

A mediated Modern Movement: Le Corbusier, South Africa and Gabriël Fagan

Arthur Barker

University of Pretoria

E-mail: arthur.barker@up.ac.za

It is widely acknowledged that the canonic architectural principles developed, in the late 1920s, by Charles-Édouard Jeanneret-Gris (1887-1965), better known as Le Corbusier, had a profound effect on the built environment of the world. Although the effects of the orthodox Modern Movement were less influential in South Africa, they were directly disseminated through Rex Martienssen's (1905-1943) meetings with Le Corbusier in 1933 and 1937, formation of the Transvaal Group, editorship of the *South African Architectural Record*, the 1933 publication of *zero hour* together with Gordon McIntosh (1904-1983) and Norman Hanson (1909-1991) and a number of seminal buildings. A short-lived orthodox Modern Movement influence was replaced with a regional Modernism, and a South African Institute of Architects' Gold Medal award winning, architect Gabriël (Gawie) Fagan (1925-) later synthesised the principles of Le Corbusier's canonical orthodoxy with a deep appreciation and understanding of Cape vernacular architecture. This article will briefly contextualize the Modern Movement, will outline the architectural influence of Le Corbusier, his link with South Africa, the mediation of his architectural principles in this region and most importantly his direct and indirect influence on the domestic architecture of Gawie Fagan.

Keywords: Modern Movement, orthodoxy, canon, vernacular, synthesis, mediation

'n Bemiddelde Moderne Beweging: Le Corbusier, Suid Afrika en Gabriel Fagan

Dit word algemeen aanvaar dat die kanonieke argitektoniese beginsels wat, in die laat twintigerjare van die twintigste eeu, deur Charles-Édouard Jeanneret-Gris (1887-1965) en beter bekend as Le Corbusier, ontwikkel is, 'n diepgaande uitwerking op die beboude omgewing van die wêreld gehad het. Hoewel die uitwerking van die ortodokse Moderne Beweging minder invloedryk in Suid-Afrika was, is dit direk versprei deur Rex Martienssen se (1905-1933) vergaderings met Le Corbusier in 1933 en 1937, vorming van die *Transvaal Group* redakteurskap van die *South African Architectural Record*, die 1933 publikasie *zero hour* saam met Gordon McIntosh (1904-1983) en Norman Hanson (1909-1991) en 'n aantal invloedryke geboue. 'n Kortstondige ortodokse Moderne Beweging se invloed is met 'n plaaslike Modernisme vervang en 'n Suid-Afrikaanse Instituut van Argitekte, Goue Medalje bekroonde argitek, Gabriël (Gawie) Fagan (1925-) het later die beginsels van Le Corbusier se kanonieke ortodoksie vereenselwig met 'n diepe waardering en begrip van die Kaapse volksboukuns. Hierdie artikel sal kortliks die argitektoniese invloed van Le Corbusier, sy verbintenisse met Suid-Afrika, die bemiddeling van sy argitektoniese beginsels in hierdie streek en mees belangrik sy direkte en indirekte invloed op die plaaslike argitektuur van Gawie Fagan beskryf.

Sleutelwoorde: Moderne Beweging, ortodoksie, kanon, volksboukuns, vereenselwigheid, bemiddeling

It is widely acknowledged that the canonic architectural principles¹ developed, in the late 1920s, by Charles-Édouard Jeanneret-Gris (1887-1965), better known as Le Corbusier, had a profound effect on the built environment of the world. Through the work of architects such as Oscar Niemeyer (1907-2012) in Brazil, Harry Seidler (1923-2006) in Australia, Tadao Ando (1941-) in Japan and Team X in North Africa (Lejeune and Sabatino. 2010:252), to name a few, Le Corbusier's Modern Movement functional, spatial and formal principles were contextually developed and devolved.

Although the effects of the orthodox Modern Movement were less influential in South Africa, they were directly expounded through Rex Martienssen's (1905-1943) meetings with Le Corbusier in 1933 and 1937, editorship of the *South African Architectural Record* (SAAR), the formation of the Transvaal Group and the 1933 publication of *zero hour*² together with

Gordon McIntosh (1904-1983) and Norman Hanson (1909-1991). The short-lived orthodox Modern Movement influence was, later, replaced with a regional Modernism, including seminal contributions from architects such as Norman Eaton (1902-1966) and Hellmut Stauch (1910-1970) who were less formalistically, and more principally, influenced by Le Corbusier. During the 1960s and 1970s, Cape-based architect and academic, Roelof Uytenbogaardt (1933-1998) paid homage to Le Corbusier in a number of seminal buildings such as the Werdmuller Centre in Claremont (1976) and the UCT Sports Centre in Rondebosch (1977)³ while Naude Santos Architects created a number of similarly inspired residences such as the Scott Road apartments in Kenilworth (1971) and House Stekhoven in Newlands in 1972.⁴ A decade earlier another Cape-based, and South African Institute of Architects' Gold Medal award winning architect, Gabriël (Gawie) Fagan (1925-), recalled the principles of Le Corbusier's canonical orthodoxy, synthesising it with a deep appreciation and understanding of Cape vernacular architecture in a number of houses, including his seminal work *Die Es* (1965).

Method

This architectural-historical article will first describe mediations of the Modern Movement to elucidate the dissemination of its canon and various adaptations. This will conclude with the final mediations in South Africa. Thereafter, Fagan's context will be described and the common source of inspiration for both himself and Le Corbusier, namely Mediterraneanism, will be described. Lastly the direct and indirect influence of Le Corbusier's design approaches on Fagan will be unpacked as a series of architectural mediations that focus on domestic architectural exemplars.

Modern Movements

The Modern Movement was characterised by a number of mediations. The first Modern Movement was the most coherent approach to the pressing issues of the time. At its core was the pursuit of the new and a reaction against the stagnant use of tradition. It expressed a programmatic and pastoral⁵ view (Heynen 1999:11-14) of modernity or an idealist tradition (Jencks 1985: 31).

The second Modern Movement is defined by, amongst others, Joedicke (1969: 16) as spanning a period of ten years, from 1930 to 1939, where modern architecture spread across Europe in variations influenced by climate, topography and tradition. The expressions of modernity were certainly still programmatic, but St. John Wilson (2007: 15) argues that another tradition of Modern architecture was formed as an inner critique of pastoral Modernity. Heynen (1999: 13) characterises this as a conflict between economics and culture, the disintegration of a holistic experience of life, and the autonomy of some domains (such as art) that cannot regain their common basis. It was also the conflict between a modernity of progress and a modernity that recognises that it could possibly self destruct, that fostered Modern Movement tendencies more aligned with tradition and place. Frampton (1986: 192) notes that Aalto combined the canons of the Modern Movement with those aspects of tradition aligned with a National Romanticist sensibility. Porphyrios (1982: 2) agrees when defining Aalto's work as reacting to the homotopic organization of a programmatic modernity, while Giedeon (1971: 618) refers to Aalto as attempting to re-establish a link between life and architecture. This is an important point to consider concerning Fagan's work as he mediated the requirements of modern life and place.

