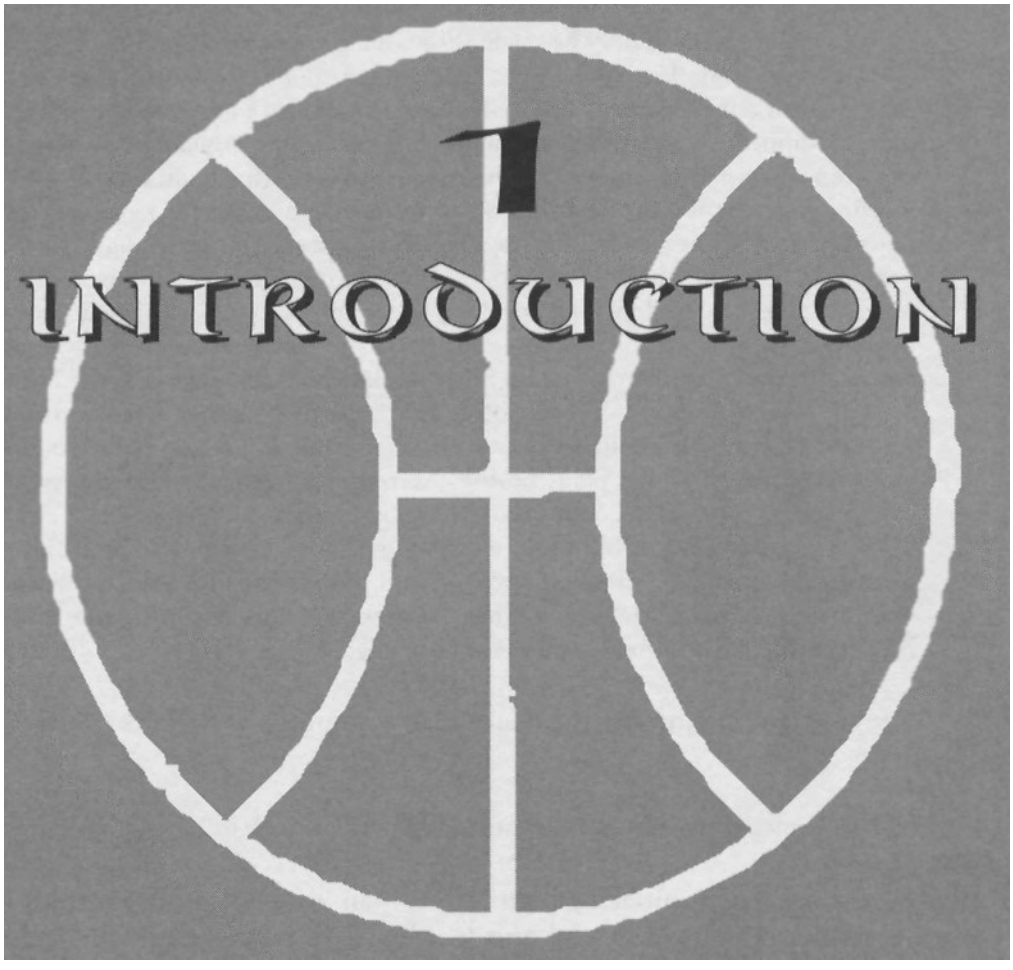
The Secret Plan of Canberra

Peter Proudfoot


1
INTRODUCTION

While still in University, this youth took note of the fact that the Australian states were federating into a continental nation and then and there decided to enter the competition for its capital city, for to his logical mind it seemed obvious that since there was not as yet an established profession of landscape architecture, the choice of such an architect could only be made through a competition.

For ten years he watched the architectural publications and then sure enough, there was an announcement before his eyes. Owing to busy practice in 14 states, the months slipped by and nothing was done about it, though doubtless the matter was brewing within, till finally, his wife, performing that valuable function of the Xantippes of the world, flew into a rage and told him that if he didn't start on the design that day she wouldn't do a stroke of drafting on the thing. The design was begun that day and after nine weeks of driving work, towards midnight of a cold winter night, the box of drawings, too long to go into a taxi, was rushed with the doors open and the men without coats — no time to go up 16 stories to get them — across the city to the last train that could meet the last boat for Australia, the imperturbable Mr Griffin himself the only one not quite frantic by this time because to his mind if Australia was serious about the matter of their Federal Capital they wouldn't let the moment of arrival of the plans be the determining factor in their choice and, to his land planning mind they couldn't but be serious in such a matter.

A year later the cable came that Walter Burley Griffin had won the prize. His words on receiving the message were — 'And then I shan't be able to see a plan better than mine'. (Marion Mahony Griffin, 'Canberra — its designer and its plan', The Federal Battle *Magic of America* pp 434-35)

In 1913, a year after winning the Canberra competition, Walter Burley Griffin declared:

> I have planned a city not like any other city in the world. I have planned an ideal city.

Griffin's exposition in the initial Canberra plan — an ideal city — is generally regarded as a synthesis of the City Beautiful and Garden City movements which dominated town planning in the late nineteenth and early twentieth centuries. In the City Beautiful model, derived from elements of baroque vista planning, architecture is set in sweeping piazzas and parkland penetrates the city centre. In the Garden City model, based on principles derived from Ebenezer Howard's *Garden Cities of Tomorrow* (1901), houses on individual blocks in suburban areas further away from the centre are dominated by landscaping. In Canberra the parliamentary triangle reveals influences from the 1901 modifications to the plan for Washington DC and the 1893 Chicago Columbian Exposition, which espoused the Beaux Arts baroque style; and less formal 'picturesque' principles applied to its suburban areas connect Canberra with English garden-towns such as Letchworth and Port Sunlight. Walter and Marion Griffin's formal parliamentary triangle reinforced the City Beautiful ideals while the informality of the Lake Park was strongly aligned to the 'picturesque'.[1]

Canberra cannot, however, be understood simply in terms of either late nineteenth century City Beautiful models or Howard's Garden City principles. While embracing such ideas, the initial plan's overarching concept establishes references to a

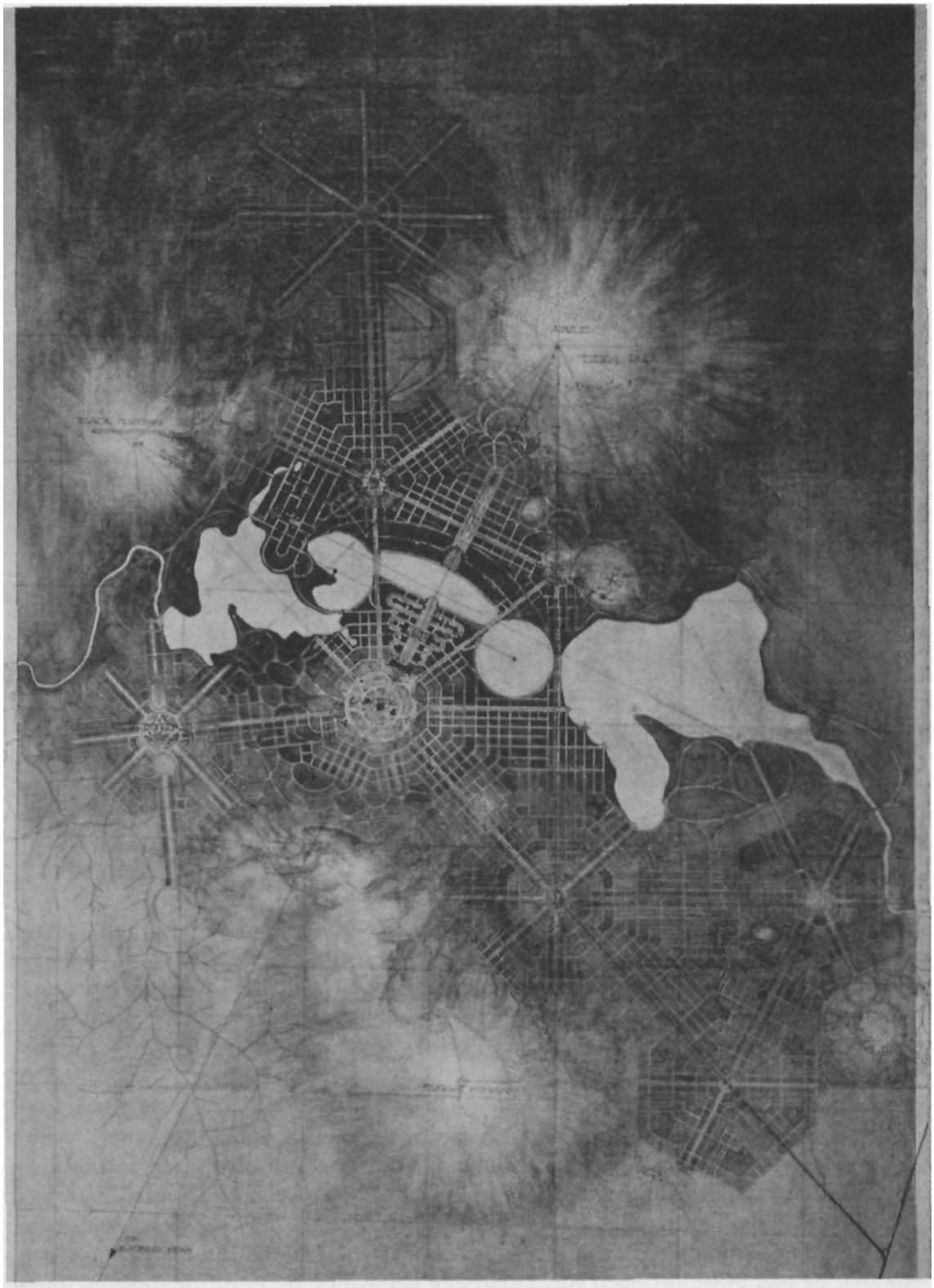


Figure 1.1 Commonwealth of Australia Federal Capital Competition: City and Environs

particular sacred geometry adopted by the Griffins. There is a symbolic content to their plan — incorporating, as it does, other significant paradigms derived from specific esoteric and cosmological sources. The Griffins' use of the term 'ideal city' links their Canberra plan to an ancient and universal tradition of planning, which also underlies both the City Beautiful and Garden City movements.

Crucial to an understanding of the design for Canberra, as developed from the Griffins' initial plan of 1912, is the recognition that the Land Axis connecting Mount Ainslie with the War Memorial, Anzac Parade, the lake system, the parliamentary triangle and Capital Hill, extends to Bimberi Peak, the highest mountain in the Brindabella ranges some 25 kilometres to the south of the central city. Bimberi Peak, not Capital Hill, was designated as the terminus to the Land Axis both on the initial drawings and in the original report (see figure 2.3 and the illustration on the back of the jacket). This north-south axis and the east-west Water Axis from Black Mountain passing through Fyshwick, the basins comprising Lake Burley Griffin and along the Molonglo Valley, form a cross akin to the monumental constructions of the ancient world such as Constantine's Rome. There, the *axis urbis* (city axis) connects St Peter's Basilica, the Capitoline Hill, the Via Sacra, the Temple of Venus and Rome, the Colosseum, St John's Lateran church, and extends to the Alban Hills, the home of the gods of antiquity (see figure 3.3). At the Colosseum it crosses another axis connecting the ancient basilicas of Santa Maria Maggiore and St Paul outside the walls. With the establishment of Christianity, the 'cross' of Rome became the model for the development of many European cities.

Inspiration for the Griffins' original Canberra design is drawn from both ancient spiritual ideas and the Griffins' understanding of geomancy — an ancient science placing man in harmony with the earth, which is common to both Eastern and Western cultures. Canberra, therefore, has affinities with Stonehenge, sacred Glastonbury, ancient Egyptian temples and pyramids, even with the concept of the new Jerusalem. In common with them all, Canberra is constructed in accordance with ancient architectural and planning principles and the same sacred geometry emanating from the Vesica.

The Vesica is the orifice formed from the interpenetration of two equal circles, one sphere symbolic of the spiritual realm and the other symbolic of the world of material phenomena. Liberated from the Vesica are the circle, the square, the triangle, the rhombus and regular polygons which interrelate (figure 1.2). Their interrelations determine the geometrical structure of the initial plan with its attendant architectural proposals; a framework clearly visible even now, and reinforced in Romaldo Giurgola's design for the new Parliament House.

Added to the simple basic cross of Canberra, there is a series of interrelated and connected nodal points: in effect, all the mountains — Black Mountain, Mount Ainslie, Mugga Mugga, Mount Pleasant and City Hill — are connected to the main Land Axis extending to Bimberi Peak on the edge of the Australian Capital Territory. This concept reflects the principle of the five sacred mountains i*n feng* shui (Chinese geomancy). The siting and massing of Giurgola's new Parliament House strongly suggests that he had in fact grasped the underlying geomantic order of the Griffins' initial plan even though Giurgola makes no reference to it in his published accounts of the

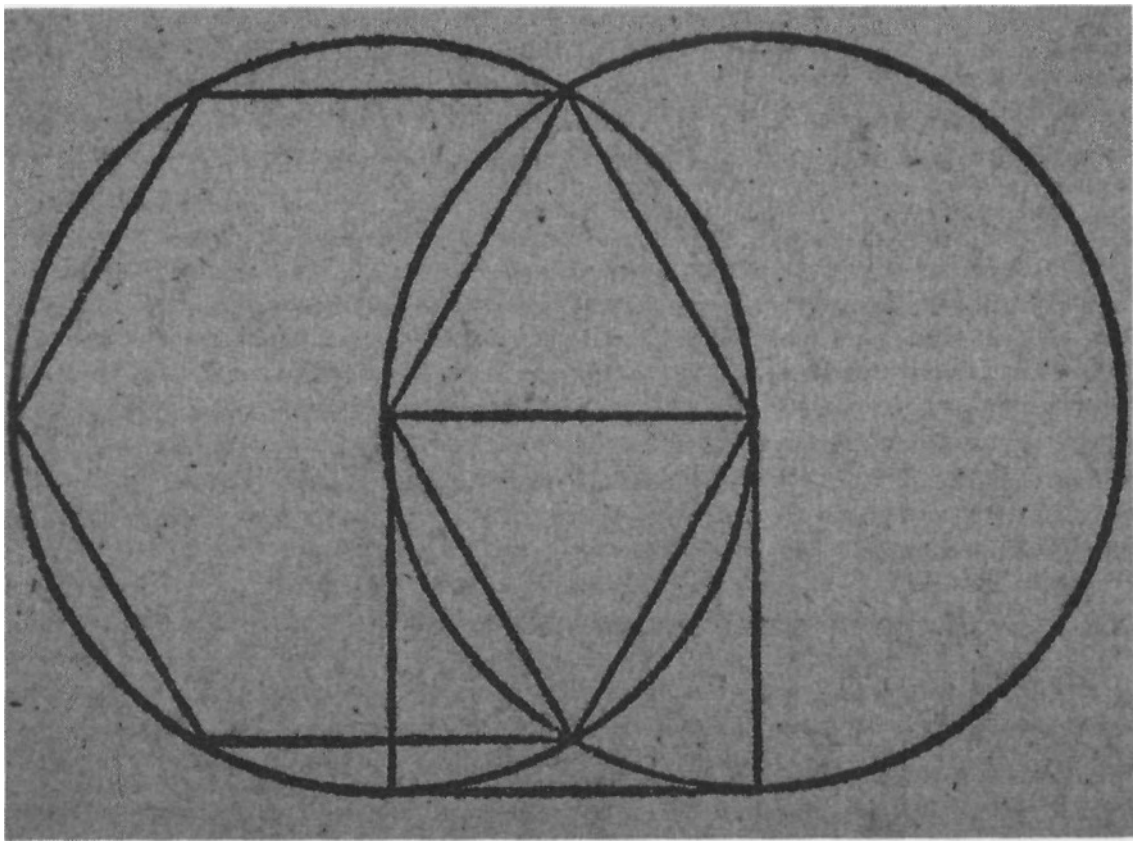


Figure 1.2 *Sacred geometry of the Vesica: circle, square,* rhombus, *equilateral triangle and regular polygons*

design. His new building, with its two huge ramped hemicycles, its relationship to water areas and the surrounding mountain forms, produces an effect similar to a feng *shui* landscape, in which a building should ideally be sited in relation to embracing and protective mountain forms (the White Tiger and the Azure Dragon) with a slow-moving body of water in the distance (Lake Burley Griffin). It is such clear references in the Griffins' original plan to their wider sources of inspiration that makes it impossible to interpret Canberra solely as a product of the City Beautiful and Garden City models. Nevertheless, such influences were never made explicit by the Griffins. Just as the medieval master masons guarded their secrets, the Griffins never revealed the basis of their design to the politicians and bureaucrats who condemned the initial plan as impractical. For this book the esoteric basis of the plan has had to be elucidated through a study of the *Magic of America,* a four-volume work written (but never published) by Marion Griffin at the end of her life.

After the death of Walter in India in 1937, Marion returned to America and began working on the *Magic of America,* a record of their life and work experience together that she compiled from documentary material and her own reflections. The *Magic of America* is divided into four parts, each part concentrating on a different stage in their career. The first part, called The Individual Battle', deals with the early years in Chicago, this is followed by The Federal Battle', dealing with Canberra. The next part,

The Municipal Battle', deals with Castlecrag, and the final part covers the later years in India.[2] Marion's reminiscences offer insights into the full range of factors that influenced the initial design, especially the impact of ancient paradigms and city models.

> Canberra is the only really modern city in the world. Not that [that] has been made obvious to casual glance, but a structure can only be truly modern when the foundations are properly laid for that particular thing, and so it is with Canberra. Its history from the beginning is the history of Town Planning or Land Planning in modern times, say of the past 300 years. For this science (and science is based on knowledge and not on feeling as in the case of the arts) has died out and was no longer practised.[3]

Marion's direct reference to a lost science of planning (in other words, geomancy) which in fact underpins the Canberra plan should be interpreted in relation to other extracts from the *Magic of* America.

> Communion with the primeval nature is the common school of thought for future architects, [as] it was in the beginning of civilisation where everywhere in every race and every climate anonymous architects expressed fitness and beauty in their constructions.[4]
>
> It is not to the architects that we go to learn architecture now, even in the schools where the cult is taught, but ultimately to the unidentified origin, subconscious periods when art was not in conflict with the surrounding natural world nor a reflex of internal strife.[5]

In the *Magic of America* Marion provides extracts from Walter's writings on architecture and cultural history.

> In the work of radical architects we find constant resemblance to the work of other men and other people — even Oriental, Aztec, Moorish, Japanese, Greek, Gothic, and Primitive. . . . They glory in the laws of Nature where everything has its purpose and form becomes satisfying only when it best fits and expresses that function.[6]
>
> All the evidence of historical civilisations among men prior to the Romans exhibits] the second essential to architecture, subordination to Nature, and indicate[s] something in these civilisations that we lack — a closer relationship of man to nature.[7]

With Marion there is a fascination with the ideal of a Golden Age, a notion that is reiterated in the philosophies of Eastern and Western cultures. 'Life is a Fine Art' she writes in the *Magic of America:*

> That is what all the poets, the seers, the sages, the revolutionaries have seen in their mind's eye. It was the vision that Moses held from the Mount as he passed behind the veil. Life as a fine art [flourished] on the shores of the Mediterranean Sea in days long before . . . in lands where wine and corn abounded, where song and music and drama

> made life resplendent, where man surpassed himself and became superman. . . . all this glory that was Greece will be resurrected by the shores of the Pacific.[8]

Here, Marion is referring to Castlecrag in Sydney which became a substitute for Canberra — a second chance — following Walter's resignation from the Canberra project in 1920.

Adulation of the manifold ancient cultures preceding Rome is a theme which permeates the writing of both Walter and Marion Griffin. In the original report, which accompanied the competition winning drawings, Walter Burley Griffin had also stated that:

> Experience from the beginnings of architecture has demonstrated that the simplest and most formal style has evolved with the completed civilisation of each race at its ultimate development. Our civilisation is tending that way.[9]

It was this kind of thinking that informed certain choices made in the Canberra plan, such as the use of the ziggurat form for the Capitol building (a monumental structure conceived of as a symbolic, sacred centre of the city). Walter observed that:

> The stepped pinnacle treatment . . . is an expression that was the last word of all the longest lived civilisations hereto, whether that be Egypt, Babylonia, Syria, India, Indo-China, East Indies, Mexico, Peru.[10]

The placing of parliamentary functions literally under Capital Hill in Giurgola's new design for Parliament House has been severely criticised by many architects. Nevertheless, a correct appreciation of Giurgola's work should recognise its profound connections to the Griffins' original massing for the Capitol and the principles of Hellenistic city design, to which Marion and Walter were committed. A way of understanding the true historical perspective of the initial design, and Giurgola's response to it, is through a study of the 1912 original report, in which Walter Griffin describes the nucleus of Canberra as a 'theatre'. What he means by this is the Hellenistic theatre, like in the ancient city sites of Pergamon, Lindos, Palestrina, or the Acropolis in Athens. There, in a grand design, by means of terraces, ramps and stairs, images are presented at discrete levels — like the Griffins' projected government group in Canberra, where the panorama of public edifices is crowned first by the Capitol on Capital Hill and then by an idealised Bimberi Peak.

Their adoption of the temple ziggurat form for the Capitol building, the nucleus of the composition as a symbolic *omphalos* or cosmic mountain, their use of a scheme of sacred/symbolic geometry, nature mimesis, the quartering of the city, and geomantic axiality and symbolism — all offer evidence that there is much more to the original Canberra plan than is generally acknowledged. The significant influences on the original plan can be gleaned from a careful reading of the *Magic of America* — in its explanations of the architecture, civic and urban design, and planning projects of the Griffins — as well as from other writings such as 'Building with Nature'. These influences can be placed in four categories: origin and symbolism of the city form, with

particular reference to the Hellenistic and Chinese city models; axial and linear constructions as representations of the divine and the cosmos, which are found in the archaeological remains of ancient cultures; Chinese geomancy or the principle of the five sacred mountains and the concept of earth energies as embodied in the philosophy of *ch'i* and *feng shui* which prescribes relationships between constructions, the natural topography and water areas, and, finally, the tradition of crystal iconography, symbolising spiritual transcendence and transmutation.

These are the main themes of this book and through them it will be demonstrated not only that Canberra has evolved within a tradition which originated in antiquity but that it can also be aligned with some of the most powerful symbols of both Eastern and Western culture. From an understanding of these influences the national capital should, therefore, achieve increased significance in the minds of the Australian people, and this heightened awareness may liberate a new and dynamic approach to the future development of the city.

NOTES

1 Most studies of the Canberra plan have interpreted it in terms of the City Beautiful and the Garden City. The following are some examples. R Pegrum 'Canberra's Planning' *Architecture in* Australia Sept. 1983, P Harrison Walter Burley Griffin Landscape Architect M.T.P. thesis (unpublished) University of New South Wales 1970; M Peisch *The Chicago School* of *Architecture* Columbia University Studies in Art History and Archaeology Phaidon Press London 1964, Donald Leslie Johnson *The Architecture of Walter Burley Griffin* Griffin Press Adelaide 1977,. J Birrel *Walter Burley Griffin* University of Queensland Press 1964, K H Fischer *Canberra Myths and Models, Forces at Work* in *(information of the Australian Capital* Institute of Asian Affairs Hamburg 1984.

2 The *Magic of America* is an important aid to the study of the work of Marion and Walter Griffin and was written by Marion in the period ca. 1940-49. In the past, it has been largely ignored. There are two manuscripts: one is held by the New York Historical Society; the other is in the Burnham Library in Chicago. The two differ slightly in organisation and content but they have the common purpose of documenting the life and work of Walter and Marion Griffin. There is **difficulty** in determining the referencing of some of the material as the volumes consist of a rather haphazard collection of material, articles, letters and interviews from throughout the Griffins' lives. Often, the work is not dated and her writing style is idiosyncratic. The numbering system throughout the book is also inconsistent. Copy used for this book- microfilm in the Australian National Library, Canberra, taken from the Burnham Library.

3 MM Griffin "Canberra, its designer and its Plan" The Centennial Anniversary of the Founding of Australia, radio broadcast by Mrs. Walter Burley Griffin' The Federal Battle *Magic of America* pp434-38.

A MM Griffin 'Back to Nature'The Individual Battle *Magic of America* p76.

5 MM Griffin 'Natural Life before Architectural Growth'The Individual Battle *Magic oj America* p7l.

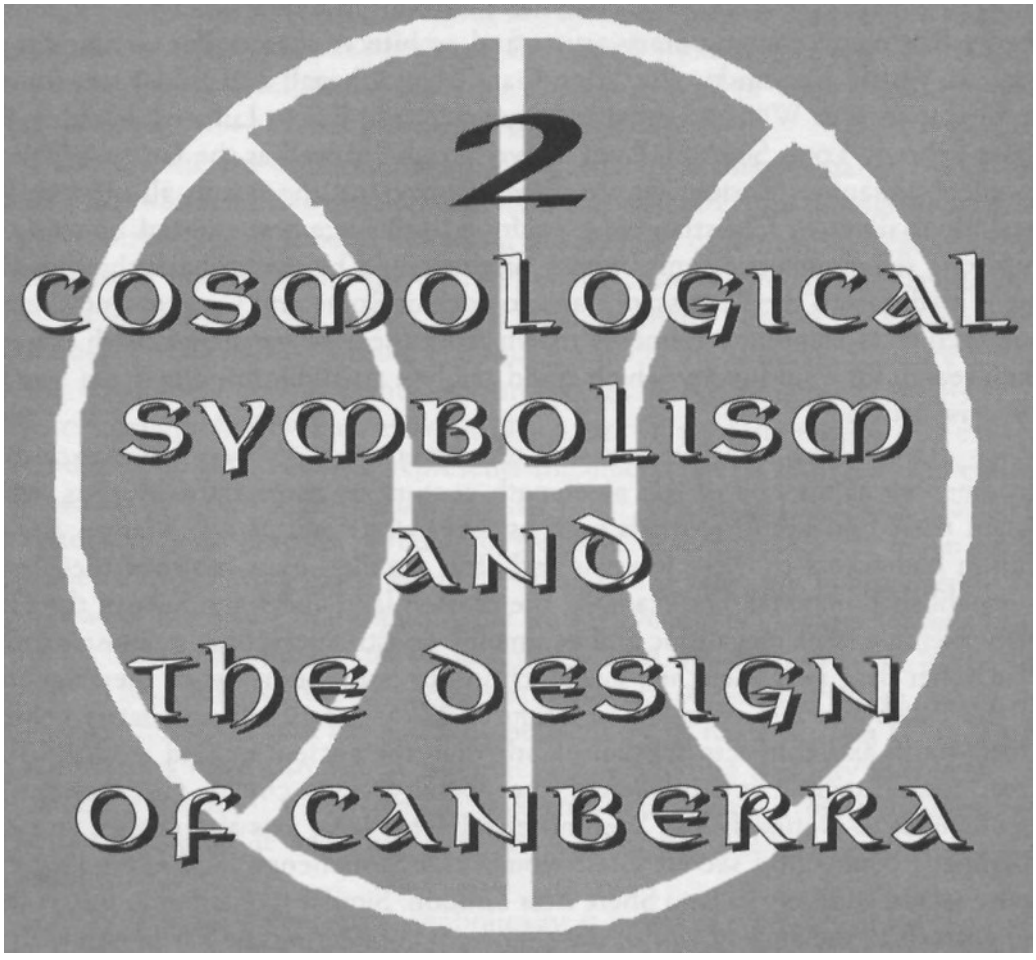
6 W B Griffin 'Architecture incomplete without Town Planning' The Individual Battle *Magic of America* p376.

7 W B Griffin The Architects Burden' The Municipal Battle *Magic oj America* p97.

8 M M Griffin The Federal Battle *Magic of America* p248.

9 Federal Capital Design No.29, by Walter Burley Griffin, Original Report' 1912, reprinted in *Report from* the *Select Committee Appointed to Inquire* into the *Development of Canberra* September 1955 Appendix B p94.

10 ibid. p96.


2
COSMOLOGICAL
SYMBOLISM
AND
THE DESIGN
OF CANBERRA

At the turn of the twentieth century there was a great diversity of influences on artists and architects that fed into their work. But it was the reaction against the prevailing revivalism and eclecticism that generated the most intense influences, some of which were absorbed through an interest in the new syncretic religious movements that many contemporary artists and architects shared. For outstanding artists such as Vassily Kandinsky, Piet Mondrian, Marc Chagall and Paul Klee, for modern architects such as William Lethaby, Antonio Gaudi, Edwin Lutyens, Hendrik Berlage, Peter Behrens, Louis Sullivan, Frank Lloyd Wright, as well as the Griffins, Theosophy, Swedenborgianism, Rosicrucianism, Freemasonry and the occult all offered dynamic new alternatives to Christianity. A profound influence was exerted by these newer, syncretic religious movements, whose origins could be traced back through the hermetic tradition to the Renaissance and to ancient Rome and Greece. And these artists and architects combined elements drawn from these newer beliefs with paganism in their search for a spirituality which could catalyse artistic inspiration from new historical perspectives.

In addition, many ancient sites of religious practice were being excavated and documented at the end of the nineteenth century by astro-archaeologists, who published their findings in journals such as *Archaeologia* and *Nature.* Marion and Walter Griffin had access to these journals and clear parallels exist between their work and this published material. For example, the crossed land and water axes of the Canberra plan resemble large megalithic and geomantic constructions such as those surrounding Haagscher Berg near Munchen Gladbach in northern Germany, or the axial crossings of the Salisbury Plain complex (see figures 3.6 and 3.10). In this latter complex its north-south axis connects Salisbury Cathedral, the ancient mound at Old Sarum, the great cosmic temple at Stonehenge, the Avebury stone circles, Cirencester Church, and extends to Dufton Fell in Westmoreland. This same axis also crosses an east-west alignment connecting sacred Glastonbury and Stonehenge, and extending through many sacred and holy hills to Shere near London. Similar to Canberra, too, is the most famous axis of the ancient world: the alignment connecting the Parthenon with Mount Salamis to the west of Athens and the horns of Mount Hymettos to the east. And when the *axis urbis* of Rome penetrates to the Alban Hills, six ancient shrines are built on a north-south axis stretching from Anzio through Lanuvio, Nemi and Tuscolo to Tivoli, with Monte Cavo being the pinnacle — the sacred mountain — in the same way that Bimberi Peak was for Canberra in the Griffins' plan.

ORIGINS AND SYMBOLISM OF THE CITY FORM

In ancient times temples, villages, towns and cities were constructed as entities modelled and structured on the nature of the universe. Nigel Pennick points out that 'the city, the fundamental unit of human civilisation, has always been a microcosm of its immediate world, containing within its boundaries the hierarchical structure of its society'. This was a concept which, on a larger scale, also governed the conceptual arrangement of state and country and on a smaller scale, the erection of dwellings.

Peking is one example of a city which approached this ideal. The innermost section of Peking is the Forbidden City: the sacred centre — the 'ritual site upon which the Emperor as the embodiment of the Empire sat'. Surrounding the Forbidden City was the everyday secular city which, in turn, was surrounded by the 'inner civilised states of the Empire'. Beyond this were the provinces, the less civilised states, they, in turn, were protected from the barbarians and chaos by the Great Wall of China. The city and state were unified by this cosmological concept.[1]

Although ancient cosmologies differ in their particular explanations of the world, city form was commonly generated either through direct cosmological symbolism or, less formally, from a ritual symbolising the creation of the world. Regarding the latter, cosmogonic myths explain the creation of the cosmos through the slaying of a giant, serpent or dragon — the organs of the creature giving birth to the various parts of the cosmos. In some myths, specific body parts and organs of the creature are attributed to the creation of certain plants, human species or different social orders. The giant or serpent symbolically represents the chaos and watery formlessness that existed before creation. The act of slaying represents the emergence of form and the end of chaos. These myths often form the basis to the ritual surrounding building practices. According to traditional practice in India, for example, before masons can begin work, an astronomer shows them a place where they can build. This spot is supposed to lie above the head of the 'snake that supports the world'. Once this spot is determined the master mason takes a sharpened stake and drives it into the earth in order to fix the snake's head. This ritual represents the cosmogonic act of Soma or Indra, when he 'struck the snake in his lair' and his lightning bolt 'cut off its head' *(Rigveda* IV, 17,9 & I, 52,10). Such myths have also led to the practice of building and city sacrifices. As Mircea Eliade points out, if a city {temple, dwelling) is to endure it 'must be animated, that is, it must receive a life and soul. The transferral of the soul is only possible via a blood sacrifice'.[2]

When city form is generated symbolically, it is placed conceptually at the centre of the cosmos. In Roman times, as part of the process of establishing the site of a town, the augur first determined if the auspices of the site were favourable. The relationship between surrounding hills and mountains, and water areas, as well as natural phenomena, would aid this determination. The augur then made a ritual delineation of the macroscopic or world *templum* taking the visible horizon as the circular boundary of the earth and indicating the four corners of the earth corresponding to the four cardinal directions. The augur seems to have established the four cardinal directions with the aid of t*he gnomon* (or shadow stick), a very ancient technique, also used in the East. It involved the erection of a vertical post and the plotting of the cast shadow, to identify the east-west passage of the sun across the sky. The shadow line thus established became the *decumanus* or principal east-west street of the town. This line was then bisected at right angles to form the *cardo,* the principal north-south street of the town. The intersection of these two principal streets was called the *axis mundi* (world axle) — the sacred place at the centre of the town, where the founder was usually buried, along with soil or other sacred relics from the parent city.

Within a circle of consecrated space (the *Pomoerium),* which defined the boundaries of the urban precinct, the four-square plan of the town was laid out and its principal quarters were divided by the *cardo* and *decumanus.* In the central *mundus* or microcosmic world was erected the *templum* (temple), which was formed by an analogous procedure of circular consecration within which a cardinally oriented four-square house was dedicated to the gods or presiding deity of the city. This tradition is remembered at St Peter's Basilica in Rome, where the axes of the original Greek cross are located directly over the grave of St Peter. The formative rationale behind this procedure was the act of consecration, or cutting off: in other words, the creation of the human cosmos — that is, the microcosm of the urban precinct — protected by the magic circle. Beyond the circle, in the unconsecrated or profane space outside the city walls, lay chaos and disorder. The cutting off involved, too, the creation of the *temenos* (sacred space), which was delineated by the ritual act of ploughing the perimeter of the consecrated area in a circle centred on the axis *mundi.* Precisely the same process of consecration, or cutting off of sacred space, is implicit in the notion of the *templum;* being traditionally located at the town centre, it was conceived of as a replication in miniature and its four-square, cardinally oriented building as *imago mundi* (a map or image of the world).

Mircea Eliade attributes the universality of the quartering system to a common perception or 'system of the world'. That is, the sacred place constitutes a break in the homogeneity of space and this break is symbolised by an opening which enables passage from one cosmic region to another. Thus, there is a connection between heaven, the earth and the underworld: the *axis mundi.* Around this cosmic axis, symbolised by a tree, sacred pillar or stone, or a temple, lies the world,- hence, the axis is located 'in the middle' at the 'navel of the earth'. In China the ancient science of geomancy, based in cosmological symbolism, ordered the entire country around the five sacred mountains: the cosmic mountain at the centre with the other four at the cardinal points. The Egyptian hieroglyph meaning city or town is a circle quartered. The Roman *mundus,* paradigm for human habitation, was a circular trench divided into four parts.[3] The modelling of the ideal city on cosmological paradigms allowed ancient man to locate himself within the order of the universe. To Plato, quartering allowed for the perfect balance between order and freedom, and this is illustrated in his concept of the ideal city: Magnesia approached this ideal (the true ideal is always unmanifested form). His concept of the ideal city was informed by the ancient 'wisdom tradition' which Plato himself had sought in knowledge held by the Egyptians.

THE GEOMETRY OF THE VESICA

At the turn of the century it was the new syncretic religious movements such as Theosophy that drew on the ancient 'wisdom tradition'. With Theosophy this tradition

was drawn into the mainstream of contemporary artistic and intellectual life. Such a tradition had the power to direct its followers towards a new inner awareness, as a result of which in their work they were able to take the cosmos into account and depict the world as an abstraction of a majestic play of energies.

The importance of Theosophic thought to the work of the Griffins becomes clear as early as 1912, from the geometry of the design for the federal capital of Australia. The geometry of the Canberra plan, based on the figure of the Vesica, acts as a symbolic reinterpretation of one of the most fundamental precepts of Theosophic thought: Cosmic Evolution — a perpetual cycle of birth, death and regeneration as underlying the processes of the universe. The Vesica described in the Introduction, is the orifice created from the intersection of two equal circles, symbolically representing the intersection of the spiritual and material worlds.

The concept of Cosmic Evolution is clearly demonstrated by a co-founder of the Theosophy movement, Madame Helena Blavatsky, in *his Unveiled* (1875). Two geometrical diagrams of Chaldean and Hindu cosmologies are presented and explained by Blavatsky to provide an alternative to the Christian story of creation as a means of explaining the structure of the world (figure 2.2). These cosmologies, unlike the Christian creation story, provide an explanation 'which agrees in every respect with the Evolutionary theory of Modern Science', according to Blavatsky.' The diagrams encapsulate the geometry of the Canberra plan,- they also display a structure which is common to the plans of sacred geomantic constructions at Stonehenge and Glastonbury, in the ideal cities of Plato, and the New Jerusalem as conjectured by John Michell in *The Dimensions of Paradise.*[5]

The nucleus of the Canberra design is a system of forms generated from the sacred figure of the Vesica; in this design the radii of the intersecting circles are determined by the distance between City Hill and the Municipal centre on Mount Pleasant (see figure 1.1). Within the Vesica there emerges two equilateral triangles which share a common base (the Municipal Axis). The triangle with the apex upwards is defined by the natural landscape features of City Hill, Capital Hill and Mount Pleasant, while the downward-facing equilateral triangle is marked in the landscape by Mount Ainslie. The Vesica also controls the geometry of the Capital Hill design in the initial plan (figure 2.1). The site subdivisions for the Capitol, the governor-general's residence and the prime minister's residence are formed by the interpenetration of three equal circles, the manifestation of a double Vesica. From the interpenetration of the circles, which liberates the square and the equilateral triangle, the Vesica also creates a number of other geometrical forms such as the rectangle, the hexagon and the octagon — all of which are present in the Canberra design. The rectangle, for instance, determines the centres of the formal water basins, which are projections from the Municipal Axis, flanking the parliamentary triangle.

Thus, the geometry derived from the Vesica and its correlation to both natural and built key features of the design provide an overarching concept for Canberra, which is consistent with comments by Walter Burley Griffin:

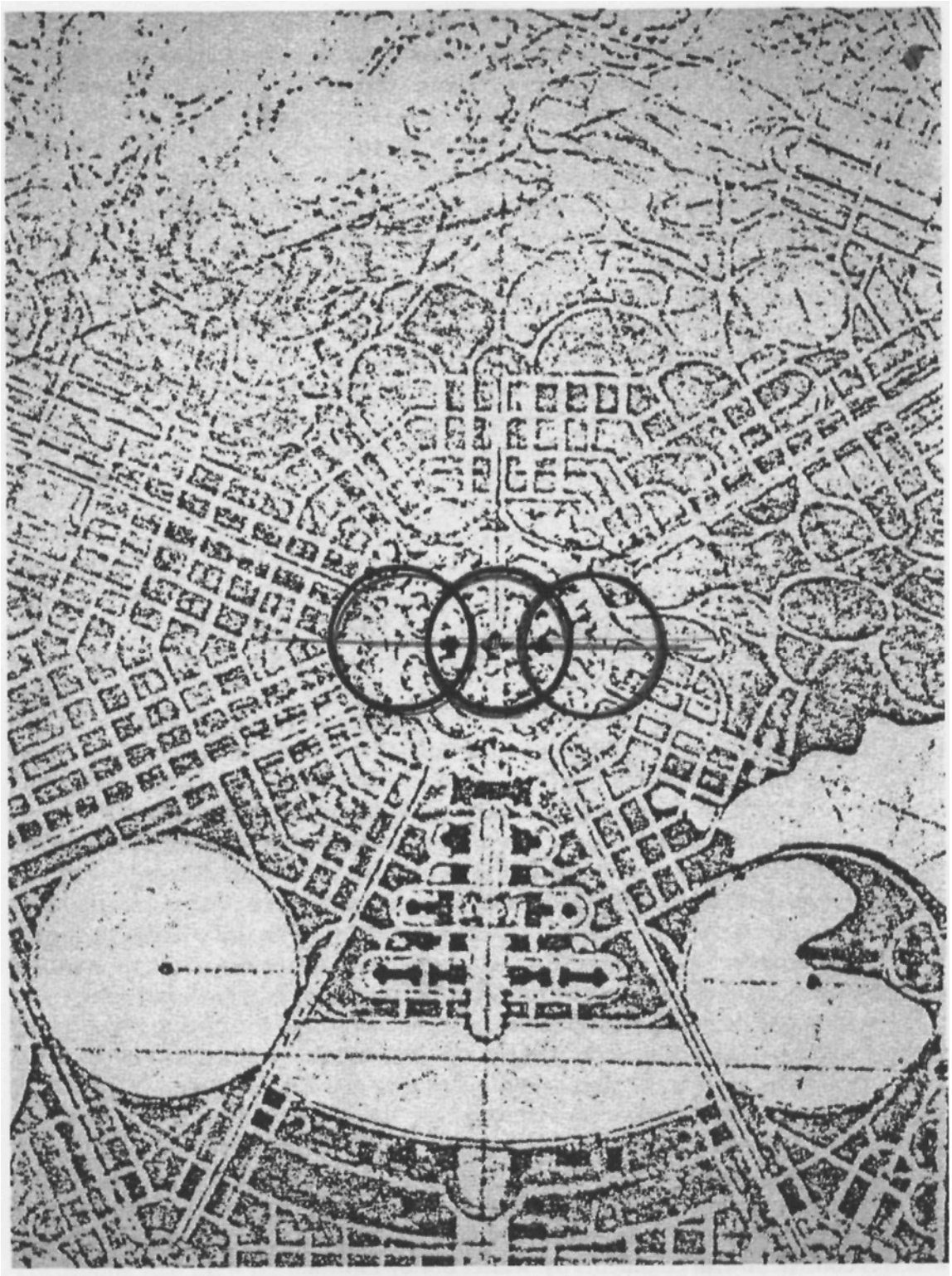


Figure 2.1 Capital Hill geometry: the double Vesica

> in Town Planning, as in architecture, there must be a scheme that the mind can grasp, and it must be expressed in the simplest terms possible. . . . Just as music depends on simple mathematical relations so do architecture and town planning.[6]

The sanctity of the Vesica lies in its ability to give rise to geometrical figures such as the rhombus, the Star of David or the hexagram. Thus, within ancient and esoteric traditions, it became a symbol of perceived knowledge and perpetual attention.[7] In the Chaldean and Hindu images the circle, which is fundamental to the construction of the Vesica, enshrines the geometrical figure of the double triangle, replicating the Star of David. As defined by Blavatsky, the circle symbolises the spiritual origins of the universe, the world within the universe, and the spiritual essence from which springs all creation. In explaining the symbolic importance of these cosmological and geometrical diagrams, she describes the theosophical concept of the active and passive relationship of spirit and matter in the universe.

