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(Magazine cover: SCIENCE AND ENVIRONMENT FORTNIGHTLY — Down To Earth — AFGHANISTAN INHERITING A BARREN LAND — US' indecent proposal to India on climate — Rats are endangered and upside down — Rightwingers Europe: a politics of alienation)

Contents

Editorial

The focus of this issue is the documentation of built heritage. Most often ignored in the Indian context, documentation is in fact the most essential initial step for interpretation and conservation of heritage structures.

The *'Compiling Records'* section in the issue presents excellent measured drawings of two complementary sacred Indian archetypes - the *Baoli* and the Temple. The firsthand documentation of the *baolis* in Madhya Pradesh is an exemplary work on these dilapidated heritage structures. Rotzer's interesting interpretation of the *baoli* as an inverse temple form introduces a fresh perspective for further research on these water structures. The documentation of temples undertaken by the American Institute of Indian Studies further emphasizes the need for such methodical records of our built heritage.

The second section shifts the emphasis from physical documentation to the recording of the intangible aspects of such sites. Anuradha Nambiar emphasizes the role of memory as a significant historical record through a case study of the lived experiences of the last royal inhabitants of the Shakthan Thaimpuran Palace at Thrissur, Kerala. Ajaykumar interrogates the role of spectatorship in art-architecture and design practice through a trans-cultural, trans-historical comparison of the Ellora caves with Ando's architecture. The following two articles on the City Centre of Kolkata showcase the role of individuals and NGO's in documenting and bringing forth Indian heritage to an international front for conservation support.

The articles on environment present relevant issues in rural watershed development; the need for environmental byelaws in urban development, and feature the Environmental Sanitation Institute by Vastu Shilpa Foundation as an example of sustainable design.

The debate on the Conservation Charter that started from our previous issue carries on!
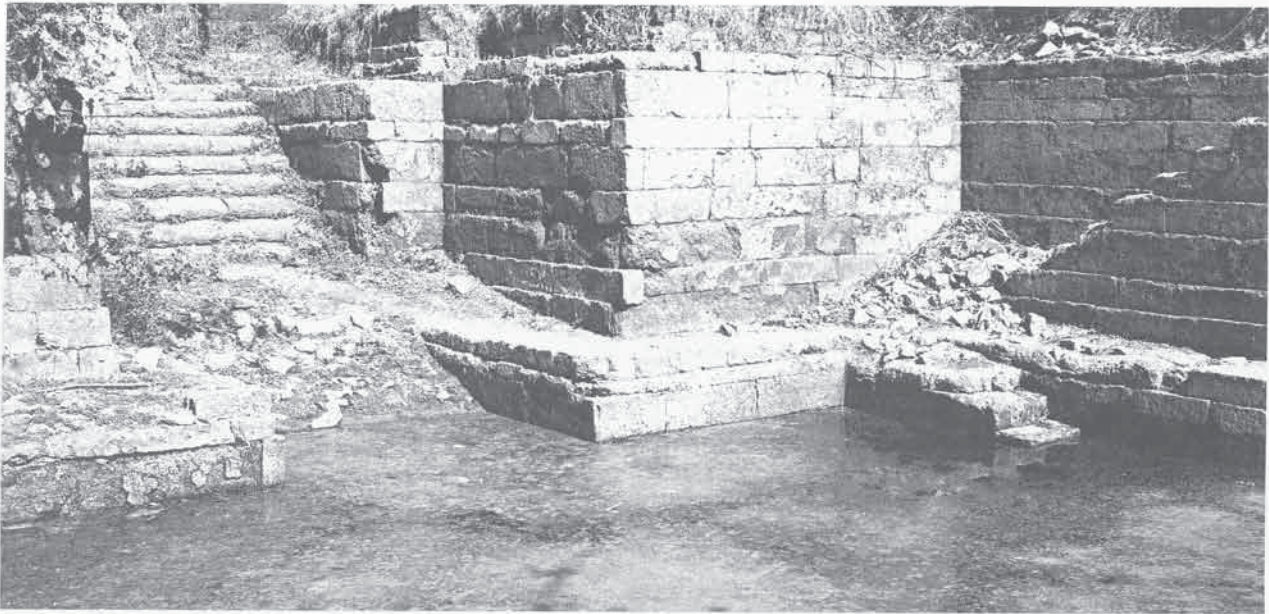
We look forward to your feedback.

Shikha Jain

Compiling Records

Baolis on Basaltic Ground

Klaus Rotzer is a freelance archaeologist who has lived for 35 years in South Asia and has done significant documentation on historic water structures and defence architecture of India.

Documenting Temples

The American Institute of Indian Studies (AIIS) was founded in 1961 to increase and improve understanding between India and the United States through academic research in various aspects of Indian life and thought. In India, the Institute is headquartered at Gurgaon and has two major research centres with large libraries and archives—the Archive and Research Centre for Ethnomusicology and the Centre for Art and Archaeology.

Baolis on Basaltic Ground

KLAUS ROTZER

Kumar Baoli, Mandu

Traditional water structures occupy a significant place in the architectural heritage of India. These structures exhibit a wide range of original and varied architecture. But in recent times these monuments have been neglected, abandoned and replaced by modern installations.

A systematic and thorough study of traditional water architecture in India remains to be undertaken. The aim of such a study should be to understand the relationship between various Indian communities and water on a religious/social level and to document the architectural innovations used to solve the vital problem of water supply on a technical/geological level.

The semi-arid regions of Rajasthan and Gujarat in particular contain complex hydraulic works. The difficulty of locating and reaching the underground water table is partly responsible for the exceptional means implemented to locate and access water. Tourist guidebooks on the region feature some of the most impressive of these monuments and likewise, some architectural studies have also been devoted to them. The basaltic areas like Malwa and the North-West of the Deccan also developed an architectural form similar to the step-wells of Rajasthan and Gujarat. However, these have until now been largely ignored, primarily for two reasons. Firstly, the stone used is not marble or pink sandstone, but vacuolar basalt of dark colour which decomposes rather quickly on the surface. Hence, unlike its north Indian counterpart, the water architecture of the Deccan is not very photogenic. Secondly, the water source is seldom found at great depth in this region. Furthermore, the ground is relatively firm, and exerts only low pressure on the retaining walls thus resulting in relatively simple construction.

