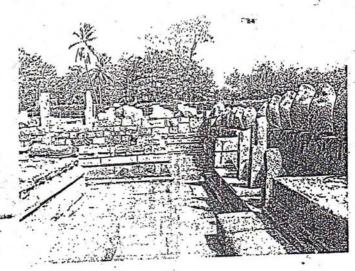
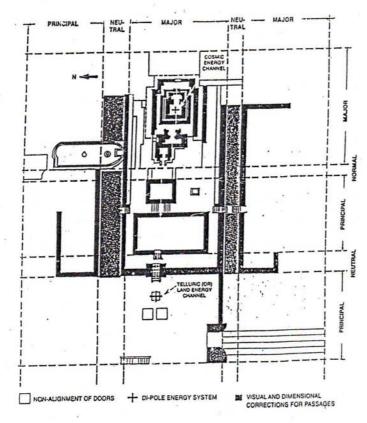


Dr Prabhat Kumar Poddar puts across his research-based results in traditional Indian temple architecture which could provide purposeful utility in the design approach of the future.

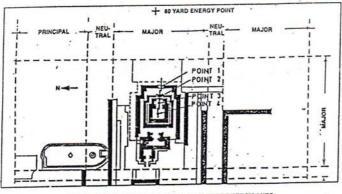
ncouraged by the remarkable relationships of structures and design principles, based on a design principles, based on a deeper understanding of subtle energies, an in-depth study of the Shore Temple at Mahabalipuram, Tamil Nadu, was undertaken to see and study if there are any such relationships in this complex. E tilt in the sixth-seventh century AD. it ilt in the sixth-seventh century AD. The focus of the study was: a) Magnetic grid lines of the earth at the temple site and solar orientation; b) Human subtle energy axes and temple energy; c) Rituals and their effect on temples. Over the years, after innumerable trips to the site of Mahaballpuram and extensive studies and research, we were rather stunned by the results.

Magnetic Grids at the
Mahabalipuram Site
The present survey and excavations have
exposed a large complex which must





MAHABALIPURAM SHORE TEMPLE RAJA SIMHA PERIOD – SIXTH CENTURY AD



INTERACTION OF TEMPLE DESIGN AND HUMAN ENERGY AXES

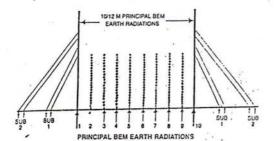
have had multiple mandapas within the temple precincts, and a host of other structures such as water tanks, open courts, etc. The harmony in this temple complex when looking at the plan of the excavated area is most revealing. A whole maze of major, principal, normal and neutral spaces of the earth's magnetic grid were discovered, which must have been mapped out first, and on the basis of which the entire complex must have been designed.

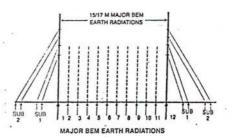
The plan of the temple complex gives an idea of how the various spaces and structures have been perfectly blended and are in absolute harmony with the magnetic grids of the earth. The entire temple portion of the complex, east to west, is fully contained within a major grid and the various plinths of the different structures within the temple portion are all spaced according to the rhythm and dimensions of the majornormal-principal-neutral-principal grid lines, in the north-south directions that intersect with the east-west major central grid.

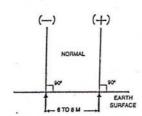
Many striking features of this complex are revealed in the study of the outer and inner walls of the temple structure. The centre-lines of the columns that are carved on the wall surfaces, follow exactly the spacing of the radiation lines of the grid concerned. (Twelve radiation lines spaced equally for a major grid line, and ten radiation lines spaced equally for a principal).

It is interesting to note that the passages between the temple structure and the outer courts are not of the same dimension or width. Because of the difference in the intensity of the fields between two majors, and a major and a principal radiation, the neutral spaces between these maingrid lines are found to be different, and this difference is respected in the width of the two passages in the eastwest directions.

Architecturally this dimensional imbalance has been subtly balanced by making the wide northern passage narrower at the western entrance by projecting the wall into the neutral zone from the major line of radiation. On the southern side, the eastern entrance is narrowed down compared to the western side by projecting the wall alignment into the neutral space away from the major lines of radiation.