With reference to the two equilateral triangles facing upwards and downwards, she writes:

> the triangle played a prominent part in the religious system of every great nation, for everywhere it represented the three great principles — the spirit-force and matter, or

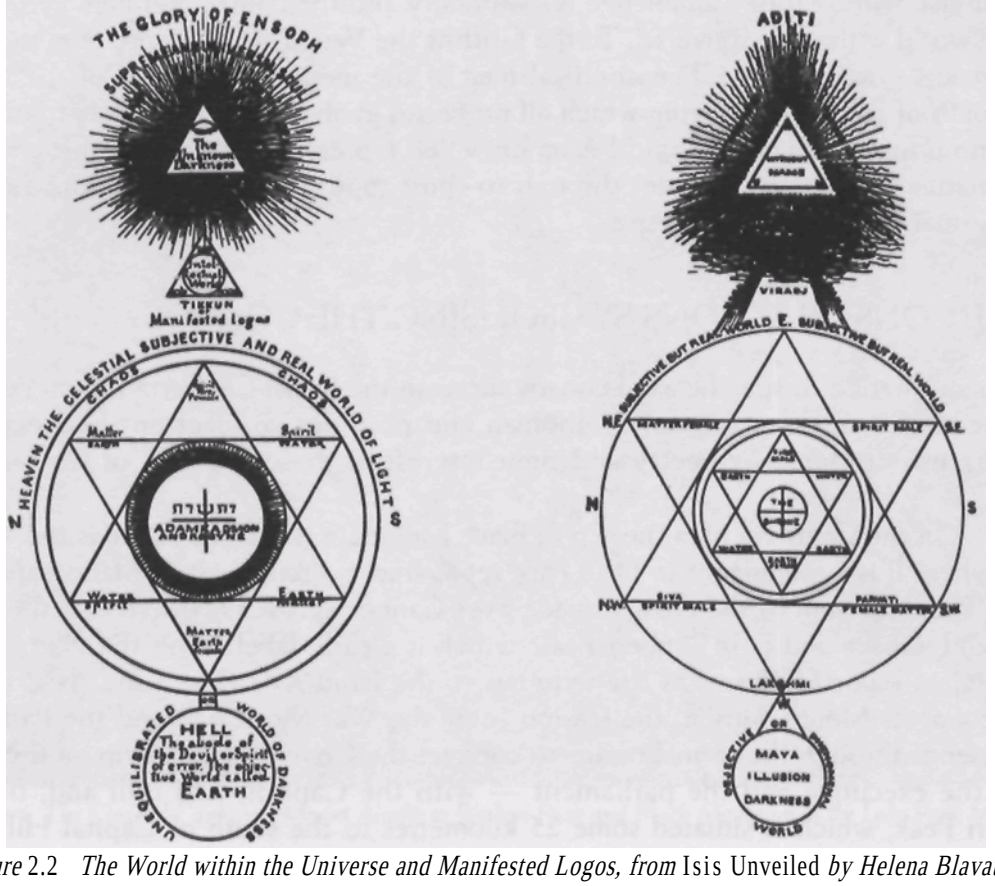


Figure 2.2 *The World within the Universe and Manifested Logos, from* Isis Unveiled *by Helena Blavatsky*

> the active (male), passive (female) and the correlative principle which partakes of both and binds the two together.[8]

and she goes on to say:

> The double triangle belongs to one of the most important, if it is not in itself the most important, of the mystic figures in India. It is the emblem of the Trimurti, three in one. The Triangle with its apex upwards indicates the male principle, downward the female; the two typifying at the same time spirit and matter.[9]

When the two triangles interpenetrate, as in the Chaldean and Hindu diagrams, and the Star of David, it is said that the 'disparate elements of the universe are reintegrated into the Primordial whole'.[10] They are 'brought together by the uniting principle of production', that is, the divine influences underlying the processes of evolution."

In the Canberra plan Marion and Walter Griffin unite the triangles, upwards and downwards, on a common base within the orifice of the Vesica rather than forming the hexagram or the Star of David. The Vesica controls the geometry of Canberra both in the overall concept and in the structure of Capital Hill. The double triangle within the Vesica can be interpreted as a symbolic restructuring of both Western and Eastern cosmogonies; a clear parallel, not only with the Chaldean and Hindu geometry, but also with that of Stonehenge, Glastonbury and the conjectural New Jerusalem — 'the world within the universe'. To the Griffins the Vesica clearly represents the true geometrical symbol of the Theosophical idea of the metaphysical state of the spirit, 'the womb of the universe', from which all processes evolve. And the double triangle is the central figure in a cosmological diagram which represents the mystical progression from matter (downward triangle) through to spirit (upward triangle) as motivated by the spiritual essence of the universe.

AXIAL CONSTRUCTIONS SYMBOLISING THE COSMOS

The incorporation of specific axial constructions in the initial Canberra design continues the theme of cosmological symbolism and provides connections between the Griffins' use of sacred geometry and their interest in the city forms of the ancient world.

On the Canberra plan the top of Black Mountain is marked A; AB is the Water Axis, where B is a monument in Lake Park set against a circular road or landscape element. Thus, the sign of the cross is made over Canberra, ABCD, where C is the peak of Mount Ainslie and D is Bimberi Peak, which is clearly labelled on the plan and in the original report diagrams as the terminus to the Land Axis. The Land Axis, therefore, connects Mount Ainslie, the Casino (now the War Memorial) and the Parkway, and extends through the formal basins to connect the Government Group — the judiciary, the executive and the parliament — with the Capitol, Red Hill and, finally, Bimberi Peak, which is situated some 25 kilometres to the south of Capital Hill (see figure 2.3).

Figure 2.3 The Cross of Canberra: Mount Ainslie to Bimberi Peak and Black Mountain to the Lake Park Monument

To Marion, Bimberi seems to be a sacred mountain akin to Mount Olympus in Greece or Monte Cavo in Italy. When Bimberi Peak is added to the entire axial network emanating from the parliamentary equilateral triangle — the Capitol, City Hill and the markets/station/cathedral nodes being the salient points, its axes extending to Mugga Mugga, along Northbourne Avenue and incorporating the land and water axes — the plan is of a size quite beyond any comparable City Beautiful or Garden City construction. Certainly, the orientation of the land and the water axes to the landscape (hills and mountains) and the outward looking character of the plan, with the inclusion of Bimberi Peak into the plan's composition and its great distance from the city centre — all make it difficult to explain the design simply in terms of the City Beautiful and the Garden City. The geometrical infrastructure generated from this patterning is also more intricate and more relevant to the natural topography than typical aesthetic arrangements of the City Beautiful.

In 'Mondrian and Theosophy', Robert Welsh notes that the cross, like the triangle, 'expresses a single mystical concept of life and immortality'. It is another symbol for the mystical progression within the Theosophical concept of evolution.[12] The four points of the cross represent, in succession, birth, life, death and immortality. The sign of the cross over Canberra, the ABCD movement, clearly derives from Theosophical symbolism as it is defined by Helena Blavatsky in her discussion on the Chaldean and Hindu imagery.

> The vertical line being the male principle and the horizontal the female, out of the union of the two at the intersection point is formed the CROSS."

This point of intersection in the Canberra initial plan is marked by the Water Gate as the nucleus of the composition. Naming the axes 'Land' and 'Water parallels the juxtaposition of Earth and Water in the Chaldean and Hindu cosmological diagrams, indicating that the Griffins were familiar with Theosophical dogma. Blavatsky describes the deeper significance of the cross as follows:

> The Philosophical cross, the two lines running in opposite directions, the horizontal and the perpendicular, the height and the breadth, which the geometrizing deity divides at the intersecting point, and which forms the magical as well as the scientific quaternary, when inscribed within the perfect square, is the basis of the occultist. Within its mystical precinct lies the master key which opens the door of every science, physical as well as spiritual. It symbolises our human existence, for the circle of life circumscribes the four points of the cross, . . . Everything in this world is a Trinity completed by the quaternary, and every element is divisible in this principle.[14]

For the parliamentary triangle Walter and Marion Griffin adopted a plan based on geomantic and Hellenistic principles, which used Mount Ainslie, Black Mountain, Mugga Mugga, Bimberi Peak, and the lesser forms of Mount Pleasant, Capital Hill and City Hill to provide its geometric organisation. In the past socio-political idealism and democratic symbolic intent, rather than the site characteristics, have been singled out as the essential organising principles of the Canberra plan. Such explanations are gen-

erally reductive, however, since they fail to recognise that the Griffins' concept of democracy is tied to ancient Greek religious symbolism as related to landscape.[15]

In every respect the initial design directs the eye towards these mountains and hills. The government group is organised on frontages and terraces in a horizontal order and a vertical hierarchy which culminates in the Capitol, the apex of the lower parliamentary equilateral triangle, and which locks the design into the land and water axes (see figure 2.4). In the original report which accompanied the competition drawings, Walter Griffin described the structure of the parliamentary triangle — the government group and the northern parkland beyond the formal basin — as analogous to a theatre.

> The background first mentioned above and visible primarily from the Northerly portion of the central district of the City is used to set off the governmental group, for which it serves as a stage setting, as it were, from the closest adjacent flat lands of the opposite side of the basin used by the Public Gardens, a 'parquet' for this theatrical whole and from the commercial portion of the city, next beyond and above occupying the 'dress circle'.[16]

It is clear from the use of the site that the Griffins' use of the terms 'theatre' and 'amphitheatre' can be taken as referring to a Hellenistic theatre and temple complex, the organising principle of which is demonstrated at sites such as Delphi, the Acropolis, Pergamon, Lindos, Palestrina and Tivoli. Why did the Griffins adopt the Hellenistic model? The *Magic of America* reveals that Marion saw the ancient Creeks as a race of 'creative thinkers', and from creative thinking democracy could arise.

> Creative thinking goes direct to totalities and works from wholes to particulars. The Greeks conceived the totality of nature — earth, water, air and fire its four conditions of matter . . . the Greeks expressed their inspiration in the fourness of their temples."

Marion, who drew all the work for the initial plan, saw her task as introducing liberty to the world. Marion saw liberty as the function of individualistic, creative and productive cultural activity, which in Canberra is enshrined in the concept of the Capitol. Equality (the function of a democratic political organisation), fraternity (the function of a cooperative mercantile centre), and liberty were unified in Canberra in a triangular concept. The equilateral triangle, derived from the principles of sacred geometry, is a rich source, therefore, of arcane symbolism: it represents the Holy Trinity in Christian iconography and is the symbol of godhead in several cosmologies;[18] to the Griffins it may also be taken as expressive of democracy in symbolic terms — liberty, equality and fraternity.

CHINESE GEOMANCY

Another category of influences upon the preparation of the initial plan for Canberra was one emanating from the East — *ch'i* and feng *shui.* The concept of *ch'i* appealed to

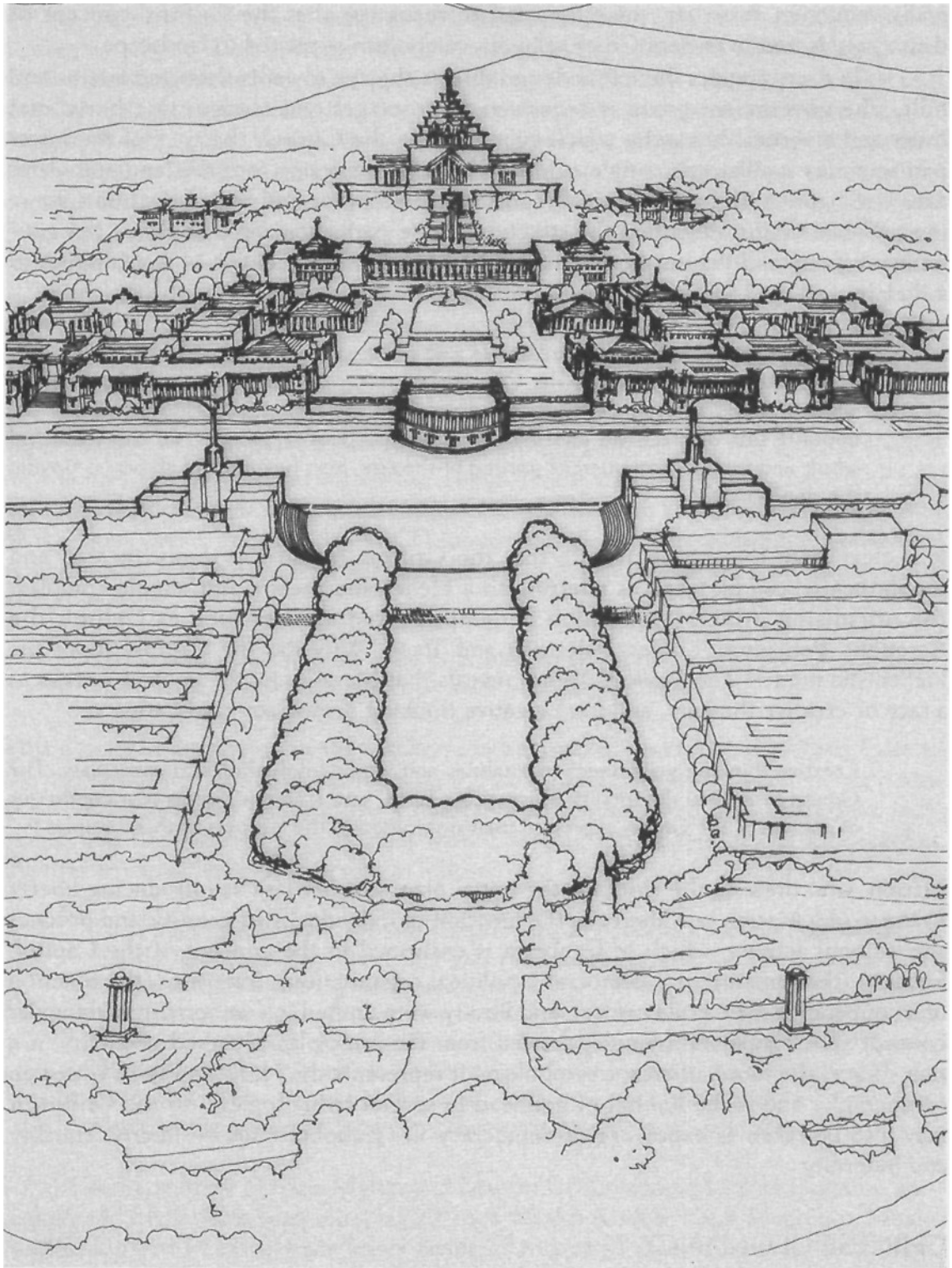


Figure 2.4 The Capitol and Parliamentary Triangle viewed from Mount Ainslie

Marion and Walter as it formed the basis to an ancient art of landscape design which stressed good health and fortune.

Before the Canberra project, Marion had already acquired a knowledge of Taoist philosophy as well as experience in Eastern artistic principles through the impact of the Japanese print on the Chicago school of architects. In Chinese landscape painting the artist was not concerned with the external physical form of an object but rather its *'ch'i',* its inner, spiritual side. *Ch'i,* which can be translated as 'the breath of life', is the cosmic energy and life force that infuses all forms and, as such, underlies the Taoist philosophy of landscape design, *feng shui.* The primary role of *a feng shut* master is to recognise the flow of *ch'i* in and across the landscape and manipulate it for his client's benefit — for good fortune and health. This manipulation is determined by a number of practices based on geomantic principles such as the placement of a building within certain natural formations — rivers, seas and mountains — and the orientation of the building in relation to other nearby constructions.[19]

There are a number of distinct features that characterise the ideal site, according to *feng shui* principles (see chapter 4). In the initial plan for Canberra, there is a striking parallel to these principles. The foci of the design, the Capitol and the government group, are sited in relation to a secondary hill (Kurrajong or Capital Hill), which is sheltered by a high mountain range to the south (Bimberi Peak in the Brindabellas). Black Mountain (the azure dragon), to the west, and Mugga Mugga (the white tiger), to the east, can be symbolised as the manifestations of the earth's spirits. As in the ideal fen*g shui* landscape — man in harmony with the earth — there is an unobstructed view from the Capitol towards Mount Ainslie in the north, and there is a quiet Heaven Pool (in the foreground of the Griffins' Parliament House), with a curving and slow-moving body of water in the distance (the formal and irregular basins).

CRYSTAL ICONOGRAPHY

Crystal iconography, symbolising spiritual transcendence and transmutation, is a further major influence and emerges as a dominant feature of both the architectural proposals for Canberra and the drawings themselves. This use of the crystal form can be seen as a continuation of a tradition stemming from ancient Solomonic legends, St John's revelation of the New Jerusalem, Islamic architecture, the legends of the Holy Grail, the gothic cathedral and light mysticism, and the emergence of alchemy. It was an iconographic tradition that stressed the transparent, luminous qualities of crystal and glass and water, which had the ability to effect a transmutation of the viewer from a base condition of existence to a more noble and spiritual state. By the turn of the twentieth century the crystal had become a clearly recognisable symbol for spiritual transmutation either on an individual scale or for a whole society.

Marion makes references to the crystal form and crystal iconography in the *Magic of America.*

> The Fairies build the vegetable kingdom but it takes the great primal spirits of mathematics to create the crystals — the Universe.[20]

In the City and Environs drawing each mountain is shrouded in a luminous, iridescent, white and yellow aura that radiates like a crystal. This luminosity and brightness is echoed in the other natural aspects of the plan: the formal and irregular basins of the dammed Molonglo River. The 'crystalline' aura of the landforms and of the architecture is reinforced by the strong emphasis on the shimmering reflections in Marion's Canberra drawings (see figures 2.5 and 4.3). The character of Marion's work is labelled by Paul Larson as a 'socialised nature mysticism'.[21] Marion may have been aware of the crystal iconography beginning to appear in the work of the German Expressionist architects. In their work and in that of the Griffins' mentor, Louis Sullivan, glass and ornament became a light-splintering medium which allowed the observer to transcend the restrictions of the physical domain and enter a spiritual communion with nature and the forces that shape it.[22]

THE GRIFFINS' LEGACY

What we have now at the centre of Canberra is the legacy of an attempt to reinstate the science which 'had died out and was no longer practised', combined with picturesque settings as devised by the National Capital Development Commission from 1958. The initial plan, however, in its structure and size, has a character that resembles

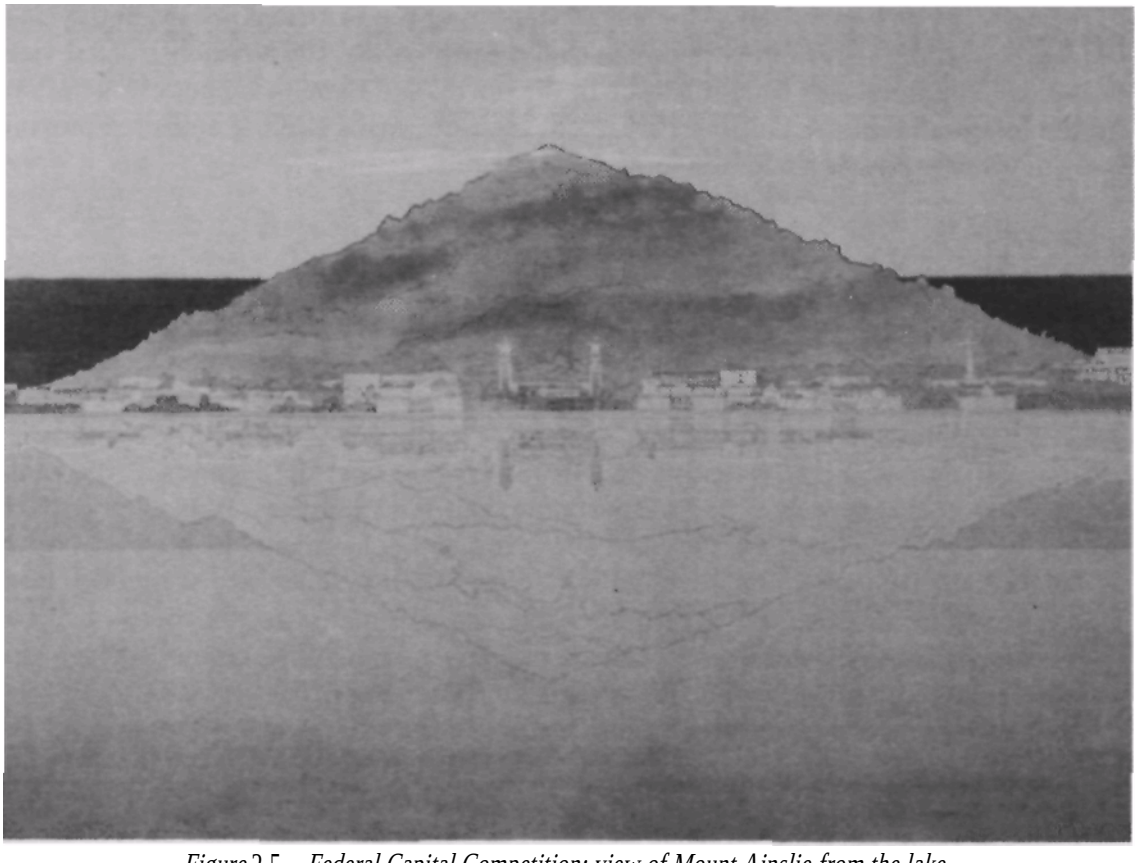


Figure 2.5 *Federal Capital Competition: view of Mount Ainslie from the lake*

many of the geomantic axial and linear constructions in Europe, Britain, and the Americas, and utilises imagery symbolic of Theosophical concepts of the nature of the cosmos. Marion and Walter Griffin sought abstract laws of art to express, in symbolic terms, their own worldview. They created their own cosmogony out of ancient traditions, while at the same time drawing on Christian symbolism by applying the earliest symbol of that religion — the Vesica.

The initial plan for Canberra was not a wilful and impractical expression of two American expatriate architects. It can be explained only as the synthesis of many forces which were brought to bear upon the consummate artistry and genius of Marion Mahony Griffin and it must also be understood in the context of an international movement that included many of her artistic contemporaries and architectural colleagues,- a movement which sought its inspiration for new forms of artistic expression in a pool of ideas whose origins were ancient and universal.

NOTES

1 N Pennick *The Ancient Science of Geomancy, Man in Harmony with the Earth* Thames and Hudson London 1979 esp. ch. 11 and p 151. See also: M Eliade *The Sacred and the Profane, The Nature of Religion* Harcourt, Brace, Jovanovich London 1957 esp. ch.l; J Rykwert *The idea of a Town, The Anthropology of Urban Form* in Rome, *Italy and tht Ancient World* MIT. Press Cambridge 1968 esp. ch.5 and p91. H Rosenau *The Ideal City, its Architectural Evolution in Europe* Methuen & Co. London 1983 ch.l; L Mumford *Tht* City *in History, its Origins, its Transformations and its Prospects* Seeker and Warburg London 1961 p10.

2 Eliade *Sacred and Profane* pp52-56.

3 ibid. pp45-47 & 52 & 37. Pennick *Ancient Science of Geomancy* pp150-53. Rykwert *Idea of a Town* pp45-50.

4 H Blavatsky Isis *Unveiled. A Master Key to Ancient and* Modern *Science and Theology* 1875 vol.2 pp262-66. The emergence of Theosophy was partly a response to scientific advances such as Darwin's theory of evolution. Blavatsky offered alternatives that were compatible to both science and religion. Her theory of evolution, a perpetual cycle of creation, death and regeneration was, in many ways, similar to that of Darwin but differed in that spirit rather than matter was held to be the motivating force in the universe.

5 J Michell *The Dimensions of Paradise* Thames and Hudson London 1988.

6 WB Criffin, in Marion Mahony Griffin, The Federal Battle *Magic of America* p364.

7 Pennick *Ancient Science of Geomancy* pi 19.

8 Blavatsky Is*is Unveiled* p269.

9 ibid. p270.

10 Pennick *Ancient Science of Geomancy* p129.

11 ibid.

12 R Welsh 'Mondrian and Theosophy', in Manso and Kaplan (eds) *Major European Art Movements, 1905-1*945 Dutton New York 1977 pp268-69.

13 Blavatsky Is*is Unveiled* vol.3 p270.

14 Blavatsky Is*is Unveiled* vol.1 p508.

15 For example, J Weirick The Symbolic Landscape of Canberra, ACT. *Heritage Seminars* Australian Heritage Council vol.1 Oct. 1985 p5l.

16 'Federal Capital Design No. 29, by W B. Criffin, Original Report' p 45 *Report from the Select Committee Appointed to* inquire *into the Development of Canberra* Sept. 1955 Appendix B p96,

17 M M Criffin The Individual Battle *Magic of America* p38.

18 Pennick *Ancient Science of Geomancy* ppl 28-29.

19 ibid. p8. See also, S P Feuchtwang AN *Anthropological Analysis of Chinese Geomancy* Vithagna Vientiane Laos 1974 p17. Some literature *on feng shui* available to the Griffins before the Canberra competition is as follows: E Ernst *Feng Shui*

or the Rudiments of Natural Science in China 1873; E Boerschmann 'Chinese Architecture in relation to Chinese Culture', *Annual Report of the Smithsonian* Institute for *the year ending June* l910-11 pp534—67; J Edkins Feng Shui' Chinese *Recorder* 1872 pp274 291 316; H Posek 'How China Man builds his House' *East Asian Magazine* vol.4 1905 pp348-55.

20 M *M* Griffin Two Sources of Wealth, Land and Abilities' The Individual Battle *Magic of America* p22.

21 P Larson 'Marion Mahony and Walter Burley Griffin: the Marriage of Drawing and Architecture' *Print Collector's Newsletter* May-June 1982 p38.

22 For a detailed discussion of the crystal symbolism and its reference to transformation-transmutation see R Haag Bletter The Interpretation of the Glass Dream, Expressionist Architecture and the History of the Crystal Metaphor *Journal of the Society of Architectural Historians* vol.40 no. 1 1981 pp20—41.

3

A GEOMANTIC MODEL: AXIAL AND LINEAR CONSTRUCTIONS AS REPRESENTATIONS OF THE DIVINE AND THE COSMOS

The Griffins' democratic idealism and their pursuit of an organic naturalism are amalgamated in the initial plan for Canberra: the former comprises the 'public' city and its connection to the City Beautiful, and the latter liberates the 'private' component of suburban orientation. The axial vistas of baroque city planning regulate the City Beautiful movement and in its rhetoric it was concerned with civic design rather than social functions.[1] The City Beautiful movement advocated aesthetic architectural planning with a ground composition of monumental buildings, grand piazzas, and sweeping vistas connecting extensive parkland to the civic centre. The initial plan for Canberra had responded to this principle within the parliamentary triangle. But the overarching concept of the plan, derived from ancient geomantic models, incorporated axial and linear constructions which focussed on hills and mountains paralleling ancient symbolic representations of the divine and the cosmos. Thus, in its structure and size, the initial plan has a character that resembles many of the geomantic axial and linear constructions from the ancient world in Europe and the Near East, as well as in the Americas. These sites have been revealed and documented since the later nineteenth century through astro-archaeology, a discipline that has been aided more recently by the techniques of aerial photography.

Canberra, in common with other Garden City constructions of the time, was intended to provide an ideal surround for a healthy and contented population. It is clear, however, that the Griffins' objectives went beyond these basic concerns and that their plan's prime source of inspiration was the culture of the ancient world. Marion and Walter Griffin sought to revive the notion of the 'Golden Age' — a myth common to all ancient cultures, which was thought to influence all facets of life and religion. The *Magic oj America* reveals how, in their early attempts to establish a new profession of landscape architecture, the unification of architecture and town planning, the Griffins sought inspiration and justification from ancient systems of planning embodied in both Eastern and Western geomancy. By adopting such ancient paradigms they infused the Canberra plan with a similar sacred and divine organisation to that which underlies the physical structures of great cities of the world such as Athens and Rome, and is also implicit in the most significant monumental constructions of the ancient world. The capital of Australia, therefore, must be interpreted and re-evaluated within a planning tradition that reaches back to the origins of cities.

AXIAL CONSTRUCTIONS IN THE ANCIENT WORLD

The concept of *quadrata* is implicit in the Canberra structure as a result of its land-water axial intersection. *Quadrata* is the quartering of the city by the *cardo—decumanus* system, which is manifest in *Roma Quadrate* and is remembered nowadays in such expressions as the 'Latin Quarter' of Paris. In ancient planning the term *omphalos* ('navel') was applied to any divined geomantic centre. The concept originated from the *omphalos* at Delphi, seat of the oracle of Apollo and centre of the Greek world (figure 3.1). The *omphalos,* which is the *cardo-decumanus* crossing, fixes the *axis mundi,* the connection between the heavens and the earth. As a pivot around which everything

else revolves, it is designated as the centre of the world and automatically defines the origin point for any city. To the Romans the *omphalos* was translated into the *caput mundi*, and at Rome was located at the Capitol, the centre of *Roma Quadrata* and the site of the *templum*. Michelangelo's stellate pavement on the floor of the Campidoglio represents a continuation of this same tradition into the sixteenth century — its egg-shaped form defines the *omphalos* and its centre fixes the *axis mundi*.[2]

This concept of the *omphalos* (the sacred place at the centre) and *axis mundi* (designating the *templum*) is present in the four-square Capitol building proposed in the Griffins' initial plan, and it has been carried into Giurgola's new Parliament House design. Within the 'sacred' circular enclosure of Capital Hill, the new building is oriented

Figure 3.1 The Omphalos of Delphi

along the *cardo* or Land Axis, while a secondary *decumanus* or cross-axis creates the location of the Senate chamber and the House of Representatives chamber. This creates in the new Parliament House a microcosm of the urban precinct at the city centre. The concept of Canberra as *caput mundi* is reinforced by the naming of the avenues which radiate from Capital Hill: Sydney, Melbourne, Perth.

In Athens the Creeks set up temples on the Acropolis (the Parthenon, the Erechtheion, Athena Nike) in such a way that the landscape was drawn around them — landscape and temples, together, being gathered into a composition. In his *Vers une Architecture* (1923) Le Corbusier said of the Parthenon, This creates a fact as reasonable to our understanding as the fact "sea" or the fact "mountain"'. The axis of the Acropolis, which runs from the sea to the mountain, is the most famous geomantic axis of the ancient world.' The *cardo-decumanus* intersection is dominant, the main axis linking Mount Saiamis in the west with the central axis of the Propylaea, the statue of Athena, the site of the old temple of Athena and the horns of Mount Hymettos in the distance (figure 3.2). From north to south a secondary axis links the sacred horns of Mount Deceleia with Poseidon's porch on the northern end of the Erechtheion, and continues through the altar of Athena to the northern corner of the Parthenon and then beyond, leading the eye away to the distant sea.[4] The axis is, thus, determined by these distant landscape forms.

In Rome, too, divine and cosmic concepts are implicit in its structure. The axis *urbis* of antiquity, running along the *via sacra* and through the temple of *Jupiter Capitolinus,* was strengthened and enriched when the Colosseum was built exactly on the axis in the sacred valley between the hills (figure 3-3). It was further reinforced when the temple of Venus and Rome was similarly located; thus its two *cellae* (sanctuar-

Figure 3.2 The Acropolis of Athens: the Parthenon with the 'Horns' of Mount Hymettos in the distance

ies), placed back-to-back in the temple, stood Janus-like — facing both directions taken by the axis in a symbolic expression of the role of Rome as *caput mundi.* The *axis urbis* was, moreover, extended to the other side of the Tiber by the construction of a circus, carefully placed in relation to an ancient burial ground and shrine — and today the site of the Vatican. Constantine transformed Rome symbolically into a Christian city by locating the two main churches on the *axis urbis-.* the church of the Saviour, St John in the Lateran, to the south and St Peter's in the north. Later, the sign of the cross was put over the entire city by means of a symbolic *decumanus* added between the churches of St Paul and St Mary (Santa Maria Maggiore), and using the Colosseum at the centre to unify anthropometric orders and cosmic axes in the simplest possible way. This cross-axial form acted as a precursor for the development of many European cities.[1]

As Christian Norburg-Schulz points out in his 'Genius Loci of Rome', it is not surprising that the extension of the *axis urbis* leads to the Alban Hills, where the gods of antiquity were at home (some 25 kilometres from the man-made synthesis of the city).[6] Being the remnants of an old volcano, the Alban Hilts have a simple shape and their clear topographic features are emphasised by two almost circular lakes in the deep craters. The hills rise up to form an impressive mass over the everyday world and possess that basic property of the classical landscape: a distinct and easily imaginable relationship between masses and spaces. The main sanctuaries of Latium were located here, lined up on a north-south axis. On the top of Monte Cavo *(Albanus Mons), Jupiter Latiaris* presided over the whole region. There, the forty-seven members of the Latin Confederation celebrated the *Feriae Latinae* every spring. Diana reigned in the woods on the slope of the mountain, her sacred grove being mirrored in the calm and deep waters of Lago de Nemi; on the other side of the lake, in Lanuvio *(Lanuvium),* where the slope is cultivated and less steep, Juno had her temple.

Continued to the south, the sacred axis reaches Anzio *(Antium),* where there was a temple dedicated to Fortuna (figure 3.4). Towards the north, the same axis passes through Tuscolo *(Tusculum),* where Castor and Pollux were at home, and then reaches

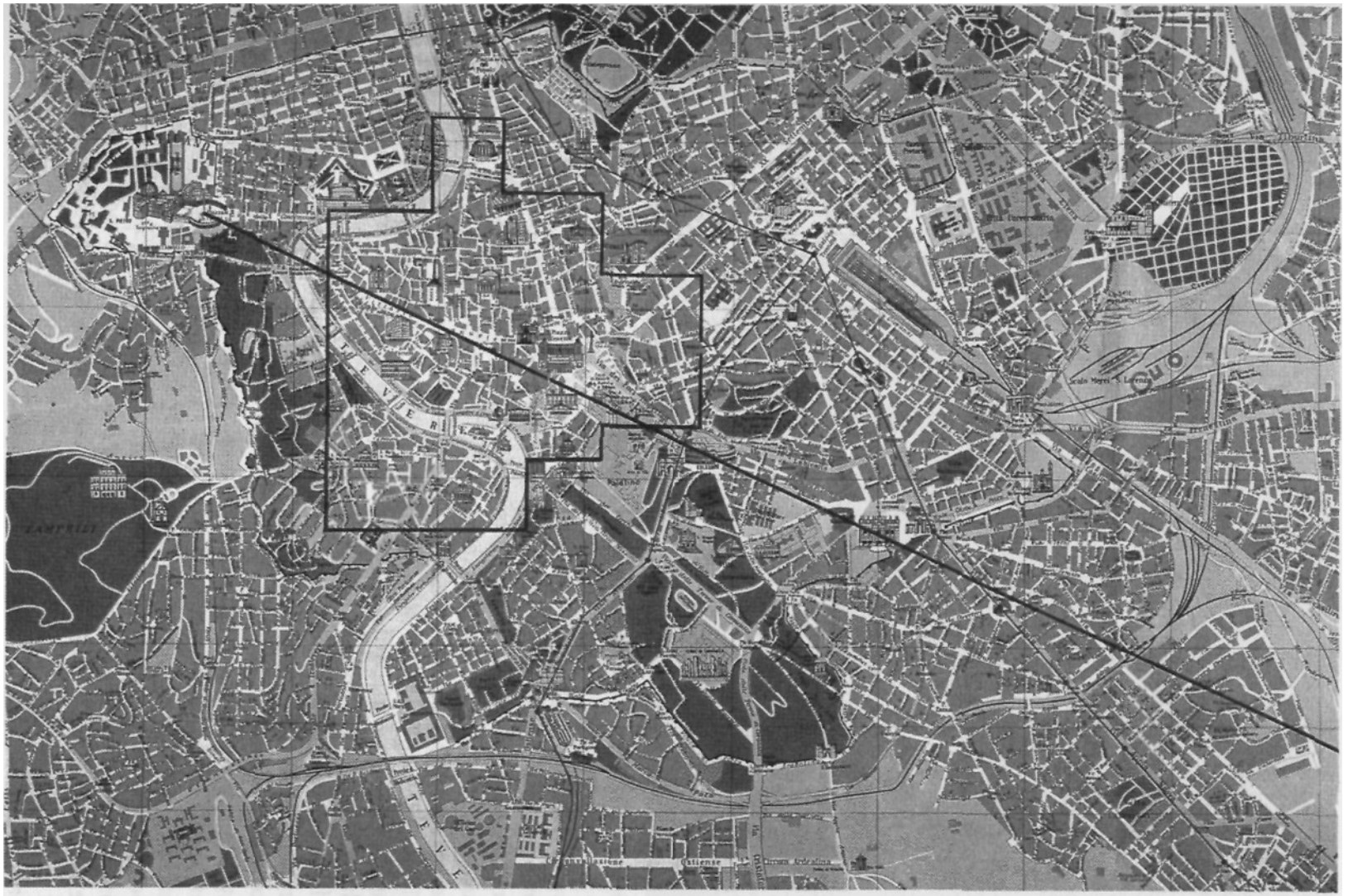


Figure 3.3 The Axis Urbis of Rome

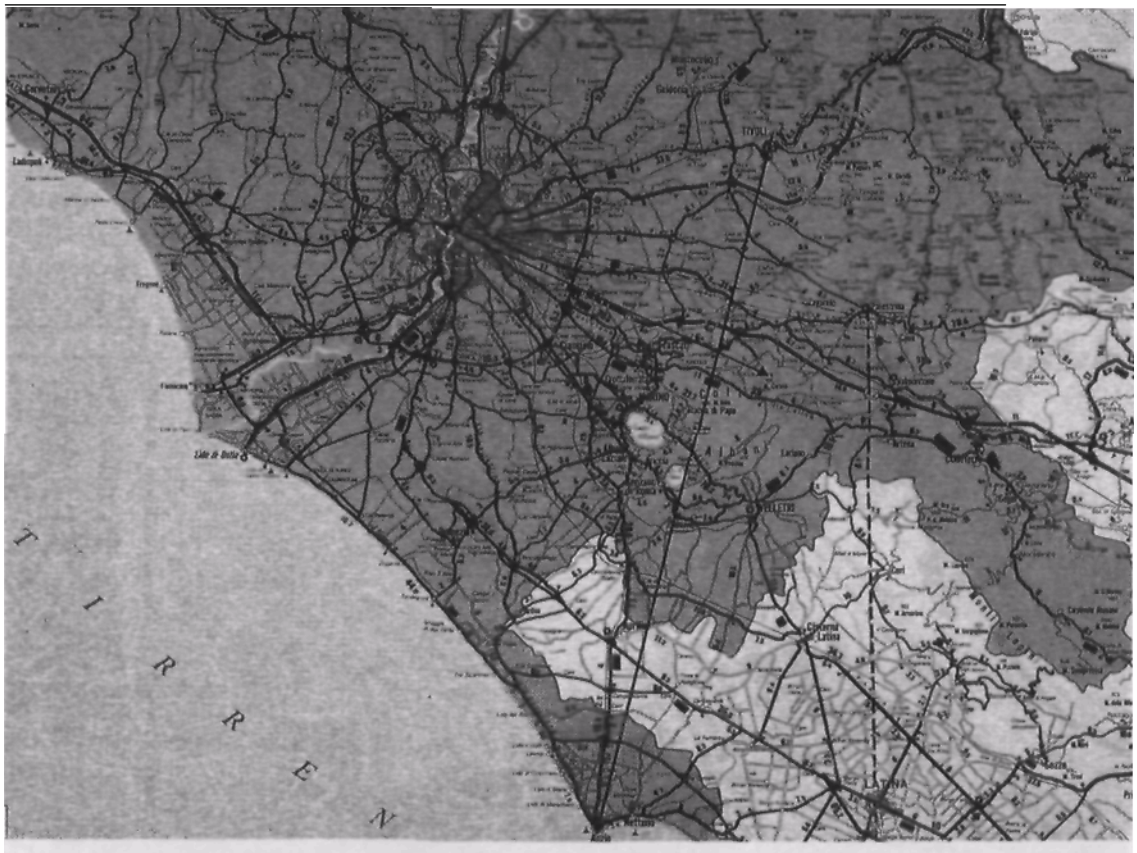


Figure 3.4 Intersection of the Axis Urbis of Rome with the geomantic axis, Anzio to Tivoli, in the Alban Hills

Ttvoli, where Hercules ruled over a wilder kind of environment, and there were also temples to Sibilla and Vesta. The main sanctuaries of Latium, thus, formed a natural north-south *cardo,* about which the cosmos revolved; and the sun followed the natural *decumanus* of the Secco Valley and the *axis urbis* of the city, which connected the Roman Campagna with *Campania Felix.*

In the initial design for Canberra, Marion and Walter Griffin depicted a construction which parallels the heroic proportions of the geomantic constructions in Athens and Rome. The Land Axis connects Mount Ainslie with the Capitol and Red Hill,- and then as the City and Environs drawing clearly indicates, this axis continues to Bimberi Peak in the Brindabella ranges to the south. The prairie-like undulations of the Molonglo Valley, which greatly appealed to the Griffins, form a natural *decumanus* akin to that of the Roman Campagna and this is reinforced by both the Water Axis and the Municipal Axis- Together, these focus upon Black Mountain (see figure 3.5). This *cardo-decumanus* scheme is also present in Latium at Palestrina, where a great composition of axially disposed terraces reinforces the *decumanus* of the Secco Valley while the axis emanating from the temple of Fortuna at Palestrina functions as a *cardo* which leads the eye between the Alban Hills and the Lepine Hills towards the distant sea.[7]

In Egypt there is evidence of a geomantic construction of even greater size. A north-south axis, the prime meridian dividing Egypt exactly in half, links the pre-

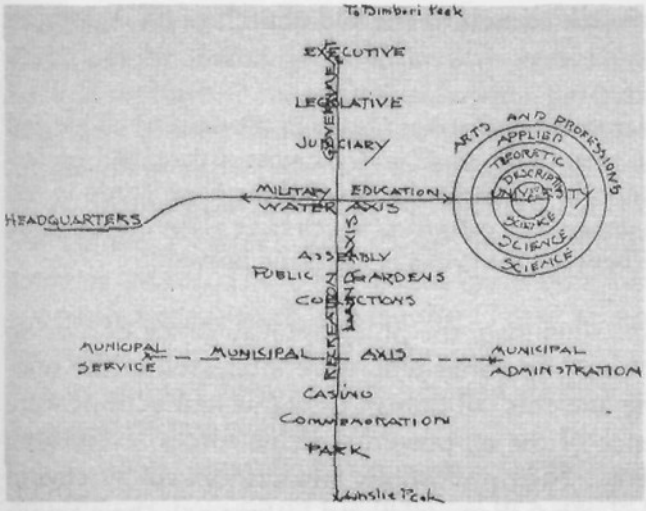


Figure 3.5 Federal Capital Competition: Original Report: diagram of Canberra's axial relationships

dynastic capital of Behdet (an island in the Nile just north-east of the Great Pyramid of Giza) with Memphis, the capital of United Egypt. It continues to the Great Cataract, which was the outer boundary of ancient Egypt in the north and may have been originally marked by a pyramid. This meridian, in relation to the siting of the Great Pyramid determines the geographic region of Egypt within the bounds of an equilateral triangle. The siting of the two capitals on this line established them both as geodetic and political centres at the 'navel' of the world.[8]

In northern Germany a long *cardo* connects a number of sites and holy hills (figure 3.6). This axis runs over Haffen Church to the north on the right bank of the Rhine, to Xanten Cathedral and through the sacred mountain Haagscher on the opposite side of the Rhine, through the Quirinus Chapel at Finkenberg and terminates at the Minster church at Munchen Gladbach. At Xanten, in front of the altar of St Victor's Cathedral, there is a signpost to pre-Christian sacred geography. This is in the form of a floor mosaic cosmogram, based on the eight-armed cross — representing the division of the sky according to the eight directions and corners of the world, with the supreme god in the centre (figure 3.7). The arms of the four cross-strips of the Xanten cosmogram point precisely in the eight cardinal directions to the following places (apart from the sanctuaries to the north and south already mentioned): to the north-west, Appeldorn church; to the west, the 'red mountain' near Uedem; to the south-west the Geribernus Chapel on the

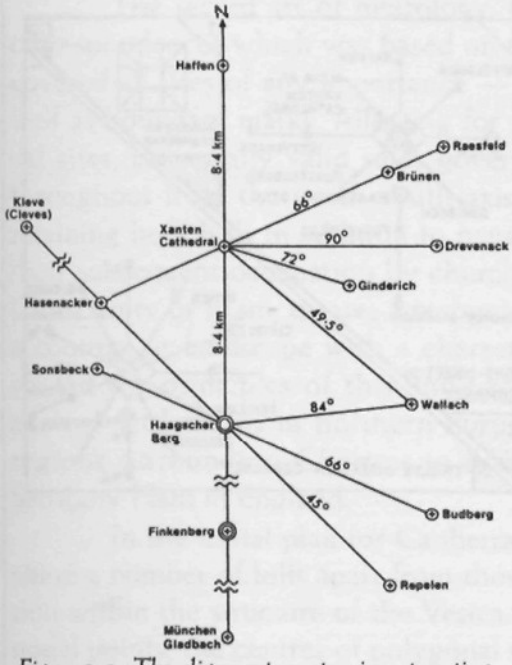


Figure 3.6 The alignments system incorporating the Haagscher Berg, Xanten Cathedral and München Gladbach, Germany

Furstenburg; and to the east via Drevenack church to the old church of St Agatha in Dorsten (see figure 38).