Among the various types of water systems of the Deccan, it is the *baoli* that is presented in this
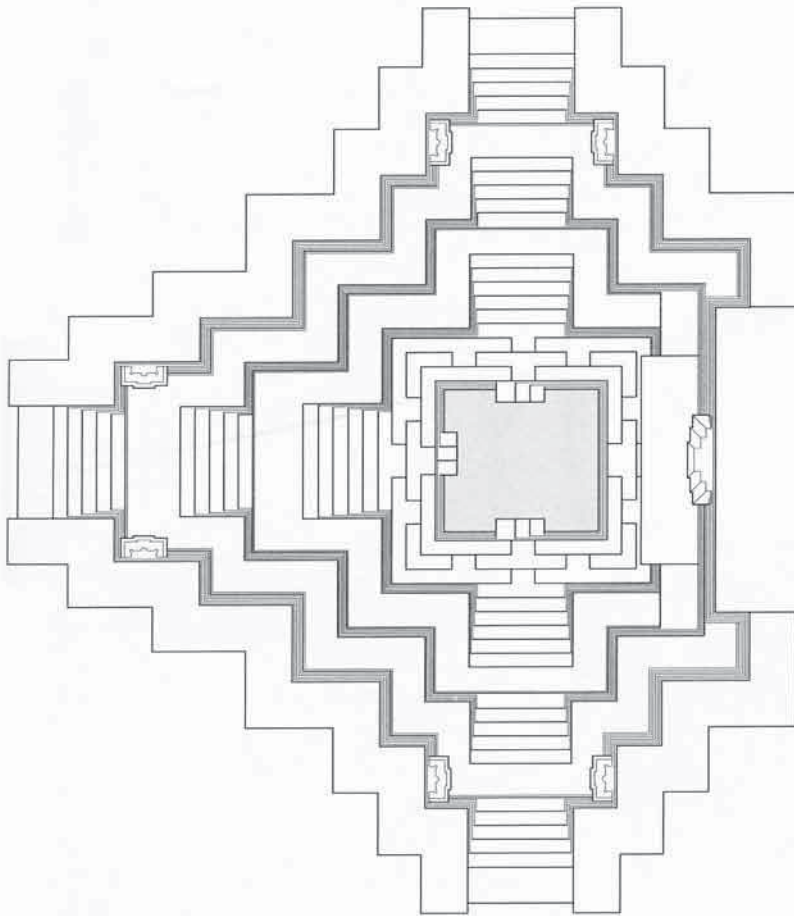
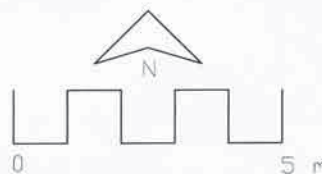**Fig.1.** Champa Baoli,Jharda, District Ujjain

documentation. The *baoli* is essentially a well provided with stairs, and serves as a source of drinking water. Here, one does not draw water with a cord; rather one goes down to the water level. It was generally the women in the community who went to the *baoli* to fetch the drinking water.

The complete corpus on which this article is based goes back to one period, from 1000 AD until about 1430 AD. This dating period corresponds to the reign of the Hindu Paramara and Yadava dynasties, and that of the Ghori Sultans at Mandu and the Bahmani Sultans at Gulbarga. The *baoli*s are of two types that with only one approach ramp (Fig. 2) and a second type with three stepped approaches or ramps (Fig. 1).

All the *baoli*s featured here share the following commonalities.

They are made up of two parts, an architectural framework made up of walls and flights of steps which forms a relatively significant space and, at the bottom, a well cut into the rock, which recovers the water contained in a network of cracks. At the time of digging, the location of the well was usually decided at random as within a margin of a few metres, one would

0   5 m

locate water or encounter dry rocks. When the water
finally surged forth from a particular spot, it was
considered a miracle, the result of divine intervention and
the well was constructed at the spot.

A low parapet that is approximately a meter wide frames
the *baoli*. A raised threshold marks the beginning of the
stairs; one has to ascend a few steps before going down
towards the water, barefooted. The retaining walls have a
set of projections and several levels delimited by
gangways. Each course of dressed stones is set back
from the previous one - the walls are therefore not even
but slightly stepped. The walls in the *baoli*s built during
the Paramara/Yadava period are made out of dry stone
(Fig. 4, A, B, C and the lower part of D). The lime mortar
was introduced later, by the Muslim masons (Fig. 4, the
upper part of D and E, F). The architectural form is

completely based on quadrangular shapes. There is no cylindrical component. The well itself, cut in the rock, is always square. The ramps are not strengthened by means of stone props or arches as the firmness of the soil into which the *baoli* is built does not require these elements. The gangways and recesses of the walls are sufficient to ensure the stability of the structure.

Last but not least, the stone slabs and pulleys for drawing up water, which these *baolis* show at present, are much later additions. The original structure had no lifting device at all. The *baoli* had to provide pure drinking water; by lifting it with a pulley it could be polluted by the glance of an untouchable or a ghost. In this area, before the 15th century, it would seem that water systems were