The first rumblings of an inherited (and second) Modern Movement in South Africa were recorded by Stanley Furner (1892-1971) when he became head of the Wits School in 1925 and editor of the *SAAR* in 1926. His publication “The Modern Movement in South Africa” was, according to Herbert (1967: 26), a seminal piece for the future of architecture as it expressed a clear understanding of the logic and philosophy of modernity, steering skillfully clear of issues of style and aesthetics. Thereafter, the limited influence of a transitory modernity on domestic architecture in South Africa in the 1930s (Curtis 1996: 306) was pioneered by Rex Distin Martienssen (1905-1942) who qualified from Wits in 1930. His direct contact with Le Corbusier paved the way for the distillation of Modern Movement tenets mainly in the, then, Transvaal. Together with a small band of like-minded protagonists, Gordon McIntosh (1904-1983) and Norman Hanson (1909-1991), later referred to as the Transvaal Group, Martienssen forged an alliance that led to the publication of *zero hour* on 1 April 1933 (Gerneke 1998: 209) (figure 1). In the 1930s a small number of Le Corbusier inspired houses were built in South Africa, such as House Munro in Pretoria by McIntosh in 1932, House Harris in Houghton (1933), Johannesburg, by Hanson, Tomkin and Finkelstein and the climax, House Stern (1934) in Johannesburg by Martienssen, Fassler and Cooke (figure 1).



Figure 1

Top left: Cover of *zero hour* magazine republished in 1985 by the Institute of South African Architects for their congress of 1985 (McIntosh 1933; 1985). Top right: House Munro in Pretoria by McIntosh, completed in 1932 (McIntosh 1933; 1985). Bottom left: House Stern by Martienssen, Fassler and Cooke (Jonas 1937: 106). Bottom right: House Harris by Hanson, Thomas and Finkelstein in Houghton, Johannesburg, 1933 (Lipman 1962: 10).

But the inherited orthodox Modern Movement influence on domestic architecture soon faded, partly due to the untimely death of Martienssen in 1942. Frampton (1992: 254) notes that Hanson had, already before this date, begun to question the socio-economic validity of Le Corbusier’s planning. After all, as Cooke argues (2003: 52), the architecture inspiring the Transvaal Group was derived from an imported European culture. The fervour of a few men

that had control over the only architectural publication of the time, and their limited influence at Wits, would not be strong enough to persuade both patrons and the public to adopt the new imported “style”. Chipkin alludes to this limited influence (1993: 155) when he describes that Herbert’s revised his original position (1967) on Martienssen’s work as ‘revolutionary’ noting, in 1975, that the work of the Transvaal Group only had an aesthetic effect on architecture in South Africa. Cowin’s critique (Chipkin 1993: 185) of the Transvaal Group’s work as slavishly imitative of imported European ideas added fuel to the fire. Hanson’s reminiscences of the 1930s (Cooke 2003: 52) also indicate that their work was biased towards aesthetics. But in terms of a rational approach to function, the critics are overly harsh. Martienssen clearly outlines a functional design bias in the *zero hour* publication, when describing living and bedroom spaces in House Hanson as having purposefully been orientated to the north to give privacy from the street and gain solar access. However, a problematic argument follows. Martienssen tries to justify the pure white cubic forms in a directly Corbusian manner. His travels to rural buildings in France, Italy and Sicily are well documented (Herbert 1975: 207), and his sketches allude to a “plastic” and “grounded” architecture (figure 5). If only he had interpreted vernacular architectural traditions in more principled ways, as so many of his European contemporaries were to do, the untenable cubist forms of his houses may have undergone a metamorphosis not unlike Fagan’s interpretations of the Cape tradition.

In 1938, Le Corbusier’s Mathes house (figure 2) was published in the March issue of the SAAR, four years after Martienssen’s House Stern. It greatly influenced the work of the Pretoria architect Hellmut Stauch. Howie (1938: 85) points towards a new architectural direction:

The house must be in harmony with its environment. It should retain the “caractere regional,” which is itself determined by the particular conditions of living, customs, materials, and the essential dictates of the climate. Conversely it is not to be compounded of more or less exact copies, of more or less established forms which are deprived of all logical and aesthetic content: it should not conform to some universal formula on the pretext that technical developments have wiped out distances and frontiers. This is particularly true of the week-end-house, the “House Minimum,” the inexpensive retreat which is becoming so well known in European countries. The House at Mathes, by Le Corbusier and Jeanneret, which, in its poised formality, its characteristic functionalism, and in the intelligent and sensitive use of materials, wood and stone is an example of this harmonious relationship between the house and the limiting conditions of its environment.

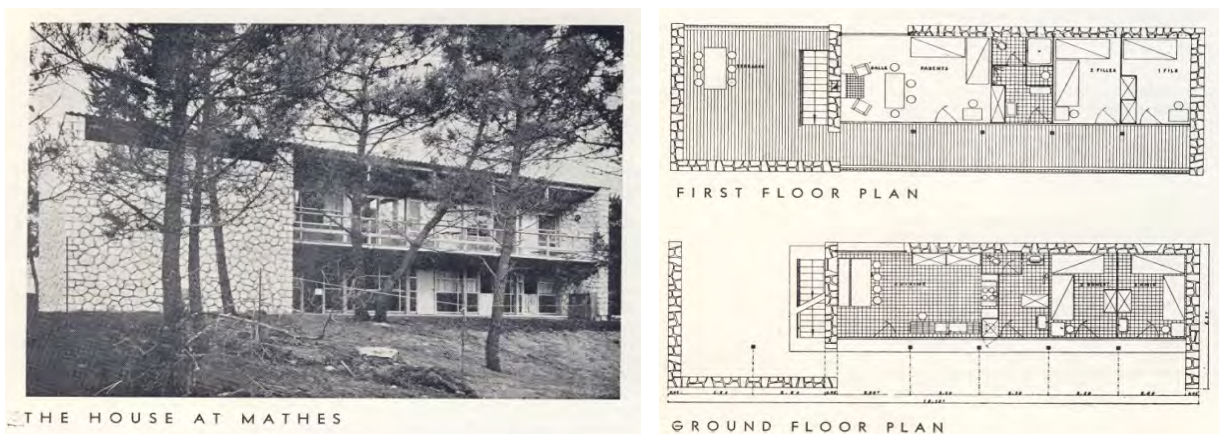


Figure 2

Le Corbusier’s Mathes house published in the March 1938 issue of the *South African Architectural Record* (Howie 1938: 84).

The CIAM meeting of 1947 resulted in a reconsideration of its original orthodox position, arguing for an architecture that would meet the material and emotional needs of society (Prinsloo

2000: 96). The idealist phase of the Modern Movement was over and as Ghirardo (1996: 10) and Curtis (1996: 395) argue, universal prototypes began to be misapplied while revolution was replaced with capitalism. The third Modern Movement shifted from a programmatic bias to a transitory one with, more often than not, counter-pastoral tendencies.

This major shift in Modern Movement thinking mainly occurred in architecture outside Europe, particularly in developing countries in South America and Africa. These regions were exposed to Modern Movement tendencies through the European education of their architects, the relocation of architects, extended trade, and the dissemination of publications such as those of the Museum of Modern Art. International Style architecture was easily adopted by countries that saw it as a way of creating a new tradition that severed the connection with colonial powers, or even as a reaction against restrictive regional tendencies (Curtis 1996: 396). But it was not until the 1940s and 1950s that modern forms had any appreciable impact on the “less developed” countries, and these forms were usually lacking in the poetry and depth of meaning of the masterworks of the modern movement (Curtis 1996: 567). This was none more so than in South Africa where a limited orthodox Modern Movement influence had waned during the Second World War. Herbert indicates (1975: 28) that the affection for the English house was still important in the Wits School during the early 1940s. Counter-classical trends and the beginnings of a nationalist fervour looked elsewhere for inspiration, and a modern-regionalism slowly developed. These architectural directions began to mediate (and not negate) the vagaries of the Modern Movement through a recognition of place and materials. This has been referred to variously as a “contemporary vernacular” of the Transvaal (Fassler 1956: 177), “Transvaal vernacular” (Fassler 1957: 22), “vernacular traditionalism” (Cooke 2003: 24) and a “Third Vernacular” (Fisher 1998: 123).

