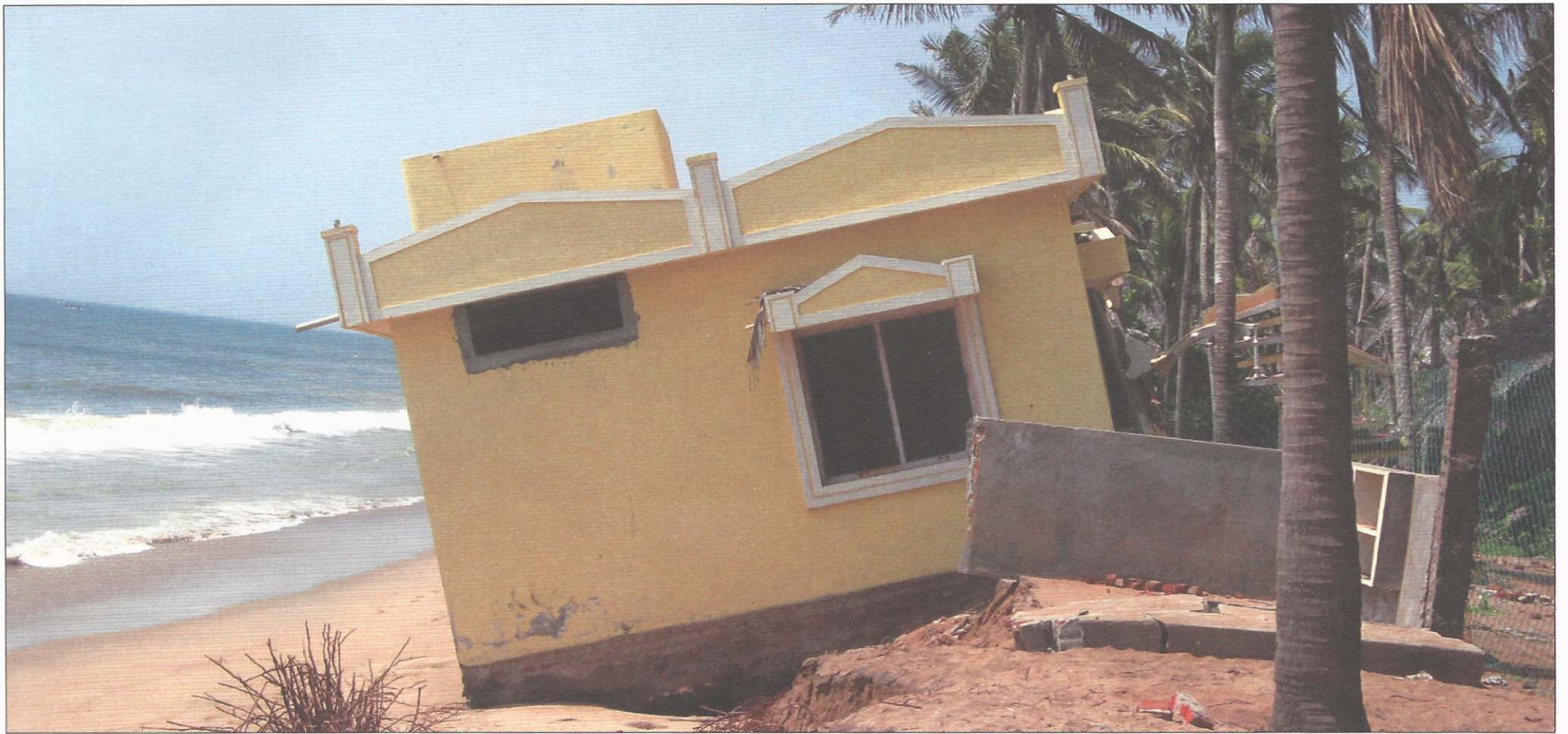


Auroville Today

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Is Auroville abandoning its threatened beach communities?

One of the houses at Repos has collapsed on to the beach, others are threatened. Meanwhile, part of the beach at Quiet continues to disappear. Why is this happening? What can be done about it?

In the late 1980s, the Pondicherry Government constructed a new harbour south of the town. As part of the new harbour, two long breakwaters were built into the sea. The two breakwaters interfered with the natural process of sand movement and replenishment. As a result, the beaches south of the new harbour have grown considerably at the immense cost of the beaches to the north, which are now being starved of sand and are eroding catastrophically.

The erosion of the coast to the north did not happen by accident. Those responsible for designing the new Pondicherry harbour knew that the harbour would upset the natural movement of sand with disastrous consequences. Consequently, an elaborate sand by-passing and beach nourishment strategy, consisting of dredgers, pipelines and a long, undersea tunnel were put into place to mitigate the erosion that the harbour would cause. However, this elaborate system was rarely used.

As a result, in little more than a decade all six kilometres of the beach of Pondicherry town disappeared. As the erosion proceeded northwards, rocky seawalls were erected to protect the coastal villages. Today a seawall extends all the way from Aryankuppam in the south of Pondicherry to Kottakuppam in the north.

However, these seawalls merely transferred the erosion process further north. Soon the adjacent coastal villages were losing beaches and homes to the sea. In response, the Tamil Nadu Government constructed first more seawalls and later a number of groynes – rock walls extending into the sea – to protect these villages. The first groynes built in 2005 were small, but in 2007 much longer groynes were built on either side of Thandirayankuppam village, just south of Quiet. These groynes created a whole new cycle of accelerated erosion which particularly affects the Auroville communities of Quiet and Repos and the neighbouring villages. Until 2007 Quiet and its neighbouring village had a 70 metre wide beach which was used for drying fish, docking boats and recreation. Within three years the

beach had almost completely gone, together with more than 25 homes in the village and the compound wall of the Quiet Healing Centre.

The present situation

Today, the beach community of Repos is hardest hit. The invading sea has washed away the beach and destroyed the perimeter fence three times in the past eight months: each time a new fence had to be erected inside the old boundary. One of the permanent houses has collapsed on to what is left of the beach, while part of the former Sun Bliss Café is hanging over the edge. “We survived the cyclone,” says Bhaga, whose own house is now a precarious four metres from the sea, “but in June we had big waves and we lost a lot of land. If those conditions had continued, my house would now be in the sea. Fortunately there was a lull, but now we see the erosion has begun again.”

In Quiet the picture is a little more complicated. Here, the annual erosion rate since 2007 has been 15 – 20 metres. However, writes Guy, “The present figures show that the beach along the southern part of Quiet (where the residences are) has so far further decreased this year by about 13.5 metres and will be under threat till the end of October. The beach along the northern part of Quiet (parking/reception/therapy centre) has more or less stood its ground this year with a minimal loss of 3 metres at the level of the beach gate and no loss so far at the level of the parking and reception. However, as this part of the beach will be under threat until the end of December, and especially during the winter monsoon rains, there is no way to predict whether or at what rate the erosion will continue.”

In fact, as sea walls have now been erected in the village to the north, Quiet now experiences erosion from both the south and the north.

Appie, whose house in Quiet is now close to the



Photo top: House in Repos which has toppled on the beach. Photo below: The collapsed platform of the village cremation ground adjacent to Quiet. Beyond it, at the edge of the sea, can be seen a line of tyres, the remnants of a previous, unsuccessful attempt by Quiet to control erosion of the seashore.

sea, has already contacted the Housing Service to explore options for rehabilitation. Other residents are no doubt considering it. The neighbouring villages have also suffered greatly. “The fishing people have lost their livelihood,” says Vasu, who comes from a fishing family but joined Auroville many years ago and lives in Repos. “Basically the beach is finished – we have lost more than 600 metres of beach – so the fishermen have nowhere to put their boats and many of their houses have been falling into the sea. Finally, we got a small seawall constructed in the village but it doesn’t help because when the waves are strong they go underneath it. Also now the fishermen have nowhere to put their boats and nets.”

What can be done?

“There’s no easy, readymade solution because it is such a complex issue,” says Filio, a member of

the local NGO, PondyCAN, who, having studied coastal management, is documenting the problem of coastal erosion here. The latest news is that the Tamil Nadu Government is proposing to construct a series of groynes, beginning near Quiet and stretching up to Pillaichavady to the north. “However, groynes and seawalls just pass the buck,” says Filio, “causing serious erosion to the north of these interventions.” In fact, it is estimated that a deficit of a few million cubic metres of sand has been created on this coastline by the construction of the harbour breakwaters and existing groynes. This deficit creates an erosion ‘hot spot’ which migrates north at a rate of about 1–2 kilometres a year. This year, Repos is bearing the brunt of it, but the beaches to the north are already suffering: the Pondicherry University beach has been reduced by about 10 metres over the past year.

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Is Auroville abandoning its threatened beach communities?

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"Groynes, particularly along this coast where there is a predominant one-directional movement of sand, are a particular problem," says Filio. "We did a rough calculation and found that for every square metre of beach created on one side of a groyne, four square metres of beach are lost on the other side. Groynes here are therefore destroying more coastal environment than they are protecting."

This may be so. But the residents of Quiet and Repos are willing to consider anything now, including groynes and seawalls. "When it comes to survival," says Guy, "you go for whatever measure will give you a chance of success." Bhaga agrees. "We have been waiting for a solution for years and nothing has materialised. Now, I won't reject anything. I will take whatever is available which will act immediately."

"In a worst case scenario, which is what Repos is facing today," admits Filio, "a seawall is probably the only option, preferably made out of geotubes (strong geotextile tubes filled with sand to hold the sand in place eds.) because they obstruct sand flow less than groynes, and can be easily dismantled if the erosion stops or even reverses. In the longer term, however, this is not a solution. The only solution is to reverse the process of erosion on this coastline by allowing the maximum amount of sand to flow naturally along the coast. This would then allow the beaches to form again."

The key to reversing erosion is sand replenishment. In fact, for the whole of last year the Pondicherry Government has been dredging the harbour mouth. However, instead of returning this sand to the sea so that the northern beaches would be replenished, it dumped it on the land. "We're talking of 150,000 cubic metres of sand," says Filio, "which would go some way towards replenishing these beaches. Now, at last, we have persuaded them to start putting it in the sea."

Challenges

There are problems with this approach, however. While governments have a defined tendering process for building groynes and seawalls, no clear tendering process seems to be in place for the dumping of sand in the sea; there is no rate fixed for this work. "To replenish the beaches the government agencies have to create, to a certain extent, a new system," explains Filio, "but governments prefer to do business as usual. And, of course, the construction of groynes and seawalls is profitable for some people. There's big money involved (a groyne costs about one crore rupees to construct) and once you build one, you have to keep building them. So there are a lot of people interested in retaining the present approach."



PHOTO: © NICOLAS CHORIER

The disruption of littoral drift caused by the groyne at Thandirayankuppam, south of Quiet, causes beach accretion to the south and beach erosion to the north of the groyne. Aerial panoramic view, photo taken by kite on September 16, 2012

Another challenge is that while a new coastline will eventually stabilize naturally, sand nourishment in the region of 400,000 cubic metres a year will have to continue, day in day out, for many years. Who will pay for this? The present dredging work at the harbour has been paid for by the World Bank but they will not continue to underwrite this work.

"The yearly cost of dredging at the harbour is about 10 crores," explains Filio. "So either you keep spending that money in sand replenishment or you will have to spend it along the coast every year in building new seawalls and groynes caused by the continuing erosion. Either way, the money has to be spent, but in the case of sand replenishment you get the beaches back, along with all the benefits, whereas with seawalls and groynes you only get more structures which cause more problems."