> In the imagery of microcosm—macrocosm, this ancient belief in the unity of all life and the analogy and reflection of the great in the small finds its most striking and expressive representation. It appears everywhere in both the Old and the New World in traditional and rediscovered sacred images and calendars, which have always relied upon the same laws of correspondence between the cycles of earth and heaven.[9]

These observations of Dr Josef Heinsch illuminate the philosophical stance of Marion and Walter Griffin and those of their contemporaries who were interested in the rejuvenation of ancient paradigms. For the ancients, all human thoughts and actions were subordinated to the energising influence of the all-powerful divine forces, everything mundane being bound up with the divine. Their philosophy and wisdom culminated in the knowledge that 'as above, so below',- thus, they attempted to bring all their activities and ambitions into harmony with higher nature, the divine will.

Geomantic constructions and axial alignments in the ancient world were not restricted to the *cardo-decumanus* scheme; many early examples exist of interconnecting alignments that form complex geometrical forms linking both constructed and natural

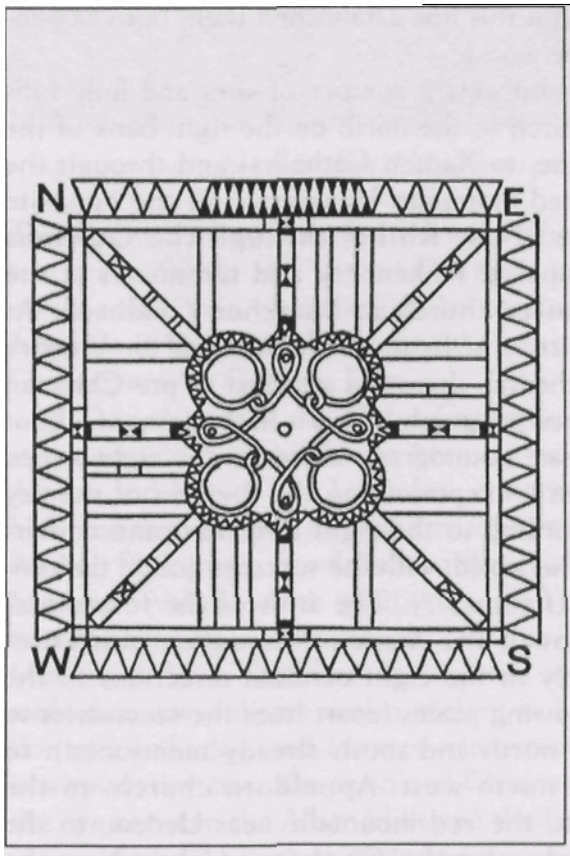


Figure 3.7 Cosmographic mosaic in Xanten Cathedral, Germany

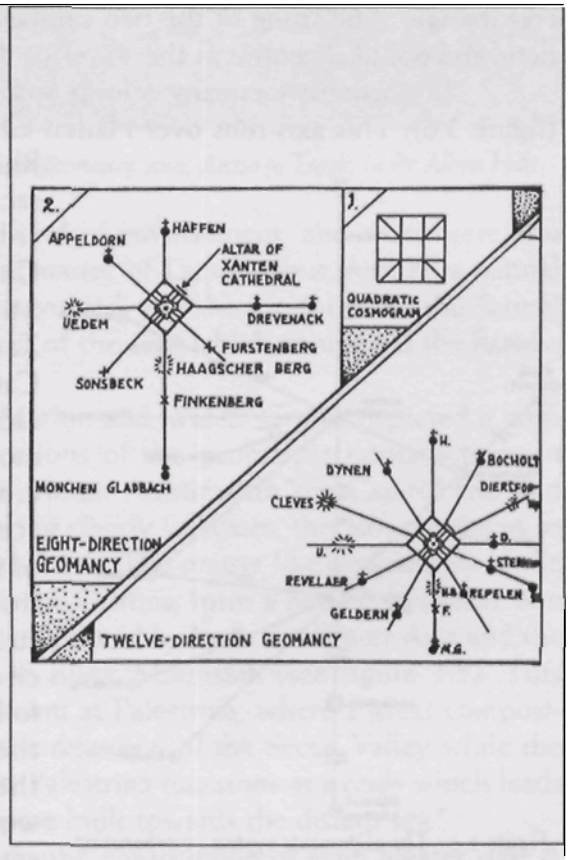


Figure 3.8 Eight-direction geomancy determined by the cosmographic mosaic in Xanten Cathedral

elements. Recent studies have indicated that certain geometrical patterns in the landscape can be linked with the 'ancient geometer's image of the ideal cosmology'.[10] Far back in prehistoric times, probably when agricultural settlements were first developing, land was already being accurately divided and surveyed -— such ancient geometrical arrangement apparently being carried out over wide tracts of land, and not just small areas. In the East as well as in northern Europe, this was done according to certain fixed angles measured from the astronomical north-south axis and using universal measures of length. There are metrological principles in landscape patterns which correspond to angle, length and number. These proportions were later retained in northern European stone circles and canonically constructed sacred buildings and temples in the East as well as Christian churches, and are effective today in giving these constructions a cosmic-sacred quality.

Apart from the fundamental triangulation of the country based on 30° and 60°, and the orientations on the diagonal of a square (45°), or double square (about 26.5°), the main sacred angles determining the ancient geometrical arrangement of the landscape relate to a basic meridian. This base-line links two important sacred sites which are found to occur regularly: the holy hill in the west, originally associated chiefly with moon worship and in Christian times often dedicated to the Virgin; and to the east of this on 84° or 96° — with a 6° deviation to the north or south — the former solar site, in Christian times often dedicated to St John the Baptist. In the mathematics of the ancients this base-line, with the angle of 6°, appears in a right-angled triangle with short sides in the ratio 19:2; the square on the hypotenuse being 365 ($19^2 + 2^2$). This base-line was named the solar year-line (figure 3.9).[11]

The sacred art of metrology, the magical view of microcosmic-macrocosmic correspondences which was based on the ancients' clear insight into nature, originally covered all sites of any importance — sacrificial and assembly places, in particular, as well as boundary marks. Allowing for the varying importance and purpose of individual sites, universally valid rules governed their orientations to one another, starting throughout from the north-south axis or *cardo.* The general conservative practice of retaining holy hills in addition to pagan religious sites as the chief sacred centres and their subsequent occupation by churches, chapels and mosques to identify them with Christianity or Islam, creates a recognisable pattern today that endows the structure of a country or landscape with a characteristic local stamp. Josef Heinsch has demonstrated the principles of this universal geometrical structure which underlies many ancient settlements in northern Europe: for instance, Odry in Czechoslavakia, the regions surrounding Chartres in France, Kleve in Germany, and Stonehenge and Salisbury Plain in England.

In the initial plan for Canberra the Griffins drew into the geometrical composition a number of hills apart from those comprising the fundamental central composition within the structure of the Vesica: Mount Pleasant, Mugga Mugga, and numerous nodal points, the centres of polygonal suburban street patterns, extending from the triangular matrix such as Northbourne Avenue to the north between Mount Ainslie and Black Mountain, or emanating from Capital Hill. Taken as a totality, this composition

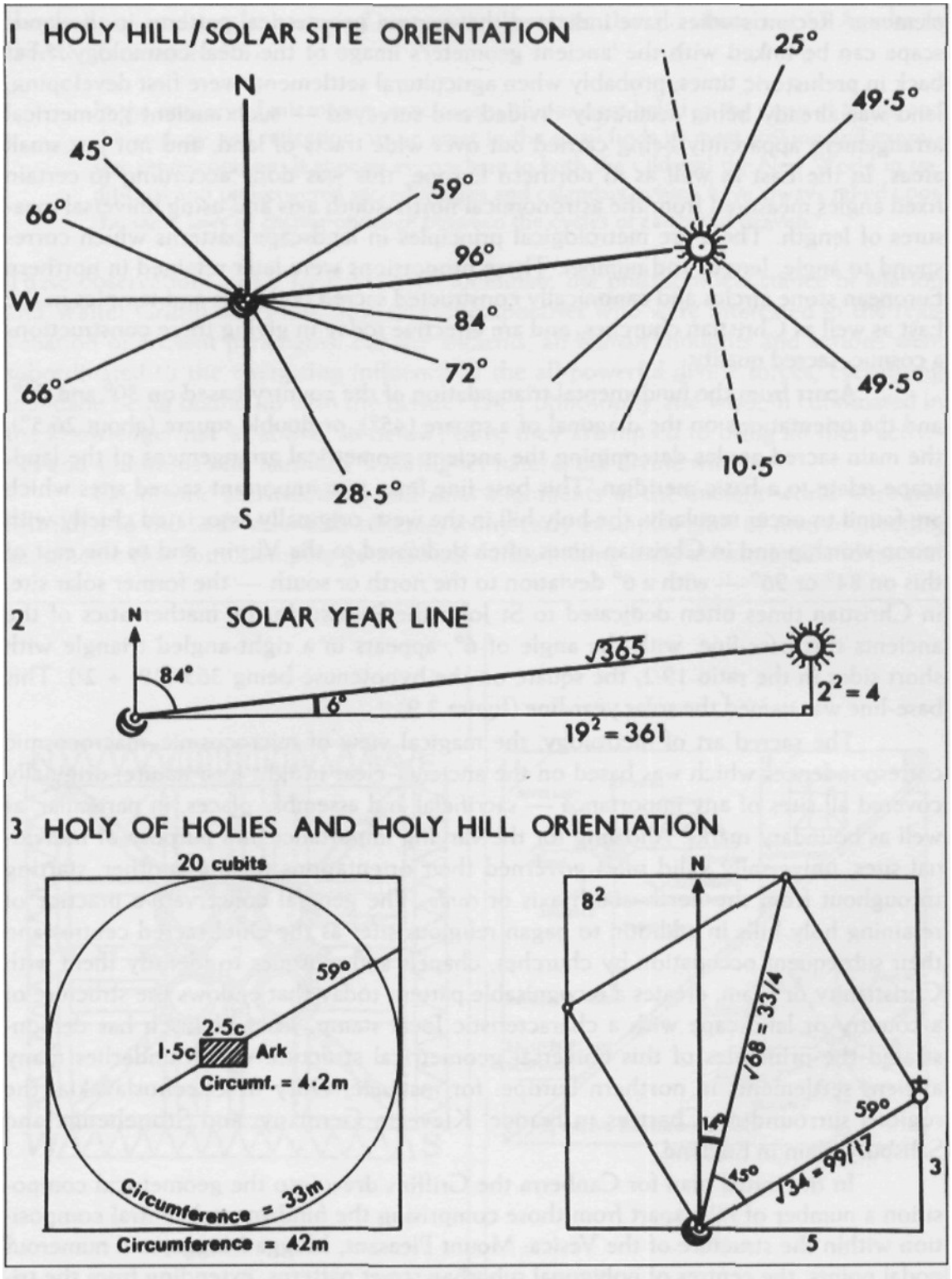


Figure 3.9 Solar Year Line and Holy Hill orientation discovered by Josef Heinsch

bears a striking resemblance to structures following the principles of sacred geometry outlined by Josef Heinsch.

In 1911, when Marion and Walter Griffin were preparing the drawings for Canberra, a large body of work on the axial orientation of Egyptian and Greek temples, and the megalithic monuments of Britain and Europe had recently been published by scientists C W Penrose, J Griffith and Sir Norman Lockyer.[12] Lockyer and his contemporaries proposed that Egyptian and Greek temples were axially aligned in accordance with the solstices or equinoxes of the sun, the rising and setting of the moon or a particular star, or even the date of the dedication of the temple to a particular deity. Connections were also seen between this tradition of temple construction and megalithic constructions in Britain. Thus, from 1890, and building on the work of William Stukely and John Wood, Lockyer began studying the megalithic monuments of ancient Britain.[13] In articles in *Nature* (from 1890 to 1910), and in his book *Stonehenge and other British* Monuments *Astronomically Considered (*1906), Lockyer revealed the astrological and geological influences governing the selection of sites and the principles of construction of these monuments.[14] His work focussed on their orientation and their alignments with natural landforms, man-made outliers and avenues, and markers. At the same time, temples at Lanuvio, Tivoli and Nemi were being excavated by British and Italian archaeologists, who documented their findings in the *Proceedings of the Society of Antiquaries,* the *Proceedings of the Royal Society* and in the journal *Arcbaeologia* from 1895."

The Griffins may not have read the professional archaeological journals but they probably did know Nature; for it was an international journal containing, in addition to material on the natural sciences, articles on art and architecture. At the time of the Canberra plan it is very likely that both Walter, an advocate of design in harmony with nature, and Marion, who was influenced by mysticism, spirituality and nature worship, were already familiar with Lockyer's work, as well as his discourse on the attendant beliefs and customs of the societies that produced these constructions.

Stonehenge is the solar centre, the great cosmic temple, which lies on the solar year-line extending over the Salisbury region (figure 3.10). The entire geometrical scheme incorporating sacred sites, holy hills and prehistoric villages and towns extends to Glastonbury. There, a system of axes connects St Benedict's, the Market Cross, St John's Church and Wells Cathedral, while another axis runs over St Benedict's, along the axis of the town, through the axis of the abbey church, down Dod Lane to Gore Hill in Wiltshire and through to Stonehenge, from where it continues to Bury Fort, Puttenham Common Hill and Shere Church. These axes were not simply sight lines but functioned as processional ways marked by standing stones often in association with barrows or burial chambers, all visible from the sacred hills and mountains across the landscape.[16]

Lockyer's work on the astronomical and religious significance of Stonehenge (as described and illustrated in *Nature,* in 1905 and 1907), in particular, seems to have been used as a model for the parliamentary triangle and Capital Hill structure of Canberra.[17]

At the centre of the Salisbury Plain complex of axes Stonehenge is connected to the sacred forest at Grovely by a meridian (previously described) which is also the

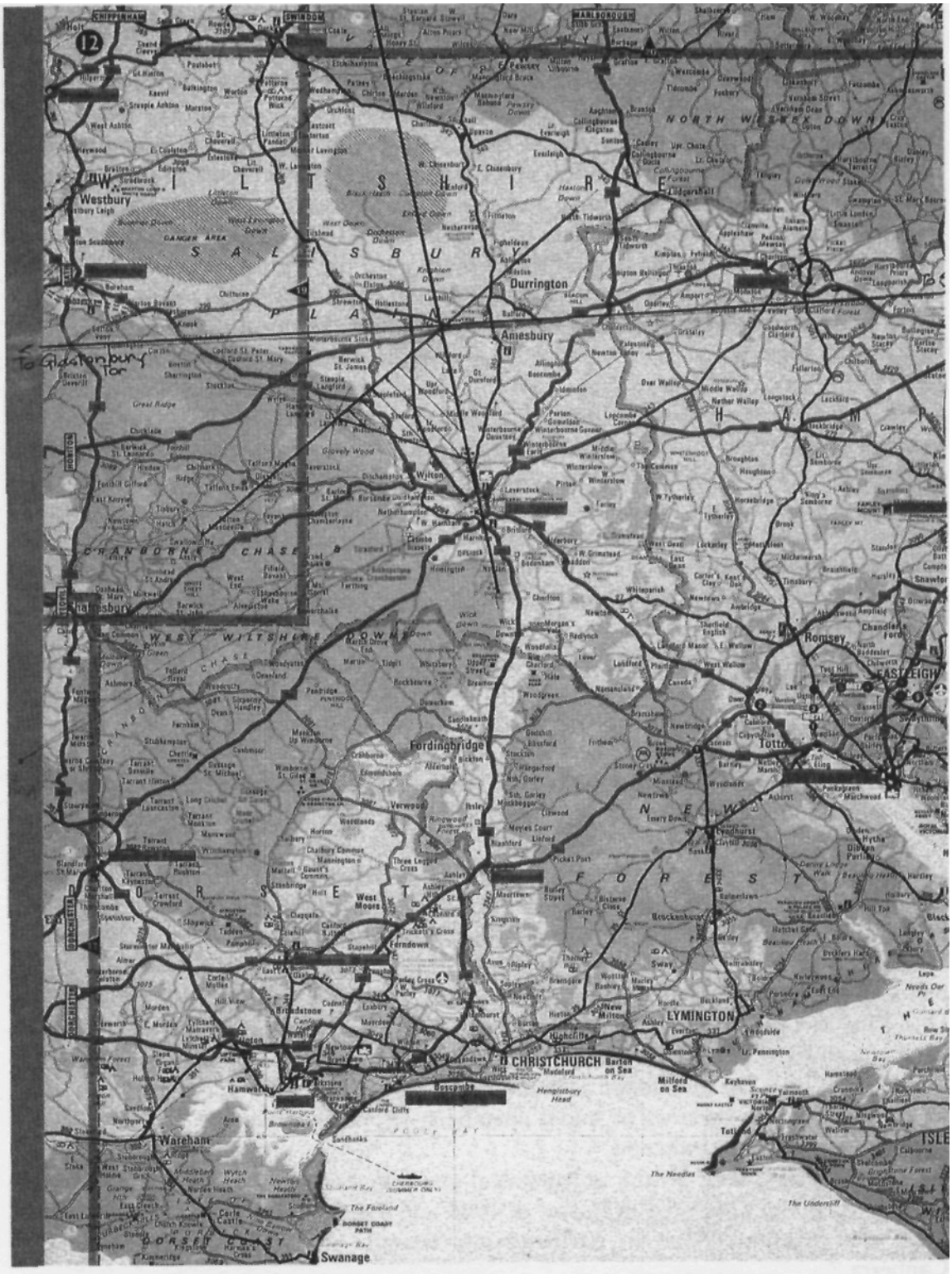


Figure 3.10 Geomantic axial alignments on Salisbury Plain, England

sight line of the summer solstice, the line of sunrise on the longest day of the year. Lockyer observed that the nucleus of this geomantic construction is an axial arrangement in the form of an equilateral triangle which connects the ancient mound at Old Sarum with Grovely Castle and Stonehenge (figure 3.11).[18] The side of the triangle connecting Grovely Castle with Stonehenge, when extended, connects sacred sites at Sidbury in the north and Castle Ditches in the south. Similarly, the side of the triangle connecting Old Sarum, when extended, passes over the spire of Salisbury Cathedral and then to the Clearbury Ring further south. In the other direction, the axis extends through the sacred site of Windmill Hill, which is related to Silbury Hill, and the great stone circles at Avebury; it then continues further north passing over Cirencester Church and over many hills as far as Dufton Fell in Westmoreland. Thus, the great cosmic temple of Stonehenge marked the crossing of an extensive and monumental north-south *cardo* and a *decumanus* connecting Glastonbury in the west with Shere and Hackhurst Down in the east.[19]

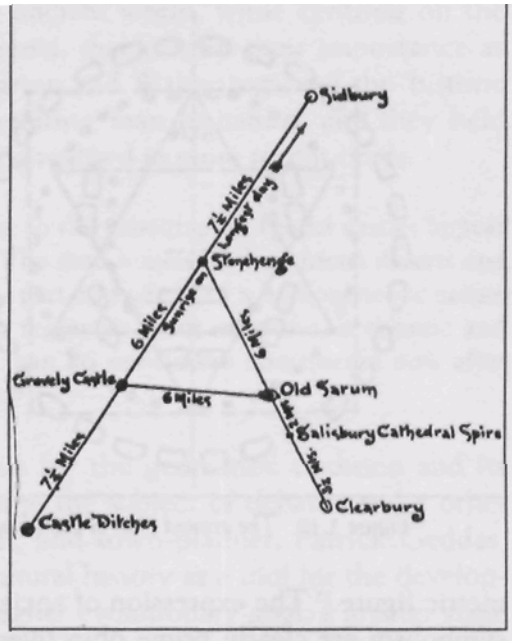


Figure 3.11 The equilateral triangle formed by Stonehenge, Old Sarum, Grovely Castle and its prolongations

The parallels with Canberra are uncanny. Capital Hill, City Hill and the Lake Park monument in Canberra are linked, just like Stonehenge, Grovely Castle and Old Sarum, by means of an equilateral triangle. The continuation of the axis from Stonehenge through Old Sarum to Clearbury Ring is paralleled by the Capital Hill to City Hill meridian continued along Northbourne Avenue (see figure 3.5). In addition, the nodal point at Salisbury, the double ring of Stonehenge (figure 3.12), could be taken as the model for the double-ringed geometry of Capital Hill. While it is clear that the initial plan for Canberra was influenced by mainstream Theosophical ideas, it is reasonable to suggest that it was the work of Norman Lockyer that crystallised the Canberra geometry.[20] The Vesica, which is the crucial element of the Canberra plan, is fundamental to the geometry of Stonehenge and of Glastonbury, next to Stonehenge the earliest and most sacred site in megalithic Britain and, later, the site of the first Christian church.

Norman Lockyer's articles in *Nature* on the axial alignments of British megalithic monuments could also have influenced other aspects of the initial Canberra plan.[21] The practice he describes of marking specific holy hills and solar sanctuaries with large stones or slabs bears a direct resemblance with the way that the Griffins designed and located a number of their suggested architectural forms, such as the Casino and the Capitol. The twin towers of the Casino (see figure 2.5), which immediately direct the eye to the peak of Mount Ainslie, especially bring to mind

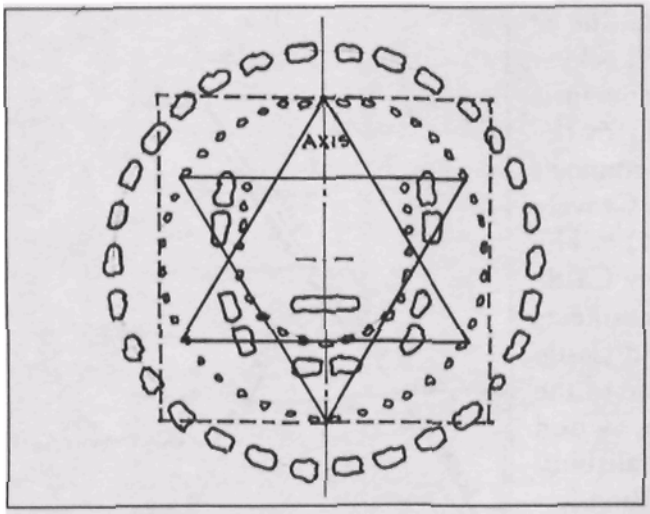


Figure 3.12 The ground plan of Stonehenge

the ancient tors, the largest megalithic markers.

It is this connection of monuments, architecture and natural landforms in a strict axial and geometrical scheme that places Canberra within the same tradition as great cities of the world such as Rome and Athens. It shows, too, that the Griffins' intentions for Canberra went beyond contemporary planning concerns for other new capitals such as Washington DC and New Delhi: no other city plan of the time utilises the equilateral triangle as the dominant geometric figure.[22] The expression of ancient paradigms and an idiosyncratic cosmological symbolism are clearly prime objectives for the Griffins but they are not the only factors contributing to the final design and it is necessary to understand what other forces were at work on them and their colleagues at the time.

THE NEW PROFESSION OF LANDSCAPE ARCHITECTURE

In attempting to establish the new profession of landscape architecture, Walter Burley Griffin, like the majority of his radical contemporaries, rejected the eclecticism of the Beaux Arts schools. He sought the integration of architecture and land-planning on a grand scale. In their writings the Griffins accentuate the historical periods which were characterised by 'creative thinking': notably, ancient Greece and the medieval Gothic period. Marion, in particular, attributes creative thinking to the true radicals of the twentieth century, Louis Sullivan and Walter himself. In the *Magic oj America* she writes:

> Mr Griffin, Mr Sullivan's successor in creative thinking in these fields awakened the community to the necessity of considering simultaneously the problem of building and environment near and far. It now becomes clear that these cannot be practised as separate professions, architect or town planner, but only as one indivisible profession — Landscape Architecture."

Disregarding dry-cut, analytical interpretations of the ancient world, the Griffins focussed in their quest on the magic ritual and wonder conjured up by new interpretations of Eastern and Western traditions. In a new profession of landscape architecture sincerity and invention would replace 'decadence, imitation and ostentation'.[24] Past civilisations in possession of advanced astronomical and geodetic knowledge fundamental to all facets of life could be exemplars, showing ways to overcome the sociological problems and ills generated by the industrialised and materialistic twentieth

century. Norman Lockyer's descriptions of the ancient world, while centring on the astronomical significance of the great monuments, dwelt upon their importance as sacred centres of nature worship too.[25] Both Marion and Walter regarded the 'historic civilisations prior to the Romans' as correctly relating 'man to nature', and they held that there was also a legacy from ancient planning realised in more recent times;

> Japanese roads, all in cutting do no violence to the topography. Feudal castles appear to grow out of the jagged rocks of Europe. The mud houses of the African deserts and the Pueblo Indians in America are distinctly part and parcel of a homogeneous nature as is the Eskimo igloo, and these certainly represent more scientific, economic and comfortable housing under the conditions than do our houses constructed now after 2000 years to the specifications of Vitruvius.[26]

The Griffins were not alone in their fascination for the geomantic tradition and its potential in modern land-planning; it had become the subject of debate on the other side of the Atlantic. The biologist, sociologist, and town-planner, Patrick Geddes, stressed the importance of the recognition of cultural history as a tool for the development of planning in the future. For Geddes, a higher evolutionary goal, a greater stage in human development, would cure the maladies of the modern city. And the best procedure for studying the city, in order to achieve this, was to produce a regional survey — a study of its geographical location and the history of the evolution of its cultural traditions, which he labelled 'civics'. Geddes advocated that, from an understanding of the deeper past, the planners of the present could 'accurately forecast the future'.

A practical illustration of this was the regional survey Geddes made of Edinburgh: it provided examples in buildings and civic layout which best revealed the importance of the past in the present.[27] Geddes reproduced a number of illustrations showing the development of Edinburgh from ancient times. The city is organised around an axis that focusses on Edinburgh Rock and is reminiscent of the megalithic alignments elsewhere in Britain (figure 3.13). The studies of the mediaeval city demonstrate a clear east-west axis running along the ridge between the castle on the rock and the abbey town in the distance, with a cross-axis connecting a cluster of smaller monasteries and churches outside the town to the port in the north. Geddes goes on to compare this relationship between the castle rock, the plain below and the sea port of Edinburgh with the relationship between the Acropolis, the Attic Plain and Piraeus, the port of Athens.

Like Norman Lockyer, Geddes recognised an ancient organising principle which was common to Egypt, Greece and Britain. As he published a number of articles on the megalithic builders and the ancient Celts in *Nature* and other journals, he would have been aware, too, of the debate on axiality and symbolism as revealed by astro-archaeology.[28] Lockyer was an eminent scientist of his day (he discovered the gas helium), but he was denigrated in conventional archaeological circles. Geddes, equally, was unpopular in conventional academic circles, as revealed by Helen Meller, who describes Geddes's writings on 'Romanticism, nature worship, the forays into Celtic past' as 'delightfully unconventional in comparison with the norms of social behaviour

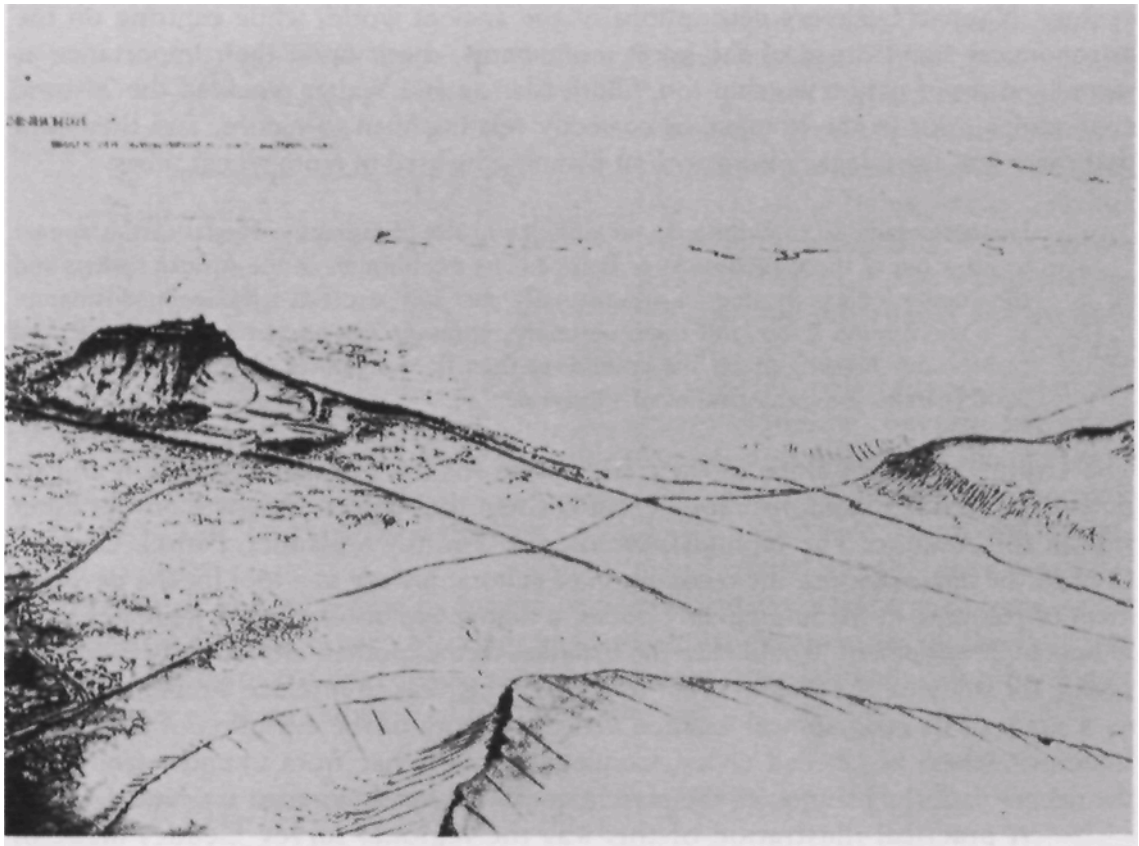


Figure 3.13 Axiality in Edinburgh and its beginnings as a hill fort

of Edinburgh society'.[29] His 'unconventionally' would surely have appealed to the Griffins.

In 1900, then an influential member of a group which advocated a 'sociological approach to the Garden City', Geddes spent a number of weeks in Chicago, where he met Walter Burley Griffin.[30] It appears that he had much in common with the Griffins — in ascribing creative thinking to the ancient Greeks and in his advocacy of a return to the religious ideals of the past as a prelude to their restatement in modern form. His notion of 'evolutionary perception' of the city, 'street by street, district by district', finds parallels in the Griffins' method of the gradual unfolding of the government group in Canberra.

It may well be that Patrick Geddes introduced the Griffins to Norman Lockyer's work on axiality. Meller points out that Geddes and his contemporary Branford were in 'pursuit of cosmic idealism . . . which appealed to many . . . struggling to establish value systems in the modern world'-" Marion and Walter must have been aware of Geddes's Edinburgh survey and its accompanying drawings which formed part of his well-known 'Cities and Town Planning Exhibition'. All the material for this exhibition had been published in the British *Town Planning Conference Transactions* of 1910, a document which all competitors in the Federal Capital Competition were advised to

consult. The *Transactions* also contained an article by John Sulman, who went to England from Australia to promote the international competition.[32]

THE INFLUENCES OF THE NEW RELIGIONS

In 'Notes on Abstract Art', Bernard Smith writes on the influence of the modernist religions, Spiritualism, Theosophy and Anthroposophy:

> 1 began to read everything I could find on Steiner, including his own varied works. One day it struck me with all the force of an illumination. Here of course lay the source, power and influence of modern abstract art. It was the *religious* art of the twentieth century, and its origins lay not in the great traditionalist religions but in the new syncretic religions such as spiritualism, theosophy and anthroposophy that had begun to emerge in the later nineteenth century with the decline of Christianity."

In expanding on Bernard Smith's theme, Sixten Ringbom's seminal article on the whole question of abstraction and the occult revealed how abstract artists such as Kandinsky and Mondrian — who had embraced, respectively, Anthroposophy and Theosophy — were deeply influenced by the little book *Thought Forms,* by Annie Besant and C W Leadbeater (1901).[34]

The Theosophical Society, established in 1875, was the outgrowth of a small group consisting of Madame Helena Blavatsky, Colonel Henry Steel Olcott and William Quan Judge, as well as Besant and Leadbeater, who had attended a lecture by George Felt on The Lost Proportion of the Egyptians'. As the story goes, Olcott, during the discussion following the lecture, suggested that it would 'be good to form a society that focussed on this kind of study'; so, with the approval of the others present, the Theosophical Society was formed.[35]

Theosophy became an important vehicle which accelerated the revival of interest in the culture of the ancient world and the relationship between religion, art and architecture. It focussed on the lost canons and sciences that Theosophists believed had directed and controlled all aspects of life in the ancient world. The work of Sir Norman Lockyer and his associates on the megalithic monuments of ancient Britain and the Greek and Egyptian temples in many ways provided Theosophists with the physical evidence for the existence of a canon which regulated the universal culture thought by some to have emanated from the lost city of Atlantis.

Thought Forms, by Besant and Leadbeater, provided immediate resonances with esoteric writings in both Eastern and Western cultures, and by the beginning of the twentieth century Theosophy had become a strong cultural force that was felt in many aspects of life. In AN Art *of our Own-, the Spiritual in Twentieth Century Art,* Robert Lipsey writes that Theosophy was closely linked to the art world, generating 'a visual language that was to enter the mainstream of twentieth century art — the abstract image — the Thought Form — perception of the etheric realm'. It was a new school of thought towards which artists and seekers could look for a new and radically different description of the world. Lipsey notes that:

> Theosophy was powerful enough to point artists towards a new inwardness and the possibility of translating that inwardness into visible form. . . . An informed poetry of the cosmos is needed no less than an informed science, and Theosophy gave some the courage to seek it.[36]

Writing of Mondrian, Michel Seuphor observed that he:

> was long interested in theosophical speculations. As late as 1916 the portrait of Mme Blavatsky hung on the wall of his studio. Yet in his writings he made no mention of his theosophical sympathies. Even in private conversation he avoided religious topics and closed up at the slightest hint of them."

With regard to the Griffins' early activities in Chicago it appears that much the same could be said of them as Michel Seuphor says of Mondrian. While there is no evidence that Marion and Walter had any official connection with the movement before or after their sojourn in Canberra, the *Magic of America* reveals the profound impact Theosophical ideas had on both of them, and on Marion particularly. Later, after leaving Canberra in 1920, they became members of Rudolf Steiner's Anthroposophy Society.

Many professional architects may not have been active members of the Theosophical Society, but they were what Robert Welsh describes as small 't' theosophists, whose work reflected a casual — though serious — acquaintance with the literature. And at Steinway Hall, Chicago, the Griffins were at the core of a dynamic movement that deeply affected all their colleagues, who were just as secretive about the influences on their work as the Griffins were. It is now clear, however, that Louis Sullivan's concept of transcendental ornament was influenced by the theories of the eighteenth century Swedish mystic, Emanuel Swedenborg, and both John Wellborn Root and Daniel Burnham belonged to the Swedenborgian church.[38] Claude Bragdon was a member of the Theosophical Society and his book, *The Beautiful Necessity: Architecture as Frozen Music, Seven* Essays *on Theosophy and Architecture* {first published in 1910), sought to revive the Pythagorean principles of number, proportion and geometry or sacred geometry in modern architecture.[39] This very popular book was an influential source of inspiration to architects, many of whom became important contributors to the 'organic movement in architecture.

Bragdon described the importance of the Vesica, the first symbol of Christianity (and the basis of the Canberra geometry), to the medieval masons, who used it as the basis for their planning and proportions. He also wrote that the geometric forms generated from the Vesica were given certain symbolic interpretations by the ancients. Bragdon's summaries were consistent with the Theosophical concepts propounded by Helena Blavatsky. The rhombus, consisting of two equilateral triangles, represents the world above and the world below, or, in alchemical terms, the male and female principles of creation — the two brought together creating universal harmony. The square, triangle and circle are the most significant for 'the circle is the symbol of the universe; the equilateral triangle of the higher Trinity (Atma, Buddhi, Manas), and

the square, of the lower quaternary of man's sevenfold nature'.[40] The influence of Claude Bragdon's work, which became available at the time of the development of the design for Canberra, can be seen in Marion's writings in the *Magic of America.*

> The vegetable kingdom transfers the spirit to matter, mathematics to life, the ether shapes the leaves from circular to triangular Australia's archangel was the greatest of artists playing with forms. Griffin emulated him in playing with forms.
>
> Spirits conceived life in the triangle and the sphere. Goethe sensed this.[41]

Bragdon calls for a new architecture for the modern world.

> It is not unreasonable to believe that the movement towards mysticism, of which modern theosophy is a phase and the spiritialisation of science an episode, will flower out into an architecture which will be in some sort a reincarnation of and a return to the Gothic spirit, employing new materials, new methods and developing new forms to show forth the spirit of the modern world without violating ancient verities.[42]

The Canberra plan — with its clear references to ancient geomantic models such as Stonehenge, the Salisbury Plain triangularity, the long axial arrangements of monuments in the landscape, together with the symbolic implications of the geometry — answers Bragdon's call both in its architecture for the Capitol and the government group and in the heroic scale of the land-planning. Marion and Walter's personal cosmogony finds its symbolic expression in Canberra — its geometry arising from the Vesica, and its axiality, both being clearly derived from sacred and divine traditions. This geometry represents, moreover, an order for creativity and success in the modern world. Walter writes in the *Magic of America:*

> When I was a boy I consulted Herbert Spencer's philosophy for enlightenment, and found architecture considered virtually as an ecclesiastical appendage; the notion seems a preposterous limitation and 1 feel sure that my reaction represents the typical modern attitude towards this art. Just so. But after studying the buildings and noting with an astonishment the absence of creative architecture in the Western world for half a millennium, in fact since Mediaeval times, the force of Spencers observations became striking, if not conclusive. Moreover in the face of the worldwide testimony of the stones that the religious structures have been the only ones to make a lasting contribution to the art of architecture, it is meet to give pause as to which architecture is when considered a living growing thing, not a graveyard. . . .
>
> For the beginnings of a fresh life we have to go from the mass opinions to those of the few pioneers who have for about a century now been exploring the complexities of the human mind and soul and the conditions for a full rounded healthy working. From these students a *practical religion* may be forthcoming compatible with modern objective science but taking into account, without prop of external agencies, our vaster subjective activities, desires and needs. Then again will the imagination and the creative powers of mankind be unbound and free for an architecture as far transcendent of historical efforts as is the science of construction and our economic power.[43]

NOTES

1 The City Beautiful urban design method is described and illustrated in T H Mawson *Cioic Art- Studies in Town Planning,* Parks, *Boulevardes and Open Spacts* Batsford London 1911.

2 J Rykwert *The Idea of a Town, the Anthropology of Urban Form in Rome, Italy and the Ancient World* M.I.T. Press Cambridge 1968 esp. p97. -

3 V Scully *Modern Architecture: The Architecture of Democracy* George Braziller **New York 1961 p45.**

4 V Scully *The Earth, the Temple and the Gods- Greek Sacred Arcbitecture* Yale University Press New Haven 1979 p181.

5 E Guidoni 'II Significato Urbanistico di Roma Tra Antichita e Medievo' *Palladia* vol.22-23 pp 3-32. See also, F Coarelli "I Santuan del Lazio in ecta Republicana' (Studio Nis Archeologica) *Nuova Italia Scientifica* Rome 1984. The early Christians were continuing the tradition of the quartered plan as a means of imposing the order of the universe on Rome, which became the focus of the new Christian world.