These architectural directions were still, at heart, honest articulations of Modern Movement concerns. To use vernacular materials did not mean a return to the facile use of tradition. As Canizaro (2007: 22) notes, the polarities of tradition and modernity are directly linked to ideas of progress and cultural continuity. Le Corbusier had already mediated these seemingly irreconcilable conditions and this approach directed much of the architecture of the third Modern Movement.

It was in Brazil that the orthodoxy of Le Corbusier found a new life through the adaptation of his principles by architects such as Lúcio Costa (1902-1998) and his protégé Oscar Niemeyer (1907-2012) (Chipkin 1993: 230). Le Corbusier’s visit to Brazil in 1937 must have been instrumental in this regard as it fostered a regional variation of his theories particularly through the development of the *brise-soleil*. The 1943 Museum of Modern Art (MOMA) exhibition and subsequent publication of “Brazil Builds”⁶ brought these new mutations to the rest of the world, including South Africa. Prior to this publication, newspaper articles had also highlighted the new developments and Chipkin (1993: 231) notes that professor Pearse of Wits owned an early copy of “Brazil Builds” dated 1944. The 1950 monograph on Niemeyer by Papadaki (De Beer 2000: 110) added impetus to the advantages of employing South American adaptations in the Transvaal climate. The effect on the architecture of Pretoria is still visible to this day. Stauch’s visit to Brazil at the end of 1948 inspired his design of the Meat Board building in Pretoria which opened in 1952 (Chipkin 1993: 282). Fassler (1956: 178) notes that the Brazilian influence can be seen in the work of Philip Nel and Partners, Stauch, and Meiring and Naudé of Pretoria and Cape Town. The legacy of this mediated Modern Movement would have a long-lasting effect on the graduates of the Pretoria School who could identify with an appropriate regional interpretation. Fagan suggests (2008) that the affinity of the Afrikaner for the language of Portugal, and thus the South Americas, also played a role in this interpretation.

Onder aansporing van Corbusier het hulle met sonbeheer die klimaat probeer aanspreek, en met beton die relatief swak gehalte van die plaaslike vaklui, met 'n besondere vormgewing (ook 'n produk van hul flambojante gebou-erfenis en tropiese weelde) tot 'n herkenbare styl verwerk. Vir Herbert Baker en Norman Eaton was die sameloop van omstandighede in Suid Afrika seker nie reg nie (Fagan 1990: 2).

[Through the encouragement of Le Corbusier they attempted to deal with the climate through sun screening, and with concrete the relatively poor quality of workmanship of local workmen, with a particular form making (also a product of their flamboyant building tradition and tropical profusion) developed into a distinctive style. The confluence of circumstances in South Africa was probably not right for Herbert Baker and Norman Eaton.]

Fagan's summation of the situation at the time highlights his understanding of Le Corbusier's influence in Brazil through Costa and Niemeyer. The last line of the quote is both insightful and curious as it postulates that both Baker and Eaton were not well located to develop a similar response in South Africa.

Gawie Fagan

Fagan was educated at an important juncture in the development of architecture in South Africa. The orthodoxy of Modern Movement teaching at the Department of Architecture at Witwatersrand University (Wits) under Rex Martienssen had waned, as architects realised the technological and stylistic inadequacies of universalist solutions. Paul Connell (1945: 164) noted that the contemporary architectural idiom did not find favour with the general public, that architects had become undisciplined in the use of the clear prismatic forms and that the flat roofed buildings weathered badly. The establishment of a new Department of Architecture and Quantity Surveying at the University of Pretoria, in 1943, provided an impetus for this new direction. 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. Fagan (1983: 2) explains that:

We were wildly excited by the emerging South American work of men like Niemeyer, but generally turned directly to his mentor Corbusier; buying and studying all his books as they appeared until we could walk blindfold through the Villa Savoye!

Fagan arrived four years after the department was established and was, probably, fortunate to miss a purely orthodox Modern Movement training. The original tenets were, however, still important and relevant for architects as they espoused contemporary ways of making functionally and technologically appropriate architecture. Fagan finished his Pretoria University education in December 1951, at the same time that Le Corbusier presented plans of his vacation cabin in Cap-Martin, France as a birthday present for his wife (Tzonis 2001: 172). As Le Corbusier's career waned so Fagan's was just beginning. Although the architects were oceans apart, their search for an authentic architecture found much inspiration in the Mediterranean vernacular. The influences of the Cape vernacular, and its Dutch and Portuguese inheritances, would form the main precedent for the development of Fagan's domestic architectural oeuvre.

Orthodoxy and Mediterraneanism

The Modern Movement search for appropriate forms, led many architects to investigate the architecture of the Mediterranean (Pallasmaa 1988; 2007: 135) as its formal and material simplicity exemplified the tenets of the modernist project and a non-facile traditionalism.

Colquhoun (1999; 2007: 13-14) notes that references to the Mediterranean vernacular were just as prominent as the idea of industrial standardisation. Le Corbusier's architecture was geometric *and* organic while, at times, vernacular building techniques were combined with engineered components, Frampton (2001: 131) notes the first use of this tectonic polarity in Maison Loucheur (1929) (figure 8) and later in Mandrot (1929-1931).

Other authors (Curtis 1996: 417, Frampton 2001: 133 and Tzonis 2001: 116) have recognised that the regionalist tendencies of Le Corbusier's work were not a new direction, but rather a patent respect for place, climate and materials and a search for the authentic in architecture. The trips abroad had sensitised him to aspects of place very early on in his career and Passanti (1997: 438,439) notes that Le Corbusier's search was for a purity and a naturalness, uncorrupted by the problems of the 19th century. Le Corbusier owed this interest 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." His design of the petite Villa Au Bord Du Lac Léman (1925) (figure 3) clearly demonstrates the influences of his travels to the "East" and the requirements of building in less developed regions. The stoa plan and white-walled architecture bear a striking similarity of design approach to Fagan's Die Es (figure 7), demonstrating the power of Modern Movement canon synthesised with 'local tradition'. Other commonalities are the attenuated plan and the location of services as expressive elements placed externally rather than internally. The free plan is tempered but the ribbon window is still evident. The splayed reveals to the small kitchen and entrance echo the windows of those found in Mediterranean and Cape houses. Eileen Gray, too, adopted a similar architectural formal approach in her 1932-34 house Tempe à Pailla outside Castellar (figure 3) near the Mediterranean port of Menton (Constant 2007: 145). It is important to understand these mediations in Le Corbusier's work, and others, as Fagan was to adopt many of the same approaches.