NORMAL LINES OF EARTH RADIATION

The walls are all vertical and not sloped at an angle since they all lie on the vertical radiation lines only, those of the major, principal and normal.

The Alignment of Energies: Looking

at the layout west to east, or east to west, the alignment of each centre line of the steps and the door openings are shifting to the right with respect to each other. This we discovered, was the secret of converting static energy to dynamic

we know from our earlier studies that all doors help channelize the energies. But if the alignment of doors is perfect and totally symmetrical, then the energy remains static within the complex. The moment the centre lines of door openings are shifted progressively to the right (even by a few millimetres each time) the entire movement of energy changes, from static it is rendered dynamic. And this principle is clearly evident in the alignments of the structure and their entrances, so that each grid energy can be rendered dynamic by the play of form, proportion, dimensions, alignments, as well as the materials used in construction.

Solar Orientation: One of the factors which is critical in establishing a sacred place or structure lies in the secret of

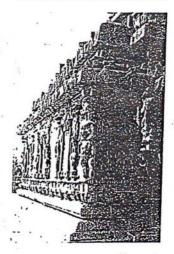
alignment of the place and structure with respect to the rising sun, on a particular day of the year.

This secret was known in ancient times and alignments were worked out very carefully. The Konark Sun temple in Orissa is so aligned that throughout the year the feet of the sun God's statue in the sanctum receive the first ray of the sun as the sun rises on the horizon everyday, taking into consideration the southern and northern shifts of the rising sun. The Mont St Michael's famous cathedral on the rocks in the north of France, is oriented to the rising sun on St Michael's day. Other ancient sites such as the Stonehenge were built as an observatory that helped the astronomers determine the equinoxes. the mid-summer and mid-winter times and inform the people of the seasons, the time for planting crops and , harvesting, the festivals, etc.

The Purpose of Solar Alignment: The sun helps renew the energy of the sacred structure or place every year, and follows a yearly cycle of replenishment that is fundamental for the energy of the place, deity, etc. Herein lies the very secret of harmonizing and channelizing the cosmic energies of the sun into a location on the earth. They represent the divine energy on the material or physical plane, as we have seen, to benefit mankind.

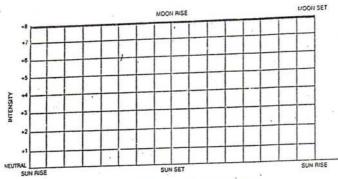
Every sacred place has this extraordinary and secret relationship with the cosmic energies, and renews itself or empowers itself in a yearly cycle which is consciously selected and fixed. In today's world, one of the foremost examples of this secret knowledge is the orientation of the main axis of the Matrimandir at Auroville, Pondicherry, which the Mother of the Sri Aurobindo Ashram gave as the rising sun on the

4th of April, the day of Sri Aurobindo's arrival at Pondicherry. This knowledge of orientation is a deep secret, requiring a lot more study and research with respect not only to the Indian calendar and traditions but other calendars and traditions too. This is in order to understand the importance of the energy



field in different structures and places across the earth's surface as understood and determined by the various ancient cultures and traditions.

Human Subtle Energy Axes As all energy is a dipole system, if one observes carefully, we find that this is also evident in the Mahabalipuram temple complex. Every place that is built has two energy points which we observe with the help of the lecher antenna and what we name as the Cosmotelluric



HIGH POSITIVE EARTH RADIATIONS IN PONDICHERRY SPECIFIC DAY AND NIGHT CYCLES ON 21 FEB, 4 APR, 15 AUG, 17 NOV, 24 NOV, AND 5 DEC

energy axis. One axis relates to the land and is therefore out in the open space, the single stone structure -the vahana-from where the alignment begins on the eastern side. The second axis relates to the building, that is, the temple and is marked by the placing of the deity at the exact spot of the sanctum sanctorum or garbha griha.

