KHAM

10th Nov.1986 - 25th Nov. 1986

Rabindra Bhawan, New Delhi

What the mind moves towards is Kham,

Kharvati mono'smin Kham

Khanyate ksubhyate mano'nena va.

What stirs the mind, or delves deeper and deeper into it

A multi-media presentation on Kham, held in 1986, projected a cross-section of the world view on the manifestation of space for various purposes through various mediums, and its many dimensions and levels. The seminar explored the diverse levels of meaning of space, each merging into the other reflecting the movement from the inner to the outer and vice versa, from the centre to the periphery, from the gross to the subtle, from the mundane to the sacred. Selected papers of this international seminar have been published.

SPACE AND THE ACT OF SPACE

KHAM It began rather simply. That it might be difficult, we guessed. It struck us all as worth attempting . The subject was to be approached cross-culturally. It was to deal with building values in pre-industrial societies.

We thought of space.

Calligraphy and choreography occurred to us as concurrent 'acts of space'.

We decided on a sound-texture since space is defined and known acoustically.

Poetic allusion titles between sound and silence; thought, and mind-space. We decided to test this resonance too. Quietly.

As we approached the question of cultures, and usage-patterns, we inevitably came up against other disciplines. There was history, art history, archaeology and social anthropology. To our great pleasure, people from these disciplines listened and were interested. Some decided to join us, others to contribute.

Space awareness begins earlier than we think. Space ways grow out of peoples' ways from patterns of social organization and change. Also from mythic memory, ritual practice, thought traditions.

The wheeling stars, a study of their movements, pure mathematical calculation, these shaped men's world view and particularly sharpened their sense of structures and systems. We were lucky to find an investigator who already combined these interests.

The interaction in assembling this exhibition seems appropriate. Designer, researcher and studio collaborate and exchange in a mutually informing process.

Traditionally, as to space and applied-arts traditions, it is likely that as much went on in the workshop as in high centres of classical learning.

It might be interesting, we thought, to translate spacemeaning back into actual spaces.

Fourteen separate semantic shifts taken together, vividly convey space as a sensed experience, as usage and as concept. These became our exhibition areas.

The single source-word: *kham* is a Sanskrit spaceword and seed-syllable. It is used as a notational term from the *Rgveda*, onwards.

It is hoped that the cross-sectioning that comes out of all this may speak for itself. It may perhaps be used as a basis for enquiry. And further analysis.

For most of us, however, this may be the first time. We scan a vocabulary of usages. We listen to the worldview that is constantly alluded to behind the brick, stone and reed of tradition building.

The transmitted values of social, psychological and spiritual space are virtually endless.

We lose something when we strip 'space' of these meanings.

What is it we lose?

This is a question for all of us.

It is a question too, for the urban designer.

Tablet I : Enuma Elish, creation-myth of 2000 BC, Bablon

We have tried to understate the drama of what is happening.

Traditionally, universal-space and used-space were actually made to concur.

Universal-time and actual-time were likewise unified by rites-of-renewal at the turning year.

Astronomers now looking outward from our unstill earth reach the frontiers of vision at four billion light years.

Here, time as we experience it break down and simple systems of physical measure, ordinary terms for form and shape, fail.

Our creation-theory views the event of world creation as a solidification process within a massively compacting gas. This yields the discoid of our solar system. Beyond this, the further universe. Our space time concept is four dimensional. How does this enter our daily lives? Do we think of it at all?

Hoe did yesterday see it?

Almost all societies from simple to complex civilisations, saw an ordered and inclusive universe outside of which lay chaos.

To many societies this universe was aligned both vertically and horizontally around a fixed centre.

This axial centre was, and in many live traditions still is, viewed as the physical and metaphysical centre of sacred and physical geography.

It may be marked as the sacral site by the tree of life, its pillar-surrogate or by the primordial mountain.

Later cosmograms, emblematic space-usages and certain architectures continued to carry this symbol.

In Nepal the annual erection of the indra-Pillar revives this ritually. It is a tree.

It announces the New Year. It is still called by the name of the Vedic ritual-post: the *yupa*. Simultaneously, kingship is sanctioned for the coming year by the living Goddess. Outside the capital, local tradition surfaces in rites of fertility.