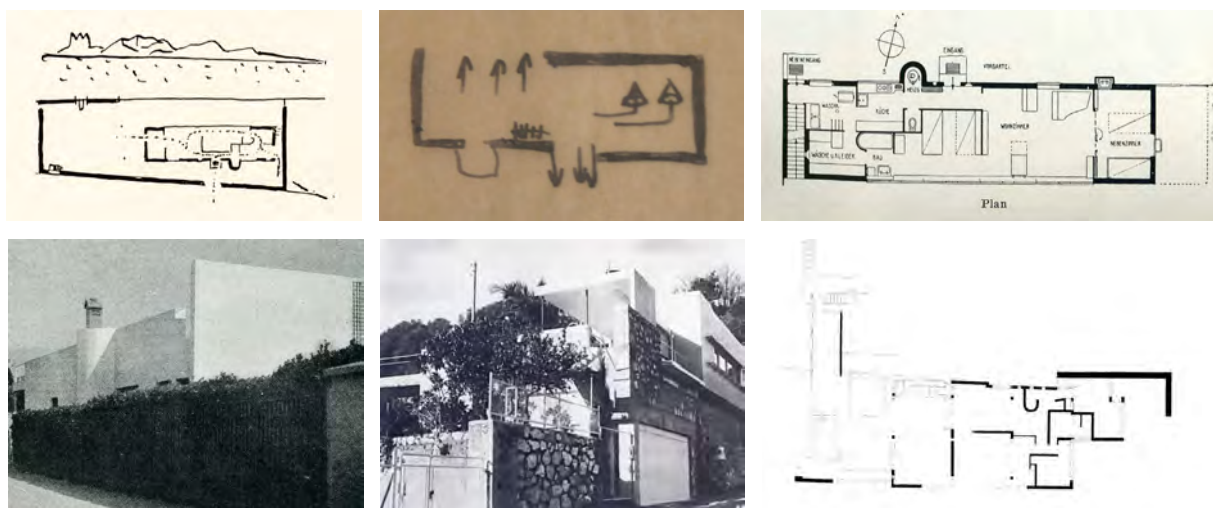


Figure 3

Top left: Le Corbusier's sketch for petite villa on Lake Léman showing circulation routes and enclosure (Tzonis 2001: 68). **Top Middle:** Fagan's sketch for Die Es also indicating movement and enclosure (Fagan archive - Job No. 656, undated). Note the striking similarity to Le Corbusier's sketch for petite villa on Lake Léman. **Top right:** Le Corbusier's Petite Villa Au Bord Du Lac Léman of 1925, plan and elevation (Corbusier & Jeanneret 1943: 74). **Bottom middle:** Street view of Eileen Gray's Tempe à Pailla (1932-4) (Constant 2007: 147). **Bottom right:** Plan of Tempe à Pailla (Constant 2007: 153).

Fagan and Le Corbusier

Le Corbusier used both platonic and tectonic forms and, on the whole, his work alternated between idealist and realist forms and pastoral and counter pastoral modernities. Although Fagan remembers (Steenkamp 2003: 8,9) that they, as students, thought Le Corbusier had “lost the plot” with the design of “La Chapelle de Notre-dame-du-haut” at Ronchamp (1955), Fagan recognised that

the basic stuff of architecture is also Martienssen’s related volumes, defined by Corbusier’s mass, surface and plan. Barrie Biermann and I were once pondering the contorted surfaces of a new building. After a long silence, he said in his laconic way “Be thankful that we were taught in a more disciplined time.” And I am truly thankful, because the cubist discipline taught the basic stuff of Architecture – the Villa Savoye has to precede Ronchamp (Fagan 1991: 10).

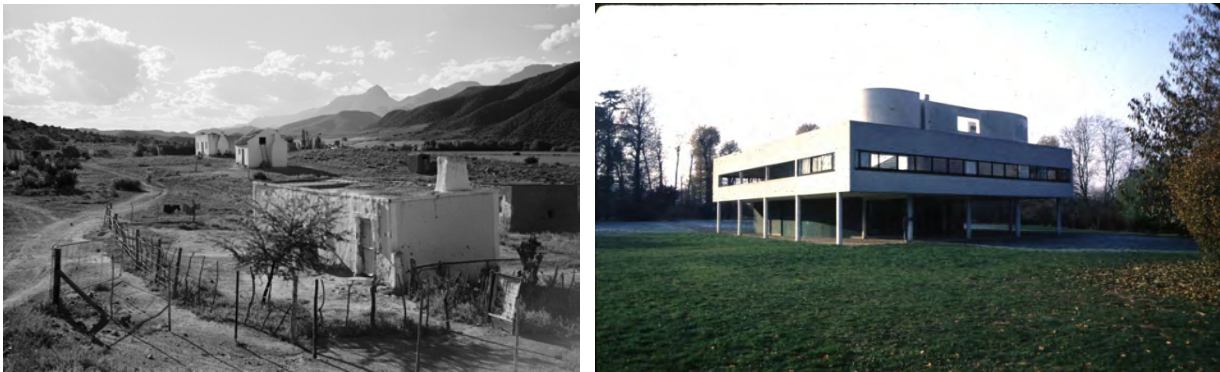


Figure 4

Left: Cape vernacular architecture (Fagan 2012b). Right: Villa Savoye (1928) at Poissy by Le Corbusier representing the epitome of Modern Movement expression (Author 1989).

Le Corbusier’s canonical five point plan set the tone for the discipline of Modern Movement architecture. Its typological lessons were clear: the plan as generator, the separation of structure and enclosure, and economy and efficiency in planning. These tenets also form the core of Fagan’s disciplined approach to the making of architecture that in its own right creates a new typological but less canonical approach. As Fagan has noted (1991: 10):

Certainly the most seminal writing after Corbusier’s “Towards a New Architecture” is Venturi’s “Complexity and Contradiction in Architecture”. And the principles certainly needed restatement, because they have always been present in the best work, including Corbusier’s own.

Fagan has consciously absorbed Le Corbusier’s earlier mediative strategies by recognising his latent regionalist tendencies and also the application of his canonic orthodoxy in different contexts. Their common affinities for the simple qualities and pure form of Mediterranean architecture (in Fagan’s case through the Portuguese influence on the Dutch; figure 4) was not unlike Martienssen who, with all his Modernist fervour, had an intimate engagement with the vernacular, spurred on by his Baker-taught lecturer, Leith, and his visit to England in 1926 with McIntosh. As Herbert notes (1975: 28), a vernacular tradition formed a paradoxical thread in Martienssen’s influences (figure 5). His early death perhaps masked the possibilities of a future, more regional, architectural direction.

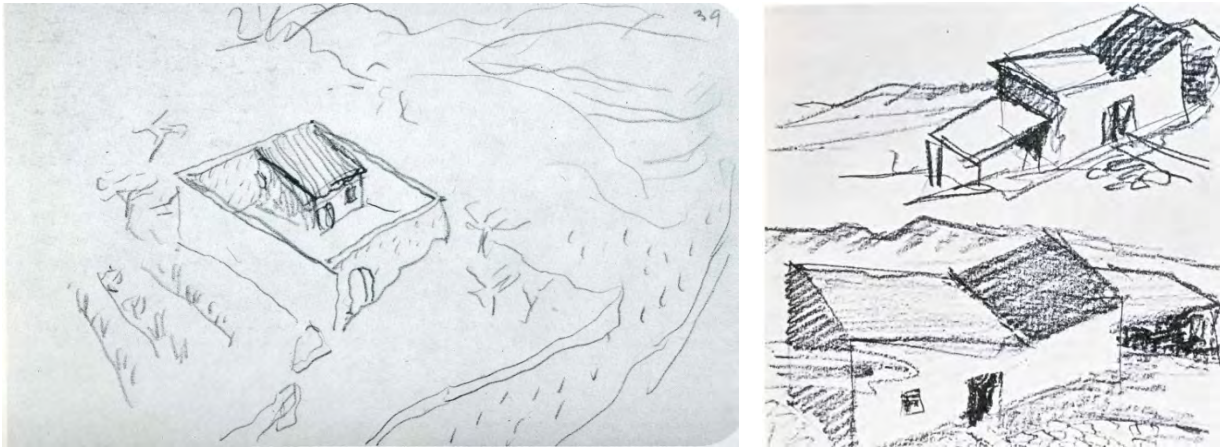


Figure 5

Left: Le Corbusier sketch of house and garden in Catalonia 1928 (Curtis 1987: 239). Right: Martienssen sketch of rural architecture (Herbert 1975: 208).