The Channeling of Energles: These two points are therefore the dipoles that channelize the energy flow dynamically. An interesting way of looking at it is from the view point of an electromagnetic system, wherein a moving shaft or object cutting a magnetic field generates electricity. Here the moving object is the human being, moving through subtly designed channels in this huge mass of static form, that generates dynamic energy within us. This dynamic energy is used for realigning the body's complex system of energy axes, when a person moves in and out of this energy field of the temple complex. This system of dipole has a subtle vibrating energy field which encompasses the entire complex, which can be detected upto a distance of almost eighty yards from the temple at Mahaballpuram.

Exchange of Energies: When checking on the beach, on the eastern face of the temple and eighty yards away, on the axis of the eastern entrance gate on the Shivalingam side, we discovered that this eighty yard point has an extremely sensitive energy field. It was surprising to find that everytime the readings at this point were taken, they showed great fluctuations but never dipped below a certain minimum, and at

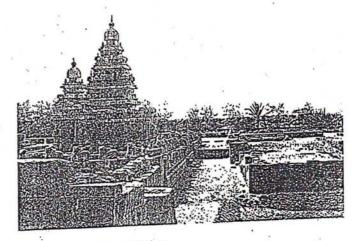
times reached a peak value which again was constant. For some time it could not be understood how to interpret this constant fluctuation to a minimum and a maximum limit.

Then we realised that every time a person entered the temple and went up to the sanctum sanctorum, the energy of the delty started falling to a minimum, and when the person left the sanctum and the temple was empty, the energy of the delty bounced back and reached its maximum high in a very short span of time (a few seconds). It was realised by further observation, that what was happening is that irrespective of the number of people who entered the temple space, everyone benefited from

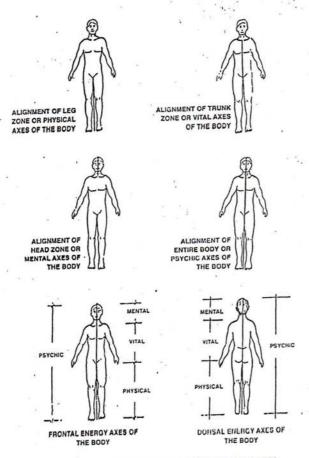
the energy field, during the short time they were there. An exchange of energy was taking place between the individual and the deity. Hence the need for narrowing down the perambulatory passage, so that people come in a line and be benefited individually. Even if a large group of tourists crowded in and were spread all over the different areas of the temple, packing it up, they still benefited individually, but the energy of the delty would not fall below the minimum.

Interaction Between the Temple and the Human Body: These phenomena made us curious to study and research how the delty and temple were interacting with the human body as and when any individual entered the place. This research revealed the occurrence of an amazing phenomenon.

We started by observing what happened to the energy field at the eighty yard point on the shore (where we were measuring) when a person walked towards the temple, entered the garbha griha and returned. It was found that as soon as a person entered the eighty-yard zone, the energy field at that point on the eastern axis of the temple slowly clarted falling. Before that, as long as the person did not enter the eighty-yard zone, there was no change in the energy level of the deity that we were measuring eighty yards away. From this eighty-yard zone, the interaction of the human body with the energy field of the temple begins, and



ARCHITECTURE & DESIGN Mar-Apr 2000



THE ENERGY SYSTEMS OF THE HUMAN BODY

we found four phases : As the person reached the outer gate of the temple, the dipping of the temple's energy field was arrested for a while until he or she crossed the width of the gate and arrived at the perambulatory passage. This indicated that a phase was reachedphase I; As soon as the individual stepped into the perambulatory passage and started up the steps towards the and started up the steps towards are garbha griha further dippling started which again stopped mid-way up the steps, indicating phase II in the energy level of the temple; When the individual

reached the platform in front of the garbha griha, and all over that area of the platform, indicated a phase III in the energy level of the temple. The phase IV in the energy level of the temple was reached, as soon as the person entered the garbha griha and went up to the delty. This corresponded to the minimum level observed.

It did not matter how many people were doing this together, the four phases or energy levels did not change.