Yet another problem is that along this stretch of coastline parcels of Pondicherry and Tamil Nadu land alternate, meaning that the two State Governments have to cooperate to come up with joint solutions. This has not happened so far. And then there is the attitude of the local fishermen. While they reject sea walls because they limit access to the beach, they want groynes to protect their beaches. "They don't consider the damage these groynes do further up the coast," explains Vasu, "they just want an immediate solution." Filio also points out that as many fishermen now have mechanized boats, they may anticipate that a groyne today can be converted into a convenient small fishing harbour tomorrow.

In other words, educating people about the problems associated with seawalls and groynes and the benefits of replenishment is a key factor in changing the present mindset. Beach replenishment is increasingly common in the West where beaches are valued for their tourist and economic potential. Filio mentions the example of Miami which lost its beaches in the 1970s, leading to the collapse of the hotel industry. "Then they started nourishing the beaches and now they are back. Today the amount of money spent on beach nourishment is only 1% of the revenue earned from beach tourism. These are the kinds of argument we have to make to the authorities here."

"In the end," he adds, "it's all a matter of numbers. At present, only a handful of us are putting pressure on the authorities to replenish the beaches, but we need more support. More and more people have to want the beaches restored and to push for this option. If this destruction continues, those who have lost land and homes are likely to take the authorities to court, although particularly the poor and marginalized, tend to be resigned to the disasters put upon them. But we can't go on destroying the coast for ever. However, we may be approaching a tipping-point. The former Pondicherry Government floated a tender to restore Pondy's beaches and The National Institute of Ocean Technology and other governmental agencies are taking an interest in solving this problem, so I'm not completely discouraged: there is a progressive trend and the pieces are slowly coming together."

Disheartening

All this is scant comfort for the residents of Repos and Quiet who have waited years for something to happen. "It's very disheartening," says Guy, "because we have put a lot of effort into trying to solve the problem but nothing gets implemented. The National Institute of Ocean Technology has been studying our situation for years, but they are an advisory body, not an implementing authority. They are extremely careful in their recommendations because they are afraid that if they come up with a proposal that causes problems they will get the blame for it."

"We don't know why nothing is moving," says Vasu. "For more than three or four years I have been running on behalf of the villagers to the government and other agencies, but nothing seems to happen. In the villages so many houses have been lost, so many people's livelihoods have been destroyed, but all we get are vague promises."

But what about Auroville and the Auroville Foundation? Could they do more to help?

Bhaga confirms that individual Aurovilians have been very supportive after the cyclone last year. Guy mentions that the International Advisory Council always expressed its deep concern about the problem. "However," he says, "I don't think the

Auroville Foundation has exerted sufficient pressure to get things done, and our contacts with the deciding authorities within the Tamil Nadu Government are virtually non-existent. Also, we've gathered that protecting our beach communities is not a priority for Auroville; you could even say that some Aurovilians are psychologically writing them off."

Bhaga believes this would be a major mistake. "The beaches were an integral part of Mother's overall vision of Auroville; they cannot be valued only from a financial point of view. The tourists who come to stay here are not the same as those who go to Goa or to Kovalam. Many have been disciples of Sri Aurobindo and Mother for a long time and they want a different atmosphere, one that is elevating and conducive to the spiritual states they are after. This is the new direction we want to take in Repos. I wouldn't fight for the survival of this place, or of my house, if their future contributions to Auroville's life weren't openly in line with the Truth that Auroville must manifest more and more."

But where is the money for the restoration of our beaches to come from? Last year, Quiet looked closely into constructing a geotube seawall on its own land. Finally, they rejected it as too experimental and beyond its means – they were quoted 40 lakh rupees for a stretch of only 80 metres. Is Auroville able to fund these kind of protective measures? If not, who can? In fact, the FAMC, which is responsible for managing Auroville's assets, feels helpless. They wrote in a recent meeting report, "It was acknowledged that Auroville, in and of itself, can not 'do' anything to protect these assets as it [the adjoining beach where the protective measures have to be taken, eds] is not Auroville land per se."

The residents of the affected beach communities, however, are not about to give up. Bhaga, for example, has also been exploring less conventional solutions, like asking friends around the world to concentrate inwardly upon protecting Repos. "It was incredible. When the waves were at their most destructive, people united in their consciousness and produced an energy field strong enough to have an effect – the very next morning the situation changed. Within three days, the ocean was back to normal."

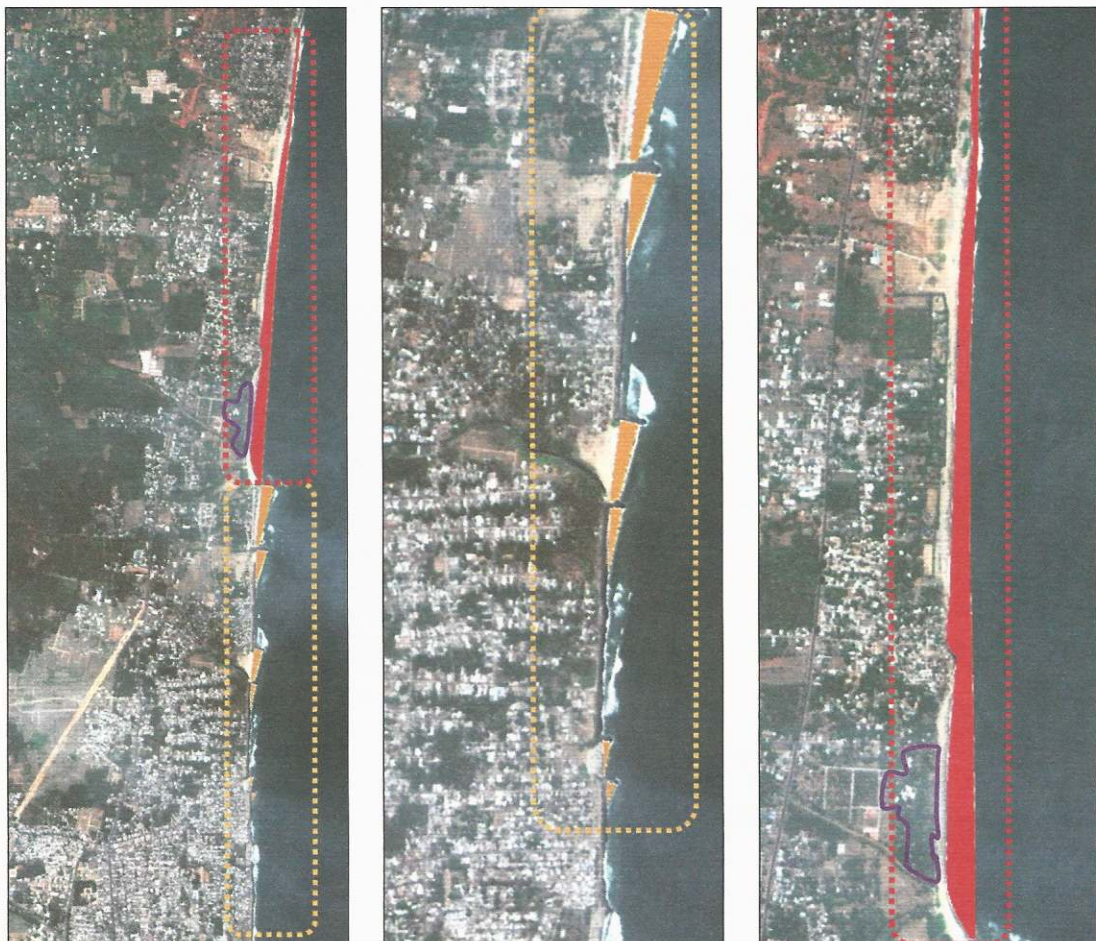
At a recent meeting with Filio, representatives of the affected communities agreed that beach replenishment is a priority as it benefits everyone – the Auroville beach communities, the fishermen and beachgoers, as well as the environment; influential friends and experts should be mobilised to pressure the authorities; and a solid technical proposal which is financially-viable should be presented to the government. It was also suggested that a pilot project be set up at Repos as a demonstration site of what could be done in the interim with 'soft' technology.

Is Guy heartened by these suggestions?

"Whatever is recommended or promised I will only believe it when I see it happening," he says. "Actually, I think Auroville's priority now should be to work with the Tamil Nadu Government for immediate protection in whatever way is feasible. After all, the choice of technology is not in our hands: they have to decide. We can only hope they make a wise choice. And soon."

Alan

PICTURES COURTESY PONDYCAN



Beach area gained (yellow – 29,000 m²) and lost (red – 102,000 m²). Quiet community is marked in purple. Picture from *The Challenged Coast of India*, a report prepared by PondyCAN.

What do we do with all the wood?

Ever since Cyclone Thane, Auroville's forests have been full of fallen trees. The foresters saw, collect and make impressive log-piles. Even more impressive are the log-piles that Alok, on behalf of the cyclone relief team, has made with the fallen trees collected from the Auroville communities and un-stewarded lands. What do we do with all that wood? "We have been selling quite a lot but the prices are no longer interesting," he says. "Also, with the excessive heat this summer the logs are drying out making them lighter and their prices are going down. We need to look for another solution."

"That solution," says Dr. Deoyani Sarkhot, "is to convert all the wood we can't use into biochar." Biochar, she explains, is charcoal which is obtained when wood or any other biomass is heated in the absence of air, without burning. This causes water and other materials to be driven from the wood. Charcoal is the substance that remains, in mass about 30% of the original input, but with many times its value. "If we burn 3 kg of wood we get about 1 kg of charcoal. Auroville is selling firewood for less than Rs 2 per kilo, while the charcoal goes for Rs 15 per kilo," she explains. And contrary to wood, charcoal can be stored for a long time, so it's possible to wait for the best price.

The uses of charcoal are legion: for cooking, for water purification, in medicine, as industrial and metallurgical fuel, in incense and soap making, for room heating, and much more. But Deoyani's interest goes further. She wants Auroville to use charcoal to improve its soil. Some experiments have already been done in this regard; for example by Bernard and Deepika in Pebble Garden, but Deoyani wants to make it a common practice in Auroville farms and forests.

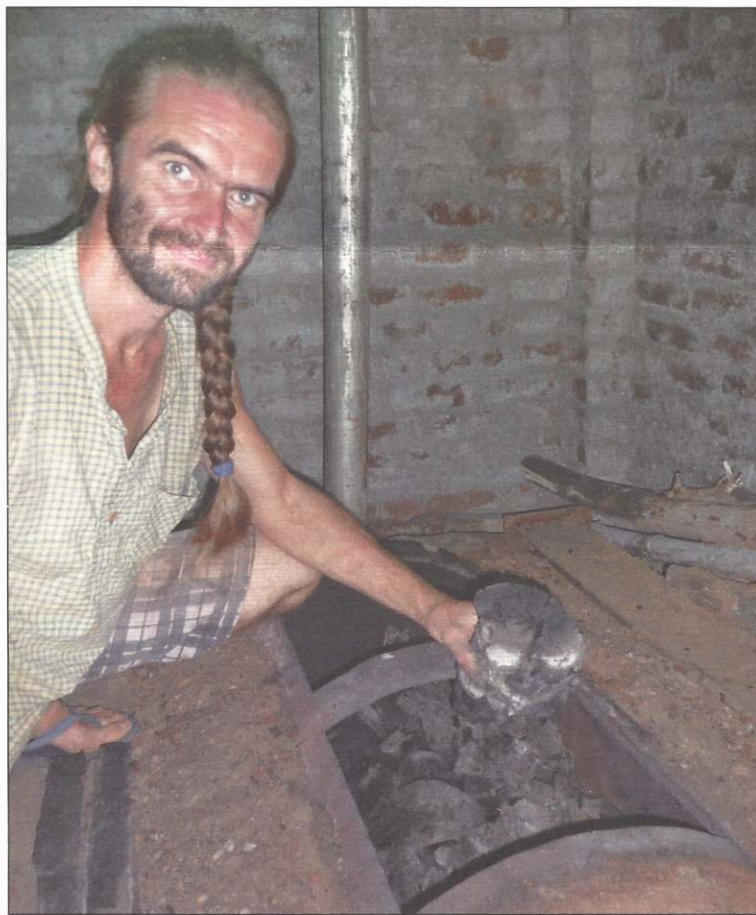
Deoyani knows what she is talking about. Her research for the last ten years focused on soil carbon and has led to a Ph.D. in soil science from the University of Florida followed by post-doctoral research projects, including one on biochar as a soil amendment, at the University of California.