It is telling that Fagan was inspired, in his first house, Keurbos, for his parents in 1951, by the regionalist leanings of Le Corbusier's proposed house in Chile, Errazuris⁷ (1930) (figure 6). Frampton (2001: 133) notes that this was Le Corbusier's first employment of a pitched roof since La Chaux-de-Fonds. Even Hitchcock (1948: 8), who espoused the International Style in the Museum of Modern Art publication of the same name, rather apologetically notes that Le Corbusier had already used "characteristics of the new Cottage Style" in House Errazuris. The house was constructed of random rubble stone walling and an exposed timber roof structure but as Le Corbusier himself notes (Frampton, 2001: 133), "the rusticity of the materials is in no way a hindrance to the expression of a clear plan and a modern aesthetic".

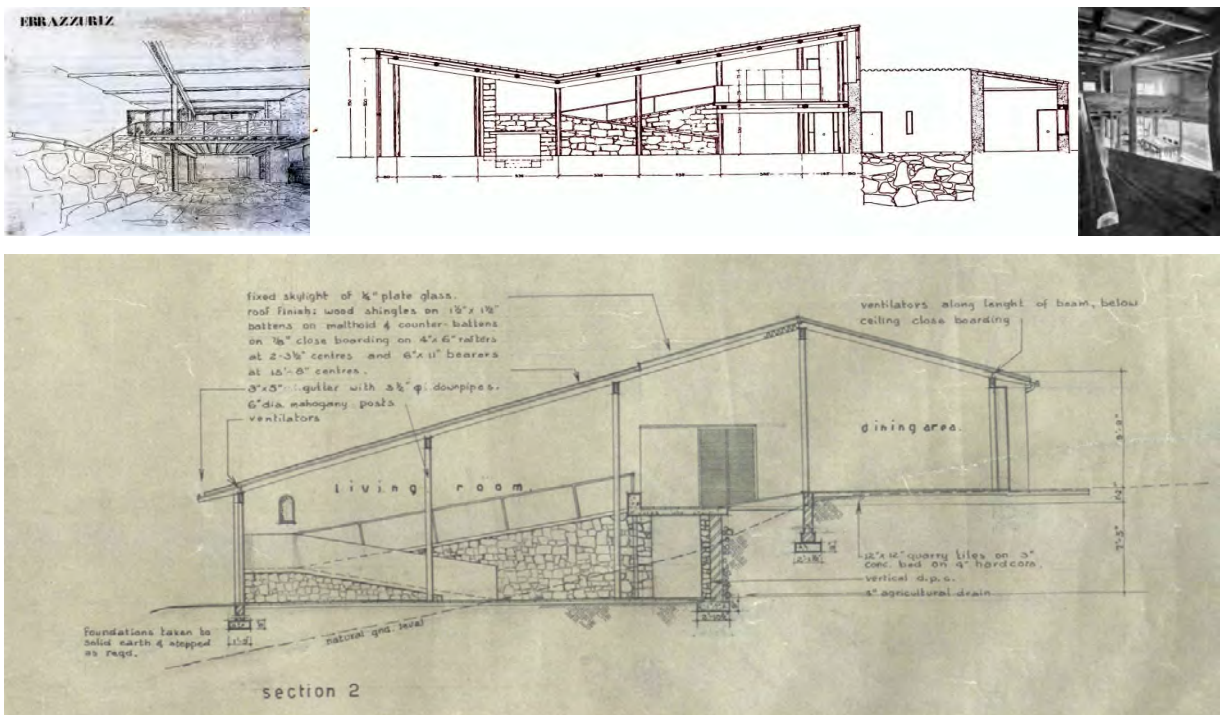


Figure 6

Top left: Le Corbusier and Jeanerret: Maison Errazuris, Chile, 1930: interior (Frampton 2001: 133). Top middle: Section through Maison Errazuris (Frampton 2001: 133). Top right: Interior of House Errazuris (Joedicke 1969: 16). Bottom: Section through Fagan's House Keurbos (Fagan archive, 1950).

Fagan and the fourth Modern Movement

Fagan's education at the University of Pretoria straddled the poles of Modern Movement orthodoxy and the exigencies of place, through responses to climate and available materials. A post war economy and burgeoning Nationalism set the scene for a new take on the Modern Movement but its core principles were still relevant in the search for a modern way of living in various contexts. In his domestic architecture, Fagan expresses a range of approaches to Modern Movement spatial typologies that are reflected as mediations between orthodoxy and place, *economie* (efficiency) and spirituality, modern and traditional spatial typologies, technology and craft, typology and place and revised interpretations of proportioning systems. These mediations respond to the influences of the idealist Modern Movement canon, Mediterranean inflections, Transvaal mediations (the third Modern Movement) and influences from the Cape vernacular. In so doing, Fagan creates a fourth Modern Movement mediation.

Fourth Modern Movement mediations: Orthodoxy and place (the universal and the local)

The Modern Movement's initial rational and empirical approach, and the belief in technological progress, later fostered a universalist architecture, often removed from context and association with tradition. Fagan reconciles the advantages of both universalism and tradition through a reinterpretation of Modern Movement ideals, and the influences of place and vernacular architecture.

In this experience of the sympathetic handling of materials, rather than in the aping of designs in themselves inferior, lies also the greatest promise of our historical buildings in making a contribution to the quality of our contemporary architecture (Biermann 1960: 27).

Fagan reinterprets the technological, functional and spatial advantages of the orthodox Modern Movement to suit current conditions and merges these with the necessity for human connection with place and the past. Orthodoxy is tempered by location. Fagan connects with place through a response to climate, views, materiality and topography, all within a dominant form that synthesizes orthodox Modern Movement and traditional Cape typologies. Ordered planning configurations, that often rely on served and servant relationships, are tempered by formal manipulations that connect the buildings to their site through location (to orientate north or face views) such as at Die Es (figure 7) and House Swanepoel in Hermanus (1990), or with floors stepping down to respond to the topography as in Houses Raynham (1967) and Neethling (1985). The open plan is balanced with cellular spaces such as at Die Es and House Levin (1969), while chimneys and walls act functionally, structurally and traditionally to imbue buildings with a dual historical and contemporary sensibility.