Again, among the Karen-speaking hill people of Burma and Thailand, the *la*, or Indra-pillar is a pole erected at the entry to the religious enclosure, with its *stupas*. It celebrates the territorial guardian-spirit: the first founder. Spiritual and territorial authority thereby converge.

Ancient kingship patterns of South East Asia established association with the mythical mountain at the sacred centre.

Only when the emperor actually entered, flanked by the entire hierarchy of the court in their ceremonial regalia could the centre be seen for what it really was: the world as empire. The empire of the Middle Kingdom as the court. Its pivot, the "living centre" of the "Dragon of Heaven" himself.

Spaceview was not simply theory. It was and is lived. At all levels.

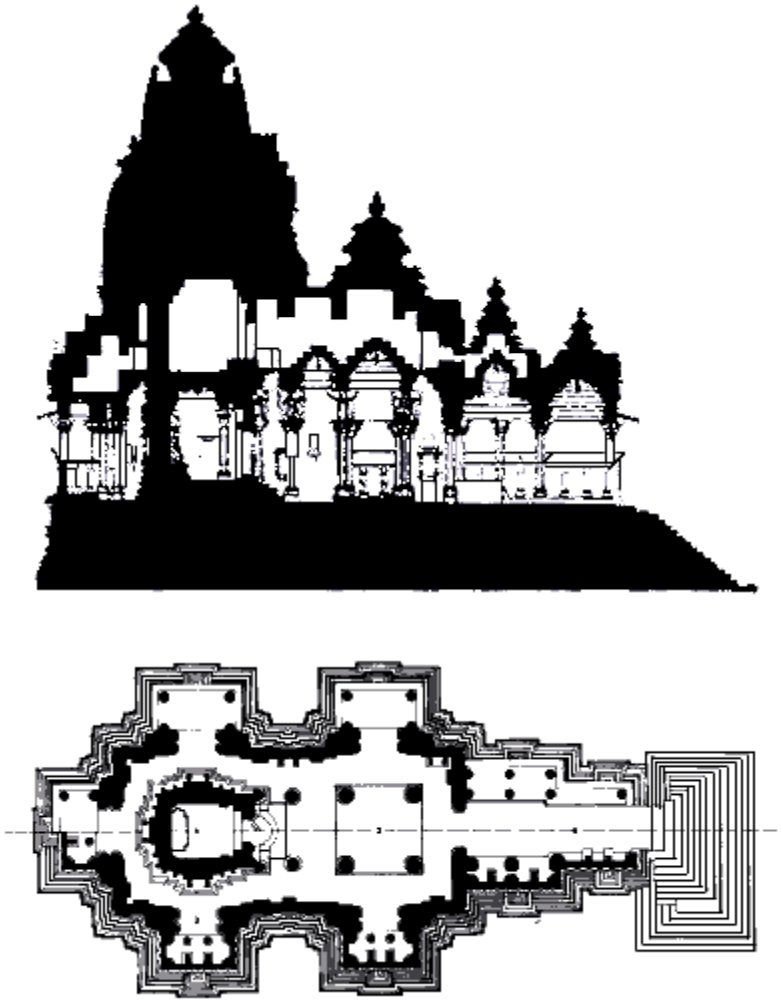
Rituals-of-the-centre still circle the sacred site sunwise.

In later meditational and mystical traditions the devotional exercise of situating oneself at the centre of the universe is encouraged so that all formations may be dissolved inwards. This is the Buddhist and the *tantrik* way: oneself the tree of life, the primordial mountain, the site of epiphany: oneself, the world.

The idea of centrespace in people' building traditions, however, is functional. The courtyard of the dwelling and by extension, the communal square to the settlement, is public space where private areas abut.

In India, this is where the shrine is situated; it is also where collective decision-making, justice and census of opinion take place.

In mediaeval Europe the market place was at the crossroads frequently, of earlier tracks. The stocks were here. And the Celtic cross, surrogate for the tree of life.



The pattern of the Dogon settlements of Mali, 900-1300 AD, on the other hand, reveals not a centric, but an anthropomorphic disposition of functional areas. The forge, the councilhouse, and the great houses, the menstrual lodges, and the foundation-altars are laid out in alignment to the ancestral body of the first founder. The pattern of domestic utilities from granary to kitchen, mirrors the settlement-pattern.