In April this year Deoyani joined Auroville. "I came across Sri Aurobindo's philosophy in 1999. It appealed to me at a very deep level. In 2002, I first came to Auroville for a field project. I came to love this place, and now, hopefully, I will be here for good and be a part of this experiment." Lucas, who runs Auroville's unit EcoPro, welcomed her with open arms.

So what about carbon and the Auroville's soils? "Most of Auroville's agricultural soils are very poor," she explains. "When compost and fertilizers are added, most of the carbon and nutrients are lost within six months. The organic matter gets decomposed by the microorganisms, the carbon gets lost to the atmosphere as carbon dioxide, while nutrients are lost by leaching and runoff. In the Auroville forests there is more balance between input and output of carbon. But in agriculture and grazing lands, the input is never enough to compensate for the output. There is always a



Photo top: Deoyani and Alok with the Adam retort
Photo below: Frank showing charcoal produced by the Iwasaki kiln



loss as these agricultural soils don't have much of a holding capacity.

Terra Preta

"The idea to use carbon as a soil amendment came following the discovery of so-called Terra Preta [Portuguese

for black earth] soils in the Amazon rainforests in the 1960s by a Dutch soil scientist, Wim Sombroek. He found that these soils produced 5-6 times higher crop yields than the neighbouring normal soils. Researchers then discovered that these soils were of pre-Columbian

origin (between 450 BCE and 950 CE) and had been created by humans by adding a mixture of charcoal, bones and manure to the infertile Amazonian soil. The combination proved to be very stable and has remained in the soil for at least a thousand years.

This led to the study of charcoal in soil. It was found that the porous structure of charcoal helps the soil to store more nutrients and reduces the leaching losses of nutrients. It also makes a good habitat for soil microbes, improving the overall health of the soil ecosystem.

"But fresh charcoal must first be 'charged', meaning that its pores have to be filled with nutrients, before it can function optimally. At present we are doing it by soaking the charcoal in cattle manure or mixing it in compost. We have found that for each square meter of soil we should use 1 kg of charcoal. For house plants we recommend 2 handfuls of charcoal per pot."

Charcoal making

The problems with the traditional methods of charcoal production through open burning or in clay covered mounds are their inefficiency and their release of harmful gases into the atmosphere. All over the world, efforts are now being made to introduce sustainable techniques of charcoal production, such as better designed stoves, kilns and gasifiers. Before joining Auroville's unit EcoPro Deoyani, on behalf of the Janaseva Foundation in Maharashtra, conducted a field evaluation of three such gasifier stove designs for use in the tribal areas of Maharashtra. One of them, the TLUD, was found most

effective for charcoal production.

"This is a small stainless-steel gasifier stove for household cooking," she explains. "It works with any dry biomass like leaves, twigs, coconut shells etc. While cooking you get charcoal as a byproduct instead of ash. The cost of the stove is Rs 2,300 at present. As the people in the villages in Tamil Nadu use firewood for cooking, this could be a very interesting opportunity to earn extra money, or use the charcoal on their fields. The stove can handle 1 kg of biomass at a time and replace the three-stone chulhas which are now being used."

But for the needs of Auroville, bigger kilns are required. With funding obtained from cyclone relief donations, EcoPro is now testing three kilns. A small-size kiln called Iwasaki, designed in Japan, has been installed in Discipline Farm. Newcomer Frank has been operating the kiln successfully since July. It handles about 40 kg of wood or 20 kg of coconut husk at a time, of which about 35-40% is being recovered as charcoal. "Discipline farm has an abundance of coconut husk and they didn't know what to do with it. This is an ideal solution. The kiln takes 5-6 hours to run, and then they wait till it cools down. They load the kiln in the afternoon, by the beginning of the evening the fire is dosed and next morning they collect the charcoal. This kiln has already proven to be successful."

Another kiln design, developed by the Appropriate Rural Technology Institute in Pune, is being installed at Windarra. It can also handle about 40 kg wood at a time. The largest kiln, which is now being built in Aurosarjan complex, is the Adam Retort. It can convert a batch of 600 kg of dry wood into more than 200kg of charcoal. Per week about 3 batches of wood can be carbonized, which corresponds to about half a ton of charcoal per week. Both kilns are expected to start functioning by the end of October.

"The Adam retort was designed by Chris Adams, who visited Auroville in 2004 where he developed the prototype in CSR. It is now in use in many countries, especially in Africa where these low-cost and low-carbon emission retort-kilns are being promoted as an environmentally-friendly method of charcoal production. For India, this is the first Adam retort to be field tested."

However, all these kilns waste heat while producing charcoal. "I want to find a solution for that," says Deoyani. "Ideally, we should go for biomass-gasification, with which you can generate electricity while at the same time producing charcoal. For a large farm like Annapurna, that would be an ideal solution. They mill their own rice and that of other Auroville and farms in the bioregion and the rice husk could be used in a biomass-gasifier, which would save Annapurna a lot of the money currently spent on diesel for generating electricity. Auroville already has a biomass-gasifier at La Ferme, but it is standing idle. We would like to test this one to see if it would work."

In conversation with Caryl

The work of EcoPro

EcoPro has been promoting "Effective Microorganisms" (EM) as a microbial inoculate for liquid and solid bio-waste for the last thirteen years. It also has demonstrated and taught composting techniques in and around Auroville. The unit is in contact with hundreds of farmers in the Auroville neighbourhood, providing support and consultancy in organic farming. In the area of human waste, it has successfully introduced ecosan into village households and is in the process of converting a village to non-flush and dry sanitation with the promotion of hygienized human excreta as agricultural inputs.

EcoPro has also conducted some biochar experiments, running small trials in the use of charcoal as nutrient absorbent and for composting. Lucas, who is also active as coordinator for educational programmes of the Auroville Farm Group, has been running a programme on ecological agriculture in Auroville's Future School and had visited Bernard's and Deepika's Pebblegarden along with students to learn and teach biochar use in building soils.

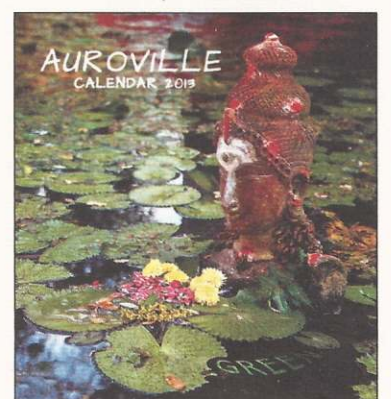
With so many fallen trees after cyclone Thane, Lucas had stated publicly that burning of wood was definitely the worst of all options and that charcoal making techniques should be researched and engaged in. At this point in time, Deoyani entered the Auroville scene.

EcoPro has announced that its programme of research and development will culminate with a conference in Auroville in 2013 to which leading researchers from India and abroad on terra preta, ecosan and biochar will be invited.

NEW PUBLICATIONS

Auroville calendar 2013

The 2013 Auroville Calendar, with photos by Ireno, is now available. It is a spiral-bound wall calendar, size 11 x 12 inches or 28 x 30.5 cm. It carries a poem on forests by Rabindranath Tagore and an introduction to Auroville. The calendar has moon phases marked and there is space to write notes. Price incl. (air)mail charges: €8, US \$ 10.50, Rs 295. To order contact ireno@auroville.org.in. For details visit: auroville.org/calendar/auroville_calendar_2013.html.



The Seven Jewel Centres



Seven times seven are the planes of the Supreme Goddess, the steps of ascent and descent of the Divine Transcendent and Universal Adya-shakti.

Above are the thrice seven supreme planes of Sat-Chit-Ananda; in between are the seven planes of the Divine Truth and Vastness, Mahad Brahma; below are the thrice seven steps of ascent and descent into this evolutionary world of the earth-existence.

These three gradations are successively Supermind or Truth-Mind, with its seven Suns; Life with its seven Lotuses; Earth with its seven Jewel-Centres.

The seven Lotuses are the seven cakras of the Tantric tradition, descending and ascending from Mind (Sahasradala, Ajna, Visuddha, Anahata) that take up Life through Life in Force (Manipura, Swadhisthana) down to Life involved in Matter (Muladhara).

All these Life-Centres are in themselves centres of Truth in Life even as the seven Suns are each a flaming heart of Truth in luminous Divine-Mind-Existence; but these lotuses have been veiled, closed, shut into their own occult energies by the Ignorance. Hence the obscurity, falsehood, death, suffering of our existence.

The Jewel-Centres of the Earth Mother are seven luminous jewel-hearts of Truth in Substance; but they have been imprisoned in darkness, fossilised in immobility, veiled, closed, shut into their own occult energies by the hardness, darkness and inertia of the material Inconscience.

To liberate all these powers by the luminous and flaming descent of the Suns of the Supermind and the release of the eighth Sun of Truth hidden in the Earth, in the darkness of the Inconscience, in the cavern of Vala and his Panis, this is the first step towards the restoration of the Earth Mother to her own divinity and the earth-existence to its native light, truth, life and bliss of immaculate Ananda.

Sri Aurobindo

In a talk and subsequent radio interview given in Auroville in August, 2012, American psychiatrist Michael Miovic summarized his work on the seven "jewel centres" of the Earth Mother. In this article he underlines the importance of the "jewel centres" for Auroville's International Zone.

In a densely suggestive description of the Supreme Mahashakti, in *The Hour of God*, [see box] Sri Aurobindo notes that just as there are seven *chakras* in the subtle body of the human being, there are likewise seven "jewel centres" associated with the planetary body of Mother Earth. Presumably, these energy centres of the Earth canalise the major planes of consciousness into material substance, just as the *chakras* connect the human consciousness to these planes. However, Sri Aurobindo never elaborated further on the seven jewel centres, so it is left to us to characterize them more completely. The interpretation of the jewel centres offered here is based on my own experience and inference, and therefore could be wrong in part or in whole. It is possible that Sri Aurobindo has said more on the jewel centres in the *Record of Yoga*, and if someone finds mention of this topic, kindly share the wisdom with me.

A geo-spiritual mapping of the planet

Overall, the seven jewel centres of the Earth Mother correspond to the seven continents. However, as the scientific definition of continents is complex and Integral Yoga describes planes and parts of the being in addition to the seven *chakras*, there are important nuances to consider in a full geo-spiritual mapping of the planet. What we may call the spiritual anatomy of the world is summarized in Table 1. In reviewing this, you will note that in addition to the seven major *chakras*, there are special designations for the Indian subcontinent, Australia, and Antarctica. These correspond, respectively, to the Soul and Transcendent, the Subconscious, and the Inconscient. Also, the North Pole represents the top of the "head" for the planet, while the South Pole represents the "feet". In between the two poles, the consciousness descends

from the mental planes in the northern hemisphere, through the vital planes around the equator, to the physical and then subconscious in the southern hemisphere. This vertical gradation of consciousness corresponds closely with the location of the *chakras* in the human being, and should be intuitively obvious.

