



Chapter 1

Introduction: global perspective

Macrocosm to microcosm

*The jewel that we find, we stop and take it
Because we see it; but what we do not see
We tread upon.*

William Shakespeare: Measure for Measure II, 1

Christopher Alexander in *A Pattern Language* (1977) and *The Timeless Way of Building* (1979) says there is only one way to create human structures that express our humanity and aliveness. Perhaps that explains why Benoit Mandelbrot saw fractal structures only in classic architecture.¹ There must be something to an ancient building if it has managed to sustain us for thousands of years and still compels innovative thinkers to return to its fertile roots.

We want to believe that cities developed almost accidentally, according to political and commercial interests. We acquire that idea from our culture, which understands life as linear history against the traditional view of life as cyclical myth.² Yet, cities as we understand them are a very recent phenomenon for human communities. The current idea developed from something the Greeks called the *polis* (which functioned like an extended family) but did not form what we would identify as a 'city' before the European Middle Ages. Before then, and all around the world until quite recently, cities were an expression of the sacred.

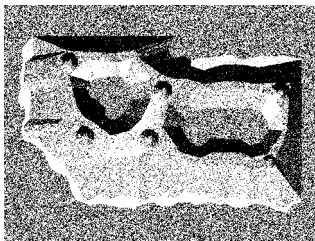


Figure 1.1

Viewed from above, Gaudi's Casa Milà looks as organic and timeless as any natural setting.

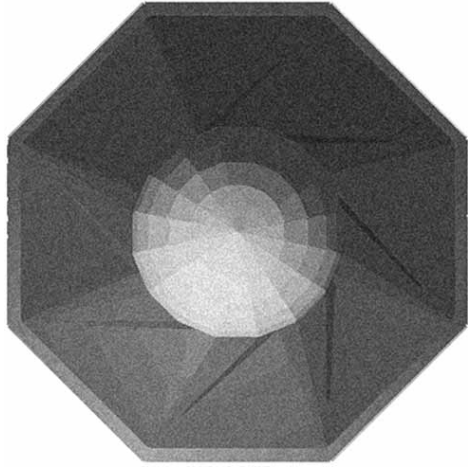


Figure 1.2

The Dome of the Rock provides the squared circle of a traditional building.

James and Thorpe (1999), in *Ancient Mysteries*, wonder why our ancestors shared the urge to reshape the planet for reasons that do not look quite sane to us. Mound building, straight and wide paths that run for kilometers to nowhere, stone monuments that chart the movements of celestial objects, cities that align to the cardinal directions and whose buildings can be used as astronomical instruments are part of our human heritage. Wheatley (1971), in *The Pivot of the Four Quarters*, showed that urban design expressed in a variety of Asian literature and architecture, and in some nineteenth-century American towns, conveyed the same designs. *What were our ancestors thinking?*

Human urban design in many places and times has conformed to the same mythic vision because it most profoundly expresses what makes us human. The planning of human habitations has generally been meant for a larger spiritual purpose—and generally an unconscious one.³ Traditional habitation seeks to mirror nature's ways as a form of respect, and human cultures provide mythic justification for these acts. Buildings everywhere used to be imbued



with magic, carefully oriented to the heavens and nearby spiritual features of the land, and integrated with the world at large.

Planetary rotation helped us define cardinal directions which, along with the centre, 'here', assumed importance for humans more than 10000 years ago. Cardinal and intercardinal directions impose cultural structure on nature and serve as a memory aid that strengthens and transmits modes of thought over generations. Humans first mapped the heavens, identified the celestial landscape with land formations, and arranged their dwellings and cities according to the scheme. Settlements were built to invoke these features. Designing on this scheme revealed the underlying movements of the universe.

