demolishes the foundation and transcends their new dreams. More conflict builds up through the course of the film as both men are in love with Mrs Eckstein. A second subplot breaks the narrative from time to time. Each and every film frame can stand on its own, but because of their filmic sequence they are joined together to form the complex narrative. Once the characters have been introduced the scene is cut and followed by an unaccountable scene of a bath with running water. A wide variety of household items like forks, cups and glasses, are thrown out of the bath. The narrative happens around the lilting and lively rhythms of the 78 rpm soundtrack of Duke Ellington while the characters are exposed to each other.

The next scene starts with the greedy industrialist Soho Eckstein – dressed up in his pinstriped suit, his fat fingers clenching a thick cigar, which are both symbols of his extreme wealth. The intertitle, *Soho Eckstein Takes On The World,* introduces the viewer to Soho as employer of the masses. His German surname, Eckstein, can be translated to "cornerstone" which represents the first stone or starting place in the construction of a monumental building. In the meantime a hammer- and sickle fly from his typewriter. These are symbols of dispossession: Soho reacts to these impulses by throwing objects from his reality towards Harry's urban landscape. A meowing cat runs out of the scene. Kentridge has started to marginalize mechanics, depicting it not only as degraded devices of control but also to investigate the limits of vision.

The scene changes to Felix's bathroom where the bath is overflowing. While Felix relaxes in his bath he philosophises and pages through a flipbook of crude erotic images depicting special moments with Mrs Eckstein. Benezra (2001:20) stated that "he [Felix] does so through a notebook of drawings that he holds and that evolve through correction and erasure in just the same way Kentridge's drawings for projection do". The next intertitle, *Felix Teitlebaums anxiety filled half the house*, appears like this on the screen while he "showers her with [his] erotic attention" (Rosenthal 2009: 40). His anxiety fills half the house and overflows the world till all is destroyed, thus gluing together the country's memory of abuse. Felix listens to the world with headphones. He tries to perform within the material world (Soho's domain) and to develop an internal sensitivity as an alternative way of life. He represents Kentridge as a witnessing artist. The narrative jumps between scenes, showing Soho's greed and the development of his wife's love affair with Felix because he neglects her while he works at building his empire. The coupling of Felix and Mrs Eckstein is portrayed by the following metaphorical acts: he licks and kisses the palm of her hand, giving her a seal of love in the form of a fish. The kiss changes to a small phallic fish (which is part of his thoughts) that starts swimming in her hand and then jumps through the air. The fish takes on a new life (personified) and joins the two lovers in the sensual element, water. Love and the dainty little fish are exactly the same thing for Soho - the charcoal fish writhes sensually in their hands (see figure 2). In language an example of a metaphor would be: love is a fish. The animation-metaphor lets a fish swim from the man's mouth to the woman's when he kisses her.

Figure 2
Still image from Kentridge's film, *Johannesburg 2nd Greatest City After Paris*, (1989), depicting Felix and the fish in Mrs Eckstein's hand.

Water as elemental power is traditionally seen as a symbol of life. The symbolic meaning of water has developed from its daily uses. Water is used for example as a solvent, a detergent, and a substance in which different elements are joined. Water is also a very important element in the life of a fish. Within the context of this film water as an element gets a new meaning because it becomes a medium for sensuality and freedom. Water is a very strong element on both a cultural and a scientific level. The fish symbol is also repeated in Kentridge's other animation films. Both the fish and the fat cigar between Soho's fingers have been portrayed in the semblance of a phallus. The fish and the cigar here resonate with each other at the paradigmatic level of decoding as phallic images. The poetic quality of Felix and Mrs Eckstein contrasts starkly with Soho Eckstein's greed and materialism. Mrs Eckstein rises as central catalyst in his personal freedom. While Soho sits at his table, he becomes aware of the love affair between Felix and Mrs Eckstein by means of the piercing sound of a ringing telephone. The next intertitle, *Rumours of a Different Life*, appears on the screen. Soho Eckstein, mining magnate, is shown in the process of aggressively buying everything that comes his way with a view to eventually taking over the world. Soho buys almost half of Johannesburg.