What is less obvious, though, is how the inner versus outer dimension of the human consciousness maps to the globe. My sense is that the eastern hemisphere represents the inner being, while the western hemisphere represents the outer being. Combining these two interacting patterns of correspondence, vertical (by latitude) and horizontal (by longitude), we find the intuitive, mental and vital planes of consciousness located in the eastern hemisphere (which starts with the inner parts of the inner being along the international date line in the Pacific Ocean), while the physical consciousness and outer being are located in the Americas. The Indian subcontinent (which includes more than just the current political entity of India) subtends an opening to the Soul in the largest sense, which includes the psychic being, Atman or transcendent Self, and the all-pervading Infinite. Australia subtends an inflection of consciousness into the Subconscious, but there are important details about the lands of the Pacific Rim in Southeast Asia, and the islands of Oceania, that I have yet to work out.

Earth imbued with conscious force

The most important thing to understand about these jewel centres are that the Earth Mother is a divine Being, an evolving portion of the Supreme Mahashakti, and her lands are therefore imbued with conscious force. We shall soon see how the force-field of the land has affected the evolution of

human cultures. However, before coming to that let us note that the jewel centres existed long before the human being, and have thus influenced the evolution of all life on Earth. To give convincing evidence of this proposition goes beyond the scope of this essay, but here are a few examples to suggest the point: cats are solitary animals in all parts of the world except Africa, where the *anhata* influence has produced lions, which are social animals. To be social requires complex emotions, or bonds of the heart, and accordingly Africa is rich in social animals, including hyenas, meerkats, elephants, and monkeys. Africa is also the ancestral home of the most social animal of all, *homo sapiens*, and the continent itself is shaped like a humanoid cranium. All this points to the existence of a conscious force in the land that preceded and later influenced the evolution of higher primates into human beings.

Or take the example of elephants and cows. African elephants are large and untameable, whereas Indian elephants are both smaller and trainable, that is, more conscious. This difference in size and alacrity is due to the subtilising influence of Maha-Bharat, the spiritual centre of the world. Likewise with cows: Indian cows are extremely graceful and radiate an aura of peace and beauty. They have lovely almond-shaped eyes, and soft, gentle curves in their bone structure that have always caught the eyes of artists. American cows, in contrast, are larger, more muscular, square of build, and produce prodigious volumes of milk. European cows stand somewhere between the Indian and American: the Swiss cow is smaller and more elegantly proportioned than the American, with a nice sense of definition to its form, yet is larger and stronger than the Indian cow and lacks the latter's grace and spiritual beauty. Thus, even in animals we see traits of the higher vital influence in Africa, the mental plane in Europe, the physical in America, and the spiritual in India.

When we move from animals to humans, and from cows to cars, we find that the same patterns persist. Africa does not yet have a tradition of auto-

mobile design, but America and Europe do. American cars are famously large, muscular, and consume great quantities of fuel. The American driving experience is all about the physical consciousness: one cruises comfortably across vast expanses of land, in plush seats with soft suspensions, and uses an automatic transmission that requires little mental focus to operate. The shapes of cars are either bland or boxy in a way that shows an absence of thought, and this among people who spend more time in their cars than anyone else on the planet. The European driving experience, in contrast, appeals to mental discipline in every way. Car designs reveal strong concepts and refined aesthetics, and much thought has been given to both quality and fuel efficiency. Also, the firm suspensions and manual transmissions force the mind to focus on the road, and this experience of driving a driving machine is further enhanced by the more compact landscape of Europe, which requires one to concentrate on the curves and frequent accelerations and decelerations as one winds through open country punctuated by towns and cities.

And then there is the Indian driving experience, which is entirely supra-rational. A seemingly infinite number of souls throng the streets in four wheelers, three wheelers, two wheelers, and no wheelers (i.e., on foot), and people drive in all directions simultaneously in absolute disregard for any rules of the road whatsoever. One might call this chaos hell, but for the extraordinary fact that the death rate is so far below what the laws of statistics would predict, that one is forced to conclude the Lord exists and is showering His Grace upon the subcontinent at every minute. The whole thing is a spiritual practice, a *sadhana* of faith and surrender and a constant stimulus for the mind to transcend the noxious onslaught of the five senses.

Negative traits

Evidently, I have described driving in India with a touch of humour, but humour that suggests a more serious point. Jewel centre forces are real,

Table 2. Cultural examples of geo-spiritual influence

India: opening to the Infinite and the Transcendent abundantly evident in her long history of yoga, mysticism, meditative practices, religious pluralism, and spiritual disciplines that emphasize direct, personal experience of the Divine (or Nirvana) as more important than belief or dogma. Note the vastness and richness of polymorphic monotheism, which sees the infinite Brahman as manifesting infinitely through countless gods, goddesses, beings, and other finite forms. This sensibility is also felt in music, painting, sculpture, dance, and other creative arts that have a unique meditative appeal.

Northern Asia: China, Japan, Korea probably correspond to various levels of the higher mind. Note the ability for holistic and synthetic thinking, and a delicate and subtle touch in the creative arts. A deep, meditative turn is also felt in Taoism and Buddhism from this region, but generally with less sense of a manifesting Infinite than in India. Note the intuitive subtlety of Chinese monochrome ink painting, the subtle energetic study of acupuncture meridians in medicine, and even martial arts that emphasize meditation, balance, speed, and deft skills over the sheer strength of European boxing or wrestling. Likewise compare the asymmetrical aesthetic of Japanese gardening to the more logical, geometrical, and symmetrical taste of Versailles; or the light yet effective simplicity of chopsticks to the heavier metallic ideas of European cutlery.

Europe: a special love of logic, order, reason, geometry, symmetry, analysis, ideas and counter-ideas, all things mental is evident throughout European cultural history. From the lucid order and perfection of the Parthenon, to the well conceived structure of a Beatles pop song, in all phases of European history one meets the Mind at work under the conditions of Time spirit. We hear this in the way that classic masters such as Vivaldi or Mozart or Bach put the mind in order, see it in the visual and anatomic realism of classical European painting and sculpture, and feel it the defined and measured grace of ballet. European history is all about big ideas played out in big ways, ideas of empire (Rome and the British empire), ideas of religion (the Catholic Church and Protestant revolution), scientific ideas, industrial ideas, national ideas, political ideas, and now the idea of the EU.

Middle East: the dynamic or externalizing mind, which throws defined ideas into powerful and effective action. From this region arose the world's first civilizations, three major monotheistic religions (Judaism, Christianity, Islam), the first written scripts, the first systems of law. Note the importance of the Word in all of these traditions and developments, and how all of the languages from this

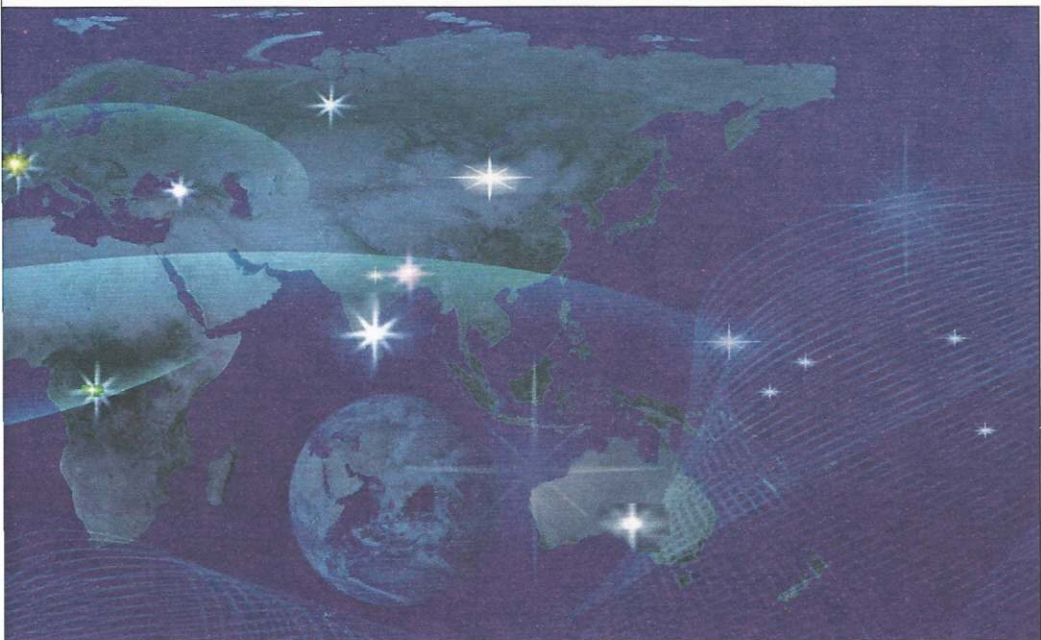
region use throaty, guttural sounds. Note also the sheer beauty of the Arabic script, and the haunting power of the voice that calls faithful Muslims to prayer five times per day. Power dynamics are prominent in the oil trade, chronic religious conflicts in the region, terrorism, and also in the oppression of women in some places.

Africa: the heart, or high-vital, influence is immediately felt in Africa's rich musical traditions. Note also that social organization historically emphasized clans and tribes (personal relationships) over hierarchically organized empires (which are impersonal and rule-oriented), and is still very common today. Examples from animal evolution are noted in the main text. Note also how human tragedies in Africa (slavery, genocide, poverty) always have an especially heart-breaking quality.

Pacific rim and islands: the first life forms on Earth are thought to have evolved on the floors of the Pacific Ocean, and its waters are still the largest live-giving force on the planet. Note how the vital power, which is by nature unstable, is manifested in the tremendous volcanic activity of this region. Culturally, one finds among the traditional peoples of the Pacific many manifestations of the vital force, from beautiful simplicity to brute force to lush sensuality to even inverted manifestations of the vital, such as cannibalism.

Americas: the focus on the physical consciousness was evidenced positively in pre-Columbian America via a profound sense of spiritual communion with Nature, and negatively through a delayed development of civilization and technology as compared to Eura-Asia. After European colonization, attention shifted from Nature to man-made objects, but the focus remained in the physical. Significantly, however, the sense of Nature being sacred continued with the New England transcendentalists, despite their lack of contact with Native Americans, and to this day one finds that the most authentic spirituality in the United States is nature-related, that the greatest temples of the United States are her stunning natural parks, and that the most common way north Americans "find themselves" is by going on "road trips" across the land. All of this points to the spiritual power of the American landmass. Note, too, that all of the planes of consciousness are repeated vertically within the Americans, in descending order, such that Canada grounds the higher mind in the physical consciousness, the United States the mental planes (ajna and visuddha), Mexico the higher vital, Central America the mid vital, northern south American the lower vital, Peru and Brazil the physical proper, and southern South American grounds the subconscious in the physical.

es of the Earth Mother



and like all real forces produce phenomena of resistance when the human consciousness is too limited to contain the massive charge of the land. Thus we find that in each place human cultures show unique negative traits that are the exact opposite of their special endowments.

For example, the United States is a powerhouse of materializing capacity, but also prone to excessive material consumption and waste, and currently shows an obstinate physical resistance to changing these mechanical habits it has developed. Europe is endowed with an exceptional ability to develop ideas and ideologies, and to organize life according to a mental plan, yet when taken to a wrong-minded extreme this produces a Hitler or a Stalin, and wars of devastating size and lethality. Africans are warm-hearted and emotionally open by nature, and this gift is sorely needed in the human family today, but a dark heart can lead to cruelty, hatred, and defiance of reason, and we see this in Africa's woes of tribal and clan conflict, petty dictators who hate and kill yet without the organized ideological power of Europe, and its disorganized political and economic development. And while India certainly has the opening to the soul and the Infinite consciousness, its urge towards transcendence has led to a neglect of matter, hence its dirt and disorder on the physical plane. Also, while the positive manifestation of the supra-rational Infinite is a manifold play of creative energies, which is certainly seen in India's social complexity and cultural richness, the resistance to this force yields a sub-rational prison of the Finite - a suffocating trap of caste, tradition, greed, corruption, poverty, overpopulation, communal conflict, self-interest, and callous disregard for the value of human life that seems entirely incorrigible.