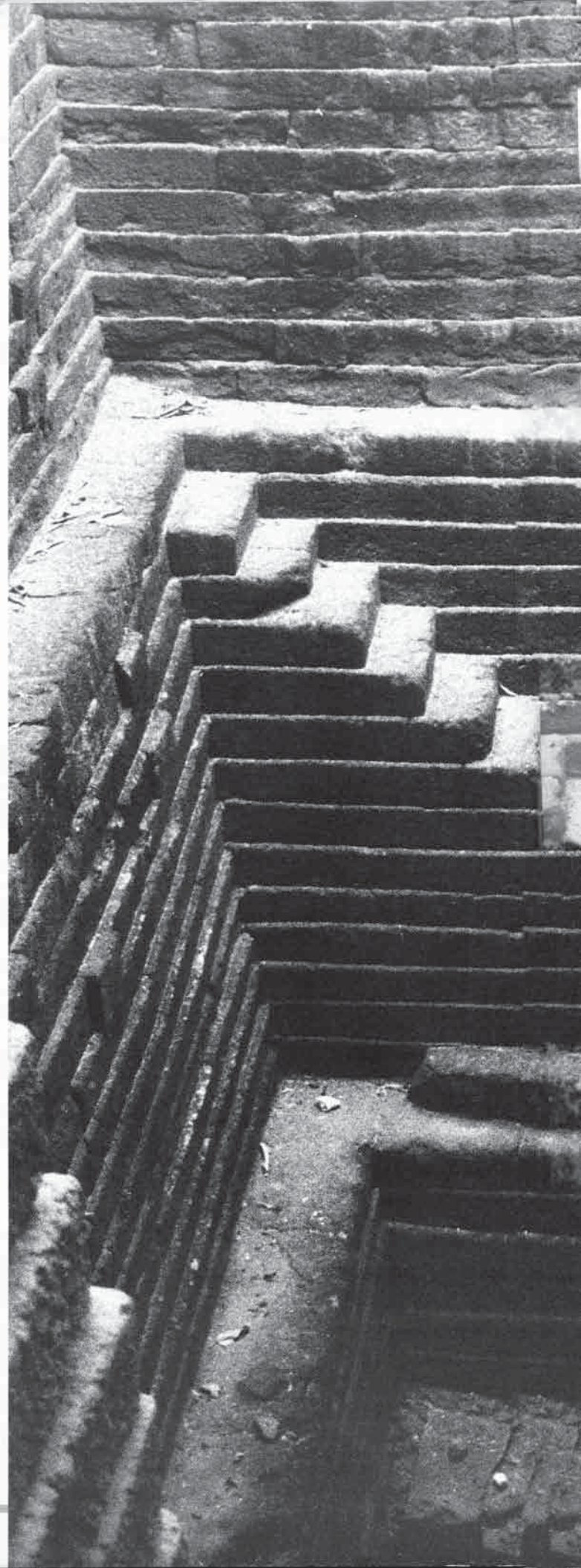**Below.** East wall and well, Champa Baoli, Jharda, District Ujjain
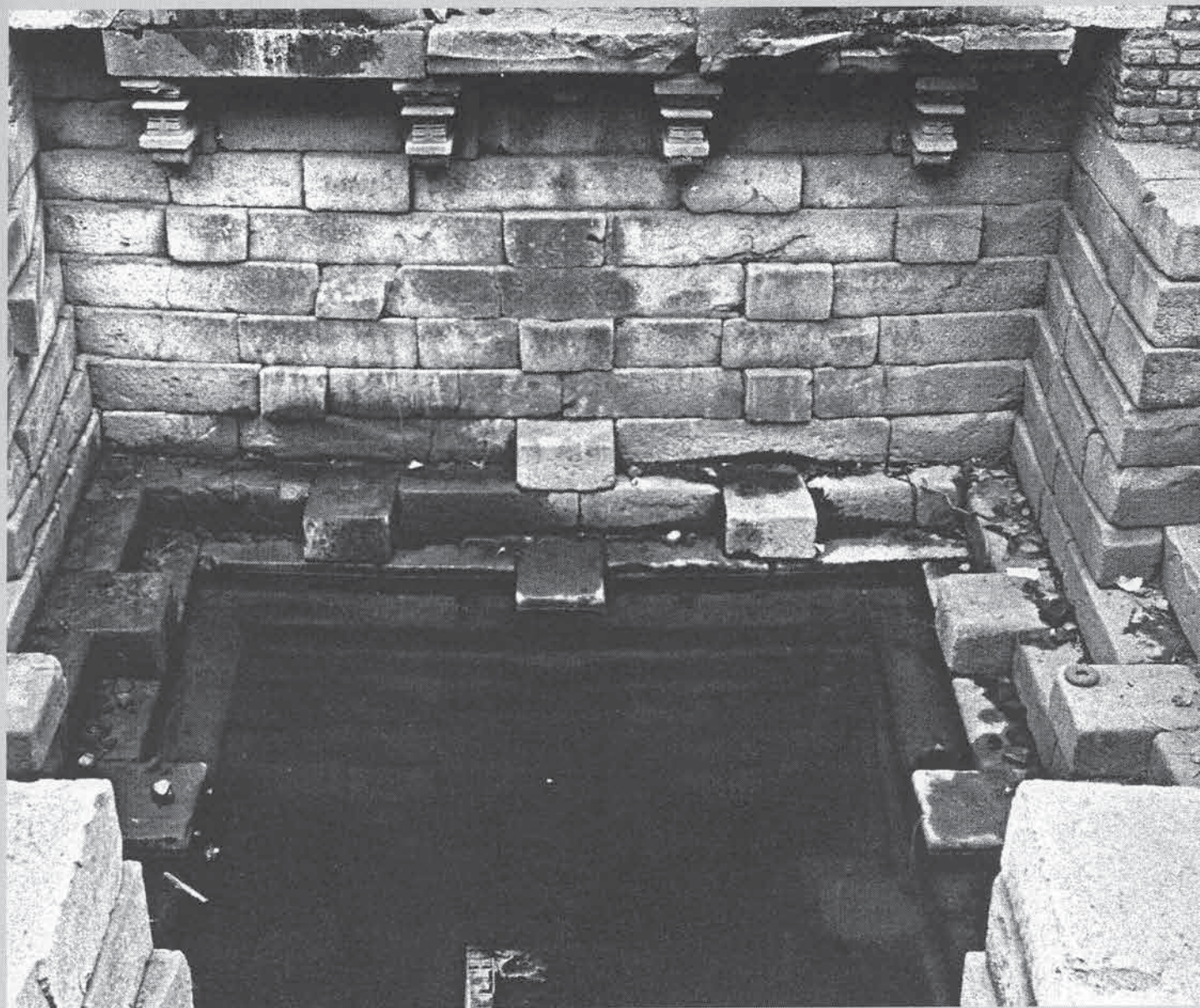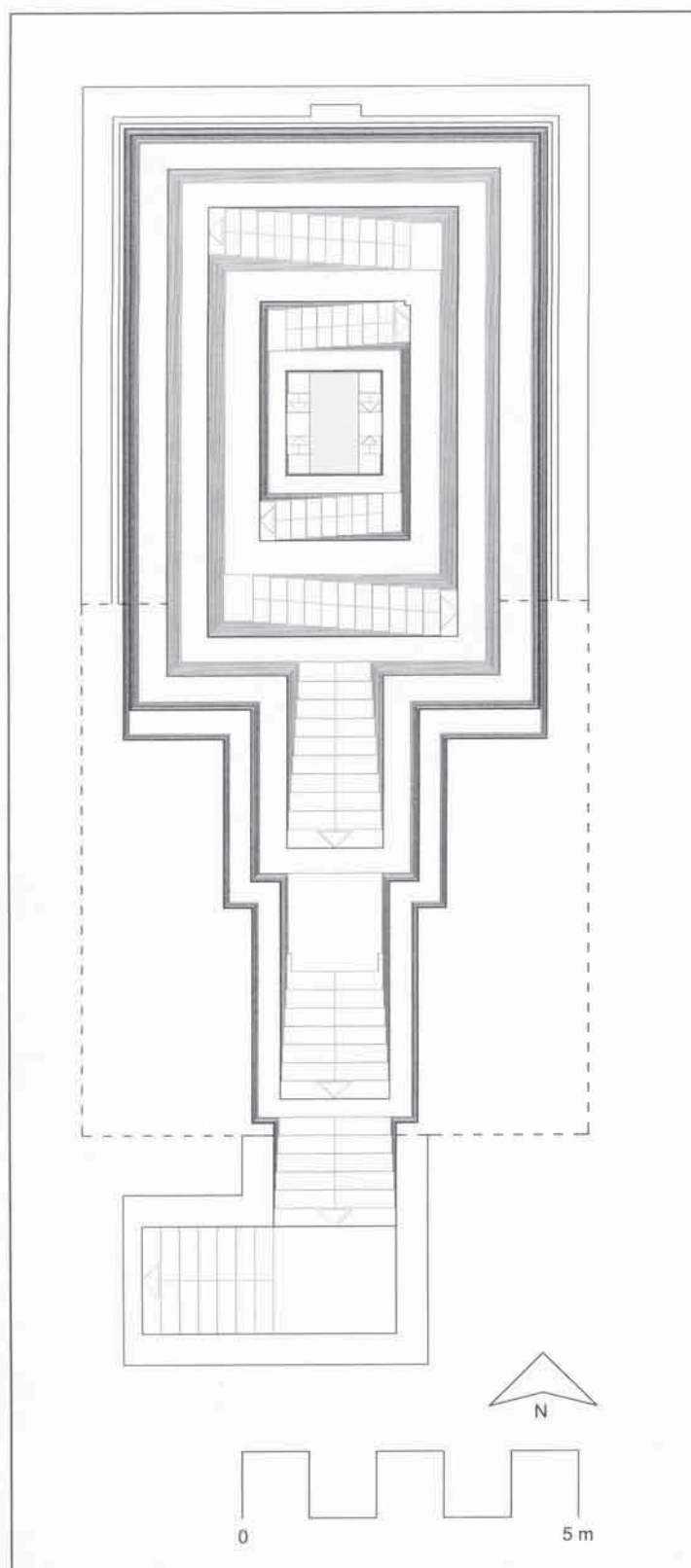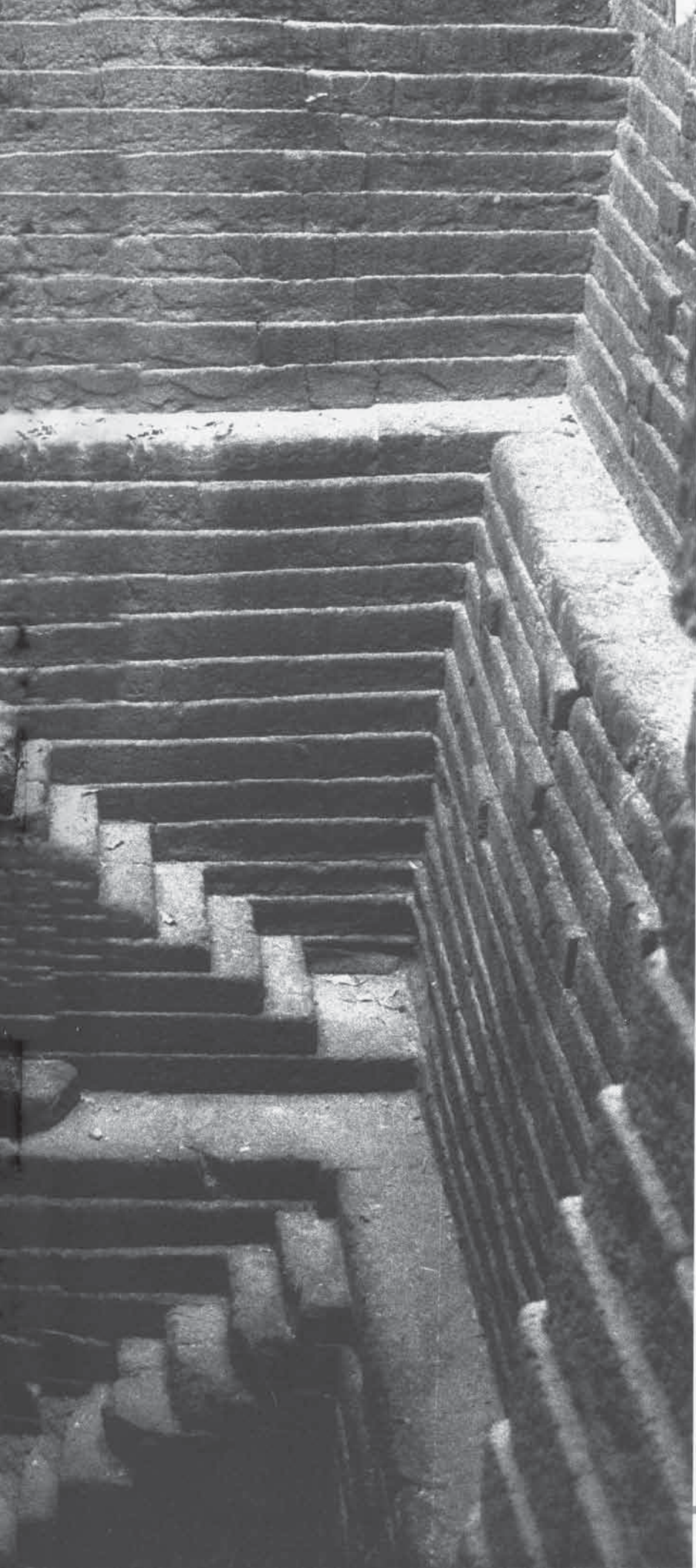
Fig. 2. Old Baoli, Gresnasevar Mandir, Ellora Village