The universe as Body of the cosmic man, hero, god or first founder is a world-view as pervasive as the *axis mundi*.

The sacred centre in Greek and Indian traditions is known as *omphalos or nabhi*: 'the navel of the world'.

Our earliest measure is biomeasure. The measures derived from one's own body persist as ritual-measures and as simple functional measures. They are our earliest mathematics of space.

Early man's concern with the relation of part to whole, and body to spirit expressed itself in the act of ritually assembling or reassembling. In Pharaonic Egypt the dismembered Osiris was annually reassemled at Abydos, where his head fell.

The dismembered *purusa* of the Vedic *yajna* is ceremonially re-assembled at each subsequent formation of the sacrifice.

A later variant of this pattern in India is the dismemberment of the Goddess, following Daksa's sacrifice.

Where the fragments fall, sacred sites of the Goddess born. At each site the whole may be worshipped in the part. And the pilgrim moving from site to site, may reconstitute the whole.

Of all these sites the most sacred is considered to be the site of the *yoni* known as Kamakhyadevi in Assam. A natural spring that runs red for four days in the rainy season, this was originally a Khasia cult-site of considerable local importance and was progressively overbuilt,

The tantrikas remind us of the human body as universe where the elements align into vertical hierarchy along the spinal axis of Mt. Meru. The bhaktas remind us of the body as temple.

But it was the Jainas who gave us that most elegant symbol of realisation where the body disappears, leaving behind only space in a material frame.

It is the nobility of the human body in its organic entirety, however, that originally provided a powerful view of origin and the unitive relation of physical terrain.

To the Mbaya of Paraguay this body soared upward from the earth: its standing-place to heaven, its ceremonial head-dress trembling with beauty. The Scandinavian-and-Teutonic Edda describes the body in more rugged terms.

The Chinese define world origin by the cosmic egg, but *P'an-ku* the giant, is the distinction-maker. First chronicled by Kung Fu Tzu, 500 BC, the *P'an-ku* continues to be reverenced in the cave temples of Kuangsi.

Ikhwan-al-Safa, the seventh century Persian, strips off myth, but pauses still to wonder at the likeness between man and terrain.

The community of the church-on-earth is defined sacramentally by Catholics as the Mystical Body of Christ. Yet Christian architecture, the Roman basilica on its way through the romanesque into high Gothic on its way through the romanesque into high Gothic flowering, had long begun to yield a cruciform plan.

The ancient solar symbol of the cross-axis had been Charistianised by the Crucifixion. The Apocryphal

Acts of Saint John -- Judged to be quite early -- describes the cross as both *axis mundi*: the tree of life, and the supernal body.

Architecturally the Hindu temple is the three-tiered universe. And the Universal Body. Structurally, it is forecast upon the ritual diagram of the *Vastu-purusa*.

Religious community, Hindu or Christian, is frequently regarded as centre by the civic community in mediaeval tradition. Much of this has to be with the mature development of church, monastery or temple in the lives of the community.

With patronage, donations and subsidies it may own land. It will directly foster arts such as liturgical music, mural painting, religious sculpture. It will attract peripatetic scholars and mystics. It will archive, chronicle and record. It will feed at times of famine and offer sancturary at times of war.

As its functions accrete, the physical structure of the church turns into a servicing system. This is generally recognised to be the "physical body" of "*civitas dei*": the City of God's congregation, or the collective of the faithful.

If the body was viewed more comprehensively than we view it, in the world tradition, so was the physical borderline between the living and the dead.

The community of the living, the community of the noble dead and the transaction between the two, were considered crucial to the wellbeing of both, to continuance, and to the land. Hero-gods, founding fathers and ancestors were commemorated or celebrated annually with offerings. In return they protected their own.

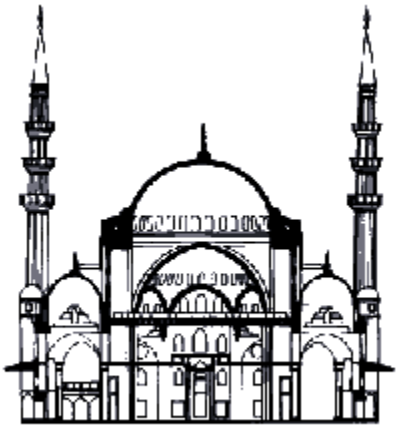
So deeply experienced were ancestral rites that they have given the world some of its most moving architecture, some of its most subtle expressions of faith.