6 C Norburg-Schulz 'Genius Loci of Rome' special edition of *Architectural Design: Roma Interrota* vol.49 no,3 1979 pp50-55.

7 ibid. p51.

8 *P Tomphns Secrets of thr Great Pyramid* Allen Lane London 1973 ppl76-84

9 J Hemsch Xanten Cosmographic Mosaic', *Heinsch Papers No.3* Fenris-Wolf: Bar Hill July 1979 p1. (Originally published in *Der Graftscbaffer* Sept. 1933).

10 J Michell THE NEW V*iew over Atlantis* Thames and Hudson London 1983 p172.

11 J Heinsch 'Principles of Prehistoric Sacred Geometry' *Grundsatzt vorzeitliche Kultgeographie* Comptes Rendus du Congres International de Geographie Amsterdam 1938 Sect.V pp90-108. English translation by M Behrend 1973 (rev. 1977) Fenns-Wolf: Bar Hill Dec. 1977 passim.

12 Numerous articles were published on the astronomical orientation of Egyptian and Creek temples by Lockyer and F C Penrose from 1891 to 1900, then, their research shifted to the megalithic monuments of Britain. J N Lockyer'On Early Temple and Pyramid Builders' Nature vol.48 no.1229 May 1893 pp55-58,- 'The Astronomical History of Thebes' *Mature* vol.48 no.1240 Aug. 1893 pp318-20. F C Penrose 'A Preliminary Statement of an Investigation of the Dates of some Greek Temples as derived from their Orientation' *Nature* vol 48, no.1165 Feb. 1892 pp 395-97, 'A Preliminary Statement of the Examination of the date of some Greek Temples as derived from their Orientation' *Proceedings of the Socitty of Antiquaries* Feb. 1892, 'On the Results of an Examination of the Orientation of a number of Greek Temples' *Proceedings of tht Royal Society* Apr 1893. See also, J N Lockyer *The Dawm of Astronomy. A Study of Temple Worship and Mythology of \he Ancient Egyptians* Casscll London 1894,- B Procter *Tht Great Pyramid. Observatory, Tomb and Temple* London, 1883.

The orientations discussed by Penrose seem to be the earliest documentation of the axial systems and sight lines noted by Scully in *Tbe Earth, the Temple and the Gods.* Scully wrongly attributes this discovery to Le Corbusier *(Vers une Architttecture* 1923). The work of Lockyer and Penrose reveals the continuity of astronomical orientation of temples from ancient Egypt to Greece. See, in particular, Lockyer The Influence of Egypt upon Temple Orientation in Greece' *Nature* vol.48 no. 1244 Aug. 1893 pp417-19.

13 W Stukely *Stonehenge. a Temple restored to the British* Druids London 1740. Also, Stukely *Avtbury* London] 763, J Wood *An Essay towards a Descriplion of Bath* 1765 (repr. Bath 1969). Sec also, A Watkin Early British Trackways Simpkin Marshall London 1922; *The Old Straight Track* Garnstone Press London 1970.

14 J N Lockyer 'Notes on Some Cornish Circles' *Naturt* vol.74 no. 1900 June 1906 ppl26-27. Also, Lockyer 'On Stars and Temples' Nature July 1891 j Griffith The Astronomical and Archaeological Value of the Welsh Gorsedd' *Naturt* vol.76 no. 1957 May 1907 pp9-10,- Griffith 'Astronomical Archaeology in Wales' *Nature* vol.78 no.2022 June 1908 p295, Griffith 'Welsh Astronomical Traditions' *Naturt* vol.78 no.2027 Sept. 1908 p78,. Lockyer *Stonehenge and other British Monuments Astronomically Considered* London 1906. See also Lockyer's series of articles on Stonehenge in *Nature:* in vol.72 —no. 1854 May 1905 pp32-34; no.1 863 July 1905 pp246-48; no. 1864 July 1905 pp270-72, and in vol.73 — no. 1885 Dec. 1905 pp153-55, no. 1888 Jan. 1906 pp224-26,-no. 1894 Feb. 1906 pp336-38. And another series of articles by Lockyer on ancient British monuments in *Nature* vol 77: no.1986 Nov. 1907 pp56-S7, no.1987 Nov. 1907pp82-84, no. 1990 Dec. 1907 ppl 50-5 I, no. 1994 Jan. 1908 pp249-51, no. 1999 Feb. 1908 pp368-7l; no.2001 March 1908 pp414-16; no.2004 26 March 1908, PP487-89, no.2006 Apr. 1908 pp536-38.

15 For example, J Savile Lumley, 'Antiquarian Researches at Civita Lavinia' *Arcbaeologia* vol. XLIX pp 367-81,- 'Further Researches at Lanuvium' *Archaeologia* vol. Llll 1890 pp147-54, R L Pullan 'Notes on the recent excavations on the supposed site of the Artemisium near the Lake of Nemi made by Sir J. Savile Lumley' *Arcbaeologia,* vol. L 1886 pp58-65.

16 N Pennick *The Ancient Science of Geomancy, Man in Harmony with the Earth* Thames and Hudson 1979 ch.6 esp. pp84-85; Michell, New *View over Atlantis* p82.

17 J N Lockyer 'Notes on StonehengC: IV. The Earliest Circles' *Nature* vol.71 no. 1843 Feb. 1905 pp391-93 'Notes on Ancient British Monuments' *Nature* vol.77 no. 1986 Nov. 1907 pp56-57.

18 J N Lockyer Notes on Ancient British Monuments: V, Avenues' *Nature* vol.77 no.1999 Feb. 1908 pp368-71. See also his'Notes on Stonehenge: IX, Folklore and Traditions' *Nature* vol.73 no. 1885 Dec. 1905 ppi 53-55.

19 For an account of the relationship between Stonchenge and Clastonbury see, J Michell *New Light on the Ancient Mystery of Glastonbury* Gothic Image Publications Glastonbury 1990 esp. ch. 15 pp 135-45.

20 J N Lockyer 'Stonchenge !V — The Earliest Circles' Nature vol.71 no.1843 Feb. 1905 pp391-93 'Notes on Ancient British Monuments' *Nature* vol.77 no. 1986 Nov. 1907 pp56-57.

21 J N Lockyer Notes on Stonchenge, VI, On the Solar Observations made in British Stone Circles' *Nalun* vol.72 no.1854 May 1905 pp33-34 'Notes on Stonehenge, VIII, On the Dartmoor Avenues' *Nature* vol.72 no.1864 July 1905 pp270-72.

22 The triangle is an important component of the 1901 modifications to I'Enfant's plan for Washington DC, but the geometry does not contain equilateral triangles.

23 Marion Griffin 'Louis Sullivan — Griffin, his Successor' The Individual Battle *Magic of* America pp37-38. See also, Walter Griffin 'Architecture incomplete without Town Planning' The Individual Battle *Magic of America* p376.

24 W B Griffin 'Building for Nature' The Individual Battle *Magic of America* pp66-6~8.

25 Lockyer'Notes on Ancient British Monuments' p57

26 WB Griffin The Architect's Burden — a talk to students'The Municipal Battle *Magic of America* p97.

27 Helen Mcller *Patrick Geddes:* Social *Evolutionist and City Planner* Routledge London 1990.

28 Patrick Geddes 'Economics and Statistics, viewed from the stand point of the preliminary Sciences' *Nature* vol. 29 1881, 'Huxley as Teacher' *Nature* vol.115 1925, The Megalithic Builders' *The Evergreen* vol.IV Winter 1896 Patrick Geddes Colleagues and Co. Edinburgh, The Masque of Ancient Learning and its many meanings' *A Pageant of education from Primitive to Celtic* Times *devised and interpreted by Patrick Geddes* Outlook Tower Patrick Geddes Colleagues and Co. Edinburgh 1912. Also, Geddes, A *Masque of Medieval and Modern Learning* Outlook Tower Patrick Geddes Colleagues and Co. Edinburgh 1912.

29 Meller *Patrick Geddes p9.*

30 G Guicci, EM Manieri,M Tafuri *The American City from Civil War to New Deal* M.I.T. Press Cambridge 1980 p304.

31 Meller *Patrick Geddes* pi 39.

32 P Geddes ' The Civic Survey of Edinburgh' *Transaction; of* the *Town Planning Conference, 10-15th* October. 1910 *London* Royal Institute of British Architects 1911. The article by John Sulman contained Information, Conditions and Particulars for Guidance in the Preparation of Competitive Designs for the Federal Capital City of the Commonwealth of Australia, Invitation to Competitors', reprinted in Appendix A, *Report from the Select Committe Appointed to* Inquire *into the development of Canberra* Sept. 1955 Point 16 p90.

33 B Smith 'Notes on Abstract Art' *The Death of the Artist as Hero, Essays in History and Culture Oxford* University Press 1988 passim.

34 S Ringbom 'Occult Elements in the Early Theory of Abstract Painting' *Journal oj the Warburg and Courtauld Institutes* vol.XXVI 1966 pp386-418.

35 C T Jackson *The Oriental Religions and American Thought* Nineteenth Century Explorations Greenwood Press Westport 1981 p157.

36 R Lipsey An *Art of our Own: The Spiritual in Twentieth Century Art* Shambhala Boston 1988 pp32-37. For further information on the impact of Theosophy on modern art, see: K J Regier (ed.) *The Spiritual in Modern Art* Quest Book London 1987, Ringbom 'Occult Elements in the Early Theory of Abstract Painting'.

37 M Seuphor Dictionary *of Abstract Painting* (trans. L Izod, J Montagne and F Scarf) New York 1958 p41.

38 N G Menoeal *Architecture as Nature, the Transcendentalist Idea of Louis Sullivan* University of Wisconsin Press Wisconsin 1981 pp23-24.

39 C Bragdon *The Beautiful Necessity: Architecture as frozen* Music. Seven *essays on Theosophy and* Architecture Quest Book The Theosophical Publishing House Wheaton 1978 (first published 1910).

40 J Michell The *Dimensions of Paradise* London 1988 pp69-71; R Lawior *Sacred Geometry* Thames and Hudson London 1982 pp4-12; Pennick Ancient Science of Geomancy pp119 129, Bragdon The Beautiful Necessity pp68-7l 86,

41 Both quotes taken from M M Griffin The Individual Battle *Magic of America* p242.

42 Bragdon The *Beautiful Necessity* p25.

43 W B Griffin'Architecture in another 50 Years'The Municipal Battle *Magic of America* pp53 57.

4

Ancient Paradigms: The Influence of the Hellenistic City Model and Chinese Feng Shui

THE ANALOGY OF THE THEATRE

In the original report, it will be recalled, Walter Burley Griffin used the analogy of a theatre, writing that the background of the hills visible from the northerly portion of the central district of the city should serve as a 'stage setting' and be used to set off the government group. The 'closest adjacent flat lands' of the northern side of the basin, the public gardens studded with other public buildings, would then serve as a 'parquet' for the 'theatrical whole' with the commercial portion of the city forming a 'dress circle'.[1] This analogy is pursued in a second report, which accompanied the submission of the Preliminary General Plan to the Department of Home Affairs in October 1913.

> Taken altogether, the site may be considered as an irregular amphitheatre — with Ainslie at the north-east in the rear, flanked on either side by Black Mountain and Pleasant Hill, all forming the top galleries; with the slopes to the water, the auditorium; with the waterway and flood basins, the arena; with the southern slopes reflected in the basin, the terraced stage and setting of monumental Government structures sharply defined rising tier on tier to the culminating highest internal forested hill of the Capitol; and with Mugga Mugga, Red Hill, and the blue distant mountain ranges, sun reflecting, forming the back scene of the theatrical whole.[2]

The organisation of the government group and the Capitol, controlled within a 'theatrical space', is clearly modelled on ancient Greek precedents and on the associated religious symbolism based on the cave shrine within the sacred mountain, where the mountain itself was the place of worship. With the development of the *temenos* (or sacred place), the cave shrine was replaced by architectural elements or else it was moved and embedded in a new construction, as at Palestrina near Rome (figure 4.1). Ramps, stairways and platforms gave access to the theatre temple, which often referred back to the deified mountain in controlled vistas achieved by partial hiding and revealing of certain features of the site in labyrinths and sepulchres. Other hills and mountains were gradually incorporated into the composition by the creation of additional controlled vistas and axial alignments. Where certain aspects of the site did not meet the necessary criteria in terms of closure or area of focus, as happened at Pergamon, for instance, tumuli were constructed as visual controls. Other landscape configurations surrounding the city, which recalled or symbolised the city gods, would also gradually acquire sacred significance. Finally, in turn, temple alignments and city construction became focussed on connecting vistas that incorporated man-made features and these landscape elements.

Although the etymology of the Indo-European root 'tern' is disputed, it does seem to be intimately connected with the process of ritual planning. Not only is it common to *temenos* {the sacred place), and *templum* (temple, the sacred house), but also to *tempus,* possibly alluding to the ancient conception of time as circular. The same root appears in *terminus* in the sense of a boundary point or stone marker, deified as Terminus, the god of boundaries.

The corresponding word for boundary or terminus in Greek was *oros,* a word that also meant 'mountain'. Although oros had a variety of technical uses in Greek logic

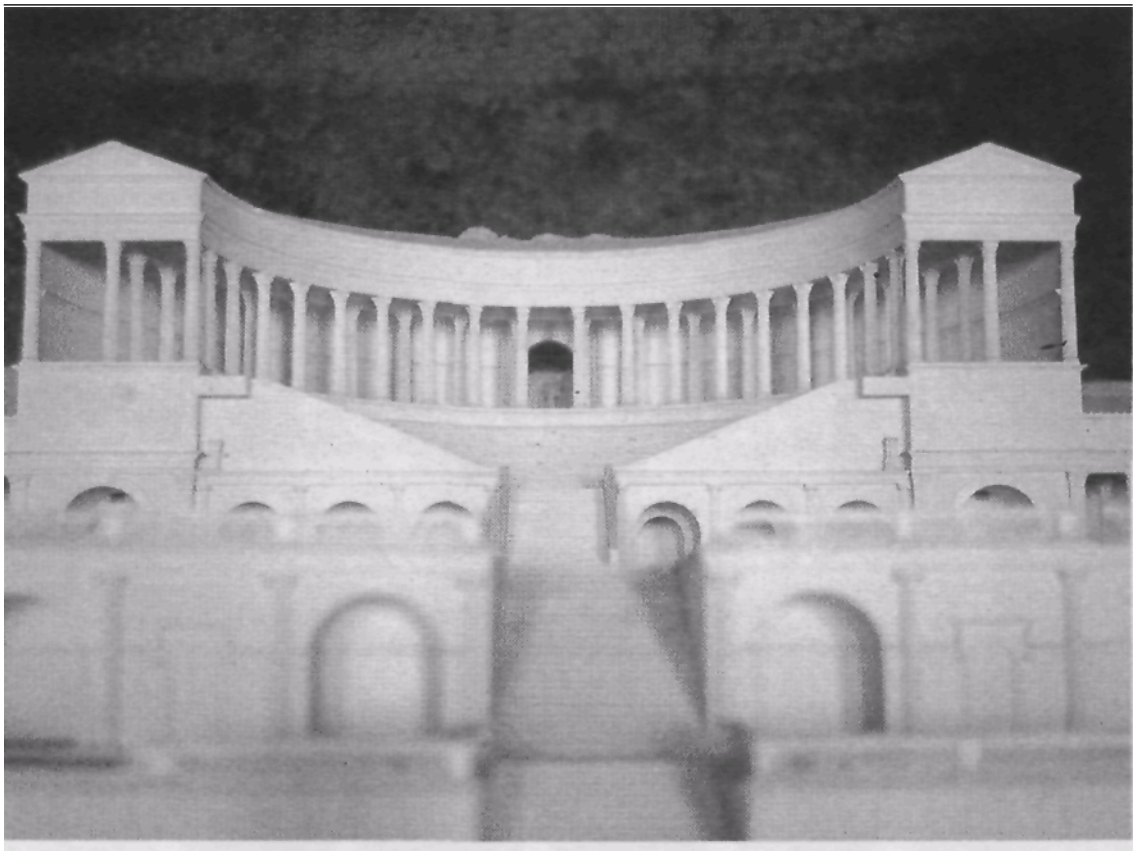


Figure 4.1 Palestrina: sanctuary of Fortuna Primigenia

and mathematics, its use in reference to natural boundaries — such as mountain, or mountain range — may be much older. The Egyptians, too, in observing the sun's passage across the sky, regarded the surrounding mountains as the natural termini of the sun's progress. This seems to be the meaning of the Egyptian hieroglyph that pictures the disc of the sun appearing between two mountain peaks.'

From oros and related terminology we can discern the double function of mountains and other prominent landscape features as both natural boundaries of the human environment and as principal reference points for the design and orientation of the most important constructions in that landscape, particularly the site of the town and its principal monuments.'

At the time of the design for Canberra published material on this relationship between site topography and architecture in ancient city construction was available to Walter and Marion Griffin. Examples of such material were included in the *Transactions* of the 1910 Town Planning Conference (London), one of the reference documents for the Federal Capital Competition. It contained an illustration of the ancient city of Ephesus (figure 4.2), showing the axial alignment of the Grand Forum, the Agora Civilis, the Gymnasium and the City Port, all set on terraces, with the prominent rock outcrop behind. There was also a restoration of the city of Priene revealing a similar relationship; this time, a north-south axis that connects temple complexes on the

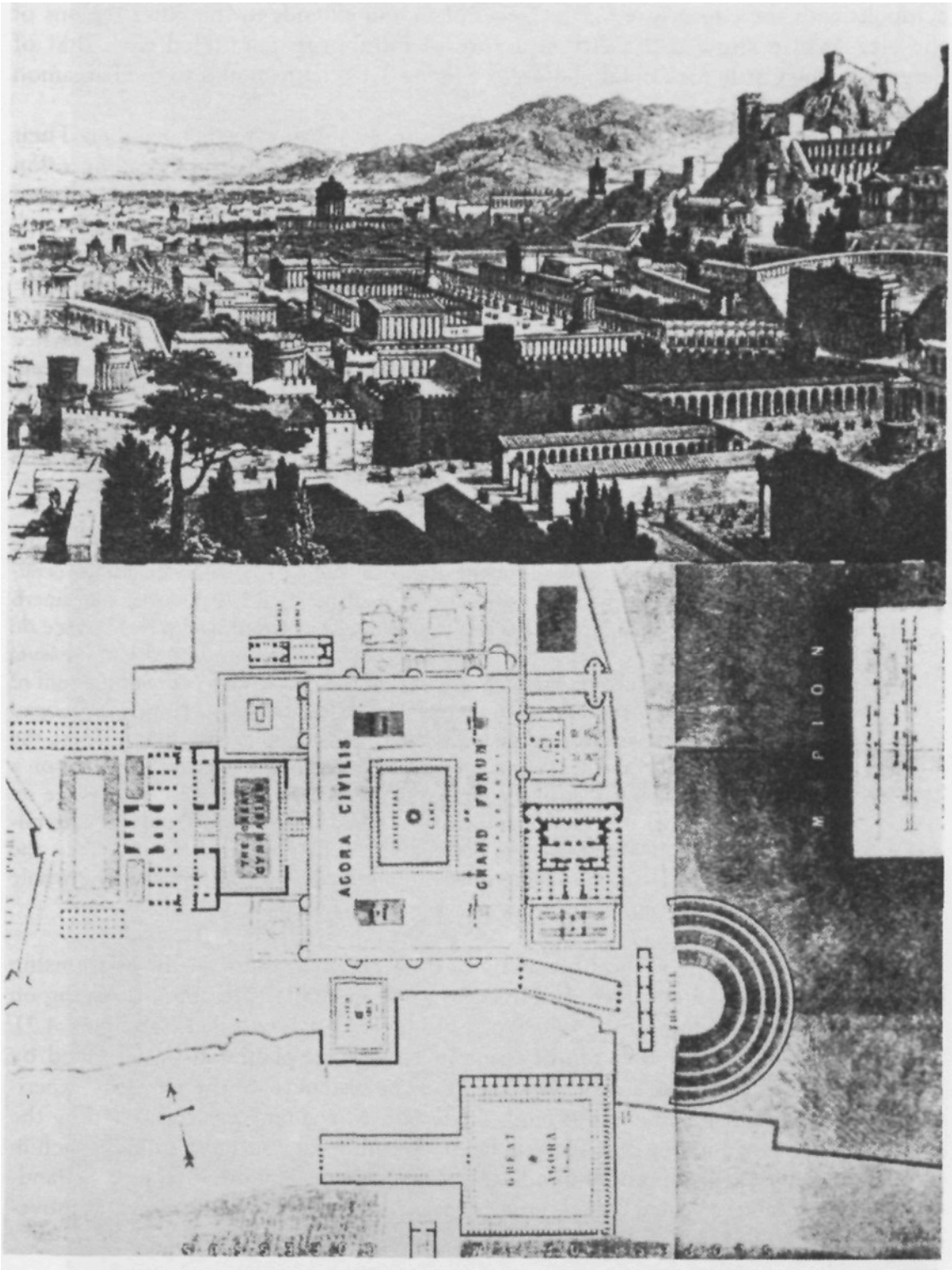


Figure 4.2 Reconstruction of the city of Ephesus and plan of the Agora

acropolis with the city centre on the lower plain and extends to the outer regions of the city. It also showed the city structure of Edinburgh paralleled with that of Pergamon,. the Castle rock in Edinburgh (see figure 3.13) corresponds to the Pergamon acropolis.[5]

In the Canberra plan the Griffins seem to establish a further parallel. Their emphasis on the role of terracing along the north-facing frontage, the interconnection of landscape elements and the frequent reference to the elements of the city placed analogous to a 'theatre' indicates a commitment to the pattern of an ancient city.

> It might be reasonable, therefore to take advantage of the maximum possibilities of the site, by bold free strokes to produce such a monumental and inspiring garden and building grouping, massing and impressive approach as could be nearest approximated only in the small but splendid rocky cities of Antiquity, of formally correlated structures, squares and terraces.[6]

The parallel between Canberra and ancient city design is amplified in Walter Griffin's essay on 'Architecture'.

> The city presents itself as an amphitheatre, the playgrounds (the Mt Ainslie side of the lake) providing a gathering place for the audience, the Parliamentary buildings occupying the stage, giving the impression of one great building like some of the superb structures of Indo-China, presenting a facade one mile in length and piling terrace on terrace, the Water Gate in the centre with the judiciary buildings on the lower level flanking the forum formed by bridging the level of the first terrace out over the roof of the Water Gate; the next level occupied by various departmental buildings grouped about a central court with its pool giving a stately and charming out door resort to the members of the Government. Terminating the court is the Parliament House set on a level some 40 feet above that of the court at its feet. This whole garden frontage on the main buildings of the city starting with the peak of Ainslie to the north is terminated by the Capitol Building some 60 feet above the Parliament House. Thus the stage with its lovely setting of the hills and mountains in the distance, the whole reflected in the lakes in the foreground makes the city itself a national monument.[7]

In this description of the vertical hierarchy of the Canberra design — the relationship between the hills and mountains reinforced by monumental architectural grouping on terraces — the application of the Greek city model is clearly revealed (see figure 4.3). The articulation and manipulation of space in Greek city planning, as described by Vincent Scully, involved an intentional 'theatrical heightening' of the religious experience for the participants moving through the *temenos.* Movement was controlled by the creation of positive and negative spaces, the juxtaposition of voids and solids, which in turn generated a ritualistic procession. In this way the gods, embodied in specific landscape features, were revealed through the controlled vistas. Scully describes this movement and sense of gradual revelation at the Acropolis in Athens.

> . . . turning the bastion on the new terrace, climbing then due east and entering at an angle through the propylon, seeing the cone (Mt Lycabettos) and then turning to the

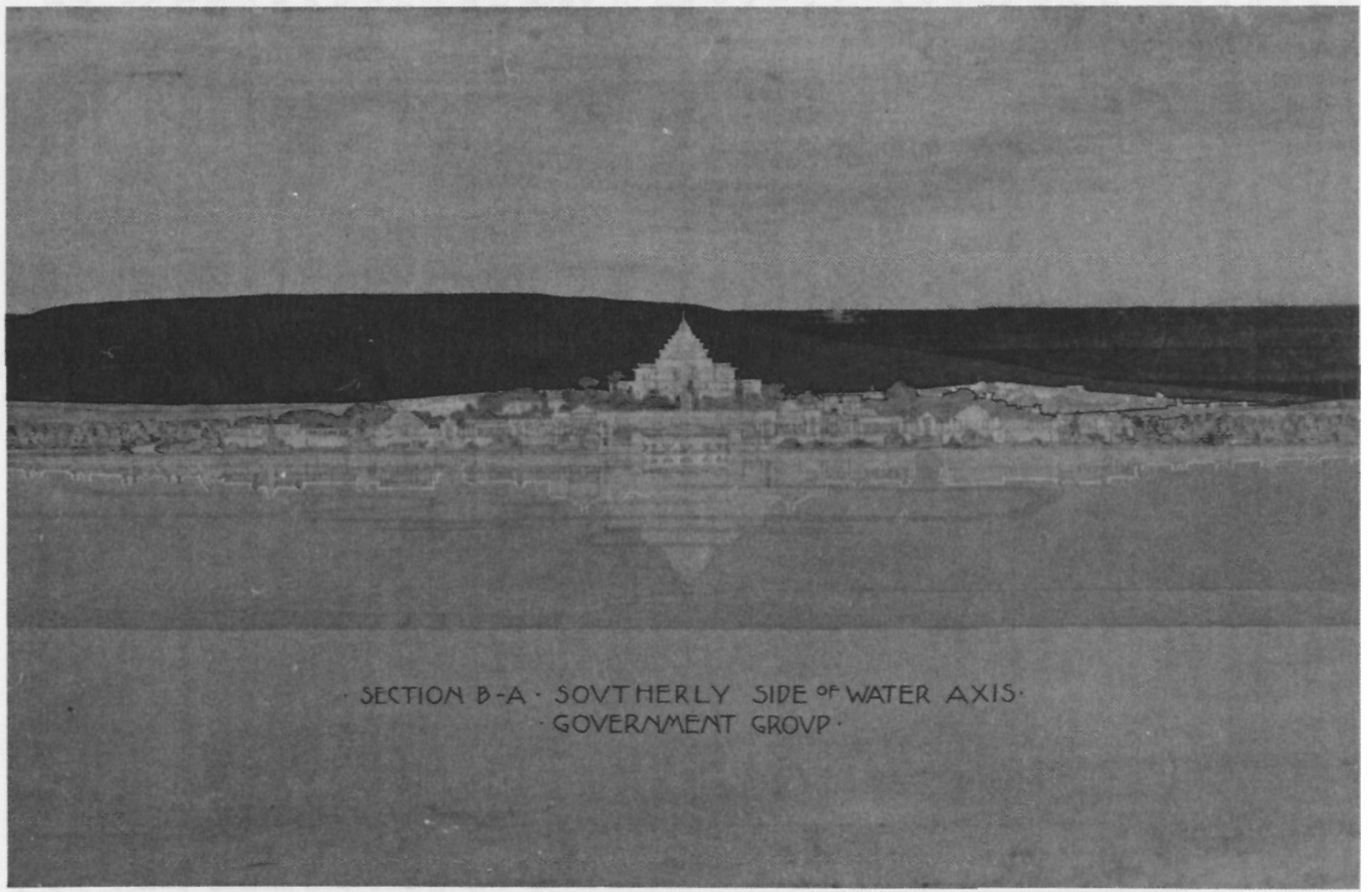


Figure 4.3 Federal Capital Competition: section southerly side of Water Axis showing Government Group

> right, the worshipper would have had two temples coming forward almost side to side across the top of the hill. One fixed object in the middle distance, the cone of Lycabettos on the left, would thus have served as a foil to the two temples near at hand and have emphasised their sculpturally aggressive characters as they loomed over the crest. The base of the older Parthenon would have been somewhat higher than the temple of Athena Polias, but that, too, was placed on an extremely high platform built out across the space where the summit of the Acropolis began to fall rapidly to the west and north. The effect would have been two large forms, with very little space between them, rising upon the highest contour from the propylon. One would have been overwhelmed by the double presence of Athena, but the reiteration might have had a rather redundant quality. The fronts of the temples would have almost lined up with each other, reducing, thereby, the capacity for each form to be seen as an independent force. The two temples would, however, have been opening slightly toward the west with some effect of fanning actively towards the observer. At the same time they also had the opposite quality of setting up a long, rather tunnel like perspective towards the east, in which direction they, of course, faced. As one mounted the hill through the purely negative space between the two temples, one would have come high enough to discover the object of their perspective, the Horns of Hymettos, towards which the two buildings would have directed the view of the observer with the velocity of a flung javelin. As one passed beyond the shorter temple of Athena Polias, the much longer flank of the old Parthenon still emphasising the perspective towards the Horns, one would have seen the complementary shape of Lycabettos rising up once more to the north east, beyond the great altar of Athena. In this way Lycabettos would have again answered a very definite need by giving some lateral expansion to the longitudinal direction of the Acropolis shape and its focal horns.[8]

In the ascent of the Acropolis only small sections of the architectural composition could be perceived at a particular time. It was not until the observer had proceeded to the northern extremity that the total order of the composition, the relationship between the temples and landform, became clear. Such a 'theatrical' arrangement of the site, a procession through set pieces, can be likened to the earlier labyrinths, through which the participant had to travel as part of specific religious ritual. It is to this kind of architectural composition that Walter Griffin was alluding in his descriptions of the vertical hierarchy of Canberra- Monumental architecture set on terraces in a carefully contrived vertical hierarchy, with the Capitol framed against the mountain background and an overarching geometrical alignment of man-made elements placed in relation to other hills and mountains, all combine to illustrate the rejuvenation of the Greek principle of city planning- If one could visualise moving through the government group, with its juxtaposition of positive and negative space, the composition could only be perceived, as in the Greek city, section by section: the setting of the judiciary, the departmental buildings, the Parliament House and finally the Capitol.

The same principle of ritualistic progression was frequently expressed later at Castlecrag, which became a substitute for Canberra, in the numerous 'Mystery Plays' staged by the theatrical society organised by Marion.

> Here in the temple forecourt, the enraged king Tauris was appeased by the appearance in the temple forecourt of Diana herself, and the wonderful procession was formed to follow Iphigenia carrying the sacred statue down the steps with the maidens and soldiers following, wending their way across the valley and up the hillside, across the top of the terrace and down, disappearing as they made their way to the water's edge.[9]

DEMOCRATIC IDEALS AND 'CREATIVE THINKING'

The Griffins' identification of architecture with sacred landforms had a further connotation, however. Their design also focussed with an exaggerated emotional intensity on the new religion of nature and democracy, as enshrined in the symbolism of the equilateral triangle connecting Capital Hill, City Hill and the Lake Park monument. Democracy had become the new spiritual ideal — a sentiment reflected in the words of H P Berlage, a pioneer of modernism and the teacher of Mies van der Rohe.

> For this modern movement to have any intrinsic value, that is to say possessing a guarantee, of a possibility of developing into a great art, it must have, if it wants to respond to these considerations, a spiritual basis. And now, I am of the opinion that the ideal side of this basis, the social ideal, i.e., that which gives direction to this organisation is the idea of Democracy.[10]

Later, Walter Griffin rejoins with: 'Democracy, was to become the new Practical Religion compatible with the modern objective'."

The parliamentary triangle of the Canberra initial plan can be interpreted as a symbolic representation of the structure of the democratic ideal. Throughout the *Magic of America* Marion stresses that 'true democracy' can only be achieved through the appreciation of the values of a tripartite consisting of liberty, equality and fraternity. Equality is enshrined in 'the function of a democratic political organisation'; fraternity in 'the function of a co-operative mercantile centre'. Both are represented in Canberra: 'equality' in the general administration centre sited around City Hill and the government groupings within the triangle; 'fraternity' in the mercantile centre on Mount Pleasant stretching out towards City Hill. Liberty, 'the function of individualistic, creative, productive and cultural activity', forms the apex of the triangle, as represented by the Capitol building. The Capitol, a monument to the Australian people, a national archive, and a place of commemoration of Australian achievement, is set above the Parliament House, the judiciary, the executive and mercantile groups (see figure 2.4).[12] Marion argues that true democracy cannot be achieved without the completion of the triangle by liberty',- this, in turn, is possible only through 'creative thinking' as opposed to rational thinking.

> One would be in despair (as apparently all our communities are) if one hadn't glimpsed the fact that, though rational thinking does not suffice for the solving of life's problems, there can be creative thinking. Some time ago, rational thinking was discovered by two men independently, Abraham and Aristotle. That kind of thinking sufficed for a millennium or two, supplemented occasionally by genius (a kind of intuitive think-

> ing, really a gift from the Gods). Nowadays no one understands intuitive thinking so the Cods are ceasing to give these gifts. Now we have to learn them . . . now the creation of a new type of thinking is as urgent as the creation of rational thinking was for the periods beginning with Abraham and Aristotle.[13]

Marion's plea for 'a new type of thinking' which would focus upon spiritual rather than material concerns is reinforced when she writes that 'since the coming of Christ, the first half of man's evolution, the descent into matter was completed, it is now our task to bring about the ascent into the spirit'.[14] And Walter writes that the ostentation, imitation, greed, intolerance and anti-social forces that actuate our civilisation could only be overthrown by a spiritual and mystical revelation of the order of nature'.[15] This notion of intuitive thinking is a direct reference to the Gnostic and hermetic concept of *nous,* that which is intelligible and perceived consistently by the 'noetic', or intuitive faculty — the higher reason.[16] Apuleius (a pagan from Madaura, a Roman colony in north Africa) explains this concept in his discussion of Plato's philosophy: here, the reader should distinguish between that which changes and is sensible to touch and that which is perceived by the nous.

> There are also two natures (or essences) of things. And of these, one pertains to things which may be seen by the eyes, and touched by the hand, and which Plato calls doxastic (or the subject of opinion); but the other is the object of intellect and is dianoetic and intelligible. For pardon must be granted to novelty of words, when it serves to illustrate the obscurity of things. And the former nature is indeed mutable and easily to be perceived; but the latter, which is seen by the piercing eye of intellect, and is known and conceived by the acute energy of the reasoning power, is incorruptible, immutable, stable and invariably and perpetually the same.
>
> Hence, also, he says, that there is a twofold method of interpretation (pertaining to them). For that visible nature is known by a fortuitous suspicion, and which is of no long duration; but this intelligible essence is demonstrated to exist, by true, perpetual, and stable reasoning.[17]

This explanation, which stresses the sense of stability and permanence of ultimate realities, serves to clarify the Griffins' notion of rational, creative and intuitive thinking. By some means Marion, in particular, seems to have been aware of the dichotomy which developed among the early Christian Gnostics and philosophers. As Tobias Churton points out, 'What to some extent, the Gnostic has attained by the experience of gnosis, the philosopher sees by the piercing eye of the intellect'; and he goes on to say:

> By intellect, Apuleius does not mean what passes for intellect today, that is, the abstract binding power of reason — that which binds ideas in coherent patterns and assigns measure and proportion to them. Apuleius means something operating by the energy of intelligence — it is a light one sometimes sees in the gardener's or craftsman's eye when he or she comes to approach the very substance of their labours — the meaning of their contact with nature. It is a natural power and begins with the observation of nature, then extends to a communication with nature and then to the 'nature of nature' herself.[18]

This wisdom was handed down in a line of tradition from the remote past. The Greeks inherited it from the Egyptians, and it manifests itself in the philosophy of Idealism of Plato, who wrote that 'the ancients were superior to us for they dwelt closer to the Gods'." The importance of Greek culture for the Griffins lay in its connection to this ancient line of tradition; it was, therefore, a means through which this ancient wisdom might be reactivated for this modern age.

To the ancient mystics, the gods, having created the spirituality of man, had withdrawn to the heavens owing to certain aberrations of human nature. If the term 'natural' or 'natural forces' could be regarded as equivalent to the 'gods', it appears that Marion and Walter shared the ancients' belief that, while the power of the gods is irresistible, it is not theirs to dispose of at will. The gods are confined to certain seasons and areas of influence which they are not free to vary: those who understand the principles by which the gods are guided may therefore direct these divine powers to human advantage. Hence, at a time when humans had a more harmonious relationship with the natural world, it was possible to channel these powers through society in such a way that the gods performed their correct function as agents of fertility, and not of destruction.[20] Through a re-application of the ancient science of geomancy — of man in harmony with nature — the Griffins sought to revive this harmonious relationship and to restore its focus on nature and the deified landforms. Canberra would be the vehicle for this new spirituality, which would provide a cure for the ills of this materialistic and industrial age:

> when spiritual influences were concentrating to transform rational thinking (which had been necessary to bring about the individualising of man) into creative thinking which would give them freedom in the true sense of the word.[21]

The emphasis placed on these ancient models in the Canberra plan is even more pronounced with the development of Castlecrag.

> It is a great work but it is only the beginning. It points to a new Australian Life, based upon a new Australian Idea . . . The Idea may be summed up in a phrase,- Life is a fine art.[22]

Descriptions of the planning of Castlecrag also used the analogy of the theatre.

> The layout of Castlecrag is like that of a theatre where each element is built upon, . . . everyone will have a view of the stage . . a natural acropolis, 300 feet above the water on the central peninsula is the civic centre, a sports field surrounded by public and semi-public buildings, entered from the business thoroughfare through a semicircular colonnaded gateway . . . two natural amphitheatres are located, the cove theatre on the water frontage, the Glen theatre at the head of the valley.[23]

The architecture of this suburban community was subordinated to the Greek theme, too. As Conrad Hamann points out, a number of the Griffins' buildings have a 'strong allusion to the temple form'. There was the use of columns and a pediment in the

Harry Page house in Mason City, which recalls sacred treasuries or peripteral temples',- while their Winnetka House was 'virtually a temple in the landscape'. Their Australian houses continued these themes: Pholotia, their own house in Heidelberg, hinted at a Roman atrium,- while the verandahs on the Canberra workers' houses, proposed in 1919, recall the portico. At Castlecrag, the Felsted House used full, open atria and the later Garrett and James houses framed the central living spaces with thick, round columns. Marion herself referred to the Garrett House as 'her temple to Aphrodite'. Even the cultural life of the community reflected the Greek idea,- at the community theatre, the children's plays, Steiner's mystery plays and the Greek tragedies were all staged against the backdrop of a clear temple form probably designed by Marion herself.[24]

After the Griffins' departure from Canberra, Castlecrag became the focus for a new, symbiotic 'Golden Age'. In the *Transactions* of the 1910 Town Planning conference (London) Professor F Haverfield, while noting that there were a number of ages when whole towns sprang up in one movement and large urban areas were concinnated, expressed the view that the period around 1910 was one of these great ages. Two other examples he cited were the expansion of the Greek peoples under Alexander in the Hellenistic period and the rapid development of the early Chinese towns in central Asia, both of which provided sources of inspiration for the design of Canberra.[25]

INFLUENCES FROM THE EAST

The legacy of those much older paradigms derived from Chinese models is similar to that of the Hellenistic era. Both systems employ a central axis in a north-south direction as the key organisational device combined with an east-west intersection. In both, the preferred arrangement is the incorporation of a number of topographical features over a large distance: hills, mountains, outcrops and plains are combined with a large body of water. Both use a terraced arrangement of buildings and a hierarchical system of building displacement according to function. Feng shui (Chinese geomancy) — with its stress on the mountain's importance as a sacred landform and its significance in city and architectural design and on the function of the axis as a means of unifying natural and man-made forms into 'ideal' representations of the cosmos — is clearly an important influence upon the initial design for Canberra.

At the time of the Canberra design the traditions of ancient city design based on Greek principles, having been lost, were in the process of being rediscovered by astro-archaeologists; the Chinese system, by contrast, was still in practical use and contemporary literature on the science of *feng shui* was detailed and comprehensive. Even if the predominant view of feng *shui* expressed in Western journals and books was to see it as an obstacle to progress and cultural reciprocity, or as a mere superstition and pseudo-science, there were other, more favourable studies. Ernst Eitel saw it as 'a recognition of the uniformity and universality of the operation of natural laws . . . the idea of an organic unity and identity of the spiritual basis of life in nature and in individuals', and as a practice that represented 'the complete amalgamation of religion and

science'. Ernst Boerschmann was equally open-minded, writing that China exhibits 'a unity of culture which can only be dreamed of as in the days of ancient Greece or some other ideal period'.[26] Boerschmann and his colleagues saw, too, a coherent connection between Eastern culture and the 'idealism' of the ancient Greek world.

The impact of the East on eighteenth and nineteenth century European and American culture is clear and well-documented.[27] The Columbian Exposition of 1893 in Chicago, particularly the Ho-o-den, the official exhibit of the Imperial Japanese Government, introduced the art and architecture of the East directly to the Chicago Prairie School. Frank Lloyd Wright became an enthusiast for all things Japanese,- he established an outstanding collection of woodblock prints in the American middle west and, in 1905, travelled in Japan. In 1912 he published a small volume containing a critical appreciation of the Japanese print. Although Wright would never admit to it, Eastern art and architecture had a profound influence on his work; it was radically different, a new and exciting alternative.[28] The first commission Walter Griffin had was the preparation of a town plan in China for a Chinese client, revealing his early interest in Eastern artistic practice.[29]

Before her marriage to Walter in 1911, Marion had worked for eleven years in Frank Lloyd Wright's studio, where she established the 'Japanese Style' as the epitome of Prairie School rendering.[30] The strong formal influence of Eastern art, with its simplicity of form relying on continuous line, is reflected in her work for Wright and, later, the practice of Walter Burley Griffin. Marion often employs a heightened or lowered perspective eye-level combined with a balanced asymmetry in the composition. The eye is, thus, led from the left to the right or top to bottom of the sheet (a device also used in the Beaux Arts style), with the perspective exterior rendering being combined with elevations, plans and sections on a single sheet.