We checked this process several times on different days and at different

hours, with men, women and children, from India as well as from other countries. The phenomenon was the constant pattern observed. As soon as a person approaches the temple, his or her interaction starts on reaching the eightyyard line. But, in the temple the energy stabilizes at four levels in a gradually decreasing order until a minimum is reached when the person enters the garbha griha.

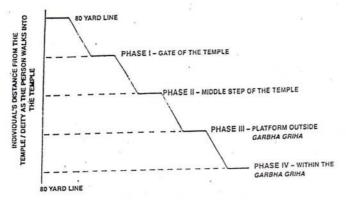
As the person leaves the garbha grilia and walks back out of the temple, the various energies that the person had been interacting with are released. The energy of the temple bounces back through the four phases as the person reaches the different zones away from the deity. Finally it is totally restored as soon as the person leaves the eighty yard line.

The very process of walking in and out of the temple is a very remarkable one — the interaction between the energy field of the temple and the human body, in spite of the shivalingam being broken! What is also remarkable is that this process still happens today after thousands of years, and is as interactive as when it was built!

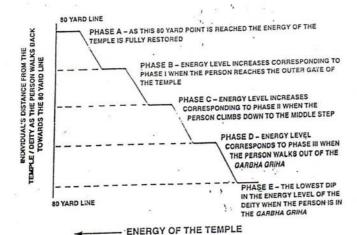
Relationship with the Four Energy Systems of the Human Body: The alignment of the four energy axes: As we further researched the phenomenon of the interaction between the entering and leaving of the temple, we tried to study what was happening to the human body. As the energy level of the temple was dipping, in what way did the energy field of the human body react? Observing the constant phenomenon of four plateaus in the energy field of the temple, when entering and on returning, it struck us that this could relate in some way to the four energy systems of the body! Was this the secret of the temple design and its essential purpose?

We proceeded to check this phenomenon with our lecher antenna, at the various points, before entering the eighty yard line, on entering the eighty yard line and proceeding to the temple entrance, at the temple entrance, upto the mid-step of the temple, on the platform outside the garbha griha, and inside the garbha griha

Before the eighty-yard line, all the energy axes of the body are found to be disturbed, in the normal state of health of the person concerned. But curiously,



ENERGY OF THE TEMPLE -



whatever be the condition of health, when the person enters the eighty-yard line, then all the energy axes of the body begin to get centered slowly. The gradual decrease relates to the energy of interaction between the body's energy axes and sub-axes. When the individual moves through the eighty-yard line, gradually the entire set of body's energy axes begin to move towards their central position, but only the energy axes and sub-axes of the leg zone, or the physical energy axes of the body get completely

centred, once the person reaches the

main gate of the temple. At this point a plateau is reached in the energy level of the temple which corresponds to the complete and integral alignment of the energy axes and sub-axes of the physical or leg zone of the body. The next plateau phase of the temple's energy on the midway steps when reached, corresponds to the complete and integral alignment of the energy axes and sub-axes of the vital or trunk zone of the body. The third plateau phase of the temple's energy, when reaching the platform outside the garbha griha, corresponds to the total

and integral alignment of all the energy axes and sub-axes of the mental or head zone of the body. The fourth plateau phase of the temple's energy is reached when the person enters the garbha griha. This we find corresponds to the total and integral alignment of the energy axes and sub-axes of the psychic or the entire body.

What was further noted and discovered was that in the process of entering the temple in stages, one by one, the various energy axes of the body (physical - leg zone, vital - trunk zone, mental — head zone, psychic — entire bodyl get aligned in the frontal surface of

the body.

Similarly when we leave the temple. all energy axes and sub-axes of the body (psychic - entire body, mental - head zone, vital — trunk zone, physical — leg zone) get aligned on the dorsal surface of the body in the reverse order. This meant that the entire temple complex was designed and built so that every human being who entered and left benefited by the interaction of the temple's energy with the body's energy axes, helping the total realignment, harmonising of all the subtle energy axes and sub-axes of the entire body system in all its parts and sub-parts, on the frontal as well as the dorsal surfaces.