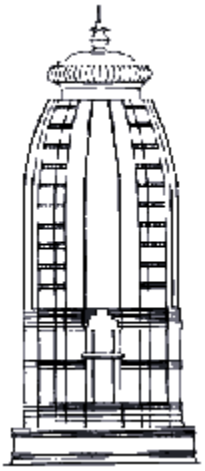
We remember the extraordinary feat of the pyramids and the sheer range of Egyptian murals, grave furniture and associated decorative arts. We remember the Etruscan smile. We recall the great barrows, mounds and dolmens of protohistory (many of which only became visible to us with aerial photography).

We recall the tomb of Agamemnon at Argos, the confiding gravity of the Catacombs. Eastwards, the late Mughal garden-mausoleum, the solemn repose of funerary Japanese mounds. The treasures of the Tien Shan, the T'ang dynasty stallions stamping and snorting; everywhere indeed, quick, vivid terracottas: at Mohenjo-daro, Knossos, Tanagra.

So, to the serene accomplishment of the *stupa*. If physically it began in the relic mound; and cosmologically, in the axial-pillar sited on cosmic waters; according to the *Mahavamsa* or "Great Chronicle", 100 BC from Ceylon, its shallow hemispherical dome may represent 'a bubble on the seas of existence'!

And according to Mahayana doctrine it is, and always was, the *dharma-kaya*: manifestation of the 'the body' of dharma: transcending birth and death.





High domes almost everywhere in the world symbolize the vault of heaven.

Islam presents us with the mosque: a dramatic sense of entry up a flight of stairs and through an archway. A minaret to call the faithful to prayer. The culmination of the dome. And through it all, an empty field of space.

The first domes are heavily corbelled. We watch them stack tensely to the breast-shape. And finally release themselves to float above the built-structure. The lazuline glazed tiles consciously reflect the sky.

Deep blue lapis-lazuli was dearly prized as ritual inlay by the ancient Babylonians as early as a couple of millennia BC. It was here too, that the earliest pitched brick vault in the world was found at Tell-al-Rimah, 2100 BC. The corbelled dome was to surmount the Hagia Sofia: the first great Eastern Orthodox Church at Constantinople, 5th century AD.

But the engineering feat of the fully-flowered Islamic dome is most clearly to be seen on its interior skin. Here structure constellates into the fine detail. An intricate threedimensional mandala, whether

intentionally or not, emerges. from the centre usually is suspended the mosque-lamp.

The tall Roman Pantheon already had, indeed, a centre pierced by a shaft of clear daylight to inbuild celestial space in architectural space. Structurally, however, it was not a true dome, built as it was of light-weight concrete.

By the 11th century the mysteries of the Byzantine ritual at Constantinople took hold on Russia. Within a couple of centuries a further architectural expression began to crystallise.

An interior hierarchy of approach is mapped in towards the inconostasis. Here opens the 'royal gate' to the sanctuary -- where none but priests may enter. The liturgical climax occurs at the cross-axial intersection with the north-south transept, facing eastwards and directly beneath the dome.

Above this ceremonial ritual, circles of stylised hierartic murals withdraw in vertical series: the saints, the apostles, the Mother of God and finally the face of the Pantocrater himself seen through a dazzle of light.

After the earthbound romanesque crypta, the Gothic cathedral starts its elaborate climb into ascent, thrusting back at the earth and forwards to the sky; the mandala of the rose-window begins to flower.

confronted down a long congregational perspective, this stained-glass membrane quickens the edifice to its own diurnal pulse. Glowing colour, brightest at noon, fading to sun-down, richly illumines the altar of the sacraments below, and brings it to dramatic focus.

The sun turns.

And the Hindu temple of the same period faces a brilliant daylight on its exterior walls.

its shell is rhythmic with light and shadow. Sculptures enact and protect the dance of life, leaning outward and down to the devotee.

Crossing the threshold, he enters the cool shadowed world of interior twilight. By the time he reaches the sanctuary he has reached 'the hidden cave space'. This is the 'womb-chamber'. It has no windows. it frames the event.