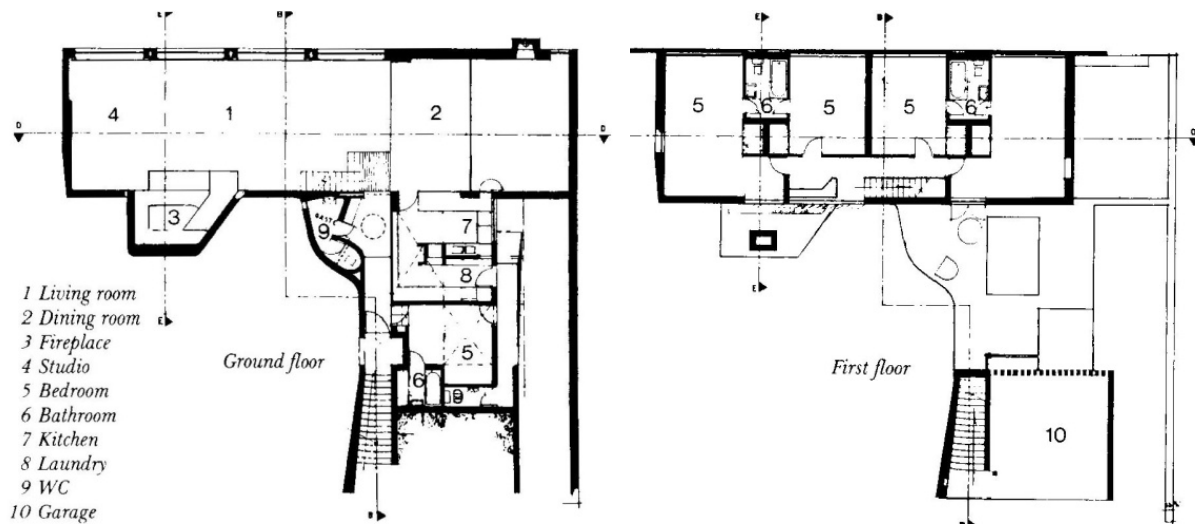


Figure 7

Die Es, Camps Bay, Cape Town, ground and first floor plans that illustrate the difference between cellular and open plan configurations (Fagan archive, undated).

Economy (efficiency) and spirituality

Doeltreffende ontwerp het my nog altyd fassineer: om so min onnodige materiaal as moontlik te gebruik, om die natuur in te span eerder as om dit ten duurste meganies reg te stel (Fagan 1975: 17).

[Effective design has always fascinated me: to use as little unnecessary material as possible, to employ nature rather than use mechanical means to correct its problems at great cost.]

Fagan's fascination with effective design can be traced to his childhood tinkering, his motorcycle "business", an initial University of Cape Town engineering training, the pragmatic education he received at the University of Pretoria and the "house as a machine for living in" dictum of Le Corbusier (1931: 95).⁸ Three types of efficiency can be detected in Fagan's work: firstly the use of space, secondly the minimization of structure and material and thirdly the response to climate. But Fagan (1982: 6) mediates these "scientific" efficiencies with a 'spiritual' nuance that imbues his buildings with unique experiential qualities.

Architecture is more than building for practical needs and economy only: Good architecture is also concerned with meanings derived from natural, human and spiritual phenomena. It gives form to these meanings. Especially in the chaotic and fast changing world of today we have a strong desire to experience our existence as meaningful, and since time immemorial good architecture has helped man to fulfill (sic) this desire.

Spatial efficiencies are achieved through circulation routes, more often than not positioned centrally on entry (to create a bi-nuclear plan), and reduced in length as far as possible with the limitations imposed by attenuated plans. Where extended routes are required, passages become useable spaces such as at Houses Bertie-Roberts (1966), Raynham (figure 8), Neethling and Auldearn (1992). Service spaces are reduced to the minimum, particularly bathrooms, where Fagan's sailing influences and Le Corbusier's experiments such as at Maison Loucheur (1929) are most marked. Fagan's holiday home Paradys (2003) is the most efficient example (figure 8).

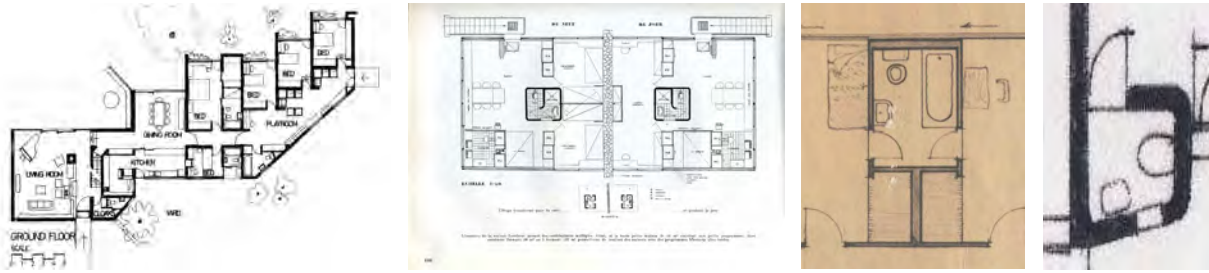


Figure 8

Top left: House Raynham, Newlands, Cape Town, ground floor plan (Fagan archive, undated). Middle left: Plan of Maison Loucheur by Le Corbusier (1929). Note the tightly planned bathrooms (Le Corbusier & Jeanneret 1943: 198). Middle right: Plan of main bathroom at Die Es (Fagan archive, undated). Right: Plan of the bathroom at House Paradys (Fagan archive, undated).

Structural efficiencies are best achieved in Fagan’s barrel-vaulted experiments where brick walls and roofs merge to form unified entities of structure and enclosure, such as at Paradys (figure 9) and Houses Lückhoff (1981) and Ida’s Valley (1975) which recall Le Corbusier’s Maisons Jaoul (1956) and La Maison de Weekend (1935) (figure 9). There are also great commonalities with Pancho Guedes’ (1925-) modern regionalist experiments in, the then, Lourenço Marques such as the Smiling Lion building that Fagan visited in 1955 (figure 9). Structural and functional efficiency is best seen in House Bertie-Roberts, where two in situ cast cantilevered concrete beams support the building while acting as service ducts. These beams provide economical support as they limit the necessity of direct support to the ground. In House Beyers (1992) a concrete column and cantilevered beam system raise the accommodation (figure 12). But these efficiencies are manipulated by Fagan’s innate design talent to aesthetic heights through considerations of junction, size and treatment mimicking the canonic principles of Villa Savoye.



Figure 9

Top: Fagan’s House Paradys in Langebaan (Author 2009). Bottom left: Guedes’s Smiling Lion in Lourenço Marques (1958) (Guedes 2009: 98). Bottom middle: Le Corbusier and Pierre Jeanneret: Maison de Weekend, La Celle-St-Cloud, 1935: isometric (Frampton 2001: 136). Bottom right: Le Corbusier and Pierre Jeanneret: Maison de Weekend: interior (Frampton 2001: 136).

Material palettes are limited to clay stock brick, concrete and timber with very little use of steel. Materials are left in their natural state except for brickwork which is informed by the plastic nature of traditional Cape architecture. Even when unplastered, it is painted white to heighten the play of light and shadow, reinventing the Mediterranean tradition.

Material differences heighten transitions between spaces, such as the suspended timber platforms at Die Es, Keurbos and House Raynham that mediate between hard and soft floor surfaces. In contrast with Le Corbusier's platonic volumes, Fagan exploits the vertical dimension to increase and decrease height to accentuate movement and entry. Die Es and houses Raynham and Auldearn are effective in their spatial constriction and release. These devices form a synergy between Corbusian and Cape architectural promenades. The visitor is taken on a journey that exploits the advantages of context through view, light and solar contact. Views are exploited through focusing on the mountain at House Raynham (figure 10) and the sea at House Patterson (1966) (figure 10) and sea and mountain at Die Es. Climatic efficiencies are achieved through north orientation and the use of thermal mass which, as Fagan (2008a) indicates, is suitable for the Mediterranean climate of the western Cape.



Figure 10

Left: House Raynham entry view through house to mountain beyond (author 2007). Right: House Patterson showing spiral promenade up to the sea view (author 2009).