This we discovered was the secret of all sacred spaces and architecture, not only in India but in all cultures. The purpose of visiting the temple at various times of the day, that is, afternoon, evening, night, helped the body realign its energies.

• For the solar period — sunrise to sunset - the solar axes of the human body come into play and alignment.

• For the lunar period — moonrise to moonset — the lunar axes of the human body come into play and total alignment.

 For the earth period — after sunset and before moonrise and especially during amavasya — the earth or telluric axes of the human body come into play and are totally aligned.

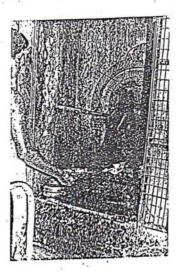
Hence the energy of the temple also changes qualitatively, and therefore interacts with the different solar, lunar, telluric or earth times and periods with the human body's energy fields and constantly works towards fulfilling its role of helping the race to harmonise its individual energies with cosmic energies. A temple is one place wherein the genius of the ancients arrived at an extraordinary channellizing of cosmic and earth energies, blending them perfectly in harmony with the laws of creation. The individual in such an environment spontaneously vibrates in harmony with these forces of creation and feels the power, the force, the peace, the harmony and what we call the

presence, the divinity!

Multiple Shikaras and Mandapas: In due course of time, this simple process got more elaborated, in the sense that multiple shikaras or mandapas were built in large proportions to channelize energies and effect a large number of people at the same time and allow them to be collectively, but individually harmonised. This system of multiple mandapas and different plinth levels of the mandapas progressively arising towards the garbha griha resulted in beautiful temple elevations of grandeur and unsurpassed beauty as can be seen in the temples of Khajurao, Somnath, etc.

A Blo-dynamic Energy Generator This was a fascinating discovery, the entire temple complex design a biodynamic energy generator of the most subtle kind, to dynamise and in the process, harmonise the entire complex to the subtle energy axes of the human body, separately and individually for men and women, respecting the inherent different energy systems of the male on one side and that of the female on the other. This was the reason for the segregation (in all spiritual structures) of men entering and remaining on the left side, and the women entering and remaining on the right side. This is graphically shown by a carving on the back wall of the temple, the image of Shiva-Parvati (none of them being carved on the central axis of the temple, but on either side of it) giving a visual clue to indicate the sides that men and women have to come in order to harmonise their energies respectively, as they enter and leave the temple and the sanctum. This tradition is still strictly followed in the temples in south India, but not so anymore in north Indian temples. The same system was also adopted in churches where the seating spaces for men and women were segregated.

What is still a mystery to us is that how the ancients arrived at creating a fine line of energy that segregated the male and female energy fields within the complex? The only explanation that we can come up with is that it could perhaps be related to the position of the two dipoles in combination with the dynamic energy line linking the two, wherein the form, shape, proportion, materials, all became part of a mandala or yantra or field force: One dipole channellizing the energy of the land, (exterior location) relating to female should or energy (Yin) which helps vitalise and harmonise the women when they visit the temple. The other dipole channelling cosmic energy (interior location, sanctum) relating to male energy. Ishwar or Yang) which helps dynamise and harmonise the men as they enter the temple complex and leave it.



When studying the alignment of body energy axes for men and women separately, we found that effectively, if each remained in their half of the temples, the dividing line being the central axis of the temple that is men to the left and women to the right when they enter and leave the temple, the harmonization of the energy axes of the frontal and dorsal, in each zone and sub-zone of the body are accomplished. But as soon as either of them crosses over from the men's to the women's side, or vice versa, then surprisingly instead of the energy axes being harmonised they are thrown totally out

of alignment! As a result of this experimentation it was found that within an hour of doing such crossovers and testing, the individuals felt totally drained out and did not have energy to even walk a few steps.

We can therefore understand the provision of separate lines of movement for men and women in all sacred spaces, as it is meant to individually benefit them. This separation was practiced not for social or religious belief. It therefore needs to be restored and not violated, with due respect and proper understanding. If it is violated, the consequences as we find can be disastrous for the subtle energy systems of the human body.