For a moment, briefly an dramatically illumined by the fire-offering, he sees the image come alive. Then it returns to the quiet glimmer of its oil-lamps.

He starts the journey back and outward into space and light, carrying this memory with him.

Out through the gateway.

Into the bustling city...

Merchantmen will soon be busy about their affairs, discussing the construction of new houses, comparing prices meanwhile, and subscriptions or donations to rebuild old shrines.

Artisans are already up and working. There is the sound of the chisel from the workshop. The brick-layers are shouting to one another. Already the quarriers are laying in fresh consignments of stone. It is a prosperous city.

Strangers stop by at the temple, its history is revived, its annual festivals attract masses. Already pilgrims travelling in the neighbourhood take a detour to include our temple. Trade thrives. No wonder the quarriers are happy.

The blocks come from a stony scarp in the country. As they drill or dig, it is not improbable that the men will stumble on the rough-hewn caves that honeycomb the cliff-face. Sometimes these are surfaced with hieratic carvings. These served as monastic retreats centuries ago. And these, the workmen respectfully bypass.

As early as the mesolithic period indeed, interior walls of cave-shelters, frequently pigmented with sinuous, vivid rites-of-the-hunt, had silently watched the burial of bodies aligned to the rising sun.

Already in prehistory a sense of space-orientation existed.

The sun is both spacemaker and timekeeper. The moving shadow turns full circle, sweeping the four directions. The moving shadow counts the hours.

The farmer scans the sky to know when to plough, when to reap and when to wait for rain. He marks time too, by the New Year ritual, the harvest offering and the annual feast days....

Sun, moon, and morning star, these were all timekeepers. They were gods and givers not only of the almanac but also of calendrical systems. The Mayas and the Aztecs kept count of each separate and coincidental cycle.

Their search for origins accelerated an investigation into the historic aeons of their own remote past, and stimulated their calendric sense. Their base consisted of 260 days; this coincided with a cycle of 18

months, 20 days and five dead days. These coincided once every 52 years. Every 52 years then, a new era begins. The sacred fire is rekindled. And the temple is ritually rebuilt.

Into systems of calculation enter questions of observation, prediction and hypothesis. We are into a conceptual world of mathematics that has transcended simple biomeasure to touch abstraction itself and the larger universe.

Already by 3000 BC the Egyptians have ordered a solar calendar of 12 months and 365 days. At the edge of the second millennium BC the Saracens go up at the ritual circle of Stonehenge with an accurate sighting of the summer solstice; this, with no other apparent technology than antlers, bones and baskets. By the 12th BC pythagoras hypothesises a spherical earth.

Around this time the Athenian Acropolis begins to watch the construction in marble of the Parthenon. Although the basic structure may be conservative, recalling the wooden structures that preceded it, its proportions are near flawless.

And the science of optical correction of columns has been brought to such a fine art of exactitude, as to be a model for centuries, an achievement that will not be repeated.

The parthenon was wooden-roofed, and patterned on a gabled-wooden structure. By the time it was built, heavy timber, what little there had been of it, had disappeared from Greece. Her limestone crags did, however, yield marble. And this proved the appropriate, and memorable, material.

Material usage in performance with structured space comes directly from men at work with the environment.

The symmetries of a conceptual order are thereby grounded and given shape.

Earth seethes. And landscape ripples. Nomads off the Central Asian Steppelands and the North American Plains evolve lifeways and spaceways that are built to travel. The shrine travels. The shaman travels.

Certain transitional societies such as the Zulus retain a lightweight structure even after they settle. If the compact and portable is one design solution, renewable construction is another.

By 5000 BC, the marshlands of the lower Tigris and Euphrates were drained and settled. Then, as now, giant reeds, bound in sheaves and bent, formed a natural armature for lofty arched construction. That this was used for temples we know from seals on ancient texts. This was also used as dwelling. And by the Marsh Arabs, until quite recently, as council houses. If it takes a hundred men to build such a mudhif, it lasts ten years. This is quite possibly the oldest living building tradition in the world.

Heavily-wooded, seagirt and liable to earth tremors, Japan turned naturally to timber. Experience with wood, respect for the material and a regard for exactitude meant a mastery of joinery techniques. Every twenty years the pre-Buddhist Shinto shrine at Ise is completely renewed. This, both for structural and ritualistic reasons. Purity is ensured, merit accrues, the pillars, which for sacred reasons are driven directly into the earth, are replaced.