In numerous examples of her work architectural forms seem to float in an undefined space: the Millard House plan, for instance, is drawn as if hanging in space from the foliage. The Hardy House drawing overlaps on a number of panels, using the traditional Japanese screen as a model. And her frequent use of ink on linen as a presentation medium is reminiscent of Eastern practice, the Rock Crest Glen development being an essay in the direct application of these principles. Here, Marion adopts the heightened perspective viewpoint with the architectural form placed unobtrusively in a collage of large trees and shrubbery. This drawing reveals both Marion's familiarity with Eastern artistic techniques and her knowledge of the philosophy which underlies that tradition: *ch'i* and f*eng shui.* Akin to Chinese painting and landscape design (see figure 4.4), the Rock Crest Glen drawings create a perfectly 'symbiotic treatment of building and site', the quality of Marion's work that Paul Larson labelled 'a socialised nature mysticism'.[31]

In the Melson House drawings nature predominates. The 'nature mysticism' emanates from the depiction of architectural form growing out from nature,- architecture being presented as simply another natural form. Here, continuous line links the elements of the composition: trees, flowers, architecture, sky. In the foreground, planting and flowering bushes cover an indefinite form, possibly a planter. The rusticated masonry walls of the house merge with the stone steps that lead up to the garden and

Figure 4.4 Landscape by Huang Kung-wang, Yuarn Dynasty (1269–1354), illustrating the 'dragon veins' of Chinese geomancy (feng shui)

these, in turn, blend into the lines which define the background foliage and the sky. It is almost impossible to determine where nature ends and the architecture begins. Marion's earlier drawing of Frank Lloyd Wright's Mess House celebrates similar ethereal compulsions in its depiction of the creeping foliage of the foreground merging with the background mass of trees and shrubs. The architectural solids are blurred by foliage and the large window panes reveal nature from the interior; the shrubs, trees and sky are connected to the interior space. This 'drawing in' of nature into the internal spaces of the house is continued by Marion in her decorative schemes for the house interiors: in fire screens, and window and furniture designs, which frequently depict landscapes and foliage. The place of man within nature, commensurate with the principles of *ch'i* and feng *shui,* became the prime concern of the Prairie School.

The presentation drawings for Canberra, too, clearly illustrate the formal and philosophical influence of Eastern artistic practice. In the City and Environs drawing, the centrepiece of the competition entry, the palette is restricted to mauves, browns, black and metallic gold,- very little green is used by Marion. Her preference for mauve and gold, especially gold, indicates a symbolic intention had displaced naturalistic representation — the use of gold to symbolise sacred practices being common to Eastern and Western art." Reminiscent of her earlier work and inspired by Japanese screens,

the Canberra perspective from Mount Ainslie is rendered on connected panels (figure 4.5). The choice of the elevated viewpoint from Ainslie for the perspective is deliberate,- for, it is only from a height — as in the Greek cities — that the plan composition can be appreciated. Walter writes:

> The importance of such an orderly arrangement is very great and can be especially appreciated in a city surrounded by heights — so that from a bird's eye view one is repeatedly presented with the spectacle of the whole city. One of the chief pleasures we get in contemplation of any work of man is the consciousness that results . . . we rejoice in the evidence of intelligence.[33]

A most distinctive feature of the Canberra City and Environs drawing is the treatment of the various mountains. Black Mountain, Mount Ainslie and Mugga Mugga are rendered as abstract, luminous balls, in sharp contrast to the opacity of the deep browns and purples of the surroundings and to the formal geometry of the central area (see figure 1.1). This symbolic device stresses the importance of the mountains in the design and also highlights the characteristic theme of Eastern geomancy: the life-force of nature.

This efflorescent cloud-like treatment of the mountains resembles the Chinese landscape painting techniques of the nature cult of the Taoist religion. The painter, in

Figure 4.5 Federal Capital Competition: view from summit of Mount Ainslie

the act of portraying the landscape, was paralleled with the Taoist mystic contemplating the cosmos. To the painter the aim was to express the presence of the cosmic reality rather than just the topographical features of the land. The painter must be attuned to *ch'i,* the cosmic energy or life force that infuses all forms: mountains, streams, trees, grasses, and the creatures which inhabit the land. It is in the abstract vitality of the painted form and, more literally, in the clouds and vapours — the visible symbols of this cosmic force — which emanate from the mountains, that the *ch'i* is expressed. The physical is concealed,- the spiritual is emphasised. Marion's elevation of Mount Ainslie with the peak shrouded in cloud is an extension of this concept (see figure 2.5) — a representation of the spiritual, inner essence of nature.[34]

This discovery of the philosophies of Eastern art deepened the Griffins' appreciation of the 'inner spiritual side of nature', which had already become, by 1910, an integral part of Vitalistic' Romantic theory filtering through to the Griffins from the work of Louis Sullivan, himself influenced by Swedenborgian mysticism.[35] Further impetus was found in *Thought Forms,* the seminal work by Annie Besant and Charles Leadbeater which was such an unparalleled source of inspiration for modern abstract art. *Thought Forms* discusses the concept of auras surrounding the human body, which are altered by varying thoughts and moods (see figure 5.7). Marion's renderings, many in full colour, in their depiction of spiritual energy and force radiating from all living things, exhibited a definite connection with the Taoist concept of *ch'i.* Taoism itself offered insights into the 'Wisdom Tradition' espoused by the Theosophical Society-Marion writes of this inner spiritual quality in the *Magic of America.*

> In Australia, I have stood looking over the valley and suddenly . . . the cloud like formation of the Chemical ether outlining with a wide band all the trees and shrubs, a phenomenon checked by thousands of others which can be experienced at will again and again if your etheric eye has become active.[36]

An early influence on Marion was the idea, drawn from hermetic thought, that art and religion should be unified with science. She believed that the role of the twentieth century artist and architect was to 'reunite the three into a true unity'. From her numerous references in the *Magic of America* to atomic theory, it is clear that this was one influence on her rendering of the splintered and crystalline forms of the mountains in the City and Environs drawing. She writes that the smashing of the atomic form frees the spiritual forces of matter. Thus, Western science had demonstrated what the ancients had known all along: that the physical forces are not vibrations of matter, but are their predecessors, the creators of matter. In the Canberra drawings the glowing, mystical, esoteric landscape forms adroitly express Marion's conviction.[37]

Feng shui, as the philosophy of Chinese landscape design and as the integral element of landscape painting, was based on an understanding of the influence exerted by the *ch'i* over the growth and change of all phenomena in the world. The *ch'i,* which is believed to flow through the ground, its conduit, is posited as prevalent in heaven and on earth, and people, living and dead, are under its control. It is under the active, cosmic force of *ch'i* that the integration is achieved of the two forces *yin* and *yang* —

the Chinese concept of the two principles of creation (male and female) that give rise to the world's phenomena. If *ch'i* is not properly treated, the destiny of humans in relation to the site will be affected. Chinese geomancers believed that the currents of *ch'i* and their presence on earth are linked with the topography: particularly, mountains, watercourses and vegetation. 'Geography', to the Chinese, therefore means not only the external appearance of surface configurations but also the inner life force of *ch'i:* both are interdependent and inseparable. The purpose of Chinese geomancy was, and continues to be, the location of sites with abundant *ch'i,* which can be beneficial to life. Sang Hae Lee notes that the term feng *shui* is a concatenation of *tsang feng,* meaning literally 'the calming of the waters', and *te shui* , meaning 'the acquiring of water'. A site which meets these criteria is regarded as auspicious.[38]

A site that is 'ideal', according to f*eng shui* principles, is characterised by a number of distinct features (see figure 4.6):

- it should face south (or, in the southern hemisphere, north), to enjoy the health-giving and psychological benefits of a warm and well-lit environment;
- it should be backed by a range of hills or trees, to ward off bad influences,-
- it should be located midway up the range, with an unobstructed foreground that allows extensive views to the north,-
- there should be mountains on the west (the Azure Dragon) and on the east (the White Tiger), to form a protective arm around the site — these mountains indicating the presence of the two forms of *ch'i,* the *yin* and *yang-,*
- there should be a small pool of water (a 'heaven pool') at the front of the site, and a large body of slow-moving water in the distance.

These principles are strikingly paralleled in the initial plan for Canberra- As already mentioned, the foci of the design, the Capitol and the government group, are

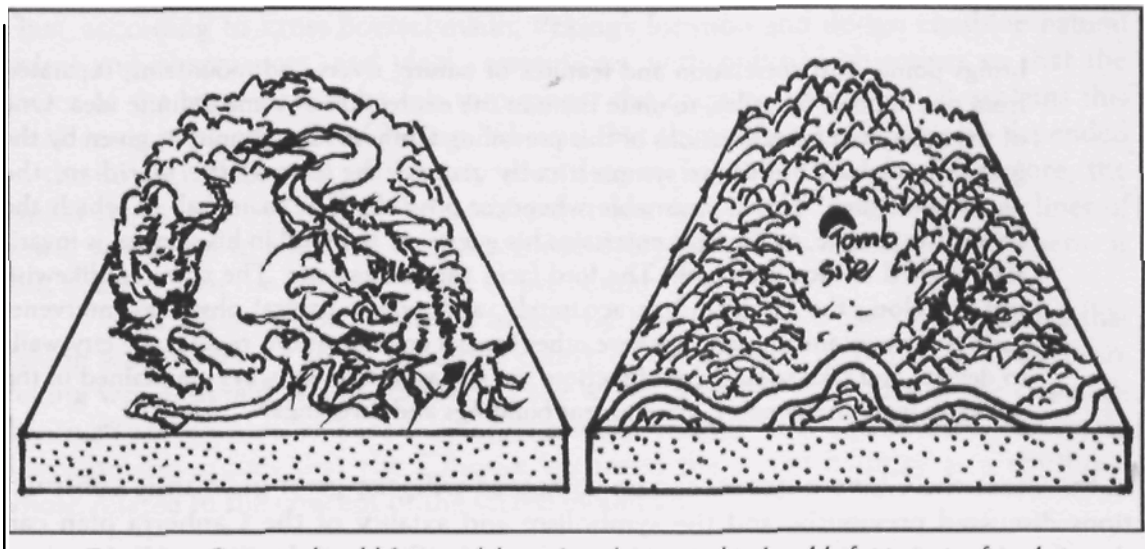


Figure 4.6 Conceptual model (tiger and dragon), and topographical model of siting using feng shui

sited in relation to a secondary hill, Kurrajong or Capital Hill, which is sheltered by a high mountain range to the south (Bimberi Peak in the Brindabellas) — a relationship that is stressed in the drawings. To the west of the Capitol is the Azure Dragon (Black Mountain),- to the east, there is the White Tiger (Mugga Mugga). From the Capitol the view is unobstructed towards Mount Ainslie in the north. A quiet 'heaven pool' is included in the design — the large courtyard pool in the foreground of the Griffins' government group — and in the distance the formal and informal basins of the lake constitute a slow-moving body of water (see figure 1.1).[39]

While these correspondences are striking enough, there are further parallels to be found between the Canberra plan and Eastern planning systems. *Feng shui* not only determined the correct placement of buildings in the topographical structure, it also governed the broader categories of architectural design and city planning. In 1911, after spending three years in China, Ernst Boerschmann presented a paper to the Smithsonian Institute entitled, 'Chinese Architecture and its relation to Chinese Culture'. He notes that Chinese architecture, city design, the arts and religion are governed by a single idea.

> One imposing conception of the universe is the mainspring of all Chinamen, a conception so comprehensive that it is the very key defining all expression in life, trade, intercourse, customs, religion, poetry and especially the fine arts and architecture. They exhibit in nearly every work of art the universe and its idea. The visible forms are the reflex of the divine. They behold the divine in the various forms which they fashion to express it,- in short, in the microcosm is recognised and revealed the macrocosm.[40]

A number of the points made by Boerschmann in this paper seem to find expression in the Griffins' original design. In particular, there is the use of the axis to link the landscape elements, both natural and constructed, which reflects the structure of the cosmos. He writes that the axis:

> brings points into correlation and features of nature, rivers and mountains, separated from one another by miles, to unite them in the expression of some definite idea. One of the most definite expressions of this prevailing Chinese idea of unity is given by the groupings of all buildings symmetrically around the axis of the meridian, the north-south line. This is invariable whenever possible. The main hall in which the Prince sits in state, or the host entertains his guests, or the Cod in his temple, is invariably aligned to face the south. The lord faces the midday sun. The cities are likewise laid out along the meridian line accurately, and, where natural obstacles intervene, such as a mountain, a river, or where other special considerations require the city walls to deviate and take some other direction, yet the axial line is always maintained in the meridian in all the temples, government buildings and dwellings.[41]

In this sense the Chinese system can be compared with the great geomantic constructions discussed previously, and the symbolism and axiality of the Canberra plan can therefore be explained in terms of traditions from the East and the West. All these tra-

ditions stress the north-south axis, around which the heavens were thought to revolve, as the dominant organising principle of the total design. In the Canberra plan the north-south axis links Mount Ainslie, the Casino, the Lake, the government group, the Capitol, Red Hill, and Bimberi Peak. The east-west axis links Black Mountain, the university, the Lake, the Lake Park monument and extends down the Molonglo Valley. The north-south axis of Canberra, with a clear idea and intention in mind, controls the placement of the buildings symmetrically arranged along the axis. The references made by the Griffins to 'an orderly arrangement', to 'the spectacle of the whole city', and to 'the consciousness that results', all indicate a recognition of Eastern traditions — a parallel referred to by Walter when he writes:

> The city presents itself as an amphitheatre, the playgrounds providing a gathering place for the audience, the parliamentary buildings occupying the stage, giving the impression of one great building like some of the superb structures of Indo-China.[42]

The axis in Chinese geomancy had a deep symbolic significance — an 'ideal' importance. Boerschmann, when discussing the capital of China, Peking, stresses the significance of its location.

> China has often changed its Capital. The Empire has been ruled from the Yangtze, from Honan, and Shensi; but for long ages, even before the Mongolian dynasty, they have always returned to Peking, which lies in the extreme north. This was, of course, mainly due to political considerations. But knowing the ideal importance which is attributed to the line of the axis, we can appreciate the exalted notion of conceiving the Emperor as seated on the dragon throne in Peking and turning his gaze along the meridian of Peking (the north-south axis) over the entire Empire, when at New Year Festival, or on the Emperor's birthday, alt officials and many people assemble at the same hour in all the cities and all the villages, kneel before his altars throughout the Empire and offer their homage, looking north towards him, the Son of Heaven.[43]

Thus, according to Ernst Boerschmann, Peking's location and design combine natural orders and observances, and ideal conceptions, with political objectives so that the power of the emperor can be felt throughout the country. John Michell explains this 'ideal' concept clearly. The Chinese believed that the welfare of the empire depended on the correct placement of the city according to *feng shui* principles. Therefore, the capital city must be placed at the nodal point of a network of Dragon lines — lines of power which ran to and from the emperor to every part of his domain. The emperor is thus imbued with the energies of the entire country.[44]

This 'ideal' notion is carried further by Boerschmann when he points out that Peking was conceived as the symbolic centre of the universe as well as of the nation. Peking was designed as a microcosm of the world, with the four sides of the city containing the temples of Heaven: agriculture, the sun, the moon and the earth. Boerschmann argues that the Chinese 'regarded the entire country as a rhythmic whole' related to the concept of the sacred mountain.

There are five ancient, sacred Chinese mountains, one each in the north, south, east and west and one in the centre. Nature contributes more, as in the western mountain of Huashan in Shensi which has five sharply outlined highest peaks that again illustrate the centre and four cardinal directions. This is likewise the case at the Buddhist mountain Wut'Aishan, whose five highest peaks present an image of the universe, which is also emphasised by its five sacred colours. Each of these old Chinese Sacred mountains that rise up majestically from out of the midst of the plains has a large temple at its foot. The extension of the axes of these temples leads directly across the highest point of the sacred mountain."

The Griffins adopt this 'ideal' notion in Canberra: the city is designated the symbolic centre of the nation, the *omphalos* in the Western geomantic tradition. The way that the avenues, all named after the State capitals, radiate from the circles on Capital Hill, alludes to the notion of Canberra as *caput mundi* and to the Eastern concept of the reflection of the macrocosm in the microcosm: the transfer of power from the centre, the seat of government, to the entire country. The landscape proposal for West Lake reinforces this concept and proposes an even grander global scheme. The area around the lake was to be divided into eight zones: Australia, New Zealand, Europe, Asia, North America, South America and the South Sea Islands. Each zone was to be planted with indigenous flora.[46]

The Chinese cosmological concept of the sacred mountain finds its echo in Canberra's design, which is also controlled by five mountains: four representing the cardinal directions (north, Ainslie), (south, Bimberi), (east, Mugga Mugga), (west, Black Mountain), with one at the centre (Mount Kurrajong or Capital Hill). This interpretation is consistent with the concept of Bimberi Peak as the sacred mountain, that is to say, in the same sense as Monte Cavo or Mount Olympus. In keeping with the Chinese tradition the most important building (the seat of the emperor or the temple of the gods) is in the centre of the composition. In Canberra the Capitol, a symbolic monument to the new democracy in Australia, is the centrepiece and, like the temple at the foot of the sacred mountain, its axis extends back to Bimberi, the highest peak in the Brindabella ranges. Furthermore, Walter proposed that each mountain should have plantings of a single colour — 'one with reds, one with blues, another with yellows and golds and so on'. Mount Ainslie was to have yellow flowers and foliage; Black Mountain was to be white and pink, while Mugga Mugga was to have only white flowers. The Griffins developed this idea later and Narrabundah became Red Hill;

Figure 4.7 Wut'Aishan, the sacred Buddhist mountain in Shansi

Ainslie, Rosy Hill; Mount Pleasant, Purple Hill,- and Black Mountain, Golden Hill. This association of hills and mountains with specific colours is reminiscent of the Buddhist sacred mountain Wut'Aishan (figure 4.7), each of whose five highest peaks, symbolic of the universe, were associated with one of the five sacred colours.[47] Writing about Castlecrag in the *Magic of America,* Marion identifies the small peak of Covecrag with Mount Fuji in Japan, which suggests that she had a long-standing acquaintance with the Eastern concept of the sacred mountain.[48]

Clearly, the Griffins were aware of the Chinese models of city planning, landscape design and architectonic organisation. And these ideas from the East, in combination with ancient planning traditions from the West — at a time when the latter were once more being brought to light the former were still in use — together, provided Marion and Walter Griffin with inspiration for the matrix for Canberra as a new 'democratic' order, expressed symbolically as their own cosmogony through the geometry of the Vesica.

I have planned a city not like any other in the world. I have planned an ideal city.[49]

NOTES

1 'Original Report' (accompanying "Federal Capital Design No.**29'),** reprinted in the *Report from tbt Select Committee Appointed to* Inquire into the *Development of Canberra* Sept. 1955 Appendix B p94.

2 Walter Burley Griffin Department *of Home Affairs: The Federal Capital Report Explanatory of the Preliminary Central Plan* Commonwealth of Australia Oct. **1913** p3.

3 E A W Budge *An Egyptian Hieroglyphic Dictionary* vol. I pcxxvi. See also, L Manniche *City of the Dead: Thebes in Egypt* British Museum Publications I987 p31.

4 This exposition has benefited greatly from discussions with Dr Graham Pont — discussions which centred on his work for the subject in general education, The Ideal City', at the University of New South Wales

5 P Gardner The Planning of Hellenistic Cities' pp 111-22,- R Unwin The City Development Plan' pp247-65, P Geddes The Civic Survey of Edinburgh' pp537-74 — all in the Transactions *of the* TOWN *Planning Conferoice: 10-15 October, 1910 London* Royal Institute of British Architects 1911. Also available to the Griffins was the large body of work on the axial alignments of Egyptian, Greek and megalithic monuments described in chapter 3, see notes 12, 14, 17, 18, 20, 21. See also F C Penrose The Orientation of Creek Temples' *Nature* vol.48 no. 1228 II May 1893 pp42-43,- 'On the Orientation of Greek Temples being the result of some observations taken in Greece and Sicily in the month of May 1898' *Nature* vol.60 no, 1548 June 1899 p213. The relationship between site characteristics and ancient architecture has been discussed recently in V Scully *The Earth, the Temple and the Gods: Greek Sacred Architecture* Yale University Press New Haven 1979.

6 W B Griffin The Architectural Developmental Possibilities of the Australian Capital City' *Building* 12 Nov. 1913 p68.

7 W B Criffin 'Architecture' The Federal Battle *Magic of America* p361.

8 V Scully *The Earth, the Temple and the* Gods pp 173-74.

9 MM Griffin 'Unsophisticated Drama'The Municipal Battle *Magic of America* p439.

10 H P Berlage 'Art and the Community, Our Religion is an Earthly Religion: the belief of the New Man' *The Western Architect* vol.XVIII no.8, August 1912 pp88-89. Democratic idealism as a stimulus and a source of inspiration for a new architecture was widely debated at the time Berlage's sentiments, that democracy enshrined a new spirituality, echoed the Griffins' call for a new spiritual base for modern architecture.

11 WB Criffin 'Building for Nature' The Individual Battle *Magic of America* pp69-70.

12 WB Griffin 'Liberty and Equity' The Individual Battle *Magic of America* p247. Later in the text Marion calls for all Americans to introduce liberty to the world, 'America's method of conquest — through Equity'. The Individual Battle *Magic of America,* p272.

U MM Griffin Totalitarianism versus What' The Individual Battle *Magic of America* p198.

14 M M Griffin Man's Evolution' The Individual Battle *Magic of* America p395.

15 W B Griffin "The Architect's Burden"— a talk to students'The Municipal Battle *Magic of America* pp89-103.

16 T Churton The Gnostics Weidenfeld and Nicolson London 1987 ch.2 The Higher Reason' pp33-46.

17 Quoted in Churton *Gnostics* p34.

18 ibid. p35.

19 Plato in Lotus speaks of a kingdom in the remote past ruled by the gods in person and, later, following the departure of the gods, by their trained human representatives.

20 A general picture of the ancient 'Wisdom Tradition' is given by j Michell *The View over Atlantis* Abacus London 1968; and City *of Revelation* Abacus London 1973. A number of books on this theme were published around the time that members of the Organic and Prairie schools were working in Steinway Hall, Chicago, lor example, le Plongeon *Maya/Atlantis, Queen Moo and tbt Egyptian Spinx,* JJ Little and Co. New York 1896.

21 MM Criffin The Individual Battle *Magic of America* p40.

23 M M Criffin 'Home Building as an art — Making a Modem Suburb in Sydney by Naphthalia' The Individual Battle *Magic of America* p248.

23 ibid. pp247-48.

24 C Hamann Themes and Inheritances: The Architecture of Walter Burley Criffin and Marion Mahony', in *Walter Burley Griffin. A Review* Monash University Gallery June 1988 p32 Hamann observes that this classicising tendency was evident in a number of the Griffins' early American designs such as the 191 I 'Solid Rock' at Kenilworth. He speculates whether Marion, with her classical training at the Massachusetts Institute of Technology and her interest in Greek literature, could have influenced these designs but does not mention the strong temple-like axiality present in her own work, such as the Adolph Mueller House or the Henry Ford House project. These houses are illustrated in H Allen Brooks *The Prairie School Frank Lloyd Wright and bis Midwest Contemporarits* W W Norton and Co. New York 1972 ppl58-62.

25 F Haverfield Town Planning in the Roman World' *Transactions* 1911.

26 E Boerschmann 'Chinese Architecture and its relation to Chinese Culture' *The Annual Report of the Smithsonian Institute* 1911 p542. Literature available to the Criffins prior to the preparation of the Canberra plan includes: E Boerschmann 'Baukunst und Landschaft in China' *Zeitschrift der Gesellscbaft fur Erdekunde zu Berlin* vol.5 1912 pp32l-36; J D Ball *Things Chinese* 'Geomancy or Feng Shui' C Scribner and Sons New York 1906 pp312-15; J D Ball *The Chinese at Home* 'Wind and Water or Feng Shui' Fleming H Revell Co. New York and Chicago 1912, J D Ball 'Feng Shui, a Review' *China Review* vol.2 no. 1 1873 pp34-35; G Dumontier La Geomancie chez les Annamites' *Review Indo Chinese* vol.XVll/l 1914 pp209-32 301-14; E Eitel Fe*ng Shui or the Rudiments of Natural Science in China* Lane Crawford Hong Kong 1873 ppl9 78 82; E Eitel *The Scitnce of tht Sacrred Landscape in Old China* Trubner and Co. 1873 (new edn 1979); J Edkins 'Feng Shui' *Chinese Recorder and Missionary Journal* (871 pp274 291 316, J J M de Groot The Religious System in China' Leyden 1897 reprinted in E Walters *Chinese Geomancy* Element Books Longmead 1989; H Posek 'How Chinaman Builds his House' *East Asian Magazine* no.4 1905 pp348—55 E Morse *Japanese Homes and their Surroundings* Boston 1886,- M T Yates 'Ancestral Worship and Fung-Shuy' *Chinese Recorder and Missionary Journal* vol.1 no.3 July 1868 p41; S J Henry Dore *Researches into Chintst Superstitions* Tusewei Printing Press Shanghai 1914.

27 This is especially true of the art world. The appreciation of Eastern culture became known as *Japonisme* among the Griffins and their contemporaries. See M Sullivan *The Meeting of Eastern and Western Art from the Sixteenth Century to the Present Day* Thames and Hudson London 1973 esp. ch.6. Around the turn of the century there was copious material published on Eastern artistic techniques: H B Bowie On *the Law of Japanese Painting* San Francisco 1911; E Fenollosa *Epochs of Chinese and Japanese Art* 1913; L Binyon *Painting in tht Far East* 1908,-CJ Holmer *Holtusai* 1898.

28 C C Manson *Frank Lloyd Wright to 1910,* University of Chicago Press 1972 pp36-40; D Gebhard 'A Note on the Chicago Fair of 1893 and Frank Lloyd Wright' *Journal of the Society of Architectural Historians* vol.XVIII no.2 May 1959 pp63-65; H R Hitchcock frank Lloyd Wright and the Academic Tradition of the 1890's *Journal of the Warburg and Courtauld Institute,* vol.VII Jan-June 1944 pp46-63. For an account of the infiltration of Eastern thought into America, see C T Jackson *The Oriental Religions and American Thought* Nineteenth Century Explorations Creenwood Press Westport 1981.

29 Marion writes that, shortly after graduation, Criffin designed a town to be built in China. See 'Man's Evolution' The Individual Battle *Magic of America* p300. The plan has not survived, but it is referred to several times throughout the manuscript.

30 P Larson 'Marion Mahony and Walter Burley Griffin: the Marriage of Drawing and Architecture' Print *Collectors Newsletter* May-June 1981 p38. Publications on Eastern techniques of rendering also appeared in popular journals. W

R Evans What Japanese Art really is. Poet Painters who are great in small things and small in great things' *Art and Decoration* New York Feb. 191 I pp 156-58, M B Edson 'Japanese Art in Bronze' *Art and Decoration* July 1911 p385, and 'Decorative Possibilities of the Japanese Screen' Art *an & Decoration* Aug. 191! p23O.

31 Larson 'Marion Mahony and Walter Burley Criffin' p38.

32 For example, a gold background in medieval art often symbolises a heavenly or spiritual plan.

33 W B Griffin 'Architecture'The Federal Battle *Magic of America* p361

34 Michael Sullivan, in *Meeting of Eastern and Western Art* pp240-43, observes that the Eastern concept of *ch'i* had a significant impact on the abstract image in modern painting, Artists such as Kandinsky, Mondrian and Picasso were no longer content to simply portray physical form, rather, they were interested in capturing the 'inherent truth of an object, its inner resonance',

35 Louis Sullivan labelled this mysterious force underlying nature as 'Inscrutable Serenity'. See, N C Menocal *Architecture as Nature; the Transcendentalist Idea of Louis Sullivan* University of Wisconsin Press Wisconsin 1981 p 12. For a study of Vitalism in Romantic thought, see D D Egbert The Idea of Organic Expression and American Architecture' in S Pearson (ed.) *Evolutionary Thought in* America Archon Books Yale University Press 1968 pp336-48.

36 MM Griffin 'Man's Evolution' The Individual Battle *Magic of America* pp394-95. The 'Wisdom Tradition' is outlined in a publication by the Theosophical Society: A Besant *Theosophy and the Theosophical Society* The Theosophical Publishing House Wheaton 1931.

37 M M Griffin The Individual Battle *Magic of America* p64. The reunification of art, science and religion is proposed by Marion in 'Louis Sullivan — Griffin his Successor'The Individual Battle *Magic of America* p39 opening caption.

38 This definition *of feng* shui is taken from Sang Hae Lee Feng Shui its Context and Meaning PhD dissertation Cornell University 1986 (available from University Microfilms International).

39 The new Parliament House by Romaldo Giurgola, as pointed out earlier, reflects the feng *shui* concept of an ideal site (see also chapter 7). See P Stacy Mystical Perception of Landscape B.L. Arch, dissertation University of New South Wales 1988 pi 18.

40 E Boerschmann 'Chinese Architecture and its relation to Chinese Culture' pp542—43. Boerschmann focusses on architectural principles but stresses that they are controlled by the concept of *feng shui.*

41 ibid. pp243-44.

43 WB Griffin'Architecture'The Federal Battle *Magic of America* p361.

43 Bocrschmann 'Chinese Architecture and its relation to Chinese Culture' p544.

44 J Michel] A *Little History of Astro-Archaeology. Stages* in *the Transformation of a Heresy* Thames and Hudson London 1989 pp110-11.

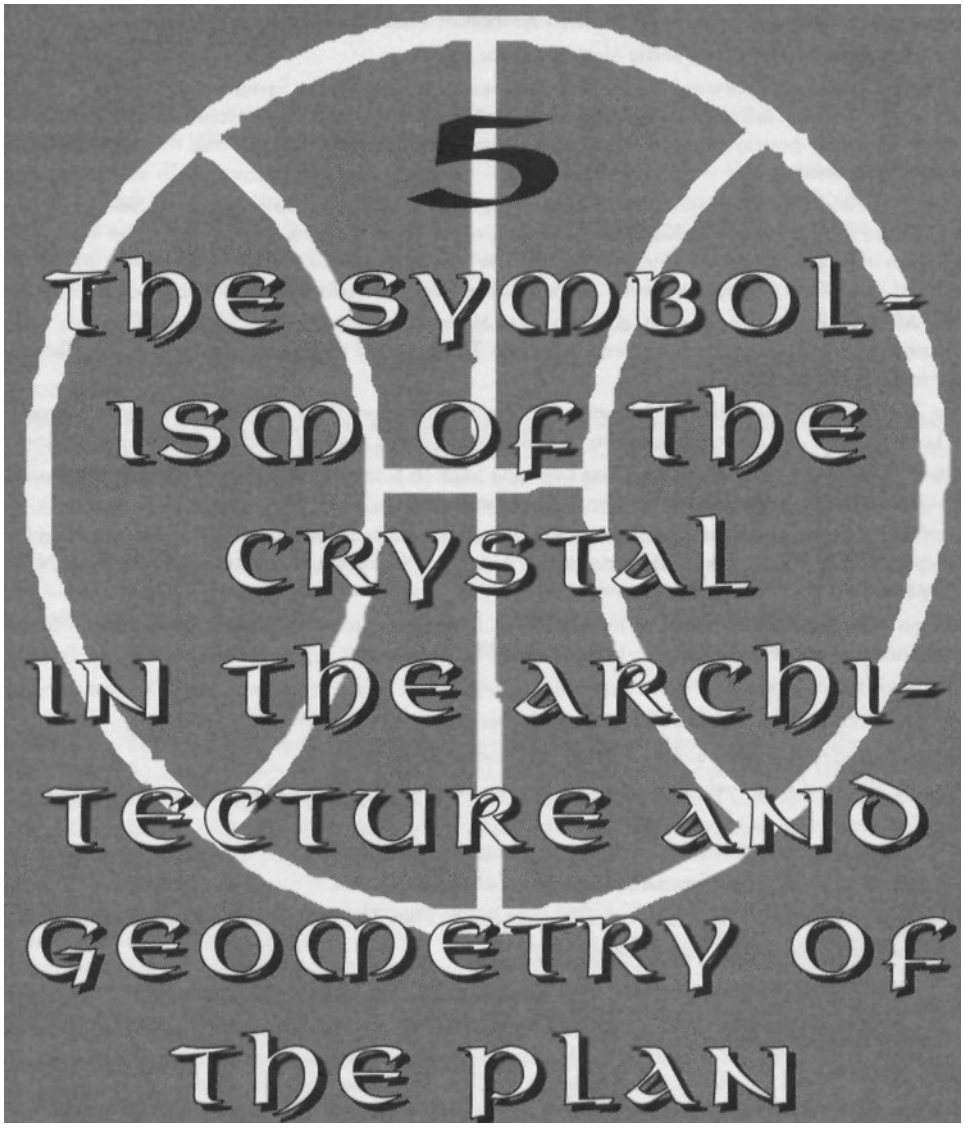
45 Boerschmann 'Chinese Architecture and its relation to Chinese Culture' p556\

46 R Clough 'Canberra's Landscape' Architecture *Australia* Sept. 1983 p63.

47 ibid. p63. See also M M Griflin 'Canberra — its Designer and its Plan'The Federal Battle *Magic of America* p438.

48 M M Griffin The Municipal Battle *Magic of America* pi 08.

49 Quoted in L Fischer *Canberra. Myths and Models; Forces at work in the formation of the Australian Capital* Institute of Asian Affairs Hamburg 1984 p 1. Fischer discusses Canberra only in terms of the 'ideal' Garden City and City Beautiful movements at the turn of the century.


5
The Symbolism of the Crystal in the Architecture and Geometry of the Plan

The decline of Christianity during the later nineteenth century, together with social and technological changes created by the Industrial Revolution, brought about in many Western countries 'a spiritual re-orientation', made visible in their art systems.[1] New and influential religions emerged: ancient ones were revived. Theosophy and, later, Anthroposophy both drew on the ancient 'Wisdom of the East' and the 'occult and heretical byways of Western thought[2] ; other movements, such as Rosicrucianism, the Swedenborg Church and Freemasonry attained new levels of appreciation and popularity-[3] For many, an exploration of spiritualism and the occult became the next necessary step to ensure proper human development and evolution: the new goal of the twentieth century. Rudolf Steiner emphasised:

> that man was on the threshold of the beginning of a Spiritual Era, that the moment had come when esoteric knowledge can become exoteric, that is, the ability to explore the higher worlds can now be made common property.[4]

Art, architecture and literature became the vehicles for this exploration of spiritual and philosophical issues. The emergence of the abstract image was, as recent critiques emphasise, the product of renewed interest in the occult and the esoteric 'by men and women who cared for things of the spirit'.[5] The search was on for an art that would, as Katherine Dreier describes it, 'free the spirit of the beholder'. Paul Cezanne (1839-1906) continuously sought in his art 'the essence of nature',- Kandinsky (1866-1944) the 'innerer Klang', the soul of humanity and nature; Mondrian (1872-1944) 'the cosmic and universal'; Edvard Munch (1863-1944) 'the inner images of the soul'.[6] Similar concerns also influenced architecture. Louis Sullivan, through a metaphysical theory of ornament, attempted to create a 'spiritual communion' between nature and architecture. Claude Bragdon's theories of fourth-dimensional geometry focussed upon a plane of existence beyond reality. Constructions by Bruno Taut and the German Expressionists, the 'Utopias of Class', symbolically represented 'extra-dimensional space and a higher spiritual plane'.[7] The spiritual and the romantic, the esoteric and the transcendental, had their impact on the literature of the period, too.

This interest in the spirituality of the ancients was further intensified by, among other things, the discoveries of astro-archaeology, discussed in *Nature* and studies of the ancient world such as Augustus le Plongeon's *Maya/Atlantis, Queen Moo and the Egyptian Spinx.*[8] It was this vitality, the search for the essence of nature and its mysteries, which came profoundly to influence the artistic development of Marion and Walter Griffin over a long period, as their writings in the *Magic oj America* clearly reveal.

> And now we know that clairvoyance was natural to pre-christian peoples, humanity had to lose this faculty temporarily in order to be able to reason — to think and to function with free will. That accomplished we must through our wills, learn again to perceive in the realm of the forces, in the realm of spiritual being.
>
> The results of scientific investigation have been progressively stating that we have become more and more mentally conceited, individually detached from the world as a

> creation, from our own subconscious minds, from the universal mind and from the religion and art in which the emotions play as great a part as the intellect.
>
> For [a] faculty which enables one to see the fairies, is the faculty which enables one to do original work in all human realms, and to transform our community, so rich in toys and tools, into a real civilization, thereby, attaining great and worthwhile ends. For this, human beings must develop their spiritual powers of perception, the basis of a new form of thinking which will enable them to know causes as precisely and as thoroughly as they know effects.
>
> It is an egoistic and vain presumption which must yield to attack in turn if such an attack be made from the vantage point of man's spiritual relationship with nature. For there is perfection, infinity and intelligence in natural phenomena continually eluding the curiosity of the scientist and which therefore it is proper of our art to respect.[9]

These sources of inspiration are evident both in the Canberra design of 1911 and also in the character of the drawings submitted for the competition. The initial plan, although reflecting the practical and sociological concerns of the City Beautiful and Garden City movements, was produced at a time when there was a certain rejection of the conventional, the traditional, and the standard. The *Magic of America* offers insights into the way in which other, more conventional, members of the Steinway loft in Chicago could have influenced the plan's preparation.[10] An indication of the Griffins' own idiosyncrasies is their use of axial and linear arrangements seemingly derived from contemporary literature on geomantic constructions and the influence *of feng shui.* Both Marion and Walter also subscribed to the views of a group of architects known as the Radicals'. This group was influenced by the new developments in Europe, especially in the Netherlands, Germany and Austria,- according to Claude Bragdon, these architects with their new ideas were striving for an architecture that 'would show the face of the Zeitgeist'. And it is the Griffins' use of the crystal motif in the geometrical structure of the plan and its architecture that stresses their links with such unconventional groups, particularly the Secessionists, such as Berlage and Behrens, and the German Expressionists, Taut, Berg and Stam.

THE CRYSTAL AS A DESIGN ELEMENT

In a recent study of the crystal-like quality of the monuments drawn by Marion for the Canberra plan — the Arsenal, the Cathedral, the Legislatures and the Capitol — Conrad Hamann writes: 'Marion has drawn in along the crucial points of the axis, notional buildings . . . all of which are portrayed as crystals, angled, faceted and shimmering'. Jennifer Taylor points out that the Capitol is reminiscent of Bruno Taut's crystal house or 'Stadtkrone', while James Weirick emphasises that the 'mysterious esoteric quality of the Capitol building is very close in spirit to the early works of the German Expressionists'." Even though this quality has been acknowledged by various writers, there has been no analysis of its *significance* in the plan's architecture. An exploration of

the iconography of the crystal, its history and significance — as well as the extent of its use in the Canberra work — yields a number of symbolic meanings.

In many ways, the Canberra design, rendered by Marion, prefigures the work of the German Expressionists during the 1920s: there are stylistic parallels, especially in the architectural definition of city design. In Canberra's Capitol, in Bruno Taut's 'Stadtkrone' and in the title vignette of Hans Kampfmeyer's publication, the *Friedenstadt,* the nucleus is a crystalline, faceted monument towering over the surrounding, predominantly horizontal city-scape (figure 5.1). Another common trait is the romantic dominance of nature over man-made form. The Germans frequently place central monuments silhouetted against a giant rising sun. Similarly, in the Canberra perspective, Marion depicts the Capitol unrealistically dwarfed by a huge Bimberi Peak brought right up to the picture plane.

Wolfgang Pehnt points out that, in the German works, the stark verticality of the central monument was intended to conflict with the pragmatic conception of the garden city spreading around it. The inclusion of such vertical elements illustrated their interest in probing the rational arguments of the Garden City proponents and exploring 'irrational' overtones as a means of expressing a return to the 'rejuvenation of the ancient soil'. The vertical forms, thus, become saturated with meaning as symbolic representations of the Expressionist ideal." In the Canberra drawings, the twin towers of the Casino seem to be used as a similar device: they direct the eye to the peak of Mount Ainslie (figure 2.5). Some of Bruno Taut's work suggests that he, too, was familiar with the revelations of astro-archaeology — such as his 1920 rendering of 'Die Grosse Kirche', a group of buildings surrounded by four towers connected by a ring of 'cosmic' light (figure 5.2), or another drawing in Die *Auflosung der Stadte* entitled 'Heilig Heilig' (Holy Holy), of the sun, orbiting planets and stars over the plans for small communities (figure 5.3). The interaction of earthly monuments with heavenly bodies and lightning is, however, a feature of the crystal iconographic tradition." Also common to the work of both the Griffins and the Expressionists is the use of the ziggurat form, together with the chiliastic theme of the 'Golden Age' and the emergence of a new civilisation,- but perhaps the most striking parallel is the frequent use of the crystal motif by both.

The crystal is employed not only as a decorative motif, but also as an ordering device applying to the architecture itself. Although Walter Griffin stated {in the 'Original Report') that he was unsure of the architectural style that should be used for Canberra, the detail of Marion's Canberra drawings suggests that she had no such doubts. The key buildings she includes throughout the design are all angled, faceted, complex structures of triangles, pyramids, spires of concrete and glass, a11 displaying a radiant luminosity. This shimmering treatment of the buildings is echoed throughout the scheme by glowing mountain forms, with an emphasis on reflection — almost all the architecture being shown as reflected in the various lake basins (see figures 2.5, 4.3,4.5).

