Tracing Patterns

Peter Anderschitz experiments with an urban cluster at Auroville
Clockwise: The landscape from Paulila's terrace, so like a Japanese garden.
A rich variety of textures interwoven.
Al fresco design of the space interconnecting the Coke and Paulila houses, via water channels, pools and walls.
A special walkway to the tea pavilion – in granite, wood and steel.
Another glimpse of greenery.
Enlarged anti-channel body at once connecting and separating Coke's Huísje from Paulila.
Clockwise, Roof vent atop the third house – Ursula’s
An alcove at Paullia, from the exterior
The same alcove again, in detail, from the interior main
alcove features of the living-room interior
The ‘porthole’ lookout from the master bedroom of Paullia
Paullia’s main bathroom
The circumbulature gangway at Coke’s house with
a transitional water channel
This open stairwell with slit windows visually connects
with a lily pond
"A building language was developed, based on certain criteria that would repeat themselves again and again, responding to the need for close living, yet fulfilling the more individual needs ..."
Whether applicable today in Auroville, debatable although the zoning and circulation structure are well recognised.

That living patterns would swing variously during the adjustment to a growing number of inhabitants and newer definitions of their aspirations, was well anticipated. First, living experiments of community settlements had to be conducted at the outskirts – to study them under the test of time and, through such a series of designs, evolve more appropriate solutions for actual execution in the model town. As it is, all the land belonged to Auroville and no one in particular.

The early community engaged in extremely close living, sharing almost every space and facility, with little consideration for individual needs. Auroville now experiences a growing peripheral, suburban development of highly individualistic lifestyles. More and more individuals have opted out of the collectives into their own, self-expressionistic houses; not finding answers in the vacuum of the much-awaited organised structure.

The individualised trend towards housing, with houses cropping up haphazardly, was clearly undesirable and detrimental to the development of the town. Housing solutions had to be directed towards more relevant community living.

Samasti was collectively envisaged by a group of architects, town planners, and people enthusiastic to live together and be part of a radical experiment that would change the trend of habitation, in tune with the future of their town. Much time and many discussions later, three architects designed parts of the project separately, exchanging ideas on those decisions that would influence the neighbourhood as a whole. Architect and town planner Peter Anderschitz imaged one cluster to get out of the suburbs towards a more urban concept – a more impersonal cluster situation and approach . . .
The main aspiration was?

Architect and town planner Peter Anderschitz: To find the structure patterns. To realise the urban concept of Auroville. To get more collective and impersonal so that it doesn’t matter who your neighbour is. To make it possible for highly individualised lifestyles to live next to each other.

To find the guidelines for these patterns and to give them a form...

To begin with a stepping stone, a starting point in Auroville’s residential zone, and learn from it and take the next step in an organised manner.

The way to a common language?

I was particularly influenced by the ideas of Christopher Alexander, Director of the Center for Environmental Structure, and Professor of Architecture at the University of California, Berkeley. His books – *A Pattern Language* and *The Timeless Way of Building* – were extremely helpful in finding the way to a common language.

According to Alexander: “There is a timeless way of building. It is a process which brings order out of nothing but ourselves. It cannot be attained...it will happen of its own accord, if only we let it.” A *Pattern Language* is a working document for such an architecture: “These patterns can never be ‘designed’ or ‘built’ in one fell swoop...patient piecemeal growth, designed in such a way that every individual act is always helping to create or generate these large global patterns, will, slowly and surely, over the years, make a community that has these global patterns in it.”

These books helped clarify several important patterns – regarding the intimacy gradient, the public and personal spaces, the transition spaces... and the layout of open and covered areas based on social patterns. The design criteria that resulted, largely reflect this ‘pattern language’.

What design criteria resulted?

A building language was developed, based on certain criteria that would repeat themselves again and again, responding to the need for close living with neighbours, and yet fulfilling the more individual needs. A climatic design approach was the main criterion as it was clearly necessary to evolve an appropriate module of building, best suited to the climate of the region. It, eventually, led to a bit of a vernacular approach, against my previous ideas, after all – tiled roofs with large overhangs, good ventilation, wind catchers funnelling in the wind, and vents on the top of pitched roofs to release hot air and create a draft...

The choice of local materials was another criterion – mud walls, and, wherever possible, ferroconcrete instead of wood to ease the pressures on the timber market a bit. Introducing alternative energy sources like solar energy, and waste-water recycling, were still other design criteria.

And your spatial considerations?

To create a series of open and covered spaces, observing the
necessary hierarchy of public and private spaces to fulfill the intimacy gradient as well as the social patterns... Common areas at the heart, distributed to smaller courtyards that live, and further, to galleries and walkways to the more quiet alcoves and window places.

What factors dictated their forms?

First of all, density. The focus of the city is coming together and close living. The townplan, accommodating 50,000 people eventually, called for dense living spaces, but with 750 residents, there's no need for such density yet. A new skyline, going higher rather than sprawling around horizontally, was also desired.

We decided to be more semicollective than the earlier supercollective efforts people had opted out of. It meant certain common infrastructures could be shared—a common storeroom, a common guest house, and, also, common public spaces within a compound with a common character in terms of spaces, their massing and outward appearance. The kitchen, bath and toilet facilities, however, would be provided independently.

Recognising the hierarchy of the public spaces, the ground floor would be invested with a public character—containing an atmosphere of streets, lanes and plazas with their pockets of livelier public areas and special care taken to work out smooth transitions between connected buildings.

And did it all work out?

Well, the idea of interconnecting the houses at their upper first-floor and on the ground, was eventually dropped as it didn't suit the clients. The Gallery System was adopted in its place—to build wherever possible, at every floor level, galleries, balconies, niches, and outdoor seating at the edges of buildings, specially where they open off public spaces and streets, connecting them directly to the internal rooms with doors. For, as Alexander states: "If people cannot walk out from the building onto balconies and terraces which look towards the outdoor space around the building, then, neither they, themselves, nor the people outside, have any medium which helps them feel the building and the larger public world are intertwined."

The most private spaces—the bedrooms and studs located on the upper floors—stand as free pavilions out of the continuous structure below, projecting out separately and distinctly to state their character of individuality.
A single compound holds a cluster, part of a larger arrangement of different clusters of group housing. Three groups of people got together to form the self-contained compound, sharing certain functions. The outcome is three houses and a guest house, along with a service structure, on a 4-acre site oriented around an entry courtyard about a single tree that stood on the portion of the site that was only apt for that.

The houses suit different family sizes—the house on the east, a childless couple; at the centre, a couple with two youngsters; and on the west, a single woman. They share interconnected entrances around the central court, but have their backs to their own private garden. A feeling shared by the group is that there is need for special places for special activities of a different nature. The pianist in the house on the east requires space for rehearsals and tuitions. The central house belongs to dancers, and so, contains a small studio. A practising therapist lives in the third house. A section of the courtyard was even elevated with a small pool to form a socio-cultural area with a mini-amphitheatre, open to the sky, as there was every intention of using the courtyard for small-scale performances.

Gangways interconnect the houses on the ground, with special care taken to connect the exterior and the interior of the units visually. The ground floor is denser than the upper floors, which get progressively lighter as their pavilion-type bedrooms are more loosely connected. Each individual is granted his own quiet private space, architecturally articulate and enjoying the view and ventilation. With an eye on the weather and for want of a view of the more public entrance courtyard at the heart of the cluster, the houses are oriented from northeast to southwest at the garden front although they are entered from the northern face of the plot. As the heavy rains fall from the northwest and northeast, and the good winds blow from the southeast to southwest, the houses have openings towards the south and more protection at the north.

The gangway idea connecting all the entrances in order to enliven them and make them that much more inviting, is well achieved, specially at the central house with a porch stretching well into the common courtyard to make place for intermediate spaces. The guest house, entered through an elevated platform from the amphitheatre, has its own front courtyard. A tiny pavilion is planned as its architectural and functional focal-point, right next to the entrance of the main compound. East of the entrance, is the service structure with its own inner open space amid storerooms, an electric room, tool room, water-supply system, and washing-facilities.

The more private gardens behind the houses are interconnected with subtle definitions of their borderlines and the central and more common landscape feature of the tea pavilion, which presides over the free-flowing form of a pond, inviting more group interaction.

The openings are rich and varied, large and many contacts with the climate and visual connections with the environment. The grilles installed for security, give the openings a Japanese character with their delicate, repetitive grid-like arrangement,
while screens repel the mosquitoes. To break the monotony, the shapes change. A circular opening in the central house overlooks the garden while some diagonally-rotated square cutouts face the central courtyard. Many openings project out to great alcoves and bay windows, with cozy window-seats for two.

A skeletal load-bearing system in concrete allows the non-load-bearing walls to move along freely. The distinctions of the two materials are outwardly enhanced, and the wall-column junctions treated specially. The mud wall is constructed with mud from the site, which does not require its composition changed nor any stabilisation with additives. Mud blocks, 30.5 x 14.5 x 10cm, were formed in a compressed block machine, and used in the 15cm thick walls, plastered with cement-stabilised lime mortar. Pile foundations with connecting ring beams proved a better alternative to continuous foundation walls although the soil did not demand structural piles. They guard against termites and any foundation settlement.

The mud walls erected on the ring beams also proved safer. Of course, the rafters supporting the edges of the buildings, and made of ferrocement instead of large amounts of wood, are overdesigned. If correctly precast, they could be much smaller, saving considerable cement and steel.

The floor slabs are composite filler slabs whose 30 x 40cm grid contains one brick in each bay. They are reinforced along the gridlines with single, 12mm dia bent bars in one direction, and 10mm dia ones in the other, while concrete covers the bricks by 5cm. They hold good for spans upto 4m, and save on steel and concrete considerably.

Running all around the periphery of the houses, a water-channel stops ants entering the living-quarters. Bulging out at several places into larger water bodies, the channel leads to close contact with water in this environment.

Geomancy is being rediscovered in the West, but was already practised on this plot. A geomantic diviner measured energy lines on the ground – the global and diagonal grid nets that influence the well-being of any organism on a more suitable plane.

He pinpointed the trouble spots by overlaying the nets of different lines – the intersection of several energy lines. These were the danger spots – where one should never sleep, nor work, not even sit still, for long.

And so, the buildings are placed and planned carefully, standing clear off the troubled spots with expert advice from the ace geomancer on how to neutralise the negative energy with a fireplace, pillars and walls, so that they never get underfoot.

Individual septic tanks receive the black and grey sewage water of each house, allowing the solids to settle before the overflow into the larger common tank adjacent to the sewage treatment plant. Toxic water flows out of this tank into an adjoining soil bed where plants like canna grow. This root purification plant purifies waste water through decomposition and certain absorption by plant roots. The 'sieved' water is then directed into yet another tank, reserved for collecting pure water. It also contains mosquito fish, which die at the slightest trace of toxicity. If the water passes this test, it can be recycled for washing, gardening and several purposes other than drinking.

Energy is supplied via two networks – the usual 220V wiring and a DC back-up system. A light and plug operate in each room from a common 12V battery, which is automatically recharged from the electrical system, as well as by solar panels. Hot water supply is also ensured in each bathroom and kitchen, in addition to a solar water-heater on each roof terrace.

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