That the inner sanctuary of the temple belongs to the sungoddess: clan deity of the emperor, that it holds the sacred mirror, and is witness to the emperor's ancestral rites perhaps explains the national significance of Ise.

Early monasteries and citadels site themselves impressively on impregnable mountains or formidable

rivers.

Monasteries retreat. Fortifications entrench themselves. Later, both may develop access to farmland and to pasturage. The monastery expands its functions, is now archival and scholastic, as well as a contemplative community, and is receiving donations. The citadel has learnt how to settle down for long sieges.

But the mountain is not only a natural defence. It is elevated. And nearer God.

The Incas of the early mediaeval period sited their capital at Cuzco, then later at Macchu Picchu in the Peruvian Andes. They terraced and irrigated an inhospitable terrain. They established a communication network fanning out into the lowlands. They developed their own metallurgical skills. *Inti*, their god, was clan god of the ruling house. He was the sungod.

And Macchu Picchu was a replica of the sacred mountain. *Intitihuatana* the hitching-stone of the sun, gazed down on the settlement. It was a ritual stone, gnomon, and a timekeeper of the solstices for the almanac and calendar.

The sacred mountain could be simulated.

The quiet, shallow fifteenth century Chinese Temple of Heaven was a mound or tai in three stepped-tiers oriented to the directions. From ancient China onward the mound had been considered the appropriate site for offerings to heaven. Here Heaven, Earth and Sun were propitiated for a good harvest.

While the ancient Mesopotamian temple was progressively re-built dynastically and for reasons of merit, the earliest known temple at Eridu is 6000 years old. By the third millennium BC the temple at Uruk is already sited on a 40 foot high mound, its corner oriented to the four directions with a stairway to the roof where prayers could be chanted at sun-rise. By 2000 BC the first true ziggurat of Ishtar Kititum, at Ischali, reared its height above the flat Mesopotamian plain. And soon after, the only surviving ziggurat at Ur.

The ziggurat marks the transition at which Mesopotamian religion turns esoteric. The temple functioniaries: the high priests, the craft workshops and the ritual kitchens continue. But the massive courtyards are gone. Was the ziggurat one massive altar? A semblance of the cosmic mountain? Or simply a high place?

The same sense of enigma hangs over the stepped pyramidical temples of the Meso American peoples, the largest of which has a plan-size as large as the Great Pyramid of Egypt.

It has been said that water is like love. No man can live without either.

To the ancient peoples, the cosmic waters formed the boundary of the known world. Axially, the world was founded on the cosmic waters, the root of the universe.

Access to springs and to sweet waters determine settlement-patterns, while the search for watering drives nomads great distances.

Along water routes trade develops. And with trade, the transmission of ideas and the convergence of pilgrim routes.

Water means fertility.

Water means refreshment of the body and the spirit. Water means spiritual regeneration. These cumulative meanings of water underlie the ritual intention of water. From the Hindu *purnaghata* or *mangalaghata*: the simple earthen jar of water, painted with the solar-symbol of the *svastika*, surmounted with mango-leaves and the cocunut of fertility; or the *kalasa*: the water-jar finial to the temple. Or the stepwell of Gujarat: this is simultaneously a watering-place, a well, water architecture, a site for ritual and a place of pleasure.

To rites of lustration, whether among Buddhistic peoples, Jainas, or Hindus. The aspersian-tanks of the mosque. And the baptismal font of Christianity.

Although it is only a small architectural detail, the font represents the entire rebirth-sacrament of being Christian and a part of the Christian community.

Water is compassionate. it cleanses. The Ganga in India is called the Mother. On her confluences, cities arose. Kashi, in particular, developed a highly stylised sacred geography. It is to be remembered that the Gangetic riverine-system, the rice-bowl of North India, was the most effective east-west route from mine-rich Bihar at the emergence of the first empire.

It is hardly surprising then that the ritual uses of water are universal. And that simultaneously, design-with-water, whether through the conscious feat of engineering such as the Islamic *ganat* or the Roman aquaduct, or for reasons of cultivated pleasure and meditation, has long engaged the interest of civilisations.