The crystal form had already appeared in the Griffins' earlier work in America, such as the 1912 Clark Memorial Fountain at Grinell, Iowa, and on the parapet of the Melson House in Mason City. In their Australian works the crystal theme became the

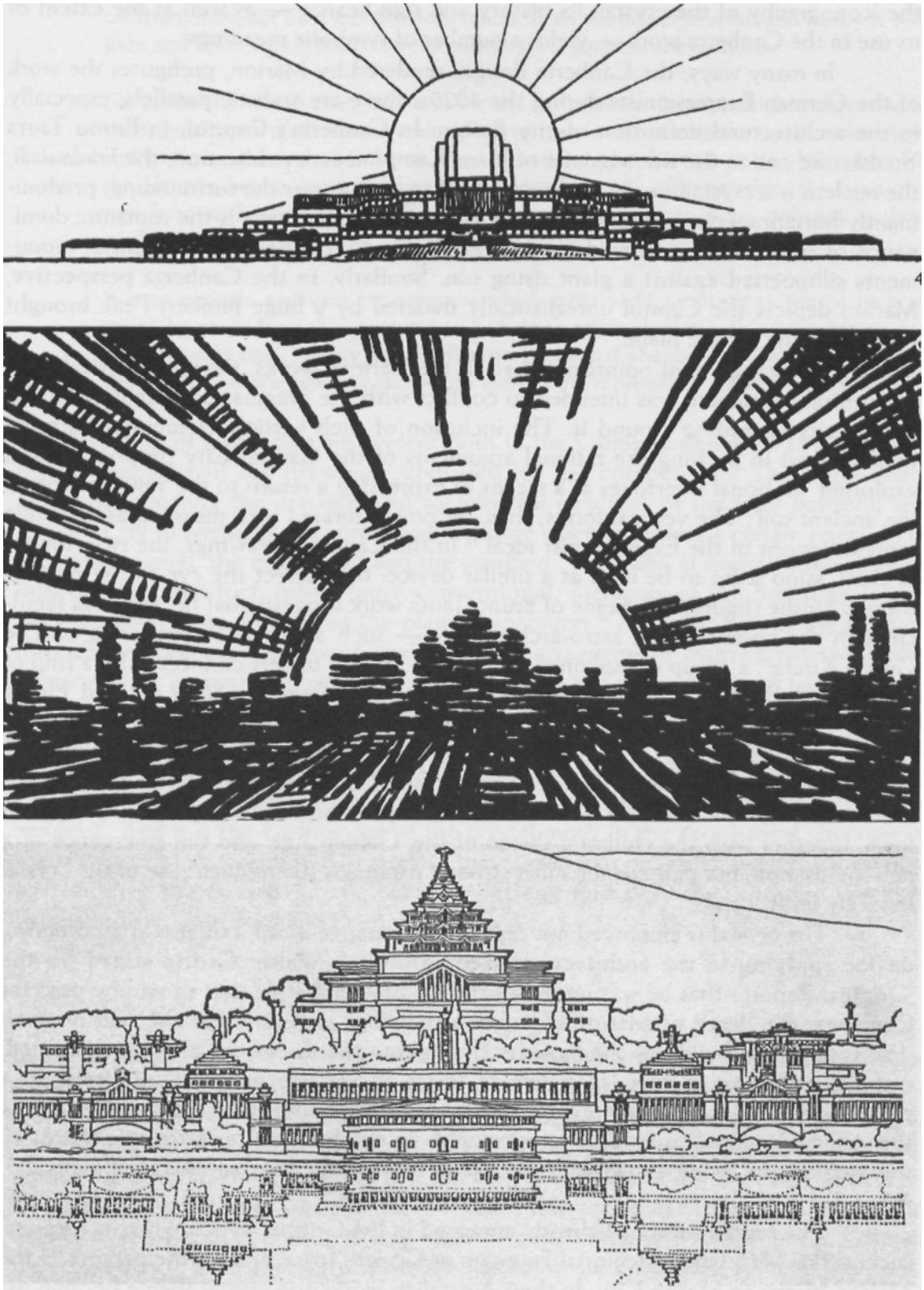


Figure 5.1 Bruno Taut: Illustration from 'Die Stadtkrone', Munich, 1919. Hans Kampfmeyer: title vignette from 'Friedenstadt', Munich, 1918. Marion and Walter Griffin: Elevation of Capital Hill and Capitol, Canberra, 1912

Figure 5.2 Bruno Taut: Die Grosse Kirche (The Great Church) 1920

basis of a major design motif: at Newman College (1915–17), for instance, it is an organising device. As Conrad Hamann points out, on the plan, the dome resembles a faceted crystal of star shape, with several levels — the vestibules, kitchen, reception room, rector's and manager's flats, and staff room, all being linked by the domed space. This 'star theme' is then carried into the ornamentation of the building, such as at the intersection of the pointed ribs around the ceiling of the dome. The Pioneer's Exposition Office in India also uses the crystal 'leitmotif', a late design building upon the Australian work: the Collins House (1914), the Capitol Theatre, the Jolimont Railway Yard project and the Castlecrag houses.[14] It is likely that the form and detail of these buildings reflect the original intentions of the Griffins for the key architectural monuments for Canberra. Throughout the *Magic of America* Marion refers to their design theory.

> The plan of the buildings was not so much a parallelogram, but freer forms to be carried on by Griffin in an endless variety of crystalline forms for he conceived a building not as a facade but as three dimensional forms. This is creative thinking.[15]

This description could apply directly to the Canberra architectural proposals, for which Marion literally presented a number of three-dimensional crystalline forms embedded within the landscape. The suggested materials for these buildings were marble and concrete faced with quartz aggregate or even glass or diamonds — a combination whose effect would parallel the dazzling opalescent quality of the crystal.

Both in Canberra, and in German Expressionist city design, the crystal analogy finds expression in the geometry of the city

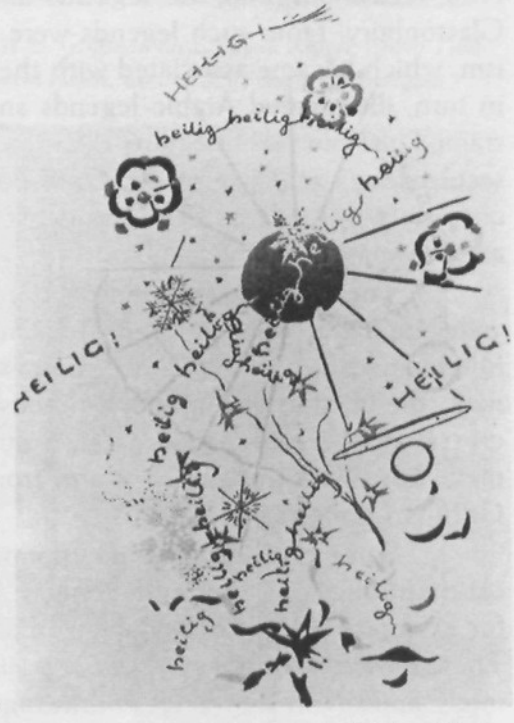


Figure 5.3 Bruno Taut: Holy! Holy! Holy!, from 'Die Auflosung der Stadte', Hagen, 1920

plan as well as in the attendant architectural design. In the Canberra plan for Capital Hill, derived from the Vesicas of three intersecting circles which control the siting of the Capitol, the prime minister's residence and the governor-general's residence, there is a striking similarity with the 'Stadtkrone' layout by Bruno Taut (see figure 5.4). In Taut's work, this cruciform geometry with flanking arcuations is drawn and described as fundamental to his 'crystalline' concept and it is the nucleus of his crystal houses.

SYMBOLISM OF THE CRYSTAL

The Germans' work generally appears after 1920, ten years after the preparation of the Canberra plan, but it indicates that they and the Americans drew on a common iconographic tradition. The Griffins' references to this tradition are more difficult to explain but the *Magic of America* reveals that they, like the Germans, utilised the crystal as a symbolic metaphor of spiritual transcendence, transformation, or transmutation. The German Expressionist movement had one clear objective: to effect a 'changed society', a 'political metamorphosis', and to create a Utopian state out of the existing tangled political climate.

Haag Bletter describes how the idea of transformation and metamorphosis, derived from crystal structure, emanates from an iconographic tradition which originates largely in architectural fantasies of ideal constructs and also from esoteric and sacred writing: the legend of the Temple of Solomon, St John's biblical vision of the New Jerusalem, and the legends and the ancient mysteries surrounding sacred Glastonbury. From such legends were developed light mysticism and transcendentalism, which became associated with the crystal, precious stones, water and glass. They, in turn, illuminated Arabic legends and architecture and became manifest in Gothic stained glass and architecture, the mystery of the Holy Grail and Renaissance stories of secular love such as The Dream of Poliphilo'. And the movement liberated alchemy, ultimately influencing the mystical sciences of the seventeenth century Rosicrucian and Freemasonry movements.

The most significant aspect of this iconographic tradition is that crystal, glass, water, precious gems and light become symbolic media of transcendence and are all interchangeable. In the Canberra drawings and design three glowing elements dominate: the crystal, water, and luminous light. Although the Expressionists' use of the crystal symbolism appears later, a number of earlier representations of the crystal metaphor, from the Germans and from other sources, can be directly linked to the Griffins' Canberra work.

Some early legends incorporating the crystal motif occur in Eastern astrological traditions — in the tenth century Arabic story of the palace of the moving dome, for example, where Ab ar-Rahum Ill's hall was oriented towards, and circled the sun. These Eastern traditions may have been known to the Griffins, for their influence definitely appears in Bruno Taut's drawings such as 'Heilig Heilig' and, in particular, 'Die Grosse Kirche'. Taut could possibly have absorbed this influence via the design and architectural fantasies on Islamic architecture and garden designs by Paul Scheerbart.[16]

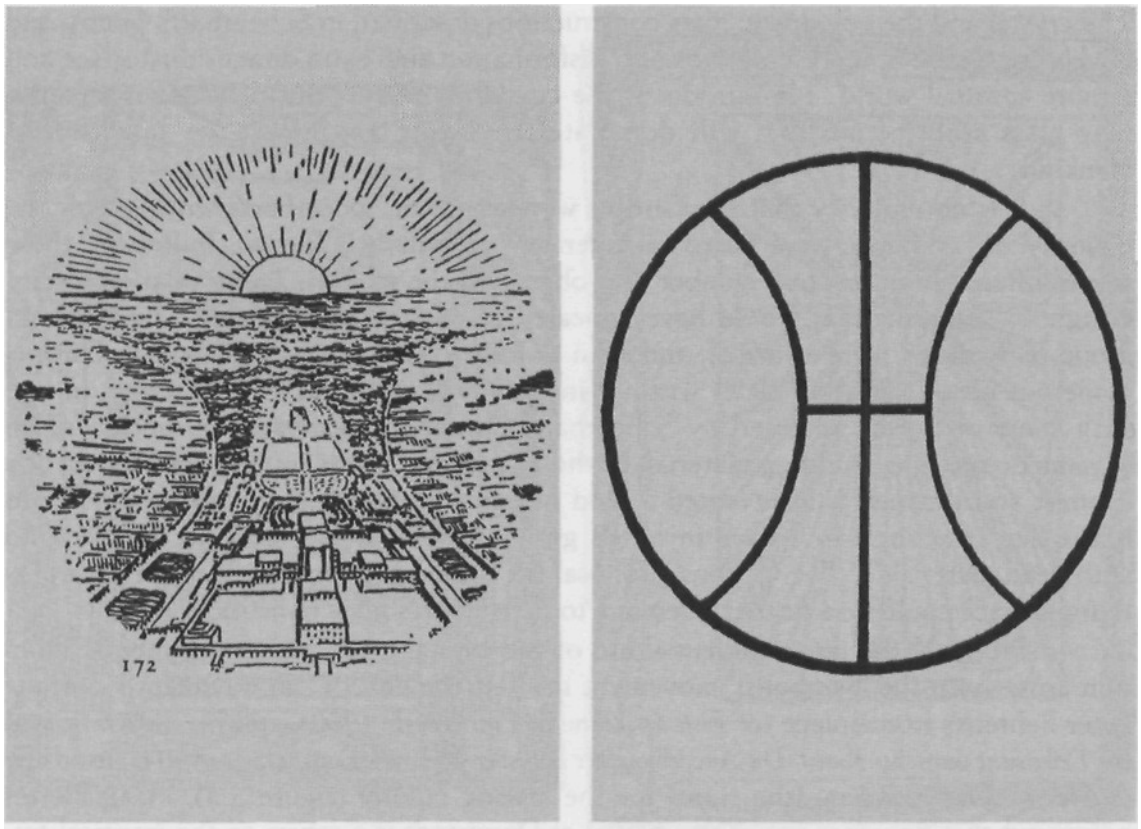
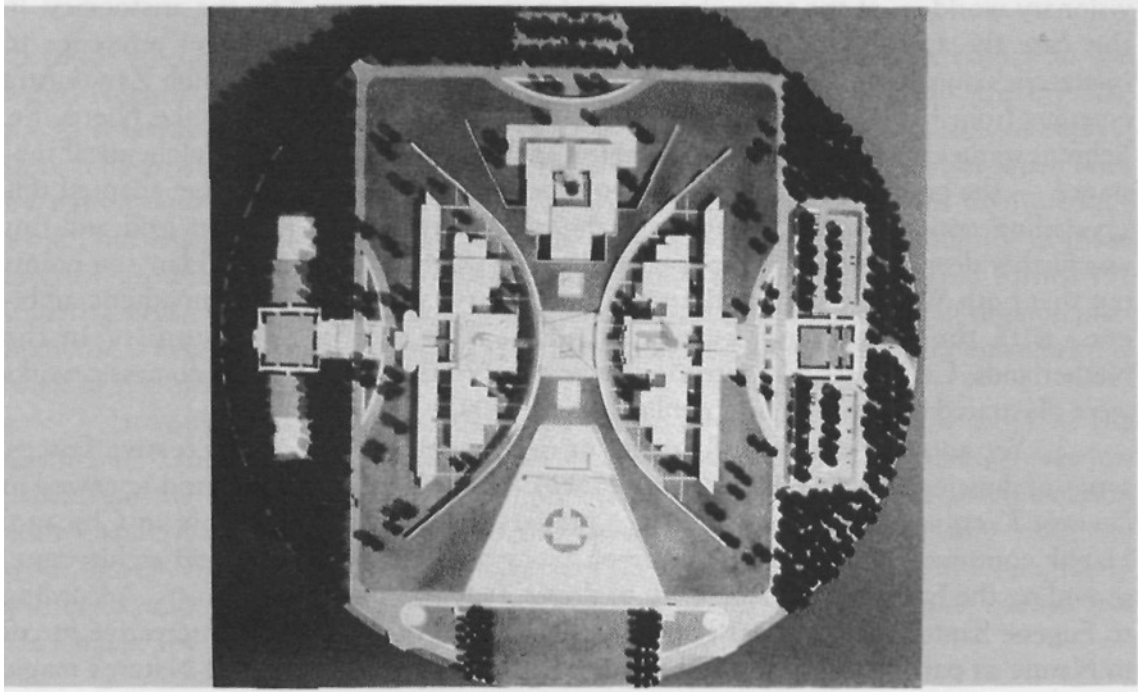


Figure 5.4 Rough sketch of intended form for Capital Hill by W.B. Griffin in the Original Report. Bruno Taut: 'Stadtkrone' and civic centre in Munich, 1919. New Parliament House, Canberra, by Romaldo Giurgola



The crystal and the colouristic glass constructions described in Scheerbart's poetry and novels are symbolic representations of transformation and 'extra dimensional space and a more spiritual world'. He introduces the crystal metaphor through his visions of a new glass architecture that will dominate the future and effect the salvation of mankind.

It is not unlikely that the Griffins were aware of Scheerbart's writings, for the majority of his stories were based in America, particularly Chicago. Indirectly, these stories offered solutions to a number of problems of the modern age in relation to city design — solutions that would have appealed to Walter and Marion. The Chicago group of 'Radicals' were aware of, and keen to follow, artistic developments in Europe; numerous ideas in Marion's later writings in the *Magic of America* are, therefore, in line with some of those expressed by Scheerbart. One in particular is the notion of an organic or 'growing' building material. In the 'Hausbaupflanzen' of 1910, he writes of a chemist and botanist who invented a kind of liana which can be made to grow into house-like structures — 'I have invented growing houses. We need no longer build with dead materials'.[17] The Griffins' proposal for Canberra of materials to create a glittering surface could be a further reference to Scheerbart's glass constructions.

Probably the most influential use of the crystal metaphor in a symbolic function arose from the 'Symbolist' movement itself at the end of the nineteenth century. Peter Behrens's frontispiece for *Feste des Lebetts und der Kunst* (1900), and his illustration to *Ein Dokument deutscher Kunst. Die Ausstellung der Kunstler-Kolonie* (Darmstadt, 1901), used the crystal as 'Das Zeichen' (the sign), for the artistic colony (figure 5.5). Haag Bletter points out that Behrens's use of the crystal at Darmstadt is a return to the mystical tradition of metamorphosis; in this case a metamorphosis from everyday life into a heightened artistic experience and an escape from material reality into the artist's visionary world — at the apex of a pyramid previously occupied by the aristocracy. In this case the application of the crystal metaphor seems to be a direct reference to Nietzsche's mysticism. The final chapter of *Also Sprach Zarathustra,* in which Zarathustra emerges from his cave like the sun, is entitled 'Das Zeichen'. But, unlike Nietzsche, Behrens reintegrates the image of the philosopher's stone with its older alchemical substance — the crystal.[18] David van Zanten notes that the architect Berlage adapted this 'crystalline' concept from Behrens to architecture through the modular grid and this was further developed by the modernist Mies van der Rohe. And Peter Harrison points out that both Walter Griffin and Frank Lloyd Wright established a sympathetic ambience with the progressive European groups such as the 'Secessionists' in the Netherlands, Germany and Austria — especially Wright after his early domestic works were illustrated in the Wasmuth publication of 1909.[19]

Yet another source influencing crystal mysticism was the 'Creative Forces' series of drawings produced by Wenzel Hablik in 1909 (see figure *5.6)* and reviewed in *Deutsche Kunst und Decoration* in 1910, a magazine which was available in Chicago. Hablik continued the Germanic theme of the crystal metaphor in art and architecture, providing the basis for the later work of Bruno Taut and the Expressionists. According to Eugene Santomasso, this series is a 'formulation of Hablik's belief in creative forces in Nature as part of a cosmic whole' and 'Hablik chose to demonstrate Nature's magic

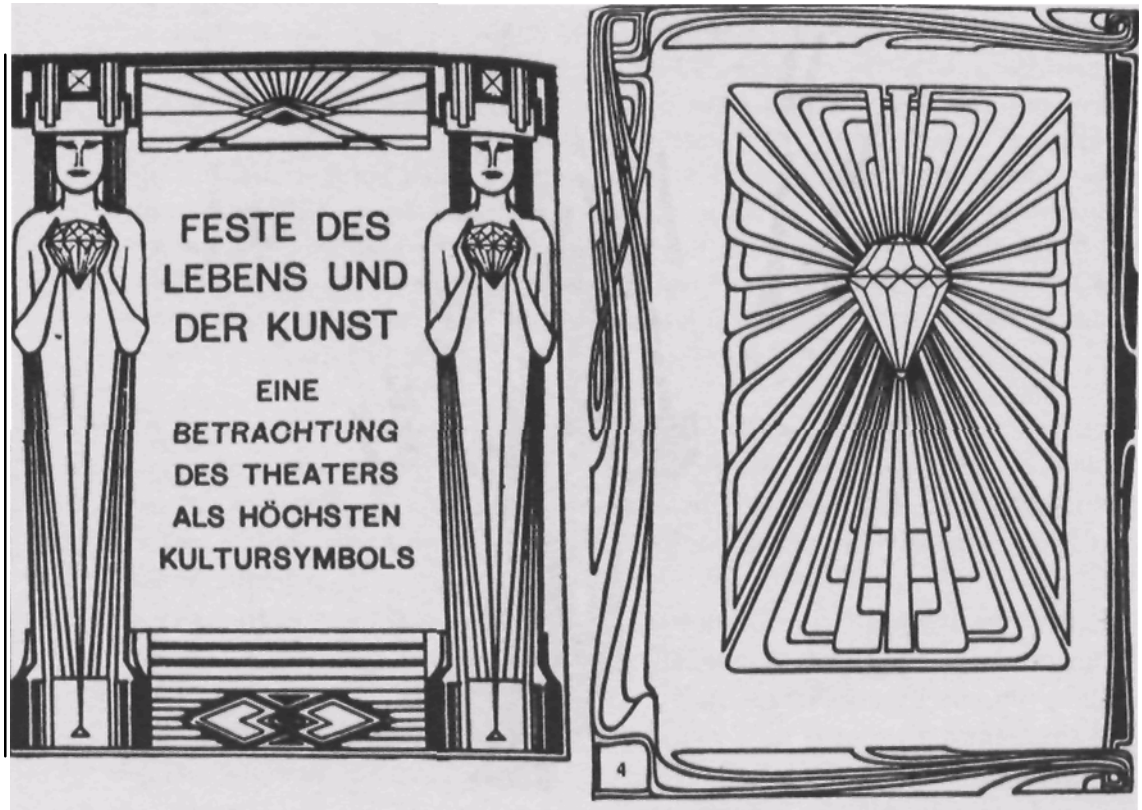


Figure 5.5 Peter Behrens: frontispiece, 'Feste des Lebens und der Kunst', Leipzig, 1900. Peter Behrens: decorative illustration, 'Ein Dokument deutcher Kunst: Die Austellung der Kunstler-Kolonie in Darmstadt, 1901', Munich, 1901

to those who do not stand as strangers before the great microcosmic edifice of the world'. Hablik believed that the study of natural phenomena, especially the crystals, for their intrinsic laws of form and structure would inspire new possibilities of expression. The artist must succeed in recognising the laws which are inherent in forms built by nature, and in discovering similar laws which are applicable to his own creative work', he writes. Santomasso observes that 'Hablik was interested primarily in those laws of growth and change peculiar to inorganic rather than organic forms. He regarded crystals as manifestations of the same spiritual force operative in organic phenomena'. These are similar ideas to the ones expressed in Arthur Schopenhauer's *The World as Will and Representation.*[20]

It would appear that, collectively, these notions underlie the work of the Griffins in Canberra,- although the crystal metaphor is given a more lucid geometrical expression there. Hablik's series also makes it possible to see a coherent connection with Canberra and the later work of the German Expressionists. Broadly, both the work of Scheerbart and Hablik demonstrates the continuation of crystal iconography within German Romantic thought emanating from figures such as Goethe, in *Faust* and *The Parable,* and Nietzsche, in *Also Sprach Zarathustra.*[21]

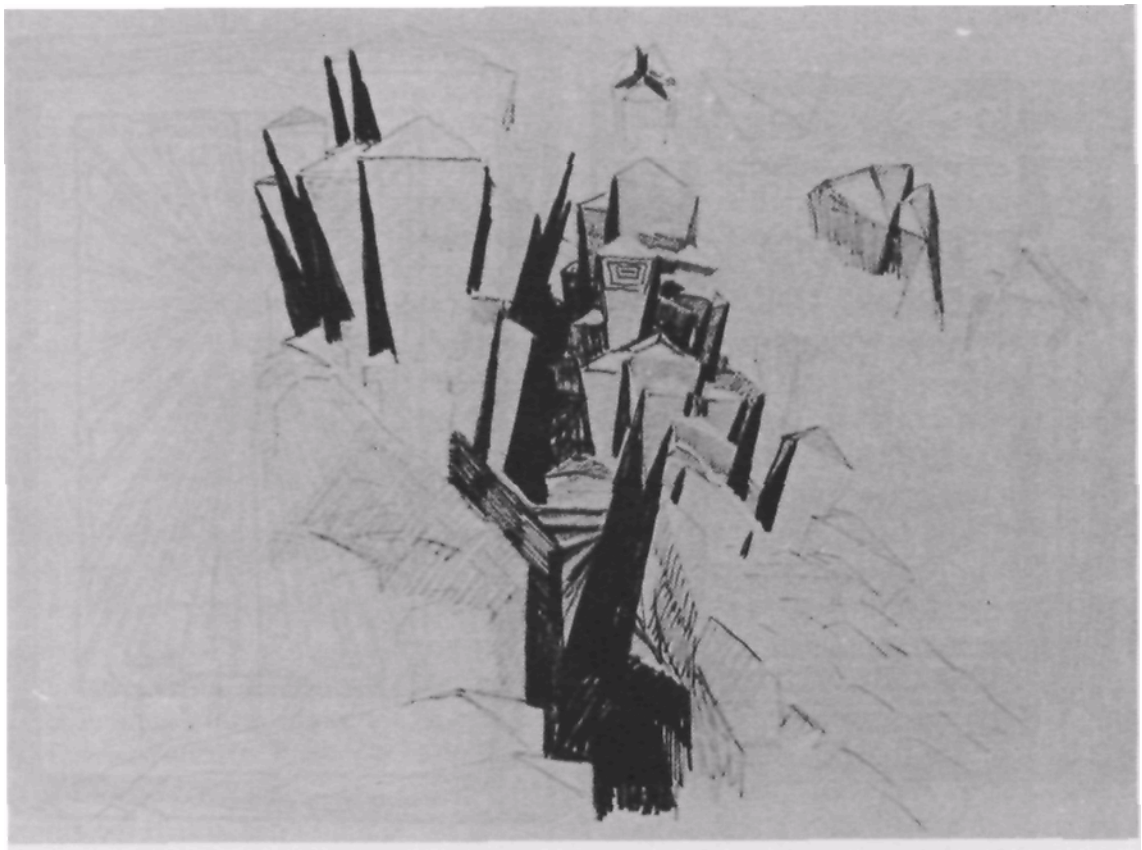


Figure 5.6 Wenzel August Hablik: 'Crystalline Gorge', Hablik Collection, Itzehoe

Marion Griffin, influenced by Goethe's writing through its appreciation by Rudolf Steiner, used the symbolism of the crystal metaphor as a theoretical basis for aspects of her theory of art.[22] Steiner outlined his key aims for the ideal modern artist — the architect. Firstly, works of art, like works of nature, are produced according to divine necessity of true and natural laws. Artistic creation is a higher form of *Naturewirken.* The work of art is the more perfect the greater this adherence to the natural laws is allowed to find expression; the beautiful is a manifestation of the secret laws of nature. Secondly, art, religion and science are inseparable and the artist brings down the divine to the earth, not by letting the divine flow into the world, but by raising the 'world' into the sphere of divinity. This is the cosmic mission of the artist. These same themes recur throughout the *Magic of America.*[23]

THE IDEA OF TRANSCENDENCE

Mysticism and the esoteric had become chief sources of inspiration for the new art and architecture of the later nineteenth and early twentieth centuries in both Europe and America, as we have seen. In 1903 the Theosophist Claude Bragdon wrote:

> Beneath the dense materiality of our civilisation there is fermenting a leaven of spirituality which may usher in a period of faith like that which Europe underwent in the Middle Ages, when Gothic architecture had its origin: a period in which the soul comes nearer to the surface of life, sweeping away existing conventions and creating for its expression a new symbolism, a new art . . The architect should study nature, the human figure, geometry and music, because in all these things he is still studying architecture, the architects of the world and the soul . . . for his purpose of observation [should be] directed towards the discovery of those simple yet subtle occult laws which determine form and structure, such as the tracing of the spiral line, not alone where it is obvious, as in the snail's shell and the ram's horn, but where it appears obscurely, as in the disposition of the leaves or twigs upon a parent stem."

While direct European influences are not discernible on the Griffins before the turn of the century, other influences absorbed from their colleagues around them are: Bragdon being one, for example, on sacred geometry. It would appear, too, that the Griffins' interpretation of the crystal metaphor stemmed from Louis Sullivan's theory of transcendental ornament.

Louis Sullivan was a key figure in the promotion of spiritual concerns as a design force in architecture in Chicago during the late nineteenth and early twentieth centuries. Transcendentalist ideals, modelled on European Romanticism and philosophy, combined with the writing of the American poet Walt Whitman, formed the basis of his theoretical stance. Menocal points out that for Sullivan 'the function of architecture was exclusively to express the transcendental essence of a building as eloquently and as characteristically as life is revealed in the sweeping eagle in his flight'." The key in this design process was the role of ornament. Based on organic and geometrical forms, Sullivan's idiosyncratic ornament sought a unification of the rational with the spiritual in order to become a medium by which the spectator could transcend the restrictions of the physical plane and enter a spiritual communion with nature. Light-splintering ornament in metal and glass on the facades of Sullivan's buildings became symbolic of a metaphysical representation of the creation of the universe.[26]

Sullivan was given heroic status by Marion and Walter Griffin: throughout the *Magic of America* he is lauded as the 'founder of creative thinking in modern architecture'. Most important of all, Walter is described by Marion as the true successor to Louis Sullivan. It is probable that, through him, they were indirectly introduced to the work of the German transcendentalists and individuals such as Paul Scheerbart. A number of Sullivan's ideas were modified by the Griffins: his 'natural thinking' was converted into the Griffins' 'creative thinking'. Like Sullivan, the Griffins sought a truly 'Democratic architecture' (imbibed from the ideas of Walt Whitman), achievable only through an expression of the 'laws of nature'. Sullivan's interpretation of the creative principle of nature, labelled the 'Inscrutable Serenity' — 'a hidden power, mysterious and serene, qualifying imperceptibly both growth and decadence' — is modified later, in the *Magic of America* by Marion as the 'chemical ether'.[27] As Menocal notes, Sullivan considered that his ornament was:

> a correlation of geometry and the organic, . . . the basis of nature's method of composition and that consequently, it had a transcendental essence. By adopting a method of composition that portrayed the two forces (the masculine and feminine/geometrical and organic) on which all creation depended, Sullivan made his work a reflection, or perhaps an extension of the transcendent, generative processes with which Inscrutable Serenity sustained the universe."

The sociologist Herbert Spencer had similar ideas but in his case 'the crystal' became 'the perfect manifestation of natural laws — common minerals growing into perfect geometrical shapes'. Marion and Walter Griffin's use of the crystal metaphor as symbolic of the underlying generative and creative processes of nature recalls Spencer's ideas. Reflection and refraction, iridescent mountain forms, crystal iconography in the architecture and the plan itself controlled by the sacred geometry of the Vesica suggest that the initial plan for Canberra was, symbolically, a direct expression of a unique, personal cosmogony.

An early but more abstruse representation of the crystal and its associations with transcendentalism was also available to the Griffins through Besant and Leadbeater's *Thought Forms.*[29] In this it was proposed that thoughts are manifest on the

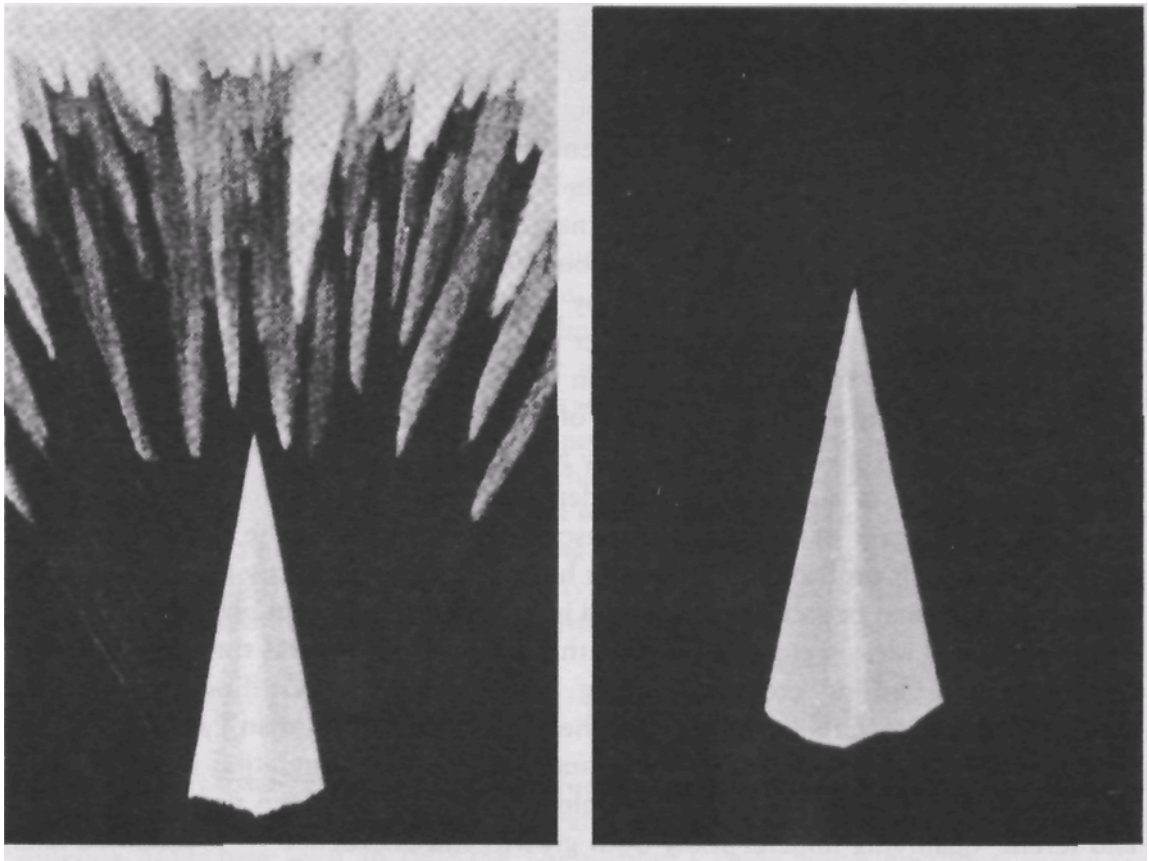


Figure 5.7 'The Entire Universe, a Thought Form – Glowing Energy', from Annie Besant and Charles Leadbeater, Thought Forms

mental and astral planes as well as on the physical plane. Significantly, the book provided a number of fully coloured and expertly rendered illustrations of a number of thought-forms,- in particular, a blue-white prism crystal, and another of the same form radiating intense light, both projected as expressive of devotion and pure thought (figure 5.7). Following the tradition of crystal iconography, the explanations to the illustrations clearly establish a link between the crystal form and the spiritual movement thought possible between natural and supernatural planes. The first illustration is explained as a

> spire of highly developed devotion which leaps into being before us. This is no uncertain half formed sentiment,- it is the outrush into a manifestation of a grand emotion rooted deep in the knowledge of fact. . .

The second illustration, developed from the first, is described as

> the result of His thought in the response of the LOCOS to the appeal made to Him, the truth which underlies the highest and best part of the persistent belief in an answer to a prayer. . . . On every plane of His solar system our LOGOS pours forth His light, His power, His life and naturally it is on the higher planes that this outpouring of divine strength can be given most fully. The descent from each plane to that below it means an almost paralysing limitation, a limitation incomprehensible except to those who have experienced higher possibilities of human consciousness. Thus the divine light flows forth with incomparably greater fullness on the mental plane than on the astral,- . . . Yet there are conditions under which the grace and strength peculiar to a higher plane may in a measure be brought down to a lower one and be spread around with a wonderful effect. This is only possible when a special channel for a moment is opened,- and that work must be done below and by the work of man. It has therefore been explained that whenever a man's thought or feeling is selfish, the energy which it produces moves in a close curve, and thus inevitably returns and expends itself upon its own level. But when the thought or feeling is absolutely unselfish, its energy rushes forth in an open curve, and thus does not return in the ordinary sense, but pierces through into the plane above because only in that higher condition, with its additional dimension, can it find room for its expansion. But thus in breaking through such a thought or feeling holds open a door (to speak symbolically) of a dimension equivalent of its own diameter and thus furnishes the requisite channel through which the divine force appropriate to the higher plane can pour itself into the lower with marvellous results.[30]

There is clearly a commonality of ideas in the works of Louis Sullivan, Besant and Leadbeater and, later, Marion Griffin in the *Magic of America.* Marion, at least, must have been influenced by *Thought Forms,* as well as Sullivan's theory- She refers to the 'etheric realm' and the 'chemical ether', terms used by Besant and Leadbeater,- and her treatment (in the 'City and Environs' drawing, see figure 1.1) of Mount Ainslie, Black Mountain and Mugga Mugga as crystalline, yellow, glowing balls of light, perhaps an 'astral' representation of mountain forms, is strikingly similar in style and technique to their 'thought-form' renderings. This provides further evidence of the Griffins' early

involvement in Theosophy and of that movement's widespread influence on artists and architects.[31]

The idea of transcendence as integral to the structure of the plan is most clearly reflected in the siting and design of the Capitol building (see figures 2.4 and 4.3). At the epicentre of the composition it is described in the 'Original Report' as;

> a general administration structure for popular reception and ceremonial, or for housing archives and commemorating Australian achievements rather than for deliberation or counsel,- at any rate representing the spiritual head, if not the actual working of the Government.[32]

The notion of a tower as symbolic of the meeting between spirit and nature was used frequently at the time by figures such as W B Yeats, Pamela Colman-Smith, Arthur Edward Waites and in the mystical Rosicrucian organisation of the Golden Dawn.[33] The tower, enshrining the spirituality of philosophers and mystics, became a recurring image in the poetry of Yeats. As early as 1900 Yeats wrote of the tower as a 'very ancient symbol through which the spiritual knowledge was made manifest in the abundance and depth of nature'. In the 'Chymical Marriage of Christian Rosenkreutze', a primary Rosicrucian/alchemical text used by the Golden Dawn, to which Yeats belonged, the tower is a symbol of the cycles of pain and personal sacrifice necessary for spiritual development and purification. In the Rider-Waite Tarot card deck, designed by Waite and illustrated by Colman-Smith, the tower is represented as earth-bound with the potential for spiritual revelation. The card depicts a tall, elongated fortress atop a rocky crag, its pinnacle crumbling under the impact of a lightning bolt, and its two human residents tumbling head-long into the ground. In Pamela Colman-Smith's watercolour 'Castle of Pain' (figure 5.8), the tower symbolises the sacred knowledge accessible only to the adepts of mystical doctrine. As Melinda Parsons notes, the tower symbolises a catalyst for the world of the spirit and that of nature. Like the sacred poles found in primitive settlements and the church spires of Christian towns, it was the esoteric equivalent of a hierophany — the meeting of the natural and the supernatural.[34]

Figure 5.8 Pamela Colman-Smith: 'Castle of Pain', watercolour, 1906

There is no written evidence to link the Griffins' work to the Golden Dawn movement but it would be surprising if they were not aware of it. Marion read widely and her belief in the 'fairy faith' indicates that she would at least have known the poetry of W B Yeats. Paintings by Pamela Colman-Smith were exhibited in New York in 1909, receiving

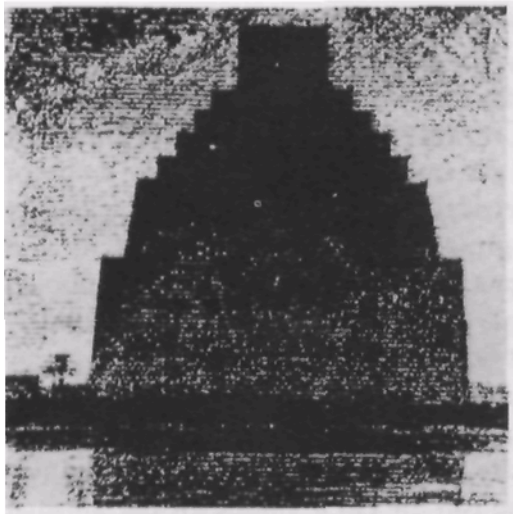


Figure 5.9 William Lethaby: frontispiece and title-page of Architecture, Mysticism and Myth

much critical acclaim with reviews and articles appearing in *Camera Work*, the *New York Sun*, *Strand* and *The Craftsman* — all of which would have been available to Marion.[35] The works, mostly watercolours (Marion's own medium), and including elements of the 'fairy faith' may have attracted Marion's attention. The qualities of the Canberra drawings and the description of the Capitol building in the 'Original Report' as 'representing the spiritual head' indicate that the Griffins were aware of the esoteric 'tower' symbolism and iconography. The Capitol was to be crowned by a winged eagle sculpture denoting Canberra as *caput mundi* and the building itself was the *omphalos*, the symbolic centre or world navel, linking the 'spiritual knowledge with the abundance and depth of nature'. The placement of the eagle with outstretched wings recalls a sculpture by *W* R Lethaby in the Eagle Insurance Building of 1900: the symbolism can be explained as follows:

> At the centre of the earth . . . for the story . . . was told that to determine the true centre of the earth, Jupiter sent out two eagles, one from the east, the other from the west, and they met at this spot.

As Julian Holder notes, the idea of the tower symbolism is similarly expressed in Lethaby's writing on the Perfect Temple (see figure 5.9). The Griffins' Capitol can be viewed in this context.

> The four square enclosure at the top of the world mountain, where the polar tree or column stands, and whence issue forth the four rivers. From the thought of such an enclosure we get. . . our word 'paradise'.[36]

A GENERATOR OF FORMS

The significance of the crystal metaphor to the Canberra initial plan is not limited to the ideas of transcendence and transmutation. Marion and Walter also saw it as a medium which could liberate Louis Sullivan's 'generative processes of nature'. This is expressed in the geometry of the plan (as described in chapter 1): its internal organisation being derived from the sacred geometry of the Vesica, which liberates the square, the equilateral triangle, the rhombus, the hexagon and the octagon — all of which are key figures in the design. The rectangle which determines the centres of the two formal basins also emerges from the Vesica and is projected from the common base of the

equilateral triangles. The arc of the northern foreshore of the central formal basin has as its centre the Capitol while the plan geometry is extended to the peripheral areas of the central city and unified by means of hexagons and octagons organised along meridians radiating from Capital Hill. Walter Griffin's comment that 'the importance of such an orderly arrangement is very great and can only be appreciated from a city of great heights' reveals that an abstracted geometrical clarity and order was a crucial objective irrespective of the experience on the ground.[37] In many ways, the City and Environs drawing can be interpreted as an abstract composition based on a symbolic, geometrical language of the square, the circle and the triangle,- a language that underpinned much of the development of modern abstract art.[38]

Each of these forms — circle, triangle and square -— has a specific symbolic function within the iconographic tradition emanating from sacred geometry. The circle has always been a symbolic representation of the heavens, the spiritual and the unmanifest form of the cosmos. In alchemical symbolism the circle stands for the spiritual property of matter whereas the square represents the physical properties of matter, the earth and man's relation to it. The progression or transmutation from the circle-triangle to the square can be interpreted as symbolising the processes of creation in the cosmos or nature and also of the formation of crystals. This concept of the 'geometrical' construction of the crystal seems to be based on an esoteric interpretation which, at that time, was undergoing a revival through Theosophy.

The triangle is also a form which has a rich and arcane symbolism, as observed earlier. In Christian iconography it represents the Holy Trinity and in other religions is a common symbol for the Godhead. In material terms, which concerned the Griffins, the triangle was representative of the active and inactive forces of creation: in alchemical terms, the triangle with apex upwards — active — is the symbol for fire,- and with the apex downwards — inactive — it is the symbol for water. In *The Ancient Science of Geomancy* Nigel Pennick notes that when two equilateral triangles are joined base-to-base, The disparate elements of the universe can be said to be reintegrated into the primordial whole'. This combination constitutes the fundamental order of the Canberra plan. Therefore, in geomantic terms as interpreted by Pennick, the geometry of Canberra, emanating from the Vesica, can be regarded as an abstract expression symbolic of the processes of creation underlying the order of the universe, the transmutation of the spiritual into the physical constituents of the universe.

Without consideration for scale, the Canberra plan can be perceived as a series of interrelated circles, triangles and squares/rectangles or, put another way, it represents the transmutation of the circle to the triangle to the square. The circle is paramount in the Capital Hill geometry with the three interconnections producing a double Vesica (see figure 2.1). In the original design it is repeated in the three formal basins while, on a more subtle plane, it permeates the total design derived from the original Vesica. The orifice contains the equilateral triangles base-to-base, the nodal points being Capital Hill, City Hill, Mount Pleasant and Mount Ainslie. The square is derived from the *cardo-decumanus* crossing of the land and water axes, that is, the quartering of the plan. As Walter Griffin appreciated, from a good elevated vantage point such as Mount Ainslie or Black Mountain, the design can be perceived as an abstract

progression from the circle (Capital Hill), to the triangle {parliamentary triangle), to the square (the land and water axes). This sense of transmutation is reinforced by the hexagonal and octagonal street systems throughout the plan as these forms flower from the circle, triangle and square.