These characterizations of whole cultures, both positively and negatively are, of course, generalizations and not to be taken in a mentally rigid fashion. Human nature itself is the same everywhere, no culture is better or worse than another, all cultures show a range of traits and are constantly evolving, individuals of all types exist within each culture, and by spiritual practice or Divine Grace one may rise in consciousness above the determinations of any time or place. The purpose here is simply to illustrate that jewel centre influ-

ences can be perceived and described for each continent and culture, and to emphasize that the spiritually helpful way to use this vision is to see all peoples and places as portions of the Divine that are necessary for the fullness of the manifestation. The goal is to enlarge our mutual understanding and appreciation of each other's gifts and labours, and to further the cause of human unity by seeing the play of multiplicity as the self-expression of the divine One.

The jewel centre theory for Auroville

There is much more to say by way of illustrating how the culture of each place expresses a jewel centre influence (see Tables 2 and 3 for an overview), but given space limitations, we will focus here on the question of how jewel centre "theory" can be useful to Auroville.

There has been a long debate in Auroville over how to develop the International Zone. The two main approaches proposed to date are to organize it by continents or to give each country its own pavilion. Based on my understanding of the jewel centres, I would favour the former approach, for both practical and theoretical reasons. Practically, there are almost 200 countries in the world and to give each its own pavilion will be costly and difficult, and poor countries will have to wait a long time to be represented. Grouping by continent - or rather by jewel centre - is more efficient and achievable. Also, having people from the various countries within each jewel centre work together to express a larger group soul would be beneficial for all involved. At the same time, the design of the pavilion for each jewel centre should include a space where each country within that jewel centre could showcase its unique qualities and special endowments. This might be a room where each has a representative piece of creative expression, or each country might get to use this room for itself on a rotating basis, or exhibits might alternate between plenary and particular arrangements over time. This would be for each pavilion to decide. The one concrete suggestion I can make is to use stone from each jewel centre in constructing the respective pavilions, because stone radiates the shakti of each place in a lovely and enduring fashion.

Table 3. Variations within each jewel centre

Jewel centres appear to be organized in fractals, that is, the general organization of the whole planet is repeated within the organization of each jewel centre. Thus, the northern part of each centre corresponds to the mental planes and the southern the physical, while the eastern portion corresponds to the inner being and the western to the outer.

For example, Delhi, which lies in north India, is the cognitive command and control centre of India, and has been since the times of the Mughals. The culture here generally shows a broad-minded and cosmopolitan influence, as compared to Tamil Nadu, which lies in the south and shows clear traits of the physical consciousness, such as stability and preservation of the past. Tamil culture has always been more insular than in the north, less affected by invasions and more religiously orthodox, and the Tamil language is one of the oldest on the planet. Quite fittingly, Pondicherry became the seat for Sri Aurobindo and the Mother's sadhana for the spiritual transformation of the body and of matter.

Likewise, compare Orissa and Bengal in the east, with Pakistan in the west. The eastern culture is more inward and subtle and delicate, the Orissi culture expressing the purest psychic influence, while the Bengalis have the inner visuddha power interfused with the mental. Thus, Orissa has the highest concentration of Sri Aurobindo centres on the planet, while the Bengalis show pronounced literary and artistic brilliance, coupled with spiritual sensibility and high emo-

tional expressivity, but are better dreamers than doers. In Pakistan, on the other hand, the energies are more outwardly directed. The culture here has always been tougher than that of Bengal or Orissa, in part due to dealing with invasions by Alexander, the Kushans, and the Mughals in turn. Also, in modern times the region has been hardened by the fact and consequences of Partition, plus lately the problem of Islamic fundamentalism. Thus, Pakistan has now become almost the opposite of Bengal, a land of doers with no dream.

In Europe, it is common knowledge that northerners are more mentalised (i.e., more disciplined, rule-oriented, organized, and emotionally reserved), while southerners are more emotional, vital, sensual, and physical. Many jokes exist about these stereotypes, and on a more serious note, we see tensions now in the EU over the financially disciplined north bailing out the laxer south. However, what may be more surprising to note is that this fractal organization is repeated within each country itself. For example, northern Germans speak the "proper" German, run the capital (Berlin), and see themselves as more progressive and sophisticated than the southern Bavarians, who are deemed more traditional (fact), a bit backward and obstinate (opinion), and are famed for their yearly ritual of Oktoberfest, the largest beer party in the world (fact). Meanwhile, according to guidebooks, the western Germans are reputed to be more fun-loving and relaxed than the rest (opinion), while the East Germans of the Soviet era lived in one the most highly regimented and repressive societies

the world has ever known, where the energies were in-drawn and concentrated in a negative way (fact). The same sorts of regional variations and mutual antipathies exist within all of the other European countries, and generally follow the same geo-spiritual patterns.

In the Americas, the north-south gradation of cultural trends is obvious, and the east-west difference is also fairly clear in a wide country like the United States (e.g. the "laid back" west coast culture vs. the "uptight" north east).

From north to south, Canada grounds the higher mind in the physical consciousness, and accordingly Canada has the most progressive and quasi-European culture of the Americas. The United States grounds the mental planes (*ajna* and *visuddha*), and the difference between its two layers is evident in the tension between its more politically progressive but socially "cold" north, vs. its more conservative yet affable south. Latin American culture is patently less mental and more vital than its northern neighbours, and this was reinforced historically by the English colonizing North America while Portugal and Spain took the south. But there are important gradations within Latin America: Mexico grounds the higher vital, Central America the mid vital, northern south American the lower vital, Peru and Brazil the physical proper, and southern South American grounds the subconscious in the physical. These differences are immediately felt in the music from each region, but that is a fascinat-

Table 1. The Seven Jewel Centres of the Earth (proposed geo-spiritual correlations)

Chakra	Jewel Centre	Plane of Consciousness
1. Sahasradala	Maha-Asia	Intuitive (several levels)
- [Chaitya Purusha]	[Maha-Bharat, India]	[Soul, Superconscious, the Infinite]
2. Ajna	Maha-Europa	Mental (reason, ideas, will)
3. Visuddha	Maha-Asiatica minoris	Mental (power, action, word)
4. Anahata	Maha-Africa	Higher vital (heart, emotion)
5. Manipura	Maha-Pacifica (middle)	Central vital (major life motives)
6. Svadisthana	Maha-Pacifica (south)	Lower vital (creative energies)
7. Muladhara	Maha-America	Physical proper (matter)
- [Subconscious]	Maha-Australia	Subconscious memory and habits
- [Inconscious]	Maha-Antarctica	Existential void or darkness

Grouping by continent: canalise spiritual forces

From a theoretical perspective, an appreciation of jewel centre forces helps us to understand that grouping by continent is not merely an arbitrary mental plan, but corresponds to a deep yogic truth and can help canalise real spiritual forces. We already live in a globalised world, and are growing towards more not less international exchange and cooperation. The vision of jewel centre forces can thus help lead us towards a practice of what might be called global white *tantra*. That is, when undertaking a work, we may consciously involve the energies of each jewel centre so as to achieve a maximum of manifested consciousness, light, power, ananda.

For example, if each of the jewel centres were represented in Auroville with an operating pavilion, then individuals could use these spiritually charged places to absorb conscious-force needed for their inner and outer development. At the same time, collective work could draw upon the *shakti* from each of the pavilions to create a "rainbow bridge" of energies reaching towards the future. That is, one could experiment with a sort of occult process by which a given work would first be presented to the Mahashakti with a collective meditation in the inner chamber of the Matrimandir, for supramental inspiration and dynamisation. The work could then involve the pavilion of Maha-Bharat to help the workers become conscious of its essential issues and dimensions, lay out its largest principles, be uplifted by a vast and supple awareness of its spiritual nature and divine possibilities, link it to a guiding light from the teachings of Sri Aurobindo and the Mother.

Next, as the work unfolds, it could move through each of the pavilions, either sequentially or with sub-groups working simultaneously in multiple pavilions, so as to involve energies from each of the jewel centres. North Asia would be invoked for her intuitive perceptions, her delicate insights and subtle synthesis of conflicting priorities and practical needs, her ability to give a light and responsive touch to even heavy things. Europe would provide an infusion of mental force, a more detailed conception of specific ideas and a way to organise these effectively for orderly execution. The Middle East would further simplify and define key ideas, and throw these into dynamic lines of action, give the manifesting Word, show us the way to be bold and powerful and effective in action. Africa would provide the human feeling, the emotional uplifting for the work, the heart of joy and warmth of universal brotherhood and sisterhood. An infusion of pure vital energy and life-force and lush creative energies would flow in through the pavilions of the

Pacific islands and Oceania. The American pavilions (north, central, and south) would confer materializing power and abundance, and a deep love of the Earth and the Goddess of Substance who lives in the physical materials used. And the Australian pavilion could help harness the powers of an illumined subconscious to resolve resistances in the work, use the subliminal mind of dream-time to know what the conscious mind cannot, and connect the ancient past of the race and the planet to a transformative future.

The role of the Matrimandir

Along the way of this large yet flexible weaving of inner and outer energies, of people and pavilions, of souls and jewel centre forces, the Matrimandir would stand at the centre of the work as the guiding light and consciousness and power of the Mahashakti, always ready to support groups and individuals as the need and inspiration arises. Some might find it helpful to meditate in the petals to support inner qualities needed to overcome challenges in the work. Others might find it useful to sit quietly by the lotus pond below the Matrimandir to receive a cool, calm and nourishing infusion from above to aid in assimilation and integration of the energies; or walk in the gardens for relaxation and contemplation; or commune with the Banyan Tree to invoke Nature's consent and blessings for the project. All these inner and outer resources could and should be involved in the work in an integral and organic fashion.

Seen from this perspective, now that the Matrimandir complex is nearing completion, the International Zone could become the next great focus of work in Auroville. The soul of the city has been installed, now the soul needs manifesting instruments. A jewel centre approach to understanding and developing the International Zone can help in this regard, and could have ripple effects on the whole world. To work consciously with the jewel centres in Auroville will have inner effects on the global evolution, and outwardly this type of cooperative endeavour could become a living example for the United Nations and other international organizations to study and emulate. This indeed would be a boon for the Earth Mother, and given the general state of crisis the world is in today, we must press forward with what we can do to help the global quest for human unity.

Michael Miovic

For more on the topic of jewel centres, see the author's article at www.integralyoga-auroville.com/Insights.php. The author can be contacted at mmiovic@yahoo.com

Technology and human unity

JV Avadhanulu, familiarly known as 'JV', served in the Indian Navy for many years and then held top R&D management positions in the IT world. He joined Auroville in 2007. Today, he runs personal growth workshops and is involved in setting up an innovative IT network for the city.

“When I was younger, I was a very different person; I was much more aggressive and competitive and I always wanted to be right. I worked very hard, drank a lot and smoked a lot (40-50 cigarettes a day). I hold an M.Tech degree from IIT, Kharagpur and my viewpoint was that life is all about technology, that technology runs life. One of my non-technical friends used to call me a 'technical moron'!

In 1987, I was diagnosed with ischemic heart disease. As there was a family history and because I also had high blood sugar, high blood pressure and a prolapsed mitral valve in the heart, the prognosis was not good. In fact, I was told that I would not live very long. I was only 41 years old.

I was very hesitant to consider alternative medicine, but a friend's mother told me about the Yoga Nidra programme being conducted by the Bihar School of Yoga. I attended the course, and for the first time my blood pressure came down and stabilized. Then I met somebody who was receiving a treatment that had enabled him to walk again after severe heart problems and I decided to try it. It was a combination of pranayama, ayurvedic medicine and very rigorous diet control.