The islamic garden is a similitude of paradise with running waters, flowering and fruiting trees and a deep yearning for symmetry. If the image was born among desert peoples dreaming of oases, it flowered in actuality: it crystallised in garden pavilions, married interior-space and spilled over into the decorative arts of textiles and carpets throughout the world.

To start with, however, the waters began as a reference to the cross-axial tributaries of primaeval river.

The Far Eastern garden is intended as an encapsulated natural world, in which the spirit may reflect. The Taoist mystics of the T'ang period in Chine, the naturalistic landscape tradition that came to flower later in the Sung dynsty, Buddhist influences too, perhaps, combined in this particularly graceful accomplishment.

A garden presupposes a sophisticated urban civilisation. A saying has it that if the house is Confucian the

garden is Taoist. The Chinese garden was planned as a series of aesthetic surprises for the cultivated gentlemen or scholar. It combined the naturalness of nature with the pleasure of literary allusion. It poised itself between enjoyment and mutual understanding of the twilit area of mysticism: how to enclose a small space in open space, to suggest vastness through a small scale, to make the empty, dense; and how to recreate a sense of the remote.

Rocks were admired for their suggestive power and their evocation of awesome mountains. Running like a thread through the garden was the moral aesthetic: the highest good, like water pliant, soft, invincible.

Inherited by the Japanese, this aesthetic simplified and grew more daring.

In the monastic gardens attached to Zen Buddhist temples, visual interest is kept low key. These gardens are intended for meditation. By the time we come to Royanji, a field of raked sand has become symbolic of the seas of existence. The rugged rocks deliberately isolated in this space are described as tigers (zen masters?) that swim to other shores.

The European sense of the garden really surfaced with the 18th century and was likewise accompanied by a great tradition of landscape painting. Nature here is seen as oppositional to the artifice of society. it is viewed as an expression of immanence: the Longinian Sublime. Less ritual and consciously meditative than philosophical and artistic in intention, we come full circle with the porspect, the lake and the folly. And so to large breadths of space and fresh air. And to the floral exuberance and simulated disorder of Nature herself.

Turning like the fingers of a clock to the seasons. The seasons themselves, influencing how we see the elements. And from the elements, according to the *Upanisadic* view, space.

For out of space came winds. Their velocities ignited. Condensed to fluid. And this solidified to our perceptible earth. From vibration, touch. From touch, sight; from sight, taste; and from taste the odour that we know to be the earth's.

This, everywhere present unbroken and unbreakable.

Space is not distinct from the other elements. it transforms and accompanies each.

To site a temple auspiciously, the earth has to be smelled, tasted, distinguished by its colour, tested for consistency and listened to.

All our senses are engaged by the act of making space.

These ways are various.

Are our ways as various?

Eventually the senses close in on themselves.

The elements themselves fold back one into one another.

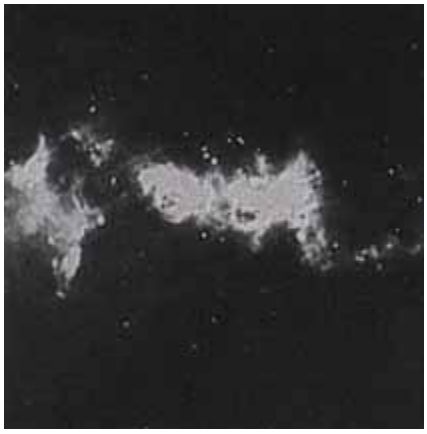
Till only space is left.

And this too dissolves or will dissolve into the uncreate.

A sense of this was shared by most cultures throughout the world. This was the spur to their

achievement. This was its measure. Do we share this perception?

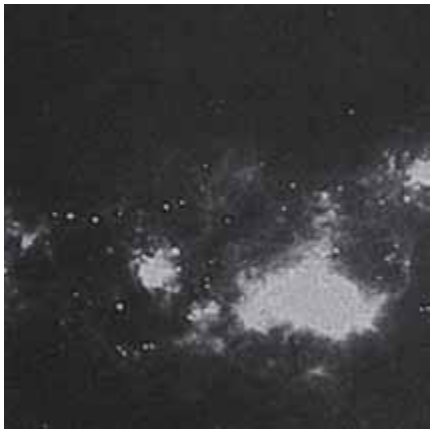
And if we did, how would this affect the way we made space?