A PERSONAL COSMOGONY

Some influences on the Griffins can be summarised thus. The concept of the 'masculine' and 'feminine' principles of creation are an integral part of Louis Sullivan's notion of 'transcendental ornament', derived from Swedenborgian influences. Crystal iconography is a common aspect of German Romantic theory (Nietzsche and Goethe) and was taken up at the turn of the century by a number of European 'Radicals' such as Berlage and Behrens. At the same time, the crystal metaphor formed a vital role in the 'evolutionary' theory put forward by Herbert Spencer and this overlapped with certain aspects of Theosophical doctrine. In the *Magic of America* Marion writes:

> The warm ether manifests itself in Spheres. We glimpse here the origin of the solar system — nothing but the warmth condition of matter, the manifestation of the warmth force . . . The Life ether manifests itself in the rectangles and squares . . . this is the form of the human blood crystals and also of the solid earth, though erosion has rubbed off the corner of the primeval form.[39]

These influences then seemed to coalesce with sacred geometry, number and proportion, which formed an integral part of the Theosophical 'Wisdom Tradition', and was applied to architectural problems by writers such as Claude Bragdon with whom the Griffins had personal contact.[40] This great diversity of influences on the Griffins determined their philosophy and shaped the plan. Throughout the *Magic of America* Marion refers to a geometrical system which underlies nature.

> Spirits conceived life in the triangular and the sphere. Goethe sensed this.
>
> . . . this is creative thinking. We learn that there are as many universes as there are crystalline forms created by the great primal spirits of mathematics.
>
> The Vegetable kingdom transfers the spirit of Matter, mathematics to life, the ether shapes the leaves from the circular to the triangular.
>
> . . . it takes the great primal spirits of mathematics to create the crystals — the universe.[41]

The new religions that appeared around the turn of the century were responsible for reviving, and spreading, knowledge of the ancient orders and ancient practices of early cultures. Elements of these religions would have revealed, however indirectly, to the Griffins that the scholars and mystics of these early cultures possessed a sacred canon which formed the basis of their model of reality. For the ancients, it regulated the

cosmos and controlled all aspects of life — language, number, music, geometry, architecture, even political organisation. When Marion talks of 'the great primal spirits of mathematics' which created 'the crystal — the universe', it seems to be a direct reference to this ancient cosmic canon, which had a mathematical basis. Walter believed that:

> In town planning as in architecture there must be a scheme the mind can grasp, and it must be expressed in the simplest terms possible. Just as music depends on simple mathematical relations so do architecture and town planning.[42]

And this suggests that such a model was consciously incorporated into their work through the 'Wisdom Tradition'. Annie Besant explains Theosophy as the continuation of this tradition.

> The Wisdom Tradition has been handed down in all civilised countries ancient and modern. . . . It underlies many of the Chinese systems, especially Taoism. . . . It is found in Egypt in the Book of the Dead, and the papyri from which its religion has been constructed; it appears in the fragmentary records of Assyria and Chaldea: in the Gathas and other scriptures of the Parsis: in Hebrew scriptures as expounded in the Kabbalah and the Talmud: in the Christian as treated by the early fathers of the church and by the gnostic writers such as Valentinus, Basilides and a host of others,- in Pythagoras and Plato, with the Pythagorean, Platonic and Neo-Platonic schools, with Plotinus, Iamblichus and Theurgists: it is taken up from the doctors of Islam and Sufi mystics; it appears in the Rosicrucian students of alchemy and astrology . . . all of these and scores more have assimilated and handed on the Wisdom Tradition. It has lent symbols in Masonry, and hidden some of its mysteries in Masonic ceremonies: it peeps out of Scandinavian and Celtic folklore, out of Hawaiian legends and Maori traditions, the unburied temples of the Mayas and the Quichas, the magic of the Zunis and other North American Indian tribes.[43]

Other texts of the time were explicit as to how the sacred cosmic canon controlled the massing and proportions of ancient monuments. In *Maya/Atlantis: Quern Moo and* the *Egyptian Spinx,* le Plongeon demonstrates cosmogonic concepts ordering the sacred edifices of the Mayas (see figure 5.10), especially the pyramids, which were symbolic of Cod in the universe, and writes that the Mayas were:

> mathematicians, astronomers, artists, navigators . . . familiar with plane and spherical trigonometry . . . they had computed the size of the earth, estimated the distance from pole to pole, calculated the length of the meridian. In their sacred buildings they invariably embodied their cosmogonic and religious conceptions, particularly in their pyramids. The several parts of these edifices were so arranged and proportioned as to agree with the ratio of the diameter to the circumference 11^{pi} = [3 + 1 + 4 + 1 + 5 = 14] the sum of which, 2 X 7 [14], was a numerical that, to the Maya initiates, as to all the occultists in other parts of the world, represented the circumscribed world — the earth.[44]

It seems clear that in the initial plan for Canberra and its architecture the Griffins made visible a system of geometrical forms and proportions encapsulating their personal cosmogony; a 'religious' interpretation of space, of the city as the 'ideal'. The geometry liberated from the sacred Vesica, the squaring and quartering of the city by the *cardo-decumanus* structure, and the creation of 'sacred' mountains, all attest to this.[45] The hierophanic function of the Capitol crowned with the winged eagle further reinforces the cosmic imagery. In 1912 the implicit symbolism of the plan could only be understood by those familiar with the sophisticated language of forms derived from the 'Wisdom Tradition' and the esoteric,- that is, 'by the initiated, or by those who in some way had developed the sensitivity of the soul to occult truth: a hidden symbolism, and by those who spoke a very special language of the spirit'.[46] As Roger Lipsey describes it:

> Many promising men and women across Europe and America . . . were to be found in the lodges of the Theosophical Society hearing for the first time about the path of inner consciousness and wisdom of the East, but, as they matured into prominence would speak little of it.[47]

The extent of Theosophical influence on the Griffins is unclear during the early period in Chicago- Walter was possibly a Freemason at this time. By the 1940s however, when writing the *Magic of America,* Marion openly expresses the importance of the mystical and the esoteric for Walter and herself in the early years. She frequently refers to Canberra as the 'only true modern city — Alpha-Omega': as a city designed by 'creative thinking' and one that revives the 'ancient science', even though nothing was said of the esoteric nature of the scheme at the

time of the plan's acceptance.

With regard to the competition for the design of the national capital the minister for Home Affairs, King O'Malley, and the prime minister, Alfred Deakin, maintained that the Australian government itself, not the panel of assessors, would make the final decision concerning the award. Deakin was involved with spiritualism throughout his youth, but all his life he was absorbed by the occult. His reflections on religion appeared in hundreds of volumes of private journals and 'gospels'; they illustrate a widespread strand in late nineteenth century religiosity, spiritualism and the occult, as well as revealing Victorian ideas of religious doubt, evolution and reform. Deakin ceased to be Prime Minister in 1910 but in the final judgement, could he or his colleagues have recognised the ancient paradigms underlying the plan? Could he have seen that the drawings, resplendent with luminous waters

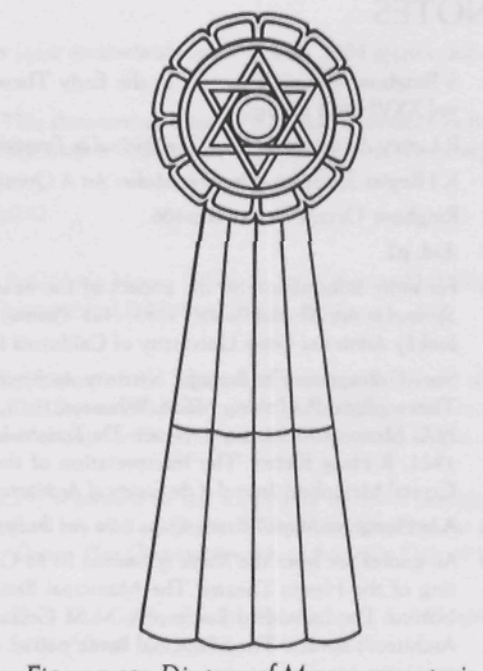


Figure 5.10 Diagram of Mayan cosmogonic notions from August le Plongeon's, Maya/ Atlantis, Queen Moo and the Egyptian Spinx

and glowing mountains, depicted ancient geomantic symbols? And could he have realised that the 'Original Report', which accompanied the drawings and presented the scheme only as an amalgam of Garden City and City Beautiful principles, veiled the true 'cosmic' significance of the scheme? There were many around Alfred Deakin of a like mind.[48]

The plan for Canberra expresses the continuity of the cosmic symbolism between Europe and Asia. In broad terms, for both the East and the West, the circle symbolises heaven,- while the cross, and its related form, the square, symbolises the earth. As Graham Pont has pointed out in 'The Circle and the Cross: Genesis and Hermeneutic of the Traditional Cosmology', these two signs have played a very stable role in the cosmic symbolism and geometry of sacred building and the planning of cities: from Babylon to Peking, Borobudhur, Angkor Wat, Benares and Mandalay, in the East,- and in the West, from Athens and Rome to the many European cities derived from them, whose design has been derived from axial orders.[49] The cosmic geometry also informs all Islamic mosques, gardens and tomb complexes like the Taj Mahal. Among the monumental civilisations of the Aztecs, Incas and Mayas, as well as the tribal cultures of the North American Indians, there is indisputable evidence of a related cosmogony. A common, coherent and complex system of thought and practice underlies certain fundamental conceptions in all of these societies,- they are linked by what appears to be a common filiation of ideas or mythical logic. The last city which reflects this system of ideas and to be designed in the grand or cosmic manner was Canberra.

NOTES

1 S Ringbom 'Occult Elements in the Early Theory of Abstract Painting' *Journal of the Warburg and Courtauld Institute* vol.XXVI 1966 passim.

2 R Lipsey An *Art of Our Own: The Spiritual in* Twentieth Century Art Shambhala Boston 1988.

3 K J Regier *The Spiritual Image Modern* Art A Quest Book London 1987 (Introduction by R P Welsh) pp1-11.

4 Ringbom 'Occult Elements' p406.

5 ibid. p2.

6 For more information on the impact of the new religions on the development of modern art see M Tuchman *The Spiritual in Art: Abstract Painting 1890-19*85 Thames and Hudson London 1986; H B Chipp *Theories of Modern Art, a source book by* Artists *and* Critics University of California Press Los Angeles 1968.

7 Sec: C Bragdon *The Beautiful Necessity Architecture as* Frozen *Mask: Seven Essays* on *Theosophy and Architecture* The Theosophical Publishing House Wheaton 1910; W R Lethaby *Architecture, Mysticism and Myth* Percival London 1891,- N C Menocal Architecture *as Nature: The Transcendentalist Idea of* Louis *Sullivan* University of Wisconsin Press Wisconsin 1981; R Haag Bletter The Interpretation of the Glass Dream, Expressionist Architecture and the History of the Crystal Metaphor' *Journal of the Society oj Architectural Historians* vol.40 March 1981 pp23-31.

8 A l e Plongeon *Maya/Atlantis, Queen Moo and the Egyptian Spinx* J J Little and Co New York 1896.

9 All quotes are from the *Magic of America:* M M Griffin "'Aboriginal Mythology in the Valley"; description of the setting of the Haven Theatre' The Municipal Battle p91; W B Griffin Modern Architecture Lifeless — Building for Nature' The Individual Battle p66; M M Griffin 'With the Fairies' The Individual Battle p232; W B Griffin The Architect's Burden'The Municipal Battle p101.

10 Other members of the Chicago School working in the loft at Steinway Hall included: Richard E Schmidt, Garden and Marten, George Maher. Perkins and Hamilton, Nimmon, Fellows, Spencer, Power, Heum, Max Dunning and Howard Shaw. Practitioners frequently collaborated, the offices were only separated by screens. See H Allen

Brooks *The Prairie School, Frank Lloyd Wright and his Midwest Contemporaries, W.* W. Norton and Co New York 1972 pp28-29.

11 J Taylor 'New Parliament House, Canberra. A Review by Jennifer Taylor' *Architecture Australia* vol.76 no.2 March 1987 p65; J Weirick 'Walter Burley Griffin and Marion Mahony Griffin; The Griifins and Modernism' *Transition-. Discourse on Architecture* no 24 Autumn 1988 p9; C Hamann Themes and Inheritances: the Architecture of Walter Burley Griffin and Marion Mahony' *Walter Burley Griffin- A Review* Monash University Gallery June 1988 p37.

12 W Pehnt Expressionist Architecture Thames and Hudson , London 1973 p29.

13 Bletter Interpretation of the Glass Dream' p24.

14 Hamann Themes and Inheritances' pp37-38; M Markham 'Walter Burley Griffin, Order and Expression', *Architect Victorian Chapter, R.A.I.A.* vol.8 May 1984 pi 3, K Bums 'Prophets in the Wilderness' *Transition:* Discount on *Architecture* no.24 1988 p22.

15 Marion considers that the crystal metaphor should provide the basis for planning during the fifth period of man's evolution — the twentieth century, see M M Griffin 'Uniting Two Poles' The Individual Battle *Magic of America* p380.

16 R Haag Bletter'Paul Scheerbart's Architectural Fantasies' *Journal* of *the Society of Architectural Historians* vol.34 no.2 May 1975 p88.

17 P Scheerbart 'Hausbaupflanzen' *Gegenwart* LXXVI1 (22) Jan. 1910 pp77-79.

18 Bletter 'Paul Scheerbart's Architectural Fantasies' p31.

19 P Harrison Walter Burley Griffin: Landscape Architect M.LArch. thesis, University of New South Wales 1970 pl9 M Price 'Secessionist Architecture in America Departures from Academic Traditions in Design' *Arts and Decoration* Dec. 1912 pp5I-53- H P Berlage, 'Art and the Community: Our Earthly Religion and the Belief of the New Man' *The Western Architect* vol.XVIII no.8 Aug. 1912 pp85-89. The portfolio edition of 100 lithographs of Frank Lloyd Wright *Studies and Executed Buildings* (publ. Wasmuth 1910), is reprinted by Rizzoli International Publications New York 1986.

20 E Santomasso 'Schaffende Krafte', in *Wenzel Hablik* Exhibition Catalogue The Architectural Association London 1980 ppl5-16: title of exhibition — *Hablik, Designer, Utopian* Architect, *Expressionist Artist, 1991-1934*

21 ibid. pp30-31.

22 M M Griffin The Individual Battle *Magic of America* ppl57-242.

23 Ringbom 'Occult Elements' pp386-95.

24 C Bragdon L'Art Nouveau and American Architecture' *Brickbuilder* (now Architectural Forum) 12 Oct. 1903 pp204-206.

25 Menocal *Architecture as Nature* p44

26 ibid. chs. 1 2 and 3. K. Burns 'Prophets in the Wilderness' p23. This shimmering effect is particularly evident in the Carson Piric Scott Department Store in Chicago. See V Scully *Modern Architecture. The Architecture of Democracy,* George Braziller New York 1961 p20.

27 For example M M Griffin The Individual Battle *Magic of America* p242.

28 Menocal *Architecture as Nature* p31.

29 A Besant and C W Leadbeater *Thought* Forms The Theosophical Publishing House Wheaton 1925 (first publ. 1901). This book was followed by Leadbeater, *Man Visible and Invisible* Theosophical Publishing House 1902.

30 Besant and Leadbeater *Thought Forms* pp36-38.

31 The illustrated thought-forms are credited with initiating the formation of the abstract image in modern art, see Regier *Spiritual Image.* Sec also, Lipsey An *Art of Our Own;* J Roe *Beyond Belief: Theosophy in Australia; 1879-1939* University of New South Wales Press 1986; A Rubbo 'Marion Mahony Griffin: A Portrait' *Walter Burley Griffin; A Review* Monash University Gallery June 1988 p19.

32 'Original Report' (accompanying Federal Capital Design No.29) reprinted in the *Report from the Select Committee appointed to Inquire into the Development of Canberra* Sept. 1955 Appendix B p7; also printed in W B Criff in Department of Home Affairs *The Federal* Capital *Report Explanatory of the Preliminary General Plan* Commonwealth of Australia Oct. 1913 P5.

33 For information on this group see M B Parsons 'Mysticism in London, The Golden Dawn, Synaesthesia, and Psychic Automatism in the Art of Pamela ColmanSmith' in Regier (ed.) *Spiritual Image* pp73-97.

34 ibid. pp86-89.

35 Pamela Colman-Smith had a series of exhibitions from 1907 to 1912, which were widely reviewed by, for example: V Stieglitz *Camera Work* 17 Jan 1907; J Hukner *New York Sun 7* March 1912. Other reviews appeared in: *Strand*

'Pictures in Music' no.695 1909; Current Literature 'Pictured Music' no.45 1908. See also, M 1 Macdonald The Fairy Faith and Pictured Music of Pamela Colman-Smith' *The Craftsman* vol.23 1912 p33.

36 J Holder 'Architecture, Mysticism and Myth and its Influences' *W.R. Lethaby, 1*857-1931: *Architecture, Design and Education* Exhibition Catalogue Lund Humphries London 1984 pp59 61 82.

37 W B Griffin The Federal Battle *Magic of America* p361.

38 B Smith Notes on Abstract Art' *The Death of the* Artist *as Hero: Essays in History and Culture* Oxford University Press 1988 pp 181-93.

39 M M Griffin 'Pyrmont Incinerator — Alpha Omega, The Final Expression and Dissolution of Matter' The Municipal Battle *Magic of America* p105. This quotation is taken from the period of work in Sydney after the Griffins had left Canberra but it reveals the continuity of their thought on crystal iconography.

40 See Bragdon The Beautiful Necessity.

41 All quotes are from M M Griffin *Magic of America-.* The Individual Battle p242, p380, p242; Two Sources of Wealth; Land and Abilities' The Individual Battle p232.

42 M M Griffin The Federal Battle *Magic of America* p364.

43 A Besant *Theosophy and the Theosophical Society Theosophical* Publishing House Wheaton 1931 p9.

44 le Plongeon *Maya/Atlantis* pp215-224.

45 The presence of the clearly defined 'cross' in Canberra — framed by Black Mountain, the Lake Park monument, Mount Ainslie, and Bimberi Peak — which recalls Constantine's Rome, may denote Marion's attempt to reconcile early Theosophical thought with Christian symbolism. She resisted Theosophy's later direction, towards stronger Eastern affinities and developed Steiners Anthroposophy whilst in Castlecrag. Directly within the hermetic tradition of Gnosticism, Anthraposophy sought the reconciliation of art, science and religion, and this was projected by its creators as the prime objective of the twentieth century.

46 Regier fed.) The spiritual image p4.

47 Lipsey, AN Art *of Our* Own p34.

48 A Gabay The Mystic Life of Alfred Deakin Cambridge University Press Cambridge 1992.

49 G Pont unpublished paper Department of Liberal and General Studies University of New South Wales 1992.


6
THE DOMINANCE OF THE GARDEN CITY AND THE 'PICTURESQUE': GEOMANCY SUBSUMED

Walter Burley Griffin was appointed federal director of Design and Construction in 1913. After seven years of haggling over the composition of the plan with politicians and public servants, he left Canberra, not having supervised the erection of a single government building and with only a few roads, cuttings and embankments under construction. Since 1920, the urbanistic or geomantic component of the plan has been progressively diminished in importance. Canberra is now a landscape-dominated city, where public buildings such as the High Court and the National Gallery are faceted and fragmented and displayed like incidental artworks in an immense picturesque garden. Walter and Marion Griffin's axial and geomantic meridians can be discerned but the vistas are interrupted by recent irregular landforms and large-scale tree planting (see figure 6.1). Canberra garden city — the geomantic city subsumed — is the result of counter-proposals to the monumental component of the Griffins' plan, first by federal capital advisory committees chaired by Sir John Sulman and Sir John Butters following Griffin's departure from Canberra, and then by the English town planning consultant, Sir William Holford, who favoured the 'picturesque'. This trend was continued through the policy of the National Capital Development Commission, which appointed proponents of naturalism and the 'picturesque', mostly Englishmen, to control both the landscape and architecture divisions from 1958.

The construction of the new Parliament House — with the building articulated under Capital Hill, leaving 85 per cent of the site available for landscaping — represents the ultimate phase of the 'picturesque' garden ideal for Canberra. When fully realised, tree growth will obscure the geometrical clarity of the Parliament House. No monumental construction has been allowed to impinge on the idea for a National Place, which is intended as a vast, levelled and grassed plaza, 500 metres wide, extending from the Parliament House to the shores of Lake Burley Griffin. In Canberra now, open space is celebrated and enshrined as symbolic of a national ideal, the antithesis of the geomantic character of the initial plan. Elsewhere the opposite prevails,- in new capital cities, such as Chandigarh, Brasilia, New Delhi and Washington, monumental constructions' form the substance of the design. This chapter will seek to illuminate the background to this Australian singularity and appreciate its cultural significance.

The forecourt to the new Parliament House, which extends from the National Place, is intended by its creators to symbolise the Australian desert but this is very different from the democratic symbolism and idealism that the Griffins illustrated in the initial Canberra plan. Walter Griffin who described himself as a 'radical democrat' was a disciple of Henry George and his philosophy was also influenced by the democratic ideals of Walt Whitman and those of his mentor, Louis Sullivan. In Chicago he had seen Australia as a Utopia, where the people of 'a vast potentially productive undeveloped insular continent' cherished 'the highest standards of human rights'.[1] The formal and axial component of the plan in the central triangle emanates from Griffin's view of Australia as:

> a democracy already in the vanguard of political progress setting a standard for the entire world in its struggle against private monopoly and exploitation.[2]

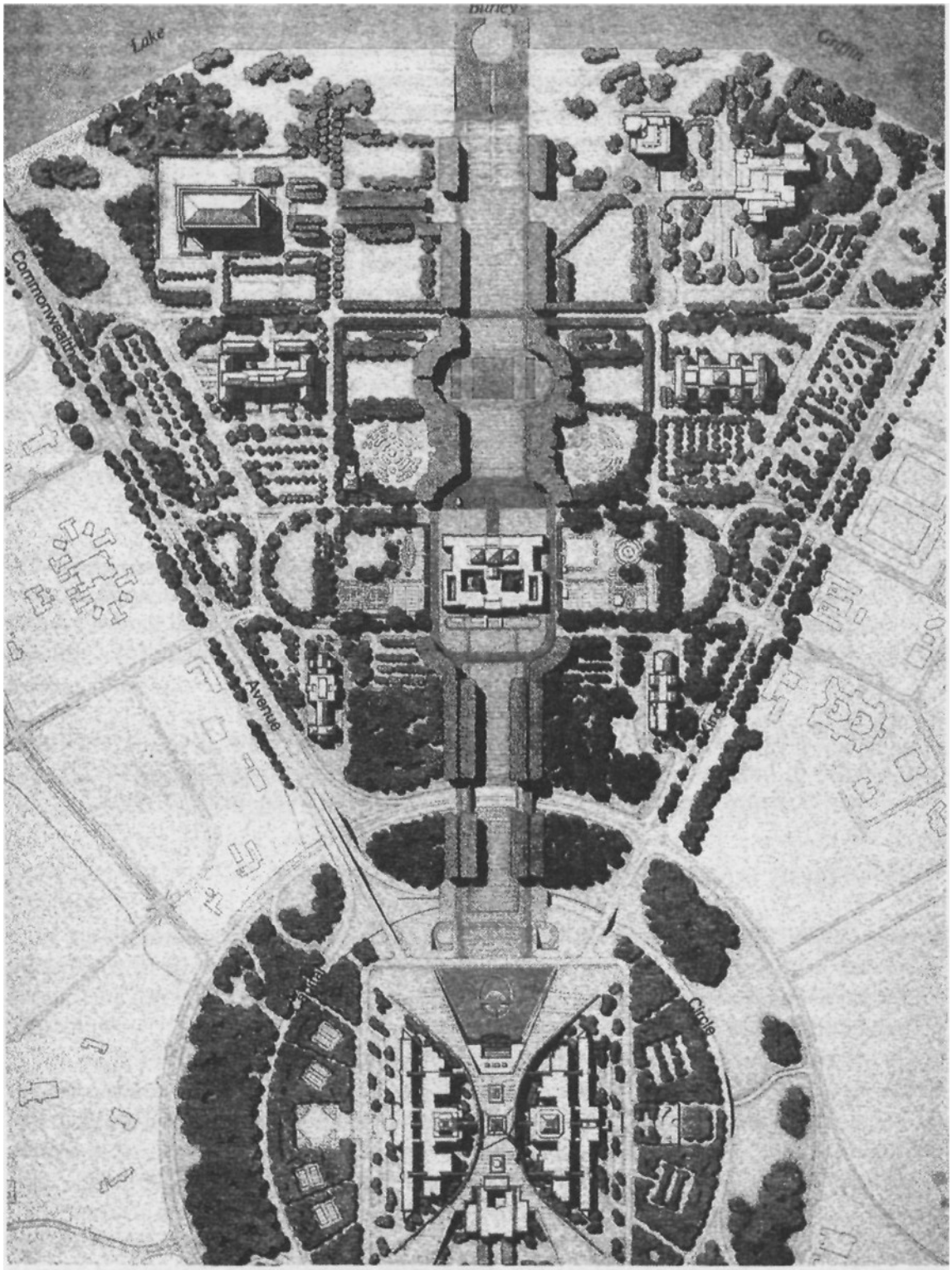


Figure 6.1 Parliamentary Triangle, Canberra: National Capital Development Commission, 1984

In the Centre of Administration of Affairs, the Parkway and the Public Gardens and in the central triangle comprising judicial, legislative and executive functions, with the Capitol as a climax, Griffin arranged the elements of government, symmetrically placed on terraces about the land axis, to express in symbolic terms his conception of constitutional democracy.[3] In the vertical dimension, the bicameral Parliament House is placed on Camp Hill above departmental and judicial functions. This composition is focussed on the Capitol, at the highest level, conceived by Griffin as a place of popular assembly, a forum, a repository for the national archives and an institution commemorating national achievements — the focus of national consciousness.

The 'Garden City' component of the initial Canberra plan emanated from another aspect of Walter Griffin's philosophy: an appreciation of nature. At the time of the competition he stated that 'I am what may be termed a naturalist in architecture . . . I believe in architecture that is the logical outgrowth of the environment in which the building in mind is to be located'.[4] In the addresses to the architectural institutes of New South Wales and Victoria, given shortly after his arrival in Australia, Griffin eulogised nature and the Australian landscape.[5] He had already written in his first Report Explanatory of the Preliminary General Plan that:

> The internal blocks, typically large . . . leave opportunity for private development or small-community initiative to evolve pretty schemes of driveway subdivision, recessed courts, closes, quadrangles, terraces, common gardens, irregular hill garden subdivisions, and a host of similar possibilities adding incident and variety to a consistent whole.[6]

By 1915, Griffin was drawn further towards the Garden City ideal: he wrote of Letchworth in England, which was also divided into areas of separate functions, as a population of 'happy, healthy and contented people living in an ideal surround'.[7]

THE 'PUBLIC AND 'PRIVATE' CITY

Walter Griffin's democratic idealism and his pursuit of an organic naturalism are both expressed in the initial plan for Canberra: the former is the expression of the 'public' city and its connection to the City Beautiful; the latter liberates the 'private' city of suburban orientation.

City Beautiful rhetoric was concerned with civic design rather than social functions and advocated aesthetic architectural planning with a ground composition of monumental buildings, grand piazzas and sweeping vistas connecting parkland to the civic centre. The initial plan had responded to this principle but with excessive separation of the key elements and nodal points, which was conditioned by geomantic considerations. Civil servants and bureaucrats remained implacably opposed to the excessive costs implicit in the ultimate realisation of the plan. This story is well-known. No one in Australia came to appreciate the democratic symbolism of Walter and Marion Griffin's plan or any of the ancient paradigms from which it was generated. The competition entry was essentially an outline presented in a manner so as 'to force the

emphasis of the underlying ideas' but Walter did not prepare a more detailed exposition of his ideals after 1912.[8]

Directly related to axes generated from surrounding hills and mountains and also derived from ancient megalithic paradigms, the nucleus of the initial plan, the parliamentary triangle and its projections, are of heroic proportions. Here, the Griffins concentrated upon the creation of a clear geometric order both in axiality and in the sculpturally separate and solid monumental constructions within the government group of public buildings. This component of the Canberra initial plan can be viewed as an expression of the 'public' city: a civic and urban symbol. The freer and more modest areas and precincts comprising the Garden City component of the plan can be viewed as an expression of the 'private' city of suburban orientation and provincial values, where the Griffins avoided the fixed climax of Beaux Arts baroque vista planning. The forms are not linear and axial but capable of endless extension spiralling from polygonal matrices. Both these components also derive from ancient paradigms, whose continuities into our own times Walter and Marion Griffin expressed in Canberra through a matrix derived from a philosophical tradition which sought to relate the forces of the earth and the cosmos.

The picturesque ethos and the panoramic prospect, on the other hand, crystallised in the Canberra plan, contained a whole range of metaphors, the legacy of the eighteenth century, which enshrined and symbolised political thought and ethical and moral ideals. These ideals were such as could be felt and responded to by modern individuals: politicians or public officials, and private individuals — in the public and the private spheres.

During the eighteenth century in England there had been a connection between politics and art, especially in landscape and landscape art. Correct taste in these art forms was used in this period, and thereafter, as a means of legitimising political authority — the claim to participate in the councils of state. Writers of the polite culture of this period conclude that political authority is rightly exercised by those capable of generalised thought, of producing abstract ideas out of the raw data of experience.

Two kinds of landscape are represented in eighteenth and nineteenth century painting and literature.[9] The first is the ideal, panoramic prospect, the analogue of the social and universal,- this is surveyed, organised and understood by disinterested public individuals. Such people regard the elements of the landscape always as representative ideas, intended to categorise rather than deceptively to imitate their originals in nature,- they study, not the objects themselves — not, for example, an individual person in a society, or their individual occupations — but their relations. Public individuals are enabled to do this by their ability to abstract and by their ability to comprehend and classify the totality of human experience.[10] In this sense they assume the mantle of the augurs and priests of antiquity who practised the principal arts of civilisation — architecture and planning included — as part of their duties or office. Just as in ancient Egypt, for instance, the priests had practised monumental civic design and geometrical planning, or in Rome the tradition of civic design referred back to the rites and observances of the Etruscan priesthood.[11]

Secondly, there is the occluded landscape. Such landscapes conceal the general view by concealing the distance. Imagery characteristic of occluded landscapes could be a cottage embosomed in trees that permit the distance to appear only as spots or slices of light. This genre represents the confined views of the private individuals whose experience is too narrow to permit them to abstract. In England, these two kinds of landscape were often, if not always, assumed to be the productions of, and designed for, the entertainment of two different spheres of life — the public and the private — and even of two different classes of people.

The representation of panoramic prospects serves as an incidence of the ability of an individual of liberal mind to abstract the general from the particular. It was also understood to be an incidence of that person's ability to abstract the true interests of humanity, the public interest, from the labyrinth of private interests which were thought to be represented by mere unorganised detail. In republican political theory a citizen, a public individual in this sense, had long been distinguished by the fact that this ability was a function of this person's reason.

> The power to abstract, as metaphorised everywhere in the power to comprehend and organise an extensive prospect, is a testimony of the ability to prefer and to promote an art which itself promotes the public interest.[12]

By contrast, private men who were not citizens, who were servants or mechanics, had been understood from Aristotle onwards to have no ability to understand reason, or to follow anything but their own immediate instincts. According to this system of classification the representation of the ideal, panoramic landscape is an instantiation of the political capability of the public individual.

In Britain, in the eighteenth and nineteenth centuries, ideal, panoramic landscape was treated as a public genre and accorded that status by an aesthetic philosophy.[13] The connection between art and the public sphere had insisted on the interdependency of the republic of taste and the political republic; and it has given explanatory power to the writing of the times.

Ancient axial orders and geomantic paradigms underlie the City Beautiful matrix, which was structured in relation to man-made termini, towers, large obelisks and fountains, controlled by the principles of baroque vista planning. The panoramic prospect evolved in England and reached its apotheosis in the work of Capability Brown and Humphrey Repton. These two spheres merged in the picturesque work of Frederick Law Olmsted in America, in which axial arrangements were utilised but using mountains and hills as 'natural' termini. The Griffins' Canberra plan was, in part, coalesced from these identifiable English, European and American influences: it was underpinned by 'picturesque' theory in Uvedale Price, *Essay an the Picturesque* (1794), and Richard Payne Knight, *Analytical Inquiry into the Principles of* Taste (1805).

GARDEN CITY INFLUENCES

The Garden City ideal can be related to contemporaneous urban environmental ideals in England and America through Walter Griffin's clear references to it both before and after the Canberra competition. Before World War I the Garden City ideal had seemed to fuse piecemeal improvements into a comprehensive model,- but, internationally, in the period of postwar reconstruction, it was seen only as a partial interpretation of planning procedures, chiefly with potential for residential application. During the 1920s the general course of planning theory was influenced by American City Functional models. These models adopted a pragmatic approach to make the best of existing cities in all their complexity,- urban renewal, traffic flow, land-use zoning and the provision of technology and services became the dominant planning paradigms. This largely weakened the nexus between residential planning and housing reform from which the Garden City movement had gained its strength.

In international terms, the Garden City ideal had peaked in popularity around 1910, following the publication of Ebenezer Howard's *Garden* Cities *of Tomorrow* in 1901. But in Australia, the Garden City ideal crystallized more slowly and its solvation was slower than elsewhere.

The depression of the 1890s brought an abrupt end to the ebullient fantasies of Marvellous Melbourne of the 1880s. In Sydney, too, the old values were shaken in every field, the old politics were discredited. The early Town Planning movement in Australia, concerned primarily with social welfare and policies related to housing, health and recreation, reflected the new political idealism but it was not until the end of World War 1 that a unified movement materialised.[14] Both New South Wales and Victoria sent strong delegations to the 1917 Australian Town Planning conference in Adelaide, which was well-attended by politicians and local government officials and many international visitors, including the influential English Garden City theorist and planner, Charles Reade. Walter Burley Griffin gave the keynote address, in which he reiterated his naturalistic idealism and its relevance to Canberra- The most characteristic note was struck by the governor of Victoria, Sir Arthur Stanley:

> Town planning is not a panacea for social evils, but at least it can be said that if healthy, happy surroundings are given for people to live in they are given a better chance to be a happy, contented community growing up in the state.[15]

Housing reform was stimulated by the conclusions of an overseas investigation, which dealt with the English garden cities, by J C Morell, the architect for the Victorian Department of Public Works. He argued that, while Melbourne was better placed than were the cities of the Old World, the present haphazard methods could not be allowed to continue: They do not provide for maximum health conditions, they are not economic, and they are not progressive'.[16] By the end of World War I there existed in Australia a concerted town planning policy directed towards the provision of adequate housing, social amenities, and open space and landscaping, consistent with English Garden City principles.

In the Canberra plan between 1912 and 1918 the suburban residential areas show the most significant changes on the plans prepared by Griffin as federal director of Design and Construction. The interstices of the stellar fingers and the steeper slopes were drawn with free road patterns on large blocks. Later, with the land for domestic construction freed from constraints and under government control, Canberra responded comprehensively to the suburban building boom of the 1920s which affected all the Australian capital cities.

After Griffin had departed from Canberra, the Federal Capital Advisory Committee advocated that, without precluding the ideal of the federal capital as a beautiful city, utilitarian development and economy should be the aim . . . leaving to future decades — perhaps generations — the evolution of the National City on lines that are architecturally monumental'.[17] The chairman of the Advisory Committee, the English expatriate architect and town planner, Sir John Sulman, was one of the earliest proponents of Garden City design. He was president of the Town Planning Association of New South Wales from its inception in 1913, Vernon lecturer in Town Planning at the University of Sydney, where he also controlled the architecture course until 1912, and he was an influential consultant to the Royal Commission on the development of Sydney and its suburbs (1909). In his book. *An Introduction to Town Planning in Australia* (1921), published well after the Garden City movement had declined in England and America, Sulman discussed Letchworth as a modern Hygeia, which offered fresh air, sunlight and uncrowded living conditions. Written in the same year, under the parameters advocated by Sulman, the *First Gentral Report on the Development of Canberra* stated that:

> the Committee conceives Canberra as a Garden Town with simple, pleasing but unpretentious buildings — mostly single storey — planned, nevertheless, to afford adequate comfort and reasonable convenience in which legislative and executive government will be carried on, with the population accommodated, some in well built and suitably disposed cottages of permanent construction, others in hostels, designed to meet their needs . . .[18]

FROM GARDEN CITY TO THE 'PICTURESQUE'

Sir John Sulman and his Advisory Committee did nothing to support the urbanistic component of Griffin's plan: the geomantic City Beautiful or 'public' city. The Garden City character would permeate even the central triangle according to Sulman. The *Report* spelt the beginning of the end for the competition-winning plan with its proposals for monumental structures set on spacious terraces framed by axial avenues along Beaux Arts baroque vistas. An influential consultant to the Advisory Committee was Professor Leslie Wilkinson, who practised picturesque-eclecticism in both architecture and civic design. He came from England in 1919 to take the first chair in architecture at Sydney University. Having immediately formed a strong liaison with Sulman, he was appointed to the National Capital Planning Committee, which sited both the

eclectic art-deco War Memorial and the Administrative Offices of George Sydney Jones contrary to Griffin's intentions.[19]

The original and grand proposals for the 'public' city fared little better under the Federal Capital Commission, chaired by Sir John Butters after 1925. A few streets were laid out and the cottages for 35,000 inhabitants were served by a small shopping area with arcades in the early Italian Renaissance style designed by J S Murdoch, the chief architect for the federal Department of Works. Conrad Hamann has noted that these arcades in Civic Centre, although solemn and delicately handled, really ignored the task of designing a federal capital and intensified the image of Canberra as a provincial country town in a garden setting.[20]

By 1927, the white-painted, stucco, provisional Parliament House, its siting vehemently opposed by Griffin even after he had left Canberra, faced the War Memorial across almost two miles of paddocks, where sheep grazed. Framing the centre, the outlines of the extensive plan, the result of Griffin's programme of road cuttings and embankments, carried out between 1917 and 1920, were discernible. They had been supported by an ambitious programme of tree planting but, ironically, it was the extension of this work, developed over a period of two decades from 1930, that helped to further erode the axial order of the plan. The Griffins' distinction between parkland on the outer reaches being wild, and in inner areas formalised, was irrevocably lost. The vast tree-planting exercises destroyed cohesion by allowing elements of the plan to be considered independently, relying on landscaping to solve all the problems arising from poor visual relationships.

In 1955 Prime Minister Robert Menzies expressed concern about the lack of development in Canberra. Menzies, an anglophile and monarchist, did not form close personal relationships and was aloof to the point of disdain, distancing himself from colleagues. Richard Clough, formerly the head of the landscape division of the National Capital Development Commission (NCDC), recalls that Menzies's influence on plans for Canberra's development was brought to bear through John Button, the head of the prime minister's department. Button had close ties with John Overall, later to become the first Commissioner for the National Capital Development Commission (they played billiards together each Saturday morning). Clough also observes that Menzies had a penchant for landscape art and admired the work of the Heidelberg School. He was favourably disposed towards the idea of a 'bush' capital and apparently appreciated the potential of the bush mystique as representative of Australianness in much the same way as the picturesque tradition was projected by conservative interests as symbolic of English culture. John Fitzhenry, an architect working with the Australian Broadcasting Commission and in conjunction with the NCDC during its formative period, recalls that Dame Pattie Menzies also took an interest in Canberra's development. She was most concerned that Northbourne Avenue, the main road into Canberra from Sydney, should be sensitively developed with houses discreetly shielded by gardens and landscaping.

Resulting from Menzies's concerns, a Select Committee of the Senate, with Senator J A McCallum as chairman, was appointed to inquire and report upon the development of Canberra- The report contained seventy-six recommendations,- it was

thorough and persuasive, drawing on evidence gleaned from a large number of witnesses. After a comprehensive study of the history of Canberra, the misfortunes of Walter Burley Griffin and the lack of achievement in building the capital, the committee gave Griffin's plan a full vote of confidence.

> The more one studies Griffin's plan and his explanatory statements, the more obvious it is that departures from the main principles should not be lightly countenanced. The principal features of Griffin's plan should be maintained at all costs. It is a grand plan and something we should hold on to."

The committee included in their *Report* Griffin's original 'Report Explanatory', his plans of 1912, 1913 and 1918 as well as the gazetted plan of 1925. The government appeared to accept the direction proposed by the Select Committee of the Senate and established the National Capital Development Commission with wide powers of control. But, while Griffin's plan was paid lip-service, it is likely that Robert Menzies interceded, exerting pressure to follow an English town planning model for Canberra rather than the European and American model implicit in Griffin's design.[22] The English architect and town planner William Holford was consulted. In his 'Observations on the Development of Canberra, A.C.T.' presented on 15 May 1958, Holford reviewed the past forty years and suggested 'Necessary Amendments' to Griffin's plan {see figure 6.2):

> it seems necessary to amend the formal symmetry of the Griffin plan and to retain it only for those features where it can be really effective, leaving a balanced but not symmetrical development to take its place on either side of the central axis. Further on still, a frankly picturesque treatment would be more in keeping with the beautiful background of hill and valley which the existing suburbs and the wider landscape of the Australian Capital Territory provide.[23]

In the light of history, present possibilities and 'amendments that will in any case have to be made to the original plan', Holford discussed two approaches to the development of Canberra: either to remain a divided city, with the flood plain of the Molonglo as an open wedge between the federal town on the south bank and the municipality on the north or 'to become a unified city, metropolitan in character if not in size, a cultural and administrative centre, and a national capital'." Holford strongly favoured the second course and outlined three objectives, concluding that 'it is possible to envisage the future of Canberra as a true capital combining the functions of a garden or landscape city, a fully motorised town and a cultural centre'.[25]

> Canberra is already a city of gardens . . . One hopes that it will remain so . . . the maintenance of a garden character in the residential parts of the city is more important than raising the density.[26]

Canberra generally postdates World War II and its character, especially that of its five satellite centres, is primarily influenced by the British 'New Town' planning movement.