Soho's empire is built from nothing and within seconds the screen is filled with thousands of miners by means of the animation medium. Kentridge already used the procession theme in 1987 with his drawings for the Standard Bank National Drawing Competition. In *Johannesburg* he adds a few prominent figures to the procession walking through the barren Highveld landscape outside Johannesburg. The procession starts at the bottom left corner, as in the comics. The procession walks through the barren landscape with a person carrying a primus stove as a symbol of survival. Kentridge's creativity is underlined by the magic qualities of the animation medium. The landscape is overwhelmed by the procession of urban poor. The desperate plight of the poor is accentuated by the music of the *South Kaserne* choir (Godby, 1992; no page numbers), while Soho tries to keep his ears covered by his hands.

The drawings that Kentridge films, remind one of the epical work of the Russian revolutionary director, Eisenstein. Kentridge portrays the resemblances between the Russian revolution and the transition period within the South African milieu. This is why his concern with his present surroundings is a quest for meaning in his work. A next title is added to the screen: *Soho Feeds the Poor*. This leads the narrative in a new direction. Soho sits alone at the table loaded with food. He eats with ravenous greed (see figure 3a). Eventually he feels guilty. He starts pelting the poor with scraps of food – both feeding the poor and killing their leaders. McCrickard (2012: 26) stated that "Kentridge shifts Soho's arms across the page, leaving shadow states (ghost images) of each arm position in a charcoal trace" across the drawing. The same way that Soho manipulates his world, Kentridge also manipulates his medium – he draws a scene just to destroy it with his potent eraser. Soho is a grotesque character who reigns supreme over his human empire when he sits at his desk-cum-landscape (see figure 3b) while his workers adore him like machines and bring the ore to the surface and march through the landscape.

a

b

Figures 3 (a & b)
Two still images of Soho: (a) sitting at his table eating and (b) sitting at his desk-cum-landscape watching as the procession march through the landscape from Kentridge's film, *Johannesburg 2nd Greatest City After Paris* (1989).

The vast scale and free but highly skilled use of the charcoal and pastel drawing mediums and erasure thereof add to the emotional feel of the procession of the poor that move over the screen – these images remind one of the inhuman handling of both workers and miners. There is a strong resemblance to social satire, a dramatic and theatrical background that reminds one of the cabarets. Lights and lamps are both theatrical accessories and eyes or observers that are always there. Soon there is nothing left in the landscape. As the poor and their leaders disappear, Felix walks naked through the landscape and confronts Soho with his actions. Soho produces a fish as proof of Felix's love affair with his wife. Felix and Soho hit each other out of the scene.

A shelf structure followed by a swift, macabre scene with disembodied heads inside these shelves which refer to Kentridge's earlier, powerful drawing *Casspirs Full of Love* (1989) (see figure 4). These stacked heads are inspired by Tony Cragg's *Inverted Sugar Crop* (1986) and the image was repeated in Kentridge's film *Mine* (1991) where the miners were sleeping in kampongs underground.

Figure 4
William Kentridge, *Casspirs Full of Love*, 1989, Etching, 147 x 81.5 cm, Collection Johannesburg Art Gallery (source: http://www.terminartors.com/artworkprofile/Kentridge_William-Casspirs_Full_of_Love).

Then Mrs Eckstein appears from behind these shelves with a towel over her shoulder, almost as if she has come from the swimming pool. When she moves in front of the shelf the towel changes into a massive fish and all proof of destruction is wiped out. Kentridge shows in this film that materialistic concerns are much more important than human relations and uses this perception as the central theme of his narrative. Signs, symbols and metaphor add to the narrative content. The scene moves to a more every day, grimy industrial landscape with a swimming pool surrounded by a fence. Soho and Felix are inside the pool, having their final club fight almost like Goya's *Duelo a garrotazos* (1820-1823). Felix wins this fight. The film ends with the procession of the poor proletariat who march and protest for their human rights, while Soho lives out his greed and the triumphant music reaches a climax.

Conclusion

The political stresses act as backdrop for the main characters' conflict in this animation film. The demands of the poor influence the narrative, but the central theme is still the competition between Soho and Felix for Mrs Eckstein's hand. When Soho asks Mrs Eckstein to come home, the sky turns black above them. In this modern fable love vanquishes money. The story is set within the socio-political context of apartheid governed South Africa in the late 1980s and the film is spawned with images of the dispossessed and the disenfranchised. In the animated film *Johannesburg* Kentridge portrays both South Africa's ironic acceptance of the apartheid situation and the fate of its inhabitants. The time and space themes are further explored in his later so-called *Drawings for Projection*-films such as *Mine* (1991), *Monument* (1990), *Sobriety, Obesity & Growing Old* (1991), *Felix in Exile* (1994) and *The History of the Main Complaint* (1996).

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