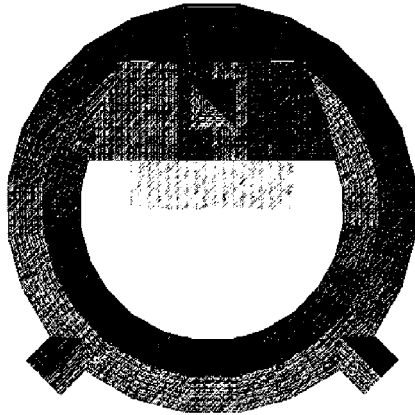
Myth provides the ultimate technology because it uses our brain and its capacity for memes and memplexes to encode extremely sophisticated information and transmit it far beyond our own time. A culture's myths make it possible for its members to acknowledge reality (nature). Myth served as the original way to encode traditional knowledge, including the science of a culture.

Petroglyphs at Teotihuacán orient the city on an east–west axis with respect to the sky and can be used for astronomy (one pair of markers indicates the Tropic of Cancer). The *Talmud* says that if a town is to be laid out in a square (which identifies what is made by humans), its sides must correspond to the cardinal directions and align with Ursa Major and Scorpio (*Eruvim* 56a). The practices of *al-qibla*, built into the Ka'aba and all mosques, orient east and west sides to sunrise at the summer solstice and sunset at the winter solstice. The south faces of mosques and the Ka'aba align to the rising of Suhail (Canopus). Spatial configurations like these form part of many cultures' scientific systems, but Westerners often cannot breach their cultural framework and accept this understanding of the world.⁴

Jauch (1973), in *Are Quanta Real?* considered that cyclical movement, a common feature in traditional and mythic thought, helps humans understand the enormity of the universe—including their own insignificance—as well as reality. (Cyclical thought, in Jauch's

Figure 1.3

The Globe Theatre of Elizabethan England features classic shapes aligned for good viewing, and acoustics. Moreover, the bulk of the building lies at the back.



opinion, is eminently useful today as a heuristic technique simply because it works so well.) Traditional building provides a way for humans to be constantly reminded of their insignificance, just as myths typically celebrate the deeds of those who humble themselves. The mythic model articulates a respectful interaction with nature to draw upon its inspiration and power.

Cosmology and the city

The city of Shang was carefully laid out, it is the center of the four quarters; majestic is its fame, bright is its divine power; in longevity and peace it protects us, the descendants.

From the Book of Odes

Our architecture and other cultural artefacts unconsciously reflect ideas of cosmic order and embody our values and social reality. They also have the potential to inspire our species' more troublesome instincts to conform to specific customs. Studies indicate that our instinctive urges can be guided merely by the presence and arrangement of nonhuman beings, landscape, and architecture.

To the ancients, subtly persuading humans to be their best meant creating habitations in harmony with nature. The ancients assessed all probable consequences of erecting a structure on the balance of nature and designed for the relationship between a building and the cosmos. Out of Greek geometry a few centuries ago Western culture fashioned the concept of 'sacred geometry' to supply a spiritual plan for monumental architecture.⁵ However, thousands of years earlier Chinese culture devised its own system—a radically different approach to addressing the same issues.

Careful planning in traditional building was essential—especially with capital cities, which assumed the responsibility for the welfare of a state. What you see in the planning of a traditional city—and especially in the planning of premodern Chinese cities—flows from what Mircea Eliade identified as the sacred practice of building.⁶

Reality is a function by which humans imitate the celestial archetype

Trinh Xuan Thuan in *Chaos and Harmony* (2001) sees the universe applying certain laws to create diversity. Harmony supplies the pattern and chaos supplies creative freedom. All the high cultures of Asia and most of the high cultures of the premodern world built their cities as a terrestrial celebration of the universe.

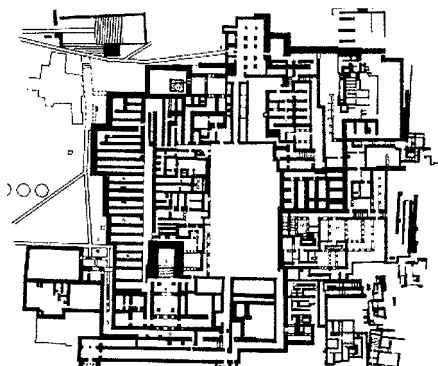


Figure 1.4

A large complex like Knossos follows the classic shapes, but it also brilliantly conveys the genius of the society that constructed it.