This discovery of the extraordinary relationship between the temple or any sacred space and the individuals who enter it is most profound and sublime, and needs to be respected and followed for our own individual benefit. It is most amazing as to how the ancients knew of these subtle relationships and took advantage to design spaces to achieve the desired extraordinary results for human beings. This is what we need to understand — not only the sense of the sacred, but bring the sacred back into our architecture.

Rituals in Temples and their

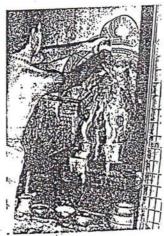
The purpose of carrying out various rituals in a temple and their implications is the subject of research carried out at various south Indian temples.

When moving around in a temple with a tuning fork, it was found that there was no appreciable difference in the sound level anywhere until one reached the sanctum sanctorum or garbha griha. In the sanctum space, the sound amplification was far more than in the rest of the temple. But if the sanctum was moist then the sound amplification was at its peal; than when it was dry. We normally find the sanctum areas always moist because of the abhishekha performed on the deity.

It was further observed that when the panchamrita (five ingredients) were used in bathing the stone deity, then a layer of negative ions was formed on the surface of the stone deity. Thereafter the agrant or lighting of flames was undertaken in front and/or the back of the deity. At the time of the agrant. mantras are chanted and bells are rung which creates a high turbulence in the atmosphere as well as a high amplification of sound because of the moisture in the garbha griha.

When the agrati is done in the front as well as in some places at the back of the delty, then the nearness of heat releases the negative ions from the surface of delty into the turbulent air, as more and more flames are used in aarati- 3/ 5/7/9/11/21/51 (always uneven numbers of flames are lit, as even numbers energetically cancel each other out). The surface of the stone deity releases large quantities of negative ions into the atmosphere of the temple, surcharging it, and spreading from the garbha griba through the rest of the temple.

When we are visiting a temple, the elders always insist that one participate and be present at the time of the agratt. The reason we now understand - our presence within the temple is meant to help absorb the negative ions into our bodies. Negative ions are normally found on seashores before sunrise because of the breaking of the waves (the air gets charged with them) and also up in the hills and mountains. The result being that when we return from a visit to these places.



the body feels invigorated and fresh, because the body system has absorbed the negative ions which neutralise the effect of positive ions we are constantly subjected to. Especially today, modern structures generate more positive ions caused by the cage of Faraday effect due to steel reinforcement. Therefore from all points of view, we would now say. "Do go to the temple, it is good for your health!"

Conclusion

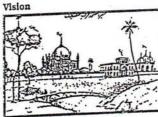
In any part of our country, even in the smallest and remotest village, a temple is built on the above principles, and the above outlined rituals are practiced solely for the benefit of every individual, wherever he or she may be — the most amazing and extraordinary gift of the ancients to us.

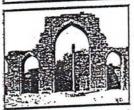
In conclusion, we could say that it is not only the selection of sites, designing and building of sacred spaces that suffices, but it is the rituals that complete and dynamically keep the energy of a place alive. Also as individuals, we bring our aspirations and prayers that further strengthen and increase the energy field of the temple and deity. Hence our research needs to look into all aspects and form the entire picture, by putting together all the pieces of the puzzle. And what a picture it isl +

Architect Prabhat K Poddar is a member of the New York Academy of Sciences. New York, and the chairman of the Akash Education and Research Trust.

iltimedia interactive CD-ROM titled 'Total A mutuneous interactive Energy Through Vanstu Shastra' has been prepared by the trust. For further details, contact 3. Cardinal Neuronan Street. Colar Nagar, Pondicherry 603001, Telefax 0413-39640 e-mail prabhaipodda

& Art Musings





Vision — the centre of art', held an exhibition of paintings, photographs, prints, maps and wooden engravings of Delhi from 11 December. 1999-21 January, 2000. Providing

glimpses of some of the rulers of Delhi, its monuments and maps of centuries ago, the exhibition captured the essence of medieval Delhi.

Above Safdarjung Tomb Left Iron Pillar

FORM IV

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I, Xavier Collaco, hereby declare the true to the best of my knowledge a

Sd XAVIER COLLACO

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