Scientific thought
develops from non-scientific thought
The space-concept
was fundamental
We must begin here
Sense experience suggests
a certain development
in the space-concept:
from the solid body
to the relation between solid bodies,
from this to the interval between them
And so to space

Space is
therefore real,
in the same sense
as a solid body

Mein Weltbild (1934), Albert Einstein



It is clear
that space-concept
already existed
Yet in Euclid's geometry
space-relations are reduced
to contact
continuum does not occur

It was Descartes
who first described
the point-in-space
by its coordinate

This space-as-a whole
as conceived by Descartes
was indispensible
to Newtonian physics
Yet most physicists
until very recently
persisted in seeing space
as the passive
container of events...

Mein Weltbild (1934), Albert Einstein

SPACE From the Latin: spatium, Church Latin: spacium

According to the Oxford English Dictionary, we extract eight meanings in order of importance.

These are:-

1. Time, duration between two points or events.
2. Time or leisure to do.
3. Time quality contained in a specific period.
4. Period or interval
5. Linear distance as the interval between two points.
6. Area.
7. An unlimited extension void of matter.
8. Interstellar distance.

It will be observed that space begins as a term of relation or duration. It is interesting, therefore, that post-Einstein spacetime resumes itself as a unitive universal quality. Einstein -- quiet accurately from the European point of view -- traces evolution of the space concept from (a) the relation of solids, through (b) the interval between them, to (c) inactive, and finally (d) interactive continuum.

Space as unlimited extension and interstellar distance appear to enter the language with the seventeenth century entry of 'the New Science'.

Conjecturally, therefore, we may assume, as seems appropriate, that from the physical function of what -- in the Ptolomaic worldview -- may already have existed as a metaphysical term. Would this be *caelum*, Latin for 'the heavens', which according to Nicholas Copernicus (1473-1543) names that which is beautiful carved?

KHAM From the Sanskrit root khan -- to delve.

According to the source, these are:-

1. The axle space on which a wheel turns (*Rgveda*)
2. Cavity, cavern, cave, hollow, aperture (*Rgveda*)
3. The spring or fountainhead (*Rgveda*)
4. The nine bodily apertures (*Athervaveda, Pratisakhya, Kathopanisad*, Gautama's *Dharmasastra*)
5. Conceptually, space, air, sky, vacuity, emptiness (*Satapatha Brahmana, Prasnopanisad, Manusmrti*)
6. Mathematically, the aperture left behind by a speeding arrrow (*Manusmrti*)
7. Astrologically, the cypher (*Suryasiddhanta, Sahitya Darpana*)
8. Astrologically, the tenth mansion (Varahamihira's *Brhajjataka*)
9. Calligraphically, notationally and symbolically, the resonating anusvara represented by the circle of the *bindu* (Legical)
10. The city (Lexical)
11. The field (Lexical)
12. Conceptually, understanding (Lexical)
13. Action (lexical)
14. The creator: *Brahma* (Lexical)

Consider also *Kham* with the positive and negative prefix:

Sukham (originally, a fine axle-space), hence ease, pleasure, joy, delight.

Duhkham -- unease, discomfort, unpleasantness, suffering, constriction.

a) The idea of space-as-continuum seems to have been arrived at as early at 800 BC, if not earlier.

b) It was never physically investigated. But it was considered supreme among the elements.

c) It was considered to be everywhere present, unbroken and unbreakable.

We translate these and resequence into the following exhibition areas:

1. An equable interaction with space (*Sukham*).
2. The primaeval space-element from which all other elements derive (*Kham, Anusvara*).
3. The hidden cave-space penetrating mass.
4. Aperture as the threshold between inner and outer space.
5. As the speeding arrow leaves behind a space configuration, so does body-language and its gestures.
6. For space-understanding we elect an early concept: its organicity as The Universal Body.
7. The field of sacred space.
8. The axle space or centre-space for all religious mandala and cross-axial patterns.
9. Encompassing space that turns to vertical space as we took up at it.
10. City-space.
11. Space-the-fountainhead which we interpret as the water-of-life in space.
12. Action space: the act of building and the builder.
13. The mathematics of space.
14. Space as astrotime".