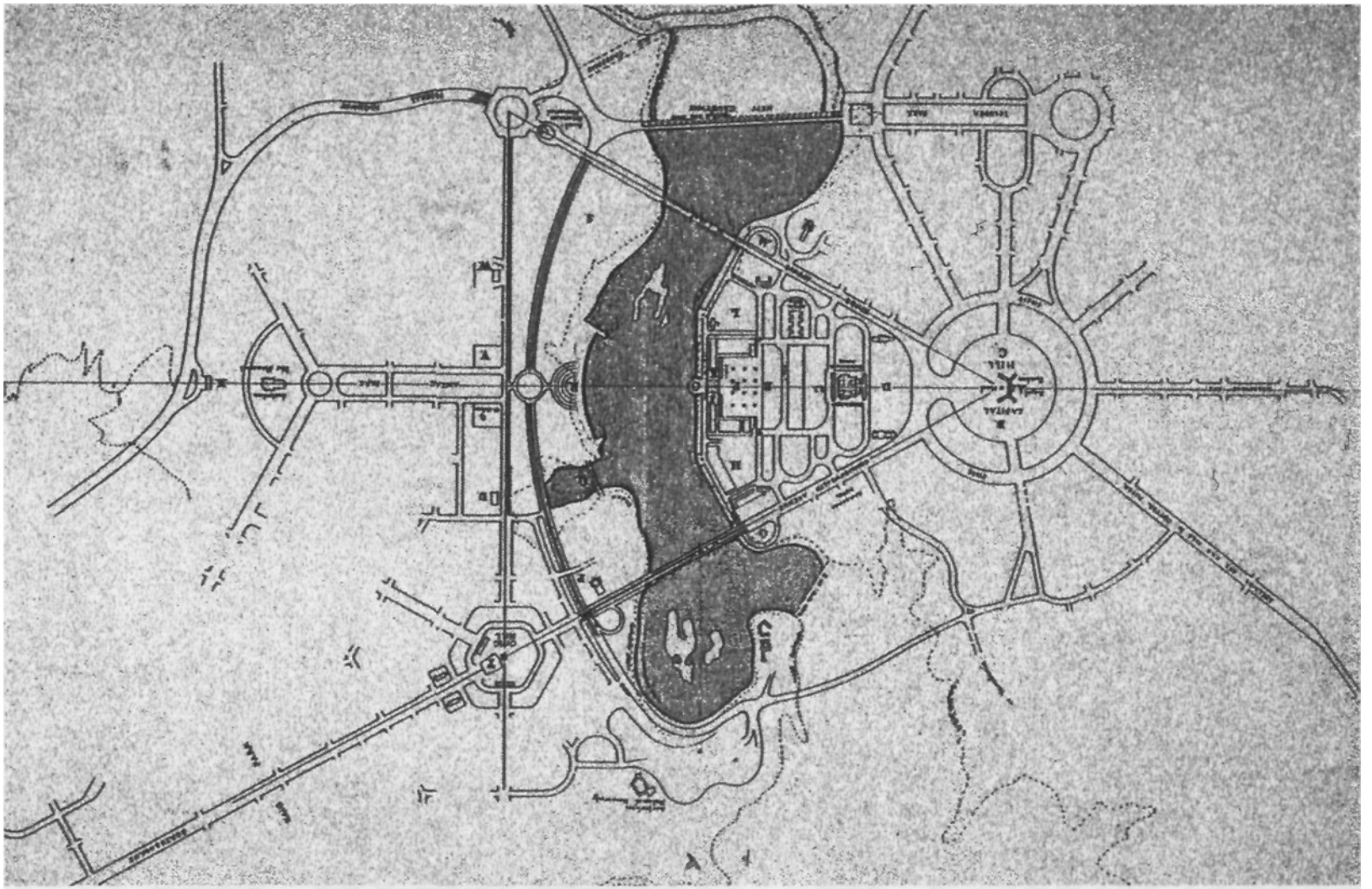


Figure 6.2 William Holford: diagram to illustrate observations on the future of Canberra, 1959

What happened in Canberra, in the wider sphere, is not very different from what was happening in the more or less homogeneous middle-class cities around the world: Toronto, Vancouver, Portland, Reading, and the older Australian cities, from Floreat Park in Perth to Doncaster-Templestowe in Melbourne. The origins of this new town movement are too complex to describe here but the new towns certainly incorporate elements of the Garden City — in particular, the use of a green belt to separate city zoning. William Holford was in the vanguard of the new town movement in England; his conclusions and recommendations for the development of Canberra embodied these principles which, at the time, represented a stronger city planning model. The American City Functional approach was clearly irrelevant. Holford applied Garden City and 'picturesque' principles for the proposed development of the central areas and these resonated with the potential of the site and the existing garden character of the city.[27] However, his 'picturesque' proposals for the permanent Parliament House and the water basins were major departures from Walter and Marion Griffin's intentions.

The creation of the lake and the ornamental basins was recommended but Holford suggested 'a slight reduction in the size and formality of the latter' for no stated reason.[28] He argued that:

> At the same time, the proposed basins at Canberra must, in my view, act as a unifying feature and not a disruptive one. The West Lake, on the other hand, magnificently framed by the contours . would hardly act as a barrier and could be a wonderful recreational and natural shape.[29]

The implementation of these proposals by the disciples of Holford and the 'picturesque', through the agency of the National Capital Development Commission, has undermined the realisation of the formal geometry of Griffin's lake system. The carefully articulated, arcuated shorelines were a crucial element in the initial plan and reinforced the symmetrical displacement of the monumental structures in the south, in the'central triangle, and those related to formal parkland to the north of the lake. Like John Sulman, thirty-five years before, Holford could not grasp the aesthetic principles of Griffins plan: the arrangement of elements relating to the axes generated from Bimberi Peak, Black Mountain and Mount Ainslie, the regular polygonal geometry emanating from the crystalline or stellar patterns and the distinction between distant and inner-city landscaping.

The NCDC was given Holford's 'Observations' for comment. Contravening the previous direction towards the implementation of Griffin's plan as outlined in the Report of the Select Committee of the Senate, the NCDC endorsed Holford's approach and the sketch plan he provided with only minor modifications. Concerning the siting of the permanent Parliament House, Holford had written:

> My own choice of site for the permanent Parliament House would be in the centre of the axis rather than at one end of it. As it is, the axis is too long and too uneventful to register any marked impression on the beholder . . . Its climax would be at the centre. Paris or Versailles would have replaced Washington as the model.[30]

The 1923 Parliamentary inquiry into the erection of the provisional Parliament House had opened a Pandora's box of opinion and speculation concerning the nature and siting of the provisional building and also what might follow as a permanent Parliament House. Walter and Marion Griffin's choice of site for the permanent building was Camp Hill but a plan prepared by J S Murdoch for the permanent structure on Kurrajong, or Capital Hill, planted the seed which has recently flowered.

But, in 1958, with no site officially proclaimed, and with R C Menzies dominating the government of the day, little concern was expressed when Holford's proposal was promulgated. Parliament House would be embedded in a picturesque setting, near the southern lake shore, and in a manner akin to the great English country houses such as Blenheim Palace or Castle Howard. In fact, the model was not Paris or Versailles, as Holford contended, but a Capability Brown landscape- Seeking to distance itself from past speculation concerning the use of Camp Hill or Capital Hill for the Parliament House site, and to justify the use of the lakeside site, the NCDC stated in a 1958 report that:

> A rather misleading impression of the importance of Capital Hill as a building site is given by the paper plan of Canberra and it should be noted that although its visibility is good from the Queanbeyan side, from the Triangle it cannot be seen at all.[31]

It was conveniently forgotten that the Griffins had proposed a massive Capitol crowning Capital Hill which could have been seen from anywhere. For a decade, from 1958 to 1968, the Parliament House site, terraced and marked with giant flagpoles, was exhibited at the northern end of the parliamentary zone. Master plans set the National Library and the High Court flanking the Parliament House with a vast landscaped court (now the National Place) separating the proposed new building and the existing provisional building. In this scheme, only the Treasury (1970) and the Library (1968) were constructed on the sites indicated.

Although the new Parliament House has been constructed on Capital Hill,-the widespread acceptance of Holford's 'picturesque' model further submerged the geomantic City Beautiful, the 'public' city proposed by Griffin. From the early 1960s, a succession of appointees from England, mostly disciples of William Holford, systematically furthered naturalism and the 'picturesque' in Canberra's central areas. Gareth Roberts was Holford's protege from the University of Liverpool and John Haskell came from his office in Brighton. They, with Roger Johnson, were successive directors of the Architecture Division of the NCDC. Richard Clough, the NCDC director of Landscape until 1981, was trained as an architect and imbibed 'picturesque' principles from Leslie Wilkinson at Sydney University. Clough's experience in landscape was gained in England under his mentor Sylvia Crowe, who had absorbed elements of the English Free Style in landscape from the Arts and Crafts movement via Edwin Lutyens and Gertrude Jekyll. Richard Clough, in particular, changed Griffin's proposals for the lake. He substituted free forms for large sections of the shorelines and emphasised irregularity in much of the foreshore planting, thus intensifying picturesqueness, and he placed the carillon and the waterspout so as to accentuate asymmetry and

informality. When interviewed, Richard Clough expressed the view that Walter Burley Griffin's axial arrangements were, in reality, 'ineffective'.

This succession of individuals, who subscribed to 'picturesque' principles of landscape design, had eroded the Griffins' concept for Canberra even before the design of the new Parliament House on Capital Hill was settled. The Mall, in the parliamentary zone, and Anzac Parade attempt formality but the former relies only on inconsequential patterns of trees, and the latter is limited to a narrow strip of the land axis unsupported on the northern lake shore. There, according to the Griffins, regular landscaping and institutional buildings should have created a formal viewing platform for the government group. With the omission of the causeway, the wetlands area bleeds into East Basin with no design purpose. There are no successful formal parks; the parklands along the entire lake frontage have been designated picnic and recreation amenity. Griffin had proposed variety and a gradation of treatment in order to make the parklands support the wider city patterns. In the parliamentary zone, the hierarchy of capital functions proposed by Griffin has been fragmented with government offices, municipal offices, national institutions and local functions distributed at random in the areas abutting the Mall.

In 1968, after Robert Menzies had quit politics and anti-conservative forces were in the ascendancy, the House of Representatives supported a proposal to move the site of the proposed Parliament House to Camp Hill. This required the demolition of the existing Parliament building, a proposition not supported by the Senate, which viewed the old building, with its threefold extensions, as a permanent fixture. This impasse prevailed until 1974 when, at a historic joint sitting of both houses of Parliament, the Parliament Act located the projected Parliament House on Capita! Hill and designated the parliamentary zone, in which all building projects became subject to parliamentary approval. An international architectural competition was held in 1979. The first prize was awarded to the American-based firm, Mitchell, Giurgola and Thorp; their scheme, with minor modifications but escalating costs as construction proceeded, was completed for the Australian Bicentenary in 1988.

While paying false homage to Walter and Marion Griffin and their visionary plan, politicians and public figures alike have discarded the most significant components of that plan and disregarded the aesthetic principles critical to its implementation. The picturesque capital of Australia is largely the manifestation of conservative idealism generated from an English background. The 'public' city, a civic and democratic symbol, is now only the dream of a few ideologues. Canberra has become the expression of private individuals, who have vacillated between the frantic desire to find something comprehensible to belong to, and an equally consuming passion to act on their own.

NOTES

1 W B Griffin 'Planning a Federal Capital City Complete' *Improvement Bulletin* vol.55 no. *15* November 1912 pl6.

2 ibid.

3 The relationship between governmental functions is expressed diagrammatically in the 'Schematic Organisation of Public Groups' Australian Federal Capital Competition Project 1911-12.

4 Quoted in D L Johnson *The Architecture of Walter Burley* Griffin Macmillan Adelaide 1977'A Naturalist in Architecture' ch.9 p38 (no reference given).

5 W B Griffin Town Planning and Garden Suburbs' *The Salon 11* November 1913 pp233-36.

6 'Original Report' (accompanying Federal Capital design No.29), reprinted in the *Report from the Select Committee Appointed to Inquire into the Development of Canberra* Sept. 1955 Appendix B p 101, also printed in W B Griffin Department of Home Affairs *The Federal Capital Report Explanatory of* the *Preliminary General Plan* Commonwealth of Australia Oct. 1913 p99.

7 This appeared in a promotional brochure for Mossman, written by Griffin, 'Mossman, Montana, A model city built on modern ideal' 1915 p2. As Canberra began, the Garden City ideal, inspired by Letchworth, Bournville, Hampstead and Welwyn in England, had already synthesised new methods of land subdivision with the provision of open space and landscaping. R Freestone The New Idea: the Garden City as an Urban Environmental Ideal, 1910-1930' Journal *of the* Royal *Australian Historical Society* vol.73 part 2 Oct. 1987 pp94-I08.

8 Letter from W B Griffin to King O'Malley 12 January 1913 Commonwealth *Parliamentary Papers* Australia 346/1914-16 pp5 7.

9] Barrell The Public Prospect and the Private View: the Politics of Taste in Eighteenth Century Britain' in J C Eade (ed.) *Projecting the landscape* Humanities Research Centre Australian National University 1987 passim. See also, J Barell *The Political Theory of Painting from Reynolds to Hazlitt* Yale University Press New Haven 1986.

10 Alexander Pope *Epistle IV* to Richard Boyle Earl of Burlington.

11 J Rykwert *The Idea of a Town: The Anthropology of* Urban *Form* m *Rome, Italy and the Ancient World* M.I.T. Press Cambridge 1986. passim.

12 Barrell The Public Prospect and the Private View" p25.

13 ibid. p32.

14 The Town Planning Association of New South Wales *The Constitution* Sydney 1913. The constitution directly reflects elements of the *Report of the Royal Commission for the Development of the City of Sydney and* its *Suburbs* (1909). The Commissioners recommended that 'Municipal authorities ought to have the power to acquire land for the provision of sites for healthy dwellings for the working classes ... on social and hygienic grounds, workmen should be encouraged to live in separate houses in the suburbs' p xxviii. The Commissioners were strongly influenced by recommendations For decentralisation and suburban development contained in the report by W H Lever on Port Sunlight; paper to the Sheffield Housing Conference 1905. Many of the recommendations of the 1909 Royal Commission concerning the provision of open space and recreational facilities were incorporated in local government plans after World War I

15 *Australian Town Planning Conference* Report Adelaide 1917 p34. A second conference held in Brisbane in 1918 further strengthened the interest in town planning. See *Proceedings of the Second Australian Town Planning Conference and Exhibition* Brisbane 1918.

16 Report to ... the Minister of Public Works by J C Morrell *Victorian Parliamentary Papers* 1915 vol.1 p64.

17 Federal Capital Advisory Committee Australia: *Parliament: Construction of Canberra, First General Report* 29 Sept. 1921 para. 18 p7

18 ibid, para 23 p8, cf. J Sulman *An Introduction to Town Planning in Australia* Government Printer Sydney 1921.

19 Griffin proposed a casino on the site ultimately occupied by the War Memorial. For an account of Leslie Wilkinson's role as an educator see P R Proudfoot The Development of Architectural Education in Sydney, 1880-1930' *Historical Studies* vol.21 no.83 Oct. 1984 pp197-211.

20 C Hamann 'Paths of Beauty: the Afterlife of Australian Colonial Architecture, Part 1' *Transition-. Discourse on Architecture* no.26 Spring 1988 p38.

21 Select Committee of the Senate *Report* p12.

22 Empty gestures towards the Griffins' plan arc a constituent feature of the Parliamentary Standing Committee on Public Works *Report together with Minutes of Evidence. Appendices and Plans relating to the Proposed Erection of Provisional Parliament House, Canberra* 12 July 1923.

23 para.d p6.

24 ibid. The Main Choice' *p6.*

25 ibid. p10.

26 ibid. p7.

27 Picturesque ideals were early established in Australia. See C Lansbury *Arcady in* Australia; *the Evocation of Australia in Nineteenth Century English Literature* Melbourne University Press 1970. Following the choice of the district in 1908,

which provided extensive views of the snow-covered mountains, Charles Robert Scrivener was instructed to recommend a site, bearing in mind that its potentialities 'will demand most careful consideration from a scenic standpoint, with a view to securing picturesqueness, and also with the object of beautification and expansion'. *Information. Conditions and Particulars for Guidance on the Preparation of Competitive Designs the Federal* Capital *City of the Commonwealth of Australia* Department of Home Affairs Melbourne April I9M Historical and Introductory Section 7 p87.

28 Holford Observations'p11.

29 ibid, p11.

30 ibid, p13.

31 National Capital Development Commission *Report* p9, submitted and included as an appendix to the 1955 Report of the Select Committee of the Senate.


7
The New Parliament House: The Response to Geomancy

The new Parliament House by the Italian-American architect Romaldo Giurgola responds both to the matrix established by the Griffins and to the existing Canberra architectural order that results from the developments after the Griffins' departure (see, for instance, the comparison in figure 5.4). It would appear from his writing and interviews, however, that Giurgola is largely unaware of the ancient regime to which he is responding.

By extending and refining the geomantic principles underlying the original plan, Giurgola has aligned Canberra with the most potent of ancient paradigms. The great ramped hemicycles embody the 'dragon' forms *of feng shui.* They form protective arms to the east and the west (the Azure Dragon and the White Tiger), while the forecourt enclosure rises to its peak at the southern end and tapers down to ensure an unobstructed view north to Mount Ainslie. As in the ideal *feng shui* arrangement, too, there is a quiet 'heaven pool' in the foreground (the forecourt pool), with a slow-moving body of water in the distance. The ramps also refer to the great curved and ramped constructions of the ancient world, such as Palestrina, near Rome, and the theatre-temples along the *cardo* from Anzio to Tivoli. The re-creation of Capital Hill as a 'natural' element identifies the new building with solemn observances and ancient orders. As in the Greek city, where the city form is seen against the sacred mountain, the elevations of the new Parliament House are profiled under the curvature of the re-stated hill (see figure 7.3).

Externally, architectural monumentality has been exorcised in the new Parliament House by Romaldo Giurgola. Capital Hill has been removed and then restated in the form of the two ramped, landscaped hemicycles. The parliamentary functions have been articulated in a labyrinth suppressed in a landscaped park. Instead of the solid monumental bulk of Griffin's Capitol, Giurgola's design provides an open frame supporting a flag mast. The volume encompassed by this open frame is roughly the same as Griffin's solid construction atop the Capitol (figure 7.1).

> According to our design 85 per cent of the site is intended to be devoted to landscape, most of which is available to the public. Rather than being an imposition on the site, the Parliament building is generated by the natural state of the land configuration, just as democratic government is not an imposition on the community but rather originates organically from within the populace.[1]

Giurgola's justification for his approach to the design of the new Parliament House centres on what he considers to be the correct relationship of architecture with nature in the context of Canberra. Through historical insights into the 'transfer' of geometry into nature, as represented by the Italian and French gardens, and the 'alternative view by which naturalness of the organic forms extends within architectural episodes, as in the English landscape', Giurgola claims that he is able to view Canberra as 'a post-industrial artefact'. In his writing he constructs parameters upon which the 'in between built forms and land forms' become a 'natural assumption'.[2]

Giurgola argues that his design adheres to the Griffins' principle for the Capitol. As the trees planted on the Hill parkland grow up, however, there is a grave

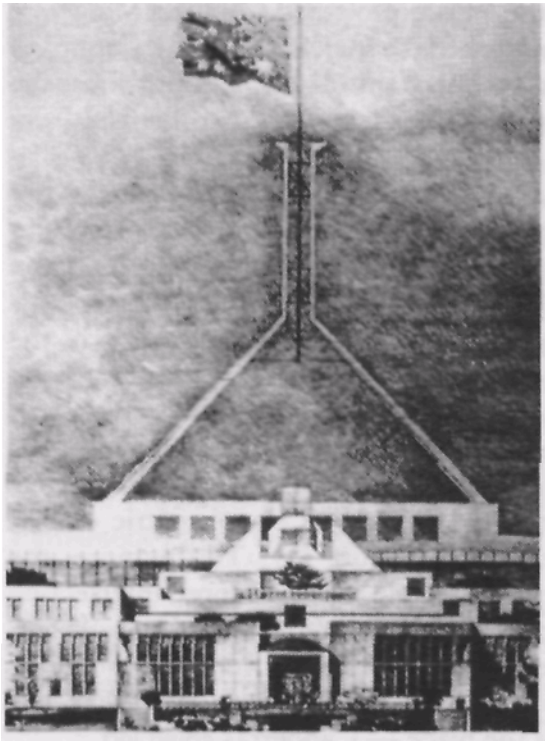


Figure 7.1 Elevation of new Parliament House, Canberra, showing flagpole

danger that Giurgola's Parliament House lying under the great grassed ramps will be read as the triumph of the occluded landscape over the overt civic symbolism of the 'City Beautiful' model: as the triumph of the 'private' city over Griffin's 'public' city of geomantic order explicit in the initial plan (compare figure 4.3 with figure 7.3). Giurgola draws a veil over the true nature of the Parliament House design in his writing, denying the ancient paradigms which underlie the geomantic matrix established by Walter and Marion Griffin: the geometry to which his work in fact responds.

In his 'Observations on the Future Development of Canberra', William Holford stated that the Parliament 'is an active, democratic building and should be in the forum and not on the hilltop'.[3] In its lakeside setting the new parliament building would be 'a democratic Versailles with a public park on the garden side beyond the basin of water, and a forecourt in the Government Triangle which every Australian would have the right to enter'.[4] Whatever credibility can be given to Holford's 'Versailles' model, the 'forum' proposed for the people comprised only an open forecourt and parkland. The acceptance of the approach by Holford that the Canberra order required an anti-monument stimulated Giurgola's response that 'the Parliament building is generated by the natural state of the land configuration'. Giurgola, too, proposed parkland 'which is available to the public' as a kind of forum. Canberra, tragically, has no place or piazza or forum. In fact, landscaped, open space is the very antithesis of the forum in Western culture. Traditionally the forum is at the very heart of judicial, parliamentary and executive functions of a society. How feeble are the proposals for the nucleus of the parliamentary zone by Holford, and those ensuing from the National Capital Development Commission, when compared with the Griffins' vision of a genuine forum — the Capitol:

> a general administrative structure for popular reception and ceremonial, or for housing archives and commemorating Australian achievement, rather than for deliberation or counsel,- at any rate, representing the sentimental and spiritual head if not the actual working mechanism of the Government of the Federation.[5]

The geometry of Canberra has been previously elucidated and is summarised here in order to explain the form of the new Parliament House. The nucleus of the plan, derived from the Vesica, comprises two equilateral triangles whose common base is the Municipal Axis with Mount Ainslie and Capital Hill as the apex of each triangle. The

centres of the formal basins are derived from the square projected from the Municipal Axis, and the profile of the northern foreshores of the lake is an arc with the Capitol as centre. In the initial plan the sites determined for the Capitol and its subsidaries, the prime minister's residence and the governor-general's residence, are also derived from the geometrical construction of the Vesica.

In the new Parliament House, Romaldo Giurgola has carefully placed the major elements of the Senate Chamber and the House of Representatives Chamber in the same relationship to the crossing or *axis mundi* (the present flagpole) as did the Griffins with the siting of the residences for the prime minister and the governor-general (see figure 7.3). The pagoda-like, pyramidal Capitol, the explicit *axis mundi* of the 'democratic' temple within the 'magic' circles of the hill was, to the Griffins, symbolic of Canberra as *caput mundi,* an imagery reinforced by the avenues radiating from the *axis mundi:* Sydney, Perth, Melbourne. The flagpole is the equivalent of the *omphalos,* the concept of the building seen as the *imago mundi* (image or map of the world). The same process of consecration is implicit in the notion of the *templum* of concentric circles, which the Griffins designated for the university (see figure 3.5). Furthermore, the geometry of the ramped hemicycles is derived from the Vesicas of three intersecting circles implicit in the circular geometry of Capital Hill in the initial plan. Giurgola has, therefore, responded both to the 'picturesque' and to geomantic orders by moulding the massing and profiles to the Griffins' matrix. Additionally, like the Griffins, he also searches to express the underlying character of the place — Canberra's *genius loci.*

THE SEARCH FOR THE *GENIUS LOCI*

Whereas Greek thought was anthropocentric and Greek architecture anthropomorphic, the Italic peoples from ancient times sought the *genius loci* for ritual and worship. The perception of the spirit of the place was the core of design in architecture, ideally the concretisation of that spirit, thus a meaningful structure for human use.[6] For example, at Nemi, Diana the huntress was first worshipped within a sacred grove by the lakeshore, the theatre-temple being constructed later.

The recognition of this ancient paradigm permeates Giurgola's writing on the new building. By gathering in significant aspects of Australian culture — references to society and its history — within the architectural design and decorative programme, Giurgola attempts to endow the building with a hierophany, 'a wonderful accretion of connotations confluences and connections making it richer and deeper rather than a mere arid group of structures with a specified function'. This concept, by which the building is considered as an agglomeration of many important symbolic elements, introduces the idea of the spiritual plane.

> 1 believe places and buildings not only have a physical existence, but are capable of having an important spiritual or cultural existence which is considerably enlivened and expanded by the role that particular place has been given in our society.[7]

Akin to Marion and Walter Griffin's proposal for the Capitol in the initial plan, the new Parliament House is intended to 'personify' the essence of the Australian 'spirit'. It

is, then, a phenomenological metaphor, in which Giurgola's sense of 'place' mirrors the Greek notion of *Logos,* meaning, simultaneously: location, place, point, order, reason, underlying principle and explanation, amongst numerous attendant meanings.[8] Thus, the building is projected as charged with symbols which evoke the Australian ethos at various levels. This notion is evident in the architectural, craft and art programmes, where temporal and spatial themes dominate the movement along the north-south axis tracing our history from the Aboriginal dreamtime (Michael Tjakamara Nelson's mosaic in the forecourt) through to European settlement (the Foyer and the Great Hall) and to the present (Executive Committee Room). The sense of temporal progression is reinforced by the use of contrasting materials: ancient natural materials such as marble, granite and timber juxtaposed with contemporary materials such as concrete and glass. Symbolic of Australia's constitutional and political history, the east-west axis connects the Senate Chamber, the Members' Hall and the House of Representatives.

Through its architectural symbolism and its art programme, the new Parliament House becomes, at one level, an explanation and justification of the architect's attempt to reveal the 'spirit' of the nation in the design.[9] But this is not the complete story, for a deeper sense of symbolism permeates the design. That is to say, a sense of the chthonic forces of nature — the symbolism of the mountain and the cave — which stems from the constructions of the ancient world, in particular the Roman Campagna and the architecture of the ancient city. The new building is distinguished by a strong inferiority, exhibiting the same basic themes of enclosure and axiality which, from the beginning, characterised the centralised and longitudinal structures of ancient Rome — the Thermae and the Pantheon — and were evident in the first churches built under Constantine and in the great Roman churches thereafter. The exterior was given little emphasis except for the main facade, being conceived as a neutral shell around a richly articulated interior. The mass is given *a priori* and the classical orders are applied only in a public place or in a dome, which rises up as a fully articulate bodily form and signals the urban presence of the values symbolised by the church. Giurgola is of Italian descent and the new building expresses the strong connections that he has always had with Rome,- he is responding to the *genius loci* not of Canberra but of Rome.

In 'Genius Loci of Rome' Christian Norburg-Schulz writes:

> Through an analysis of the landscapes of Latium we may therefore arrive at the needed explanation of the genius loci of Rome, of its various components and their interaction.[10]

He identifies the 'strange, "sunken" valleys' of Etruria, where continuous walls of golden-brown tufa close in 'idyllic' spaces, as the truly 'local' component of its *genius.* Originally the site of Rome had this character; the seven hills were not really hills but a series of crests between blind valleys along the Tiber. The Etruscans built their villages on the crests and used the sides of such valleys for tombs and cellars. Ancient Rome followed this pattern and its importance was recognised in that the altar dedicated to *the genius* loci was placed immediately under the steep tufa rock of the Palatine Hill.[11] The different landscape of the Alban Hills has already been mentioned: 'Here,

the gods of Antiquity are at home' writes Norburg-Schulz, and the natural forms enshrining Jupiter, Juno and Diana are in fact distinguished by a 'Greek clarity and presence'. Thus, Rome is situated between two different worlds: to the east the classical landscape of the gods and to the west the chthonic world of the *forre.* Around Rome, keeping both worlds at a certain distance, is the Campagna proper, which creates a 'pause' before the man-made synthesis of the city.[12]

From earliest times Rome possessed this double spatial structure: the vernacular cluster of settlements with roots in the earth, which came to create the 'idyllic' enclosure of the urban spaces,- the abstract axis of symmetry, which made the city the focus of a more comprehensive totality. The combination of these two components creates an axially ordered enclosure, a particular kind of architectural unit, which may be considered as the *basic element* of Roman architecture. The fora, thermae, sanctuaries, palaces and atrium houses of Rome are, literally, axially ordered enclosures; as such, they conserve a certain independence within the urban totality. Not assimilated by any superior geometrical system, they are accumulated like the individual buildings of the classical Greek settlement. Thus, the third fundamental property of Roman space emerges — the classical image of an environment consisting of *distinct, individual places.* But there is a distinction: whereas the Greeks in their settlements added plastic 'bodies', the Romans used *spaces* as units.

Rome forms the centre of a landscape which contains 'everything'. The old chthonic forces are present in the underworld of *the forre* and the Alban Hills rise up and contain the anthropometric characters of the classical gods; between these, under the abstract and cosmic order of the sky with the sun, these meanings become manifest as an exceptionally rich and varied environment on the Campagna which accommodates everyday life. In an active symbolisation of the various meanings, the world of the *forre* is reproduced in the streets and piazze of the city and the gods are seemingly brought down from the hills to the urban temples. The role of Rome as *caput mundi* is undoubtedly determined by its natural situation but this gathering is not simply the result of the central location of the city. Dynamically, the gods extend their influence to the whole environment as in no other place. This synthesis of the chthonic and the classical is the essence of the Roman ethos, in which classical forms appear on the facades and in the courtyards of the houses to 'humanise' the 'natural' structures.[13]

As Norburg-Schulz remarks, The power and versatility of the Roman *genius loci* has throughout history given the architecture of the city a unique self-assurance and grandezza'. The cosmic dimension, the *cardo-decumanus* scheme giving rise to the cardinal directions, gives man a general foothold in a mutable world and became the natural symbol of the Roman Empire,- and it concretises the belief in a general cosmic harmony behind all things. The distinctly Roman synthesis became complete with the incorporation of the cardinal points in all the main building types.

In Canberra Walter and Marion Griffin established parallels with ancient paradigms, particularly Greek models, but also with Eastern ones arising from ontological similarities.[14] In an interview discussion about this most recent phase of Canberra's development, Romaldo Giurgola indicates that he recognises the reach by the Griffins for the *genius loci.*

> Although Walter Burley Griffin had been brought up with the ideal of the Garden City, he envisioned much more in designing the plan for Canberra. He saw it as a symbolic place, an art form which could survive only if it strictly but harmoniously related to the configurations of the surrounding land. In conceptual terms a *genius loci* developed and evolved for the city plan according to two principles,- first, the organisation of the site into a number of specific and functional places and,- second, a tri-dimensional perception of the site which included landform, the landscape with its flora and fauna, and the architecture. *The similarity between this attitude and the city form of the Classical world is apparent.* [emphasis added]

In the new Parliament House design, Giurgola sought to concretise the in-dwelling spirit of the nation as the Griffins had attempted to do in the original design for the Capitol building. By reiterating the shape of Capital Hill in the general mass of the building, Giurgola infused his design with metaphorical associations such as permanence and stability, and, in the Roman sense, enclosure and interiority. The Great Verandah is intended to recall a distinctively Australian architectural element; in fact, the austere facade of marble and granite facing recalls the rock-hewn tombs of Roman Petra and those of Egypt but in a stylised romantic-classic mode This 'megalithic' monumentality is present in the exposed exterior surfaces of the building, where the rock-like masonry is punctuated with smaller openings as if carved or chipped into the face. The marble and granite concentrations of cubistic forms and the primary arrangement of verticals and horizontals also recall megalithic forms as at Stonehenge. A microcosm of the 'dragon' imagery of feng shui; the sweeping curves of the great ramped hemicycles reinforce the paradigm of the mountain and the cave,- their convex curves channel movement through the Great Verandah to the interior Foyer and there is a clear-cut distinction between exterior and interior space.

From the Foyer, no visual relationship can be established with the outside landscape as masses of marble and granite are piled up, symbolically interpreted in Australian terms as a metaphor for the eucalyptus forest. This 'inferiority', which characterises the Foyer, can be felt within the major spaces of the Parliament House. In a literal sense, the building can be perceived as a series of enclosed spaces,- like the Italian piazze, of introverted squares. A clear view of the city is never given but — in keeping with the Italian tradition — the sky can be clearly seen from courtyards which frequently have fountains or sculpture at their centres (see figure 7.2). The *forre* of the prehistory of Rome, reborn in its streets and squares, spring instantly to mind,- but in the new Parliament House these 'piazze' are framed by tautly stretched facades with a linear and planar clarity, and a machined sharpness as well.

In Rome significant architectural units are axially ordered enclosures and Romaldo Giurgola parallels this effect in the new building. Each area can be perceived as a separate space,- yet the *cardo-decumanus* system unifies the building. The cross-axial arrangement is clear externally but it can also be felt covertly, from views of the flagpole, the explicit *axis mundi,* which are presented from within.

The dialectical relationship between enclosure and axis is the fundamental theme during the history of Roman architecture, running from the Pantheon and the early Christian basilicas to Michelangelo's St Peter, and the high baroque interpreta-

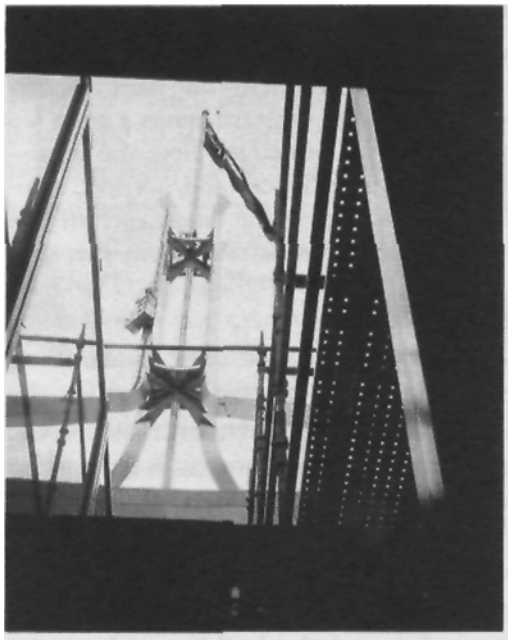


Figure 7.2 View of flagpole from the new Parliament House interior

tion of Borromini's St Ivo, and through to modern instantiations such as the Rome railway station of the 1950s. The Pantheon (AD 120), in which a circular room enclosed by a continuous, massive wall is interpenetrated by a longitudinal axis, visualises the basic spatial properties of the Roman *genius loci*. Through the central oculus of the 'heavenly' dome, the earth and the heavens are united. Thus, man's existence on earth is understood as the reflection of a general cosmic harmony symbolised in the grandest manifestation of the Roman conception of interior space.

This principle is implicit in the new Parliament House design. In the Senate Chamber and the House of Representatives the only light is provided from a pyramidal roof lantern in the centre of each chamber. In the Members' Hall other, cosmic factors come into play. The double-storey height of the Hall has a pyramidal lantern but, in this case, the roof lantern is positioned exactly above the north-south and east-west *(cardo-decumanus)* crossing and the crossing is emphasised by a reflective fountain pool. Thus, the enclosure of the hall, with its robust wooden columns, is penetrated by a vertical *axis mundi* projected from the conspicuous flagpole that symbolically links the earth with the heavens and marks the central *mundus.* Externally, the pyramidal shape of the flagpole can be interpreted as a tribute by Giurgola to the Griffins' original intentions for Capital Hill and the hierophanic function of the proposed Capitol. Akin to the concept of the Pantheon, the new Parliament House symbolically reflects the cosmic order: the *cardo-decumanus* relationship indicates the four corners of the earth and the quartering of the city, and Canberra as *caput mundi* — the geomantic expression of the microcosm in the macrocosm (see figure 7.3).

By alluding to the scale and architectural character of the surrounding buildings such as the High Court, the provisional Parliament House and the nearby imposing Administrative Offices, Giurgola has placed the keystone in the arch of Canberra and made a connection between the ancient paradigms and the actual world. And his design has made the Griffins' macro-landscape resonate with some of the most powerful symbols of Western culture. In the Colosseum and the Pantheon, the urban foci of Rome, anthropomorphic orders and cosmic axes are unified in the simplest possible way. The synthesis becomes symbolically present in the urban man-made environment. Recognising the power of this ancient symbolism, Romaldo Giurgola has expressed these timeless and eternal continuities in the urban focus of our national life.

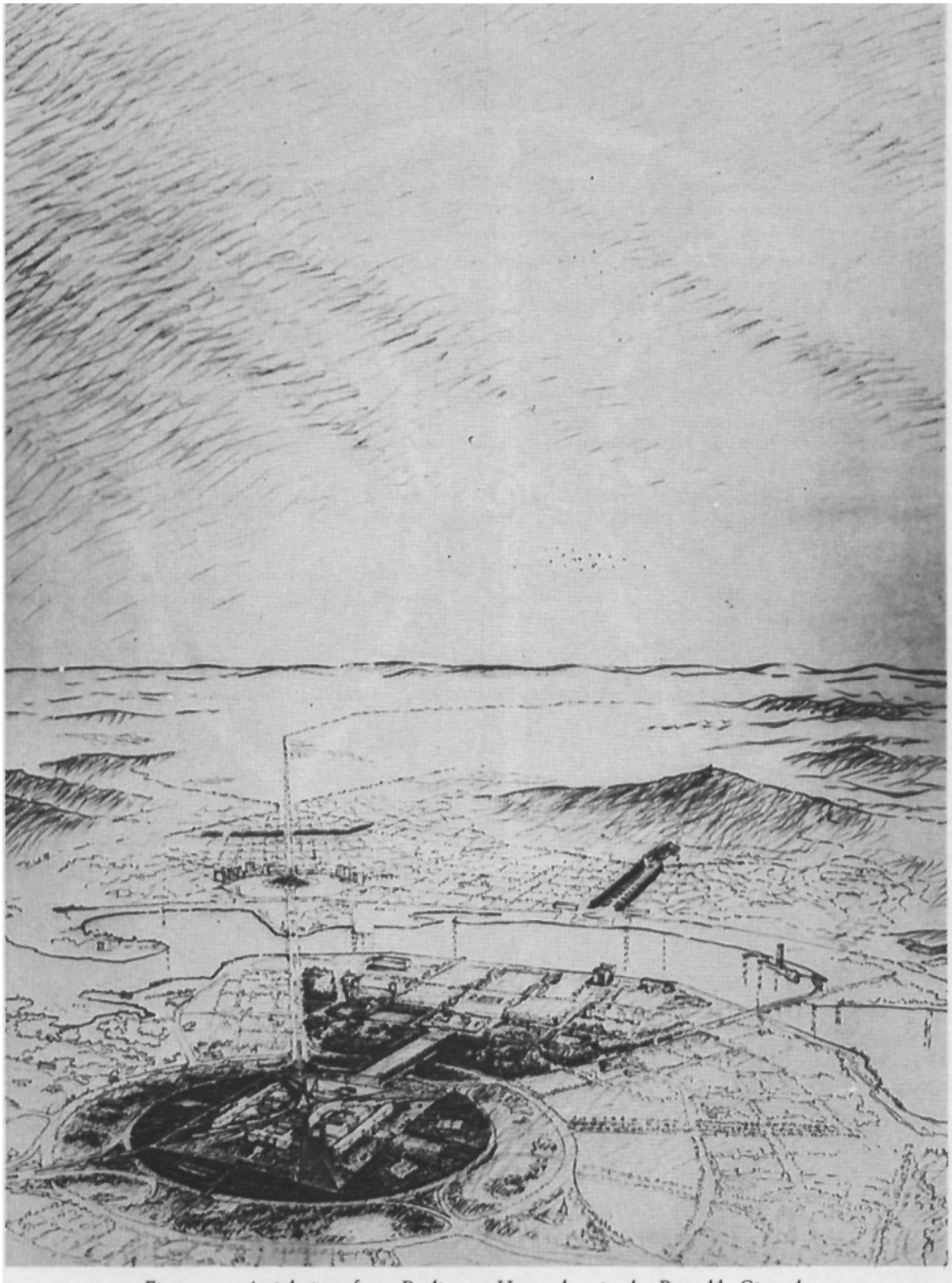


Figure 7.3 Aerial view of new Parliament House, drawing by Romaldo Giurgola

NOTES

1 R Giurgola 'Architecture, more than a Building' *Architecture Australia* vol.76 no.3 May 1987 p45.

2 ibid. p46

3 'Observations' p13.

4 idem.

5 'Original Report' (accompanying Federal Capital design No.29), reprinted in the *Report from the Select Committee Appointed* to *Inquire into the Developemet of Canberra* Sept. 1955 Appendix B, also printed in W B Griffin Department of Home Affairs *The Federal Capital Report Explanatory of tbt Preliminary General Plan* Commonwealth of Australia Oct. 1913.

6 C Norburg-Schulz *Genoa loci. Towards a Phenomenology oj Architecture* Academy Editions London 1980 p5. Norburg-Schulz develops the theories presented by: C Kashnitz von Weinberg Mittelmerische *Kunst* Berlin 1965; H Kahler *Wandlungen der Antiken Form* Munich 1949,- H P L'Orange *Romersk Idyll* Oslo 1952.

7 RCiurgola 'Architecture, more than a Building' *Architecture Australia* May 1987 p43.

8 ibid. p44.

9 J Pellarin 'Art and Architecture, The Gap between Theory and Practice in the New Parliament House' Craft *Realities* no.4 1991.

10 C Norburg-Schulz 'Genius Loci of Rome' special edition of *Architectural Design: Roma Interrota* vol.49 no.3 1979 pp50-55.

11 G Lugli Il *Forre Romano e il Palatino* Rome 1971 p 182. See also, Rykwert *The Idea of a Town. The Anthropology of Urban form in Rome, Italy and the Ancient World MIT.* Press Cambridge 1968 p 114.

12 Norburg-Schulz 'Genius Loci of Rome' p52.

13 G Hersey *Tht Lost Meaning of Classical Architecture* M.I.T. Press Cambridge 1988 passim. Hersey argues that the 'forest' of columns comprising the temples of antiquity represent a translation into stone of the original sacred groves which preceded the temple form.

14 B Bognar 'A Phenomenological Approach to Architecture and its Teaching in Design', in D Seamon and R Mugerauer (eds) *Dwelling, Place and Environment* Columbia University Press New York 1985 p195 f.1. Botund Bognar notes the similarities between Zen Buddhism in the East, and Existentialism and Phenomenology in the West.