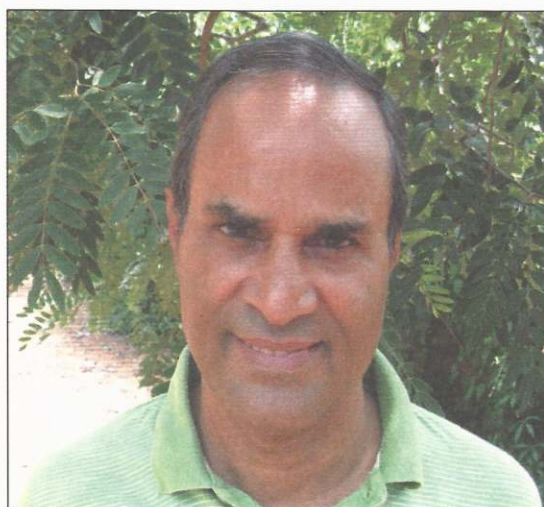
Within six months, I had become asymptomatic and my resting ECG became normal after a year. I stopped the medication and strict diet after a year but I continued with the pranayama. All of this made me much more health conscious.

Then, in 2002, I went for a routine medical check-up and the doctor told me that my mitral valve was normal. The doctor had no explanation as to how a congenital problem had rebuilt itself, except that maybe the earlier diagnosis was a mistake. I didn't bother to pursue this line: I lost my rational, scientific curiosity and decided just to enjoy the blessing that I had received. But while I became more open and receptive to new ideas, my consciousness hadn't really changed: none of this really impacted my inner being.

Soon after, I was admitted to hospital with a very severe back problem. The pain was so bad that I was put on pethedine injections and I was going in and out of consciousness. In fact, it was so serious that when my brother, who is a doctor, saw the MRI scan, he exclaimed, "My God, you are not going to walk again."

I would say this was my real life-changing moment, because when I heard this I made two decisions. One was that I would quit work in the corporate world so I could really find out the purpose of my life. The second decision was that I would walk out of the hospital. Ten days later, to the amazement of the doctors, I did walk out.

How? It was a combination of willpower and getting in touch with something beyond the rational mind, getting in touch with the source, the creator inside me. I spontaneously started chanting the Markendeya mantra, the 'immortality mantra' which I knew from my father and Yoga Nidra teachers. And as I immersed myself in the chanting,



J.V. Avadhanulu

ng, I became experientially connected with my inner source, the divine spark. This was the first time I became aware of That, and never again have I so intensely felt it, but the serenity of being in touch with That left me in no doubt that I would walk again, even though the doctors had given up on me. This is when the inner movement of my life began.

After I left hospital, I started looking for places where I could clarify my life purpose and my daughter suggested Auroville. When I first came here in 2004 it was love at first sight. My wife and I went to the Visitors Center and there, on the wall, was the Auroville charter. It kind of struck me in the face. Since then, the charter has been my constant source of inspiration.

The Auroville adventure

I moved here in 2007. I was 61 years old, but an Aurovilian told me I looked very young. What is the secret? he asked. When I told him I do pranayama, he suggested I teach it. I'd never considered this before – it was very beneficial for me but I never saw myself as a pranayama teacher – but the response of the small group which I started with was very good, so I continued.

Then, in response to requests, I started including other practices. These include Yoga Nidra deep relaxation, visualization, chanting and meditation, and now I regularly offer a number of workshops on integral health and wellbeing, both inside and

outside Auroville. At one time I didn't feel good health was part of spirituality, but this changed when I read The Mother's saying that 'good health is an outer expression of inner harmony'. For me, spirituality is contacting that inner being which is beyond all disease, infinite, for when you are in touch with that, there is always harmony.

When I left hospital, I was very clear in my mind that I didn't want to work in technology again. But Mother had other ideas. On one of my early visits to Auroville, I met Pashi. When he heard I was Director of R&D for an information and communication technology company, he said we need a good IT network in Auroville. At that time, somebody had already started working on a concept, so Pashi asked me to review it. I gave some comments and forgot all about it. However, Pashi didn't, because when I came to live here he told me that the person who had initiated the project was not willing to work on it further. Could I take it on?

I began to go much deeper into it and gradually the project took me over. It evolved from being just a campus network, of which there are many existing examples, to something quite different – I started seeing it as a means of manifesting the Auroville charter. Because, in my opinion, one of the ways that Auroville can belong to "humanity as a whole" is through the World Wide Web, for this removes all the constraints, the limits of time and space, which separate Auroville from the rest of the world. So I began to see the Integrated Communication and Information Technology Infrastructure (ICITI) project as one of the means of making it happen (see box).

There is still a lot of work has to be done on this project, it's a work in progress, but the response so far has been very supportive. It has been approved by the International Advisory Council, the Governing Board and all the major committees of Auroville, and we have presented it to an expert committee of the Government of India. They said the project is fine but there has to be clarity on certain points, in particular the funding. The total money involved is about 12 crores, out of which we are proposing that about one fourth would be the Auroville contribution, while the other three fourths would come from the Ministry of Electronics and Information Technology. Two private companies have also agreed to help us. Moreover, Mr. Bala Baskar, Secretary of the Auroville Foundation, is taking an interest in the project and this has made a big difference.

Now the ICITI team, which has been strengthened by Chandresh and Sandeep taking up specific roles, are in the final stages of preparing the final proposal and this will be submitted to the Government. And then the next stage in my Auroville adventure will begin...

From an interview by Alan

The Integrated Communication and Information Technology Infrastructure project

Auroville is already connected to the world through the Web through its web page and email providers, etc. But the broadband we have today is hosted outside Auroville (which means we pay BSNL every time we talk to or email each other or browse Auroville), unreliable and slow and not able to support certain data and video services which would bring the world and Auroville, as well as the Aurovilians themselves, closer together and enhance the opportunities for everyone to participate in this experiment. For example, Auroville seminars and talks could be made available in real time on the Internet and they could be interactive, allowing people anywhere on the planet to make comments or ask questions.

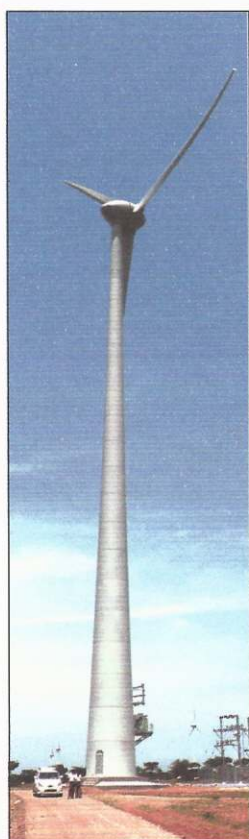
"Our hope," says JV, "is that ICITI will also facilitate better governance and transparency within Auroville, and augment Auroville's valuable work in the bioregion by making information and consultancy available to the villagers online."

"So what we are envisaging is a highly reliable, lightning-fast Internet which makes such things possible. Practically, this would involve connecting every office and house in the city area by fibre optic cables, which would mean that any data or video service already used in the world – many of which we don't have access to today – would be available at any point in the city. All internal calls will be free and all audio and video conferences within Auroville will be free and unlimited. And if you don't have a house or office in the city area, you can also avail these services through ten community information centres which will be set up."

"The ICITI project also brings together my interests in technology and health and healing as this network will be much lower in terms of electromagnetic pollution than the present one. Although the research on this topic is somewhat inconclusive, more and more governments are concerned that their citizens' health is being adversely affected by mobile telephone networks. In fact, the Indian Government has just drastically reduced the radiation limit for mobile towers and handsets, for these are the main sources of this pollution. The ICITI network will be ultra-low-power, operating at about 100th of the power of the present system. And when the pollution is reduced, it's not just humans who benefit; recent studies show it is also beneficial for the flora and fauna. In addition, it would also reduce the carbon footprint of Auroville."

"In fact, I see this less as a technology project than as an ecological preservation project and a human unity project. We're not inventing any new technology but are applying it to further the yoga of human unity."

GREEN ENERGY



Wind energy for Auroville

In August 2009, Auroville Today reported about a new venture, the creation of Varuna Pvt. Ltd., a company set up outside the purview of the Auroville Foundation but with the sole aim of supporting Auroville. It is run by four Aurovilians and a Friend of Auroville.

The main aim of the company is to create a green energy park for Auroville (mainly wind, eventually also solar) which will be able to meet fully Auroville's energy-consumption needs now and in the future. The second aim is to support a money-free society in Auroville by providing electricity free of cost, first to all service units, in a later phase to individuals and other units. A third aim is to build and operate a small desalination plant which can supply drinking water to the nearby villages and Auroville as well as provide water for the future Matrimandir Lake.

Varuna Ltd has progressed well. It built three windmills, one in

Dharmapuram, and two in Pillayarkulam, and contributed in the period April 2010 to January 2012 about Rs 70 lakhs (US \$ 133,000) towards the payment of the electricity bills of 47 Auroville services. In the beginning of 2012 Varuna Auroville, a unit of the Auroville Foundation, was created, with the same management and purpose. Varuna Ltd. then donated the Dharmapuram windmill to Varuna Auroville which since has taken charge of the channelling of the donations towards electricity bills. In the period February 2012 to July 2012 another 31 lakhs (US \$ 59,000) was donated, making the total amount donated exceed Rs 1 crore (US \$ 190,000). At the same time, Varuna Auroville received a foreign donation for the purchase of one more windmill. This wind generator started operating on August 1st, 2012.

Together, the four wind generators of Varuna Ltd and Varuna Auroville will produce about 70 lakhs kWh of

electricity, double the present energy requirements of Auroville of about 35 lakhs kWh per year.

The Auroville Foundation, the owner of Varuna Auroville and its two windmills, has meanwhile asked permission for the 'wheeling' of the energy produced by the Dharmapuram windmill to Auroville. If approved, there will be no further need for Varuna Auroville to sell the energy produced and then make donations to Auroville to pay for electricity bills. Instead, Auroville will be able to use free in Auroville the equivalent of what has been put into the grid by the Dharmapuram wind generator, minus an administrative fee.

The electricity generated by the two windmills owned by Varuna Ltd will continue to be sold. The proceeds will be used to build a 1.2 megawatt solar-plant in the Industrial Zone, for which site-permission has meanwhile been applied.

Carel

How 'green' are the Varuna wind-generators?

The 'life cycle analysis' of carbon dioxide (CO₂) emissions for various methods of generating electricity, which includes the manufacturing of the generating equipment and processing the fuel, is expressed in grams per kilowatt hour (kWh). The figures are an average of the different possible efficiencies which the energy carriers can have.

Lignite - 1150 to 1200 g/kWh
Coal - 925 g/kWh
Natural gas - 430 g/kWh
Photovoltaic solar - 105 g/kWh
Wind Power - 12 g/kWh
Nuclear - 6 g/kWh
Hydroelectric - 4 g/kWh

Auroville's four wind-generators produce per year about 70 lakhs kWh of electricity. The CO₂ footprint would be 12 x 70,00,000 grams of CO₂ = 84 tons of CO₂.

The electricity consumed by Auroville from the grid is mainly generated from lignite. Generating the same quantity of electricity using lignite produces 8,400 tons of CO₂. So the four Auroville generators are preventing 8,316 tons of CO₂ per year from being emitted into the atmosphere.

Aspiration: A programme for Newcomers

Ten of us Newcomers or pre-Newcomers joined with our three coordinators – Rakhal, Sonja and Anamika – at the Pavilion of Tibetan Culture for the start of our programme to explore Auroville. We began by doing some movements, and then were asked to introduce ourselves with a gesture, which subconsciously through our movements revealed something of ourselves to the others. We split into pairs and were asked to discover more about the other person through questions, answers, discussion. Then based on our discoveries, we introduced the other to the group, receiving some welcome assistance from our moderators who drew out further disclosures from our partners. This was the start of a beautiful highlight of the seven-day long programme: getting to know others who were planning to join Auroville.