Modern and traditional spatial typologies: the traditionalised free plan

The architect is among those attempting to create South African architecture which understands historical vernacular without duplicating it, responds to the site and the particular environment generated by the climate, light, etc., and develops the *free plan* – an appropriate form to the casual way of life (Beck 1985: 48).

Le Corbusier's architectural call for a free plan was a reaction against the spatial and formal containedness of tradition. The intention was to provide flexibility of use and a 'healthy' internal condition. The consequence was an abstracted spatial configuration that in its universalist heyday was often devoid of cultural significance. The typology had become self-reflective and removed from its direct context. Fagan recognises that the original tenets of "healthy space" are

still relevant but that mediation is required between this condition and that of ‘familiar’ domestic space.

Fagan mediates the requirement for open and flexible space with the cellular nature of quieter and more private spaces, all within a controlled container. Here Fagan (2008) cites the influence of dialectical cellular and open-plan space in Le Corbusier’s La Tourette. House Levin’s central volume extends the Modern Movement typology of the free plan upward while cellular spaces define its boundary. In House Raynham (figure 8) the circulation route expands and contracts to form living, dining and playroom spaces, while at Die Es (figure 7) the living room and raised dining room provide many spatial possibilities. As Fagan (1983: 9) has remarked, “I feel that today’s house at least, calls for a certain inner complexity to provide for various moods”.

Hygiene (health) and genius loci

The 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. Similar developments by local architects such as Norman Eaton and Hellmut Stauch influenced other architects and University of Pretoria 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 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.

Fagan does, however, manipulate the roof in innovative ways to allow solar gain and views where necessary. House Levin (1969) incorporates roof lights 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 11). House Swanepoel in Hermanus has three different roof light configurations – over the courtyard, around the chimney (figure 11) and a series of bathroom domes. 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 and which recall the roof lights in Villa Savoye. At House Keurbos the glass louvers, sliding windows, and frameless glazing panels between exposed rafters provide ventilation. Paradys has a frameless pivoted glass window above the mezzanine level and portholes in the bathrooms (figure 11).



Figure 11

Left: View of angled rooflight to House Wolfaardt (author 2009). Middle: view of rooflight around chimney to House Swanepoel in Hermanus (author 2009). Right: porthole in House Paradys sea facing bathrooms (Fagan 2012).

Technology and craft (machine and hand)

Fagan (1972: 2) called for the development of a contemporary vernacular using today's technologies. His lifelong hands-on approach to making has sensitised him to the opportunities of new technologies and techniques. Materials are used directly according to their inherent properties and expressed honestly, echoing Cole Bowen's strategy of "no second or third processes are required" (Fassler 1956: 178).

By this I in no way imply an arts and crafts approach, for machine objects can evoke poetic response. Nor a detailed technical knowledge of what goes into a modern building, which is the province of your specialist consultants. But I do mean sufficient experience (and there is nothing like learning through your own pair of hands!) to truly understand the character of your basic materials, timber, metals, concrete or plastics. And to understand the wonderful possibilities of the basic welding, machining or manufacturing processes by which these are transformed. Corbusier justly wrote that the business of architecture is to establish relationships by means of raw materials (Fagan 1991: 9).

Much of the detailing in Fagan's buildings mirrors that of yacht design and construction, where a minimal amount of material is required to perform as many functions as possible and under the most extreme conditions. These approaches align with Le Corbusier's thinking on the direct relationship between function and form.

Le Corbusier's cubist work was, however, less honest in its formal expression of materials through his use of plastered and white-painted concrete frames and block infill. Here, structural and spatial expression was more important. Later work and regional designs such as Errazuris in Chile (1930) and Petite Maison de Weekend (1935) achieve more honest material expression (figure 6).

Fagan mediates these two contrasting positions in his work through the use of modern technologies and manipulations of tried and tested vernacular technologies. He relies on the stereotomic tradition of the Cape wall as both structure and support, collapsing Le Corbusier's canon into one. Most structural materials save for plastered and painted brick walls are expressed in their 'original' state. Reinforced concrete is left in situ, sometimes even compromising the possible totality of the white wall surface as at Die Es. The concrete work in House Beyers (figure 12) is pure in its expression of the supporting structure. Brickwork is often bagged

and painted as in houses Raynham and Swanepoel in Cape St. Francis, which creates a plastic mediation between traditional plastered forms and raw brick. Brick floors are however left with their original colour and texture save for an applied linseed and turpentine mixture, the colour providing a connection with the earth like the floors of old. Timber structure is seldom painted but timber screens, doors and windows often receive decorative colours to tie them mythically to their surroundings (figure 12). Very few “manufactured” materials are used and components such as aluminium windows and doors are often placed within timber subframes. These elements are also never off the shelf but are made to suit functional and aesthetic requirements.



Figure 12

Left: Green and blue hues to doors at House Swanepoel in Cape St. Francis (Photo courtesy of Pierre Swanepoel architect, 2012). Right: Concrete columns and cantilevered beams and slab at House Beyers (photos by the author 2008).

Typology and place

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 “lessons from the vernacular” (Barker 2012: 167-232) 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 new Cape vernacular 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. Orthodox Modern Movement buildings were more often than not iconic in form. They dominated their landscapes, announcing their object presence. The starkness of initial cubist forms later gave way to buildings that still announced their presence but which attempted to connect with their surroundings through careful siting and material use. Locally, the shift in Pretoria from the white cubism of the Transvaal Group to an architecture more sympathetic to landscape paved the way for future mediations. Fagan first synthesised the dialectics of typology and place through his many designs for Volkskas Bank in the 1950s where he almost apologises for their existence as “Ekskuus my dat ek hier sit!” [excuse me for sitting here] (Fagan 2008a). Later, Fagan would synergize the Modern Movement and Cape vernacular form (see figure 13) in almost all of his house designs.

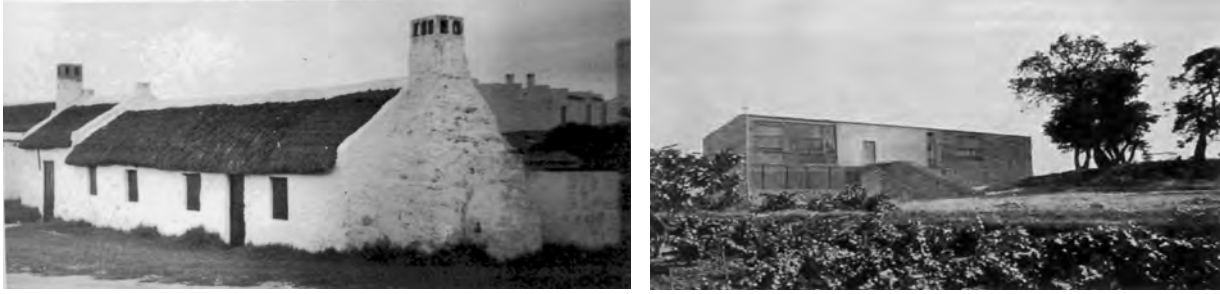


Figure 13

Left: Extended rectangular cottage at Waenhuiskrans (Walton 1997: 59). Right: Villa de Madame de Mandrot, Le Pradet by Le Corbusier and Jeanneret (1929) (St. John Wilson 2007: 161).