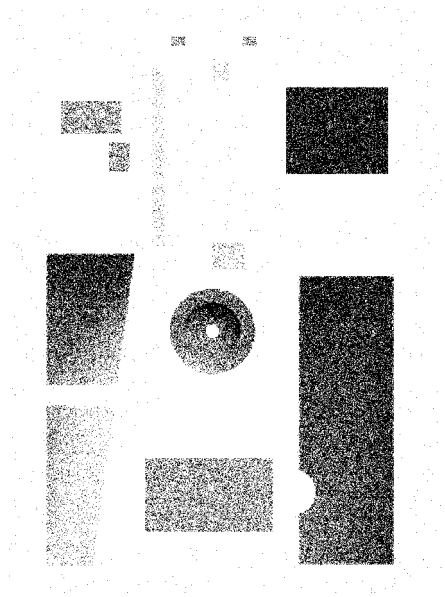


Figure 1.5

The Pantheon complex is aligned symmetrically but follows the patterns humans expect.

The traditional worldview of Chinese culture supplies a profound cosmology for generating symbolism. A Chinese city was built only after a considerable list of requirements was satisfied. Local influences (*xingqi*), dynamic powers of what an ancient Roman might call the *genius loci* or ‘spirit’ of a place, were determined before construction in accordance with the shape of local terrain and the stars and planets wheeling overhead. No expense was spared to ensure that the city conformed to traditional design principles. Space–time is paramount in the traditional ideology of Chinese building, which resides in the ‘Kaogong ji’ (Manual of Crafts) section of the *Zhou li*. The site and date for groundbreaking had to be confirmed by heaven in advance. In the *Book of Odes* one Neolithic ruler consults tortoise shells to obtain information whether a particular area offers the appropriate place and time for construction.



Humans mimic the macrocosm and the microcosm by conducting themselves so that they maintain harmony between the cosmos and their world

All rites used in the founding of settlements and cities seek to bring the human world to life within the cosmic scheme. Determining structural orientation, laying a foundation stone, and performing a sacrifice express the primordial creation of the world.

Orienting a structure to a particular time and place creates a microcosm of a meaningful instant. Founding rites also pull a civic entity from the quantum world (unpredictable, invisible, no direction of time) into the human one (visible, predictable, distinct matter and energy, forward direction of time).

Most traditional African religions promote the idea of harmony between humans, the natural world, and the world that cannot be seen—which, depending on your viewpoint, could be anything from spirits to dark matter, bacteria, and viruses. Daoist thinking consists of working with the planet, even to the point of cultivating 'uselessness' to avoid exploitation. In China, master builders applied the primary scientific theories of Chinese civilization to individual structures. Significant numbers and celestial objects were conveyed in the design of government buildings and humble dwellings,⁷ just as Renaissance artists sought to incorporate 'divine proportions' in paintings and monumental architecture. Traditional Korean architects analysed terrain before building so that their structures did not usurp the primacy of nature. They hid or de-emphasized necessary building or engineering devices and accentuated natural features. Building materials were used as if they had appeared naturally.

Reality is achieved by participating in a symbolic centre

For example, the circumpolar constellation Purple Palace (*Zigong*) was the model for the palace in the Ming city of Beijing.⁸ The architectural symbolism of the centre validated and demonstrated the power of the emperor who embodied the polestar and the nation's subservience to the forces of nature.



Orientation techniques for defining sacred territory in profane space emphasize the cardinal compass directions

Many cultures established cities on cosmology. Traditional people align primary streets to cosmic markers, establish streets on a cosmic grid, and place major gates on the primary axes. An entire city (including the palace and related structures) often aligns with a direction and/or a particular celestial object. A later design inherited whatever symbolism accumulated over centuries if not millennia. This made it simpler for conquerors to legitimize their rule by utilizing native cosmology and architecture.