Each day was well-organized with interesting learning experiences and fine lunches at various locations. On our first day we visited Alain B. at his home in Auromodèle where he told us the early history of Auroville. We heard stories about the “war” with the Sri Aurobindo Society, and what it was like to live in Auroville in those days. Afterwards we visited Gaia’s Garden, and Kireet discussed and answered our questions about water harvesting. Then he took us for a walking (and climbing) tour of the canyon, where we could sense the challenges faced and the progress made over the decades to retain the rainwater through dam building and reforestation. On another day we experienced Awareness Through the Body with Ashoka, which was an interesting exploration of our inner being.

There were several presentations that helped us to learn about some crucial information relevant to Auroville living. This included presentations on the Auroville city plan with Gilles; the policies regarding housing with Joseba; the recycling of household waste with Sonja; the Food-link project linking organic farms with the Auroville consumers with Inge; a discussion on the Auroville economy led by our coordinators; and a visit to and explanation of Pour Tous next to the Solar Kitchen. These presentations seemed to provide something of an initiation into Auroville life and membership, taking us beyond ‘guesthood.’

We had excursions into a few of the more remote corners of Auroville to get a feel for the different possibilities of life here. One of these highlights was the visit to Discipline Farm with Jeff. It was refreshing to walk through the green fields of organic fruits and vegetables and see the possibility of living close to and in harmony with the earth. We learned of some of the methods used to naturally fertilize the land, and felt, smelt and tasted interesting foods.

Another was the visit to Mandala Pottery, where Anamika works as a partner. The pottery



Participants and coordinators of the Aspiration Newcomer programme: from left, back row: Ananth, Ongkie, Larry, Denis. Front row: Ursula, Anamika, Roeland, Anja, Isabelle, Meenakshi, Rakhal, Nick. Absent: Sonja

produces tableware and household items as well as artistic pieces. It was interesting to see how the clay was fired in the different kilns, the difficulties and challenges faced in their production, and learn of the possibilities for starting and running a small-scale handicraft and commercial enterprise such as this. Afterwards Anamika took the group for a walk through the surrounding forest.

A third excursion was to the Mohanam Centre in Sanjeevinagar, where we learned about Tamil Culture. We started off with a nice Tamil lunch served on banana leaves while seated on straw mats in the renovated traditional Tamil building. One of our own Newcomers, Nick, who has been involved with the Centre, gave us an introduction to its activities. After the young Tamil children attending the Centre in the upstairs room had finished their activities, the discussion was turned over to two of the Tamil organizers, who told us something about their life story and work with the Centre. The Centre is a remarkable effort at recovering and developing the best of the Tamil culture, and our refined Tamil presenters were living testimonies of the human potential such efforts at rebuilding the Tamil culture can realize.

We also had a couple of introductions to Sri Aurobindo’s and the Mother’s words and vision. One of these was given by Ashesh, who had lived in the Sri Aurobindo Ashram for many years, and after coming to Auroville has been giving workshops at Savitri Bhavan on their vision and works. We learned some of the basic points of their yoga and philosophy, and had an interesting discussion about the differences between religion and spirituality. Another

activity was beautifully organized by one of our coordinators, Rakhal, who put out a selection of different books from which we each selected one. We were to fix a question silently in our mind and try to find an answer in the book, either opening the book at random or perusing the book. We then presented to the group what we had discovered. It was interesting to see that through this little exercise many in the group were deeply affected, almost as if waking up to a new world. Most of the group had limited

knowledge of Sri Aurobindo’s and the Mother’s yoga and teachings, and through this opportunity for self-discovery, stepped onto a path to unknown vistas.

On the second to last day we had a video and discussion about the construction of the Matrimandir, facilitated by Adhara, who had been involved for many years in its construction. This was followed by a visit to the Matrimandir itself by those who wanted to go. Some went into the inner chamber, some into one of the petals, some sat below under the Matrimandir. We also walked around some of the gardens, and sat for a while under the Banyan. It was a peaceful drawing to a close.

On the last morning of the programme, we repeated an interesting activity which we had done on the first day. In small groups, we each contemplated ourselves crossing over the threshold into Auroville, and made a drawing with coloured crayons of what we visualized or felt about that experience. We drew on the opposite side of the same paper we had used on the first day. After completing the drawing we shared with the other members what was represented, and received interesting observations and reflections from them. We compared the two drawings, before and after the programme, and noticed the developments that had been made. It was another interesting exploration of our inner being. We concluded with a discussion and evaluation of the programme we had completed, and I think we all were deeply appreciative of the wonderful work and presence of our coordinators. We shared a group hug and invitations to keep in touch.

Larry

Aspiration – a Newcomer’s Perspective

As one of many advised by Entry Services to attend the ‘highly recommended’ six day long process for newcomers to learn about the many facets of Auroville, I complained mostly to myself. I’m too busy with things to do or I’ve been here for a year and don’t need a six-day guided tour. But I did attend the process and must now admit that I was truly lacking in vision and not open enough to what is offered. The fact is that most of the sessions were at the very least, interesting, some were really excellent, and none dull or boring. It was certainly not a waste of time at all.

For me there was one very important highlight that lifted the whole experience to something very special. Some of the presentations during the week related to the teachings of Sri Aurobindo and the Mother while others related to their influence and impact on Auroville – directly and indirectly. In the past I was reading about the Mother because I could grasp and understand on some level what she was writing. On the other hand, I was paying almost no attention whatsoever to the teachings of Sri Aurobindo because I felt that it was about things I neither understood nor related to. At one point we were asked to contemplate an issue, then to select a book by Sri Aurobindo or the Mother, open the book anywhere and read the section. I selected a book that is a commentary on the *Upanishads* by Sri Aurobindo. The section spoke directly about my question, which is quite a revelation in itself but, more importantly, I was now about to read and understand with more clarity than before. I have now gone back to reading *Savitri* because I always really liked the language but it seems now I have a better understanding too.

Nick

SPORTS

Auroville kids win gold, silver and bronze

Sixteen Auroville children between 9 and 15 years old studying at Transition School, Last School, The Learning Community and Future School achieved great results in the Rescue India National Pool Lifesaving Championships, organized by the Rashtriya Life Saving Society (India), and held over three days in October in Kolkata, West Bengal. Coached by swimming instructors Tanja and Satyavan with the help of Sunny, the children won four gold, two silver and two bronze medals in the individual rallies. In the group events, the two girls’ teams won two gold and three silver medals and the boys’ team one gold and two silver medals.

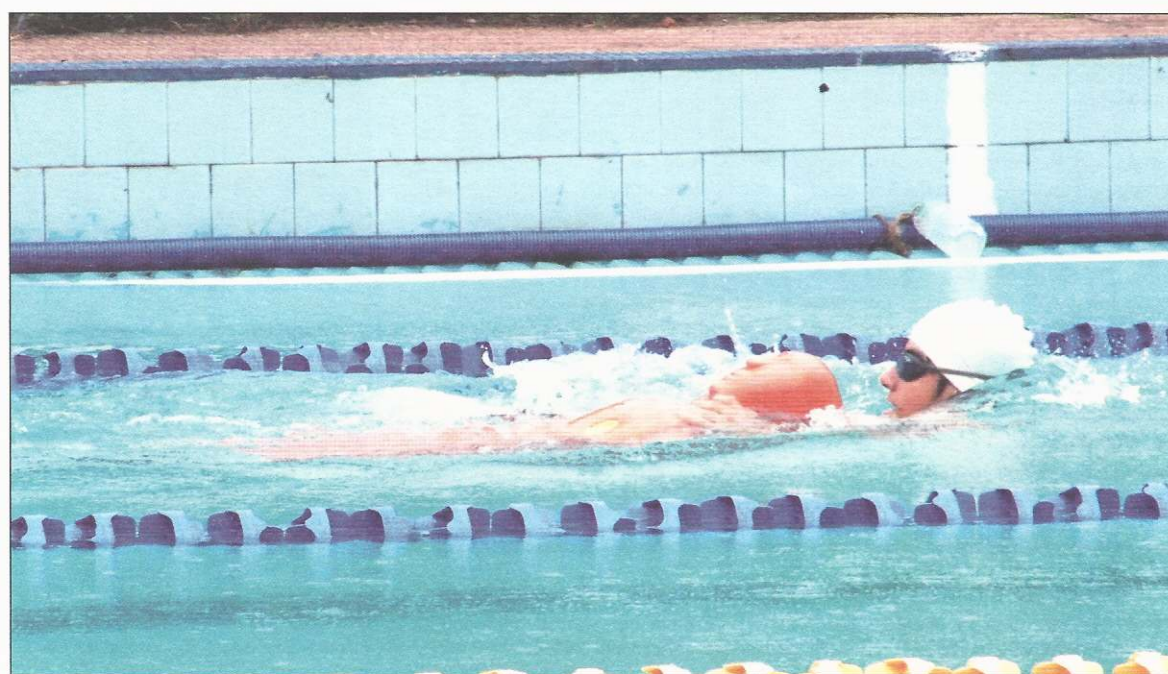
The children had been training hard. For several years, they had been coming to La Piscine swimming pool in New Creation four mornings each week at 6.30 a.m., before school starts. The competition motivated them to work on speed and endurance.

“This is the second year we are participating,” says Tanja. “For eight children it was the first time they ever joined a competition. It was a good experience for all, even though it was tough. The Auroville team arrived at

4.30 a.m. after a two-day train journey, and had to start swimming at 8 a.m., a few hours later! The event took place in an open-air pool. It was pouring with rain, there was thunder and the pool was 50 metres long, twice the distance they were used to. The first individual rally, the 100 metres crawling and passing underneath four submerged obstacles, was a bit overwhelming. But soon after, they had to do the same in teams and then they won their first medals. From then on they gained confidence and demonstrated the results of their strenuous training. Obviously, the children enjoy the sense of belonging and being part of a team stimulated them to give the best of themselves.

“The jury, however, was stricter than we had anticipated. The boys got three times disqualified for minor mistakes, just when they were about to win gold. Such mistakes are normally overlooked. But the jury was selecting candidates for the National Team to represent India in the junior world championships, and that’s why they were following the rules to the letter.”

What’s next? “We will now focus on the refinement of the different swimming styles and in a couple of



Sanata with the mannequin

months will start preparing for the 2013 pool competitions in Bangalore. And we will start training for the National Ocean Lifesaving Championships. That involves a lot more physical activity, such as run-

ning on the beach, swimming in the ocean and saving somebody with a rescue surfboard. Now that the Repos beach has disappeared, we will have to train at Banyan beach. Moreover, the Rashtriya Life Saving Society has

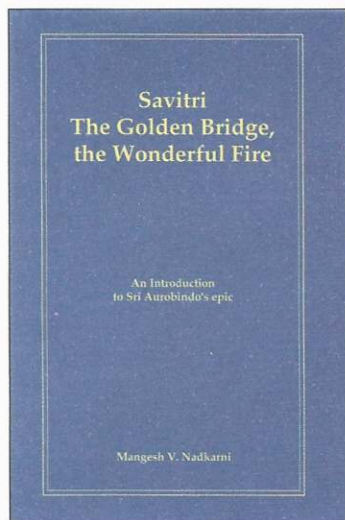
asked us if we would be interested to help organize the 2013 National Ocean Lifesaving Championships in Auroville. We are looking for a suitable location.”