Proportions

A direct, or even, Rosseauian connection with nature can be effected through the use of anthropometric and proportional systems in architecture. Alford (1955: 113) points out that

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 (1983: 8) has derived his understanding of proportional systems from three sources. A direct influence is Hambidge's *Dynamic Symmetry*, through his education at the University of Pretoria, which is based on the Fibonacci series and secondly from his fellow student and life-long friend Karl Jooste (Jooste 2008 and Gerneke 2008) who employed these approaches extensively. Thirdly, Fagan would have been exposed to Le Corbusier's proportioning system (figure 14), such as the Modulor, through university teachings and book purchases. But more direct, and tangible connections were the Renaissance influences on Cape Dutch architecture which Fagan learned through his extensive conservation work. Teeger (1965: 7) notes that in Cape Town, Revel Fox, Michael Munnik and others [read Fagan], investigating their Cape Dutch heritage, have maintained the materials and proportions of that era within the context of Twentieth Century home building.

Fagan substitutes arithmetic calculations with a system of drawing that uses various diagonals, giving better control over the outcome. In *Die Es*, Fagan organizes the entire building form according to Hambidge's proportional system, including door handles (figure 14) which respond directly to the movement of the hand. Fagan rarely uses proportional systems now as he does not draw that much anymore and the requirements of contemporary work do not allow for the time consuming process but he suggests that the understanding of the principles has trained his eye to become aware of their design possibilities.

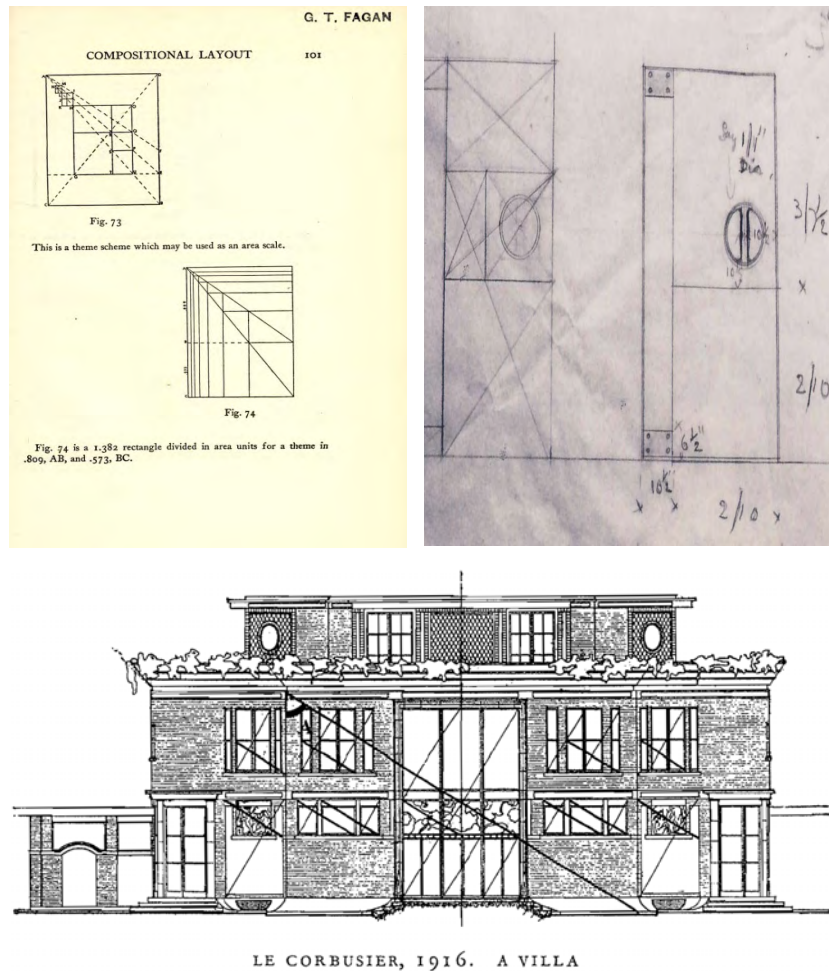


Figure 14

Top left: Proportional layout system in Hambidge's book *Dynamic Symmetry* with Fagan's office stamp in top right corner (Hambidge 1932: 101). Top right: Proportional layout for door to Die Es (Fagan 2005: 36) and Le Corbusier's use of regulating lines in A Villa, 1916 (Le Corbusier 1931: 80).

Conclusion

The orthodoxy of the Modern Movement has undergone a number of mediations most often influenced by the exigencies of place. These have aligned with Le Corbusier's search for an authentic architecture which required solutions uncorrupted by the problems of the 19th century. His belief that the more basic and paradigmatic, ancient or vernacular a solution is, the closer it gets to being "natural" and "original" spurred on architects like Fagan. But the orthodox and canonic principles of the first Modern Movement remained influential as they were tempered by local vernaculars. Fagan's similar search for an authentic architecture had its origins in the regional-modern expression (third Modern Movement) of the Pretoria School, the influences of Mediterranean architecture, all of which he has synthesised with the orthodoxy of pastoral modernity.

Through the mediations of universalism and place, efficiency and spirituality, modern and traditional spatial typologies, technology and craft, typology and place and proportional systems, Fagan has imbued his domestic architecture with a dual historical and contemporary sensibility which expresses his wish (1983: 1) "that architects [in the Southern region of South Africa] should be striving for an architectural language that "belongs and is appropriate to the Cape".

Notes

- 1 Le Corbusier's principles of *hygiene, economie and circulation* formed the basis of his five point plan for architecture.
- 2 This manifesto proclaimed the virtues of a new technologically and functionally driven architecture and was widely disseminated, even to Le Corbusier himself who published a letter he wrote to Martienssen in the introduction to his *Oeuvre Complète* (1919-1929) of 1936
- 3 See Vio, G. 2006. *Roelof Uytendogaardt - Senza Tempo/Timeless*. Padova: Il Poligrafo.
- 4 See Wolff, I. (ed.). 2012. *Adèle Naudé Santos & Antonio de Souza Santos, Monograph, Cape Town work*. Cape Town: Open House Architecture.
- 5 A pastoral view of modernity relates to the heroic period of the Modern Movement. Here any contradictory aspects specific to the modern are ignored and a singular goal is sought. Progress is seen as harmonious and continuous.
- 6 The "Brazil Builds" exhibition of 1943 documented South American Modernism and showed the positive influence of climate and context on a universal architecture. The subsequent book by Kidder-Smith found much favour in South Africa due to the similarities in climate.
- 7 Frampton notes (2001: 133) that Le Corbusier had falsely suggested in 1934 that Errazuris had already been built. Joedicke however (1969: 16) shows a photograph of the project under construction that is dated 1930.
- 8 This approach is further reinforced by Fagan's fascination with flying and aligns with Le Corbusier's realisation (1931: 109) that the 'airplane is the product of close selection' meaning a direct alignment between function and form.

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Arthur Barker joined the Department of Architecture at the University of Pretoria at the beginning of 2010 after coordinating the BTech (Applied Design) program at the Cape Peninsula University of Technology (CPUT) in Cape Town for 13 years. He holds a higher diploma in Architectural Technology from CPUT, degrees in Architecture from the University of Cape Town and a Masters degree in Environmental Engineering and Design from the Bartlett School of Graduate Studies in London. In 2012, he completed his PhD on the domestic architecture of a seminal South African architect, Gawie Fagan. He currently co-ordinates the Professional Masters program, the Heritage and Cultural Landscapes Research field and the departmental Architectural Archive. His main research interest is the architecture of South Africa, and in particular, that of the Fourth Modern Movement.