Carl Jung thought that four directions were part of human brain functions, because they often appeared in people's dreams when they were stressed. Humans do have an automatic 'direction sense' that provides a frame of reference so that we can orient ('east') ourselves. This innate cognitive map typically provides four directions (back/front, right/left) and includes a form of internal compass that provides awareness of familiar environments. However, it works only if we stay in our home areas. Our cognitive map includes 'gestalt laws' regarding the orientation of buildings to take advantage of solar gain.⁹

Brave new world

It took approximately three centuries of aggressive work to unseat the traditional view of the world as a holistic system—typically known to us as 'paganism' or 'primitive superstition'—and replace it with the rational, Cartesian one. However, a tidal wave of scientific discoveries threatens to resurrect this old worldview—one that many hoped had been relegated to history (or at least restricted to pseudoscientists, *artistes*, and other belittled groups). In a classic case of 'revenge effect' or philosophical hubris,¹⁰ the ancient worldview has been partially reinstated through rational scientific inquiry and romantic popularizers such as Fred Alan Wolf and Fritjof Capra. Evidently, everything is more closely linked than previously



Figure 1.6

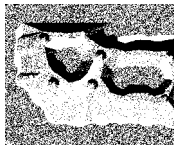
The Pentagon conveys classic design in a favoured shape of Vitruvius.

thought, so that the effects of actions are likely to be more widely felt than previously acknowledged.¹¹ This is a scary thought to people who have not adjusted to ideas of nonlinear systems, quantum mechanics, and chaos theory (sensitivity to initial conditions)—the scientific concepts that overthrew reductionism and renewed interest in the ancient worldview.

Claude Lévi-Strauss anticipated that science would eventually be sophisticated enough to explain the validity of mythological thinking and help us to close the gap between our mindset and the rest of the universe. Science can explain how much of what makes us human is built on metaphors for our experience of the natural world.¹² Now we have a better understanding of why myth cannot and should not be eradicated. It is time to engage the natural world and ancient traditions before they disappear and humanity goes completely insane.

We have met a traditional human—us

Humans are a product of the natural world and our bodies respond favourably to the introduction of natural elements because we are 'hard-wired' that way.



A substantial body of research indicates that human concepts of 'landscape aesthetics' construct the natural world before the Industrial Revolution. Across national, racial, and cultural differences, humans largely tend to choose an unspectacular or even mediocre natural setting over an urban setting devoid of nature. A large and consistent volume of research demonstrates the stress-reducing effects of natural settings and human observation of animals. Other studies conclude that natural pattern, natural beauty, and natural harmony are part of humanity's genetic makeup.

If we succeed in replacing the natural world that shaped us with objects of our own design our entire species is likely to go mad—if we are not nearly there already. Science advises us that the natural world preserves our mental health. That is why pets, ponds, wild animals, and views of parks and waves reduce our blood pressure and lower the production of adrenaline. Contrary to conventional wisdom, crime rates drop when the amount of vegetation increases.

Humans associate relaxation and peacefulness with natural settings that include a water feature. We prefer calm water before us to refresh us and to offer a soothing view. We prefer the presence of vegetation and animals in our vicinity, and desire a mountain or other imposing natural feature at our backs. Our early, not-quite-human ancestors also located their settlements this way. We also prefer the mechanics and infrastructure of modern living to be quiet and unobtrusive. Feng shui's ideal conditions for human happiness and well-being are programmed into our genes.

Traditional methods of feng shui supply a creative problem-solving system to analyse the built and natural environments and to better understand and improve the quality of life. This traditional, sustainable philosophy provides time-honoured techniques of environmental protection. On an extremely simplified level, feng shui can be understood as an attempt to re-establish a dialogue between humanity's deepest needs and our long-estranged, much-abused planet.



A final note

This book is not designed as self-help for the study of feng shui. You can locate the worthwhile self-help books in Chapter 15, but none can provide instruction on all aspects of authentic feng shui and none can compare to study with a competent instructor. What this book hopes to provide is factual information on aspects of authentic feng shui practise, suggestions on integrating principles of traditional feng shui into the modern practise of architecture. It hopes to offer a perspective on scientific principles that seem to underpin certain aspects of the traditional practice.

You definitely will not find much 'new age' thinking in these pages because that mindset has nothing to do with feng shui. Traditional feng shui is part of Chinese traditional science (ethnoscience) and follows a long history of interactions and knowledge of the world—empirical knowledge built up over generations and grounded in practical evidence.¹³ It also emphasizes attachment to place. Anything 'new age' (and especially 'new age' feng shui) is just nineteenth-century spiritual and occult ideology in posh packaging.¹⁴ Moreover, 'new age' feng shui has no basis in traditional science, legitimate science, or traditional practices.

If feng shui is going to work in the modern world it has to meet the world's criteria. Let us see if it can.

Notes

¹ Research based on aerial photos of traditional settlements in west and central Africa shows that they tend to have a fractal structure (scaling in street branching, recursive rectangular enclosures, circles of circular dwellings, etc.). These are the result of intentional designs and are found in other areas of African material culture.

² Myth, in one anthropologist's view, creates the illusion that humans can control and completely understand the universe.

³ In the prevailing scientific view, humans process visual information outside their focus of attention; some say this happens automatically (Craven, 2002). Most of what happens within us is beyond our perceptual range. Conscious and unconscious interpretations and motives often conflict. People around us generally know better about what is going on inside us than we do, based on their observations of our behaviour (Wilson, 2002).



⁴ See Joseph (1991) and Ascher (2002).

⁵ Geometry is found in all buildings but Chinese geometry is not Western geometry—no Chinese noun corresponds to ‘triangle’ for example. In Chinese geometry, straight lines are water, pointed shapes are fire, round shapes are soil/earth, curved shapes are wood, and square shapes are metal.

⁶ See Eliade (1991).

⁷ Traditionally, one part of an imperial palace in a capital was named *Taiji*, after the polestar. Beijing is sometimes known as *Zijin Cheng*, the Polar Forbidden City.

⁸ *Ziwei yuan* (Purple Court) consists of several stars in the constellation westerners know as Draco. The cosmology behind Chinese use of the circumpolar stars is very ancient.

⁹ See Johnsson (2002, pp. 316–17).

¹⁰ The *revenge effect* is defined as the situation when new structures, devices, and organisms react with real people and real creatures in real situations in ways that were not foreseen or intended. These are considered system effects and they can be tightly or loosely coupled. Complexity makes it difficult to determine how a system might act. A tightly coupled system can create problems from the beginning. Complexity and tight coupling create a higher potential for new disasters, especially of global proportions.

¹¹ Species in a variety of habitats have been shown to be generally within three links of one another, with the average number of links between organisms being just two. Few species in a community are four links from each other. This means that every species is ecologically connected to every other species in a community (Dunne et al., 2002; Williams et al., 2002).

¹² See Lakoff and Johnson (1999).

¹³ Ethnoscience is the study of interactions and of traditional knowledge of the world. It is based on the work of Harold Conklin among the Hanunoo of the Philippines in the 1950s. Traditional people are generally recognized by science as a potential source of knowledge. Interestingly, Joseph Needham championed the view that feng shui is an ethnoscience, partially on the fact that its principles follow the scientific model and are based on calculations and complex mathematical formulae.

¹⁴ See Krupp (1991, p. 320). ‘New age’ also draws upon disturbing nineteenth-century cultural themes, along with apocalyptic visions from the Middle Ages (see Goodrick-Clarke, 1992; Cohn, 2001).