In conversation with Carel

Savitri, The Golden Bridge, the Wonderful Fire

Few people in the world have been as inspired by Sri Aurobindo's epic poem *Savitri* as Professor Mangesh V. Nadkarni. In the November 2000 issue of *Auroville Today*, he was called 'A town crier for *Savitri*' which aptly indicated the work he was doing: giving classes on *Savitri* in 'Savitri Camps' in Pondicherry and at Auroville's Savitri Bhavan in which he read and explained the poem line by line. He continued this work until his death in September 2007, amongst others in the e-journal of the Sri Aurobindo Society, *Next Future*, where he contributed one article on *Savitri* every month from 2003 onwards.

At the initiative of Ms. Meera Nadkarni, Mangesh Nadkarni's wife, and with the help of Shradhdhavan, all the 47 articles have now been issued in book form. With the exception of the cantos on King Aswapati's yoga, the articles cover *Savitri* from its beginning to the climactic point in the middle of Book Eleven, where Savitri is offered four boons to merge with the Supreme, and asks instead for the Supreme Peace, Oneness, Energy and Bliss 'for Earth and Men'. To complete his coverage of Sri Aurobindo's epic, the transcripts of two more talks given by him in Savitri



Bhavan on book XI, including the prophecy's of the Earth's future, and book XII, 'The Return to Earth', have been added. In the last talk Prof. Nadkarni also gave a succinct overview of the entire poem.

This book presents an 'introduction' (as Nadkarni modestly called it) to *Savitri*. It includes the tale as recounted by Rishi Markandeya to Yudhishthira in the Mahabharata, and highlights Sri Aurobindo's departures from it, adding illuminating sidelights drawn from the writings of Sri Aurobindo and The

Mother. But more than anything else, Nadkarni shared in these writings his delight in the poetic beauty of *Savitri*, admonishing his readers time and again to hear and not just see the lines, with as empty a mind as possible. "In a slow subdued voice we have to communicate *Savitri* to ourselves; only then will we be able to capture something of the wonderful rhythmic properties and the life throbbing of the poetry in *Savitri*." And he recalls The Mother speaking about *Savitri*: "Savitri has an extraordinary power, it gives out vibrations for him who can receive them, the true vibrations of each stage of consciousness. It is incomparable, it is truth in its plenitude, the truth that Sri Aurobindo brought down on the earth. My child, one must try to find the secret that *Savitri* represents, the prophetic message Sri Aurobindo reveals there for us. This is the work before you, it is hard but it is worth the trouble."

Nadkarni's contributions are an invaluable resource in this 'work'.

Carel

Savitri, The Golden Bridge, the Wonderful Fire - and introduction to Sri Aurobindo's epic by Mangesh Nadkarni. Published by Savitri Bhavan. Price in India Rs 350. Info: savitribhavan@auroville.org.in

Seven Quartets of Becoming

This is a difficult book, but one well worth the effort of reading. It has three main aims, all complex and deep: the first is to present the aims and nature of Sri Aurobindo's yoga as described in his *Record of Yoga*, his yogic diary; the second is to examine his Integral Yoga in the wider context of Indian yogas and spiritual philosophies; and the third is to examine certain facets of Sri Aurobindo's Integral Yoga in relation to the concepts articulated by various Western philosophers. There is no doubt that the author has an excellent grasp of all three of these difficult subjects. Viewing the work from what I might claim to be a fairly strong grounding in Sri Aurobindo's thought, but not quite as strong in Western philosophy, I would say that the author was quite successful with the first and second aims, but less so with the third.

I often had difficulty following the author's comparisons with Western philosophical and psychological concepts, in part because there were just so many different philosophers and philosophies discussed in relation to such a wide assortment of ideas that it was hard to get an overall perspective on all this material, and in part because the descriptions of Western philosophical concepts seemed highly abstract and condensed. In contrast, I found the parts describing the concepts in the *Record of Yoga* much more accessible, and though the language used to describe them may also be difficult for readers less acquainted with them, these concepts are presented more leisurely, with fuller explanations, and so they are easier to digest. In addition, the structure of the Integral Yoga described in the *Record of Yoga* is nicely organized into "seven quartets," and this structure helps in comprehending it overall and in relating

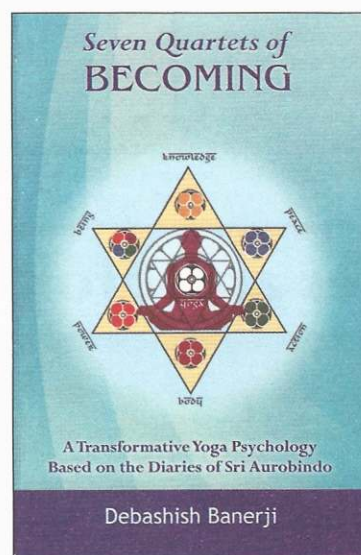
the parts to each other. The author has capitalized on this guiding structure by including helpful tables that summarize and organize the ideas.

Let me elaborate a bit more on each of the three main aims of the book. The *Record of Yoga* was Sri Aurobindo's diary of his yoga that he wrote primarily between 1912 and 1920. The manuscripts that comprise the *Record of Yoga* were found relatively recently and first published as a book in 2001. These personal diary notes were presented in a difficult form with much Sanskrit terminology, brief notes on various experiences, and sometimes more systematic reviews of his ongoing progress in the various aspects of his *sadhana*. Some other writings by Sri Aurobindo which helped to describe the overall structure of his *sadhana* were included as an Introduction to the *Record of Yoga*.

In the present book, the first aim has been to present the overall structure of this yoga, a concise yet accessible explanation of the 28 parts of the seven quartets. The seven quartets are the quartets of Perfection, Peace, Power, Knowledge, the Body, Being, and Action, which are well described in a chapter devoted to each. There follows an important chapter called "Attitudes of Self-Discipline," which discusses major threads running through many of the quartets and integrating them, attitudes such as aspiration, sincerity, purification, equality, constant remembrance and surrender. Another chapter enlarges upon the quartet of pure Being and its relation to Knowledge, discussing concepts such as Brahman, the one and the many, the personal and the impersonal, and the Master of the Yoga. The final chapter elaborates further on the quartets of action, power and enjoyment, all of which are connected to the life-affirming nature of the yoga.

The *Synthesis of Yoga*, Sri

Aurobindo's main formal text on the Integral Yoga, is organized and formulated quite differently from the *Record of Yoga*. Though most of the components of the seven quartets appear there, they are presented in a different language and organizational structure. Some of these components are also elaborated in Sri Aurobindo's other works, and the author refers to these works as he discusses and explains the system of yogic practice found in these early diaries of Sri Aurobindo. In summary, this book successfully renders the main concepts of the *Record of Yoga* accessible and understandable, and thus gives a useful new perspective on the Integral Yoga.

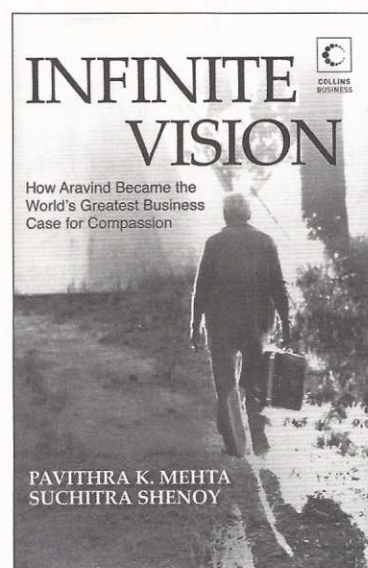


The second stated aim was to place Sri Aurobindo's Integral Yoga in the wider context of Indian Yoga. This seemed to me a minor endeavour of the book, with relatively few pages devoted to it, and yet I was struck at times with new insights about the Integral Yoga's relation to the other Indian yogas and philosophies. For example, the first

Infinite Vision

Much has been written about Dr. Govindappa Venkataswamy, the visionary eye surgeon who, though permanently crippled at a young age with twisted and frozen fingers, manifested an impossible-seeming dream: to eliminate curable blindness. By 1976 he himself had performed more than 100,000 sight-restoring surgeries. That same year he founded Aravind, an 11-bed eye clinic operating out of a family home in South India named after Sri Aurobindo who, together with The Mother, was his spiritual teacher. Over the years Aravind grew into the largest provider of eye care in the world. By 2011, it had treated an estimated 32 million patients and had performed more than 4 million surgeries, the majority for free – reaching out to barefoot labourers as well as to the elite in India. When Dr. Venkataswamy passed away in 2007, he left behind an institution whose business model is being emulated in many places in the world and is a mandatory study topic at Harvard Business School.

Infinite Vision, written by Pavitra K. Mehta, one of the members of the Aravind family, and Suchitra Shenoy, describes the evolution of Dr. Venkataswamy's work and the growth and functioning of the Aravind eye hospitals. It is a unique book, probing the 'why' of Aravind's improbable success while at the same time avoiding the typ-



ical business analysis approach. In a time when the national health care systems are in crisis and many private health institutions are pursuing purely monetary aims, this book highlights Aravind's social responsibility work. It is an inspiring narrative about an institution that, writes Pavithra, 'has lit the eyes of millions.'

Infinite Vision: How Aravind became the world's greatest business case for compassion by Pavithra K. Mehta and Suchitra Shenoy. Published in the USA by Berrett Koehler Publishers Inc. Published in India by Collins Business. Price in India Rs 499.

chapter describes Sri Aurobindo's yoga in relation to *Vedanta*, *Samkhya*, *Tantra* and *Patanjali's* Yoga and illuminates these relations with its twin goals of *mukti* (liberation) and *bhukti* (enjoyment). These two goals are found again and again in the structure of the seven quartets, and in several of the quartets two aspects are focused on *mukti*, and two aspects are focused on *bhukti*, the latter being associated with the acceptance and divinization of earthly life. The book also covers many of the central concepts of Sri Aurobindo's spiritual philosophy as described in *The Life Divine*; it is not focused exclusively on yoga or yogic practice. These philosophical concepts, which are not merely concepts but spiritual experiences or potentially verifiable experiential realities, are also illuminated in many of the comparisons with the Western philosophies. At some points in my reading I was struck more profoundly than ever with how new and radically different Sri Aurobindo's teaching is from the traditional yogas which tend to focus exclusively on *mukti*.

The third aim of the book focuses on showing how Sri Aurobindo's Integral Yoga compares with and relates to various Western philosophies, especially those of Hegel, Nietzsche, Bergson, Husserl, Heidegger, Foucault, Derrida and Deleuze, with a special emphasis on the last, who articulated many concepts similar to those of Sri Aurobindo. While it was obvious that the author has a close familiarity with these writings and is skilled at extracting their primary ideas and comparing them and locating them in the development of philosophical thought, it seemed to me that he assumes too much from the reader in this respect. Although the introduction to the book provides a brief introduction to these philosophers

and their related conceptions, I felt that there was a vast reservoir of knowledge hidden below and behind his various assertions about their philosophies which remained unarticulated and thus might often leave readers like myself scratching their heads. There is also a specific style of language and terminology used in these discourses in which the author is clearly expert, but which is a bit daunting to take in alongside the complexity of terms and conceptions articulated in the *Record of Yoga*.

Still, I would not say that this material was completely intractable; I did learn useful things about these philosophies, and, even more importantly, was struck by their profundity and the similarities that many of them have to Sri Aurobindo's views on various matters. In addition, it is quite likely that many readers have had a better preparation in Western philosophy than I, and with a good introductory background in these philosophies, might find these comparisons more illuminating. I do believe that this third aim of the book is an important and necessary one, for it relates Sri Aurobindo's thought and yoga to present-day ideas and philosophies, and thus to modern humanity's self-conception and its conception of the world and its future. It is to be hoped that in future works the author might articulate these relations of Sri Aurobindo's Integral Yoga to Western philosophy in a more elaborated, more accessible manner for lay readers.

Larry Seidlitz

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