**Right:** The Well, Ellora Village

adapted to each water-related requirement of the community. Thus for each requirement, drinking, bathing, cloth washing and irrigation, there existed a corresponding type of water system. Under Muslim rule during the 15th century, the *baoli* ceased to provide water for particluar requirements.

The *baoli*s with three stepped approaches date mainly from the Paramara & Yadava period (Fig. 1 & 8). The type disappears at the beginning of the 15th century (Fig. 10). The edge of these *baoli*s consist of a rather broad paved margin. Drawn in plan, the three approaches to the well form as a 'T' with each one ending in a side of the square well. The fourth side is made up either by a retaining wall (Fig.1) or by a kind of buttress (Fig.3 & 8) with a niche which shelters an image of Vishnu lying on the cosmic snake, Ananda. Later, this part began to be capped by a drawing pulley or Persian wheel.

The square well cut in the rock is framed by *ghats* (Fig. 1 & 3), which constitute a transition between the excavated part and the built part of the *baoli*. It ought to be stated that the three slopes are not always identical. That which faces the image of Vishnu is often the most significant, and is substantially developed (Fig. 3 & 8). In fact, *baoli*s of this type are reverse temples. Instead of the steps and *shikhara* rising towards the skies, the steps go down to the pure drinking water, which the community needs to live. Vishnu resides in the buttress or wall directly opposite the main flight of steps. In some ways, this *baoli* that opens out in front of the residence of the God replicates the plan of a temple *mandapa* where the centre is replaced by the well. The other gods present are usually placed in the niches that flank each of the three descents to the water level. The *baoli* of Patlavad has twelve such niches with deities (Fig. 8).

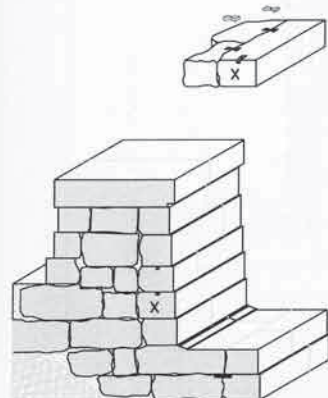**Fig.3.** Baoli in the Village, Dhamnod District Dhar
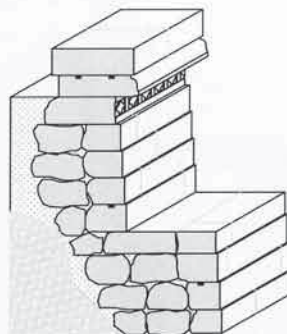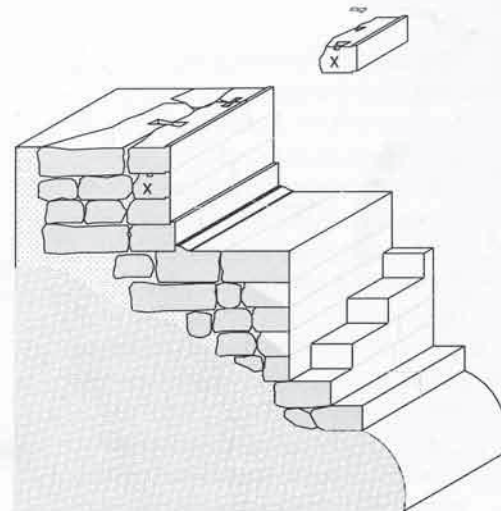
Right: Western Ramp, Dhamnod

N

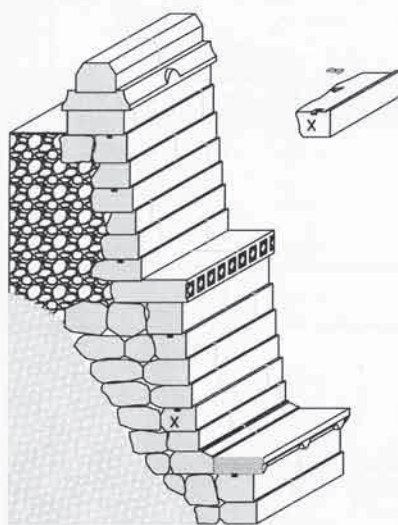0   5 m
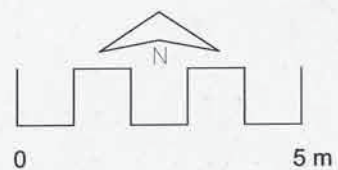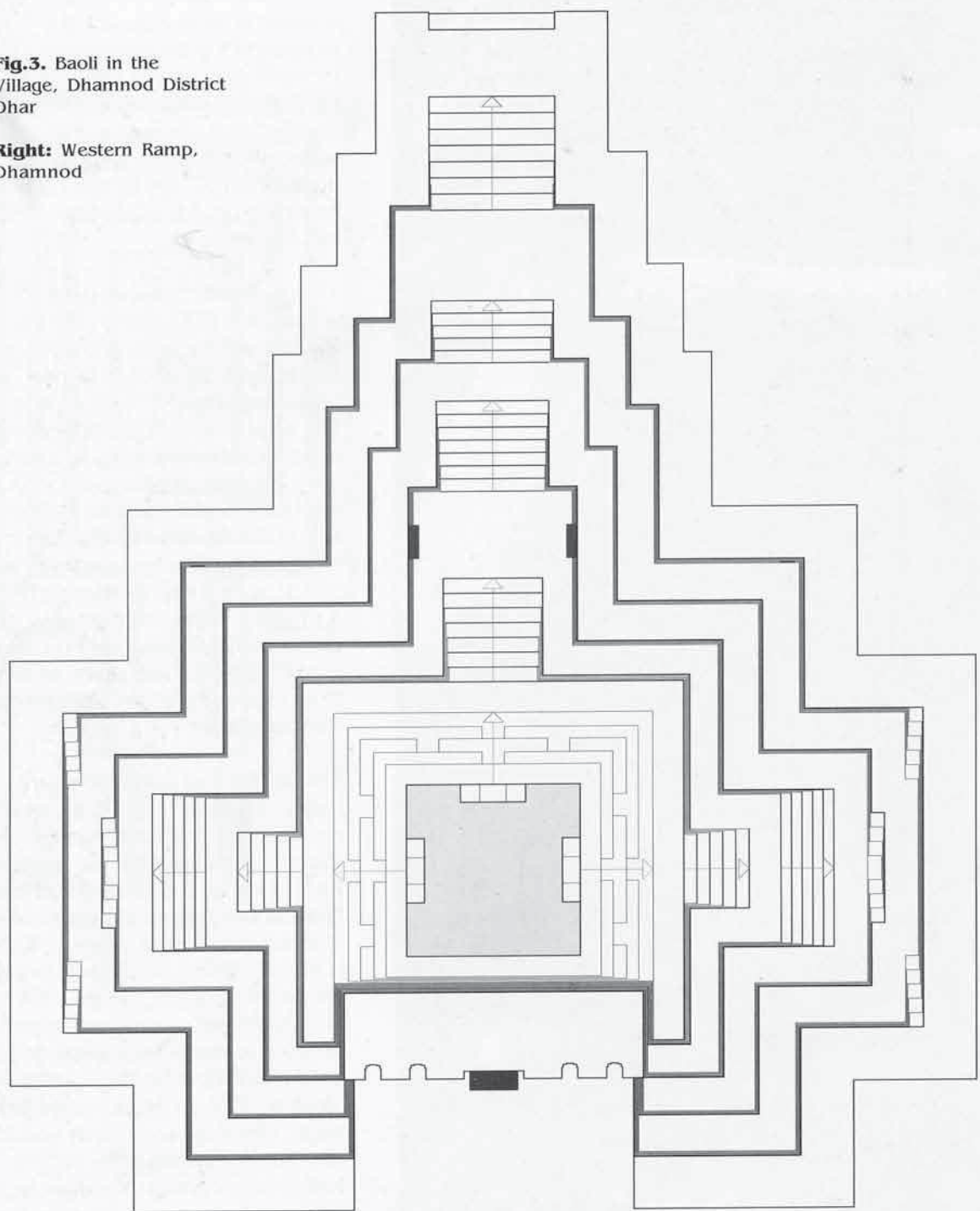
DHAMNOD
Balai Baoli
Cut Section
A

NALCHA
Nani Baoli
B

MANDU-NALCHA
Baoli MN-E7
C

0   1 m
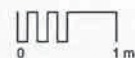
NALCHA
Mithi Baoli
D
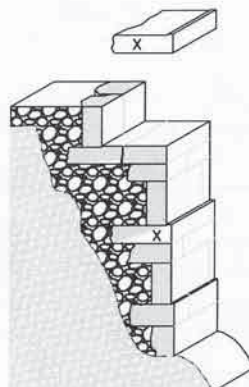
MANDU - NALCHA
Suli Badiji Baoli
MN-E1
E

MANDU
Kumar baoli
F

0   1 m

Basaltic Rock

Earth as Mortar

Basaltic Quarry Stone

Limestone or Sandstone

Rubble & Lime Mortar

Joint
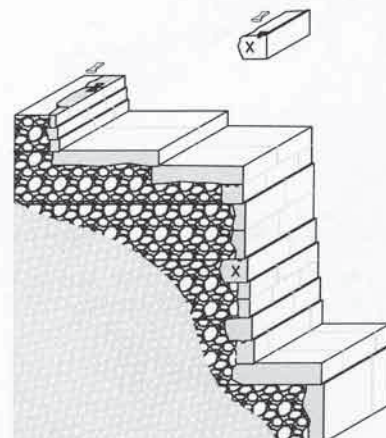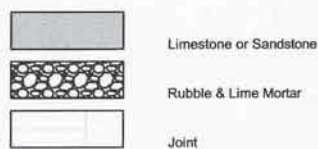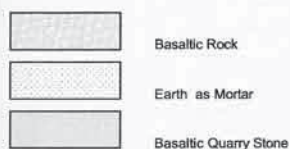
DHAMNOD, Dist. DHAR, MADHYA PRADESH

MANDU, Dist. DHAR, MADHYA PRADESH

NALCHA, Dist. DHAR, MADHYA PRADESH

Fig.4. Construction of the retaining walls of the Baolis
Left: Eastern Ramp of Baoli, Dhamnod, District Dhar

The *baoli*s with a single
approach present the same
evolution in the techniques of
construction as those that have
three separate approaches. In
the oldest examples, dating from
the Paramara & Yadava period,
the flight of steps is not straight
but bent at a right angle; there is
no device to lift water and the
niches for the images of gods
are rarely seen (Fig. 2 & 9).
Later, in a Muslim context, this
type becomes the standard one;
the stairs are straight rather than
bent and a device is provided for
lifting the water (Fig. 6).

What was the role of these
*baoli*s in the life of those who
built them?

In a Hindu context, the one with
three approaches, was a

Fig.6. Kumar
Baoli,
Mandu,
District Dhar

0   5 m
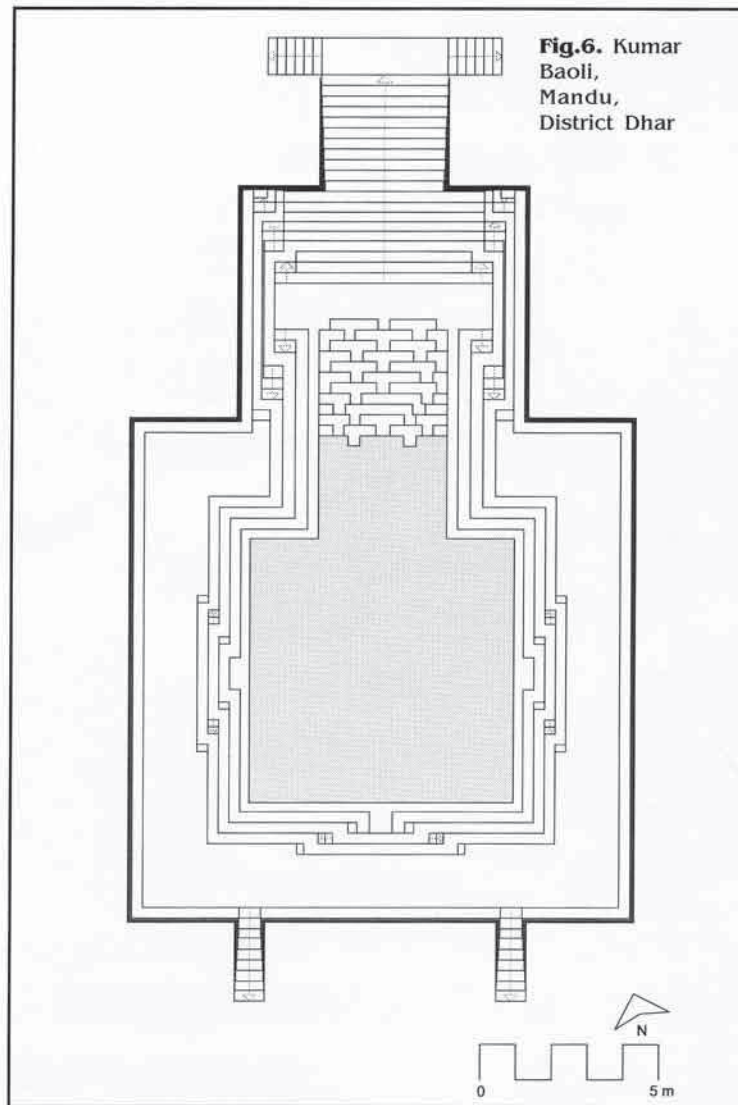
Fig. 5. Mithi Baoli, Plan of five
levels, Nalcha,Near Mandu,
District Dhar

0   5 m.   10 m.
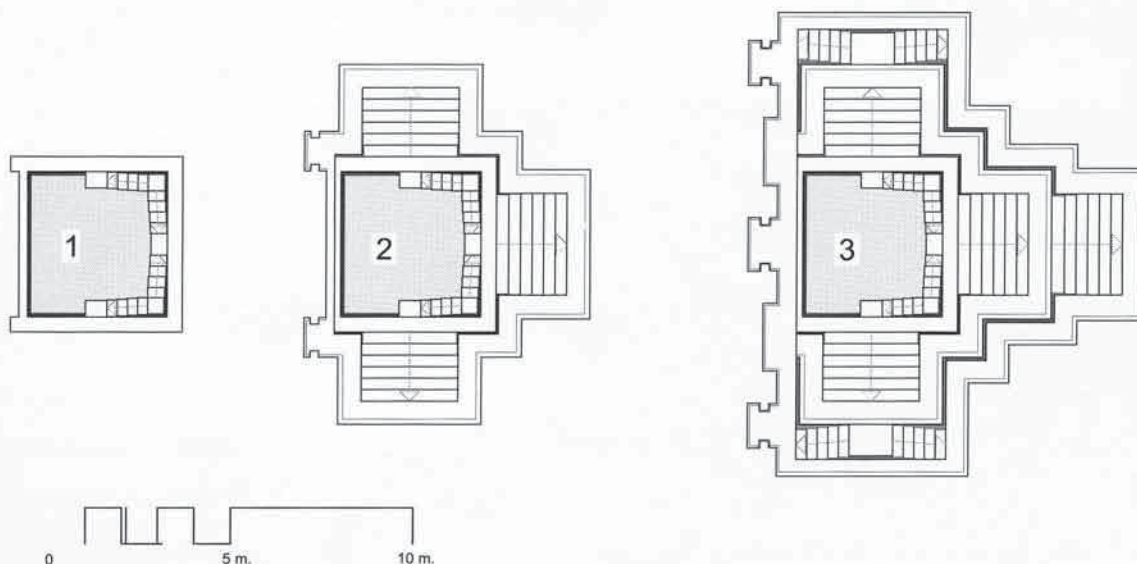
Fig.7. Baoli in the northeast-ern part of the garden city, Daulatabad
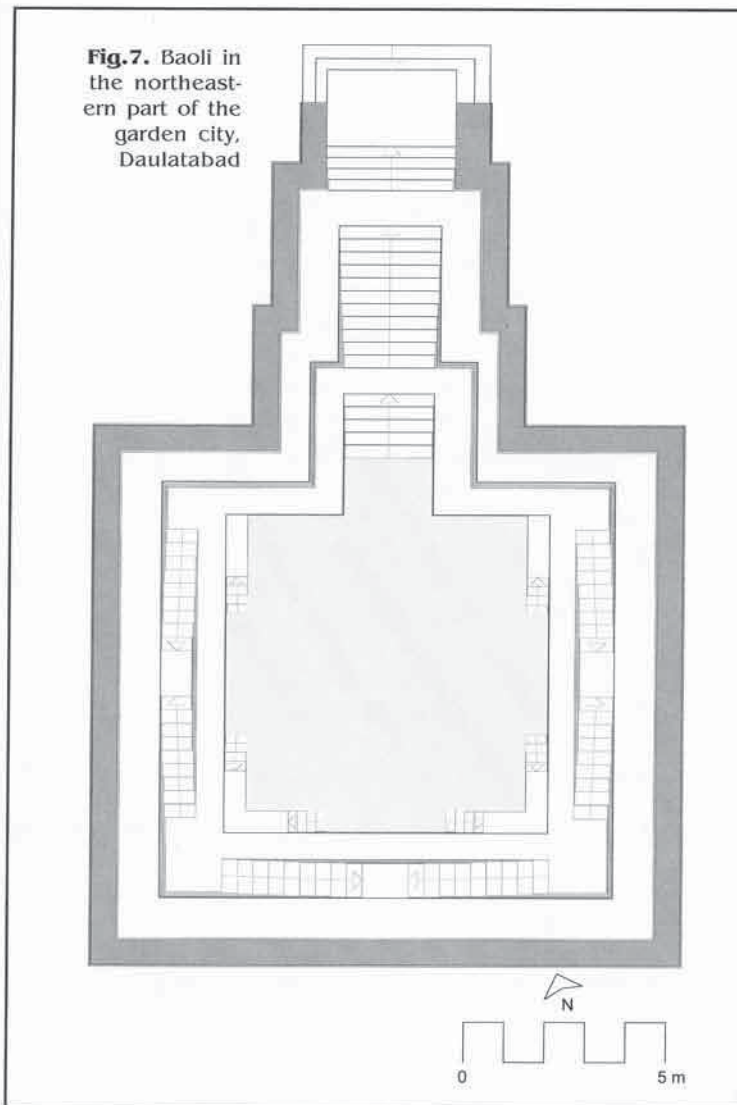
particularly significant place for the community that had financed its construction. It supplied drinking water that the women of each family would draw and bring to the house. At the same time these women took care not to pollute the water and when they went up, barefooted, they sprinkled the images fixed in the niches to oblige the gods and attain their protection. But this cool space, with its large margin and its shady gangways, was also an ideal place for the men to gather. One could sit there, protected by the gods. The youth could study under the guidance of a guru and at the same time have the opportunity to watch the laughing girls carrying overflowing brass pots. The whole community who built the *baoli* - women and men, old
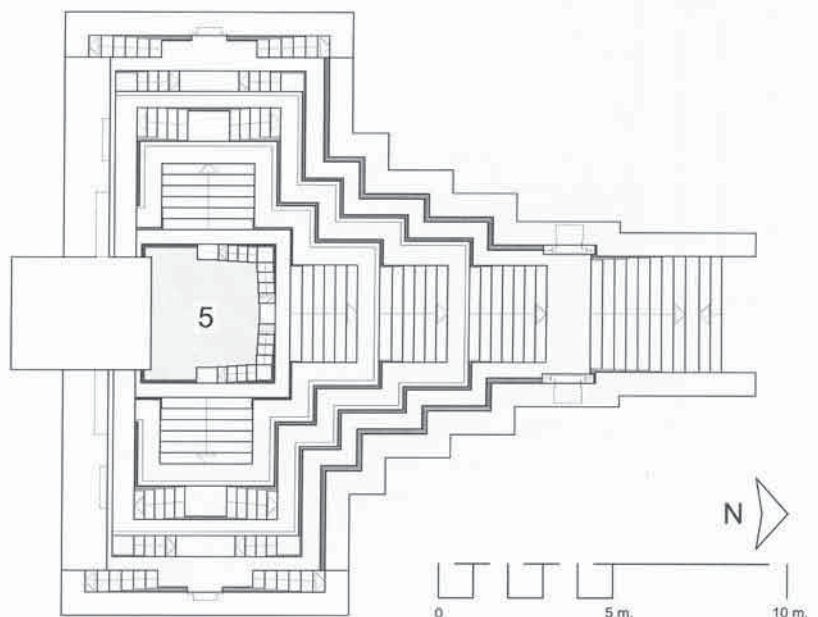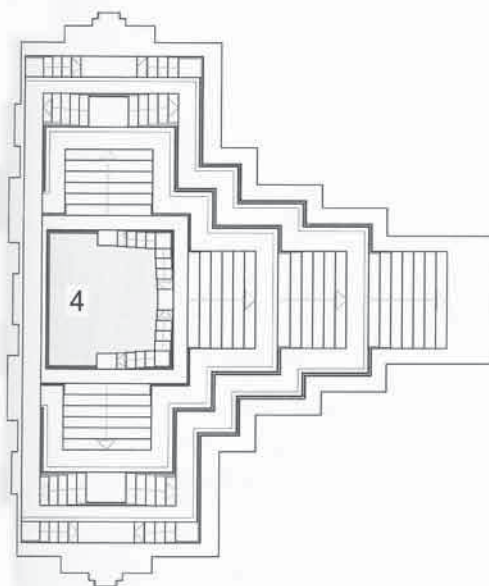
and young - met in its cool environment under the glance of auspicious divinities. By allowing water to spring out of the rock, Vishnu himself was behaved to have chosen the place. Given its sacred nature, it is understandable that outsiders were prohibited at the *baolis*. These *baoli*s were private places designed especially for the use of a specific community.

When following a social change, a *baoli* of this type passed to a Muslim community, its religious character underwent a change. Such a transformation can be observed at Nalcha, the suburb of Mandu, the capital of the sultanate of Malwa. The Mithi *baoli* here was restored at the

beginning of the 15th century (Fig. 5). The wall with Vishnu's image was dismantled to facilitate the incorporation of two levels of niches, each one covered with an arch, the symbol of Islam. This wall is inspired to some extent by the *qibla* wall of the great mosque at Mandu. Another example of the adaptation of this type of *baoli* to a different religionis provided by Sultanpur in the north of Gulbarga. The *baoli* was located in the garden of a Bahmani palace and the image of Vishnu is also replaced with an arched niche (Fig.10).

Before the 14th century, the *baolis* with a single stepped approach seem to be intended not for a sedentary community but for consumers of

Fig.8. Baoli in the village, Patalavad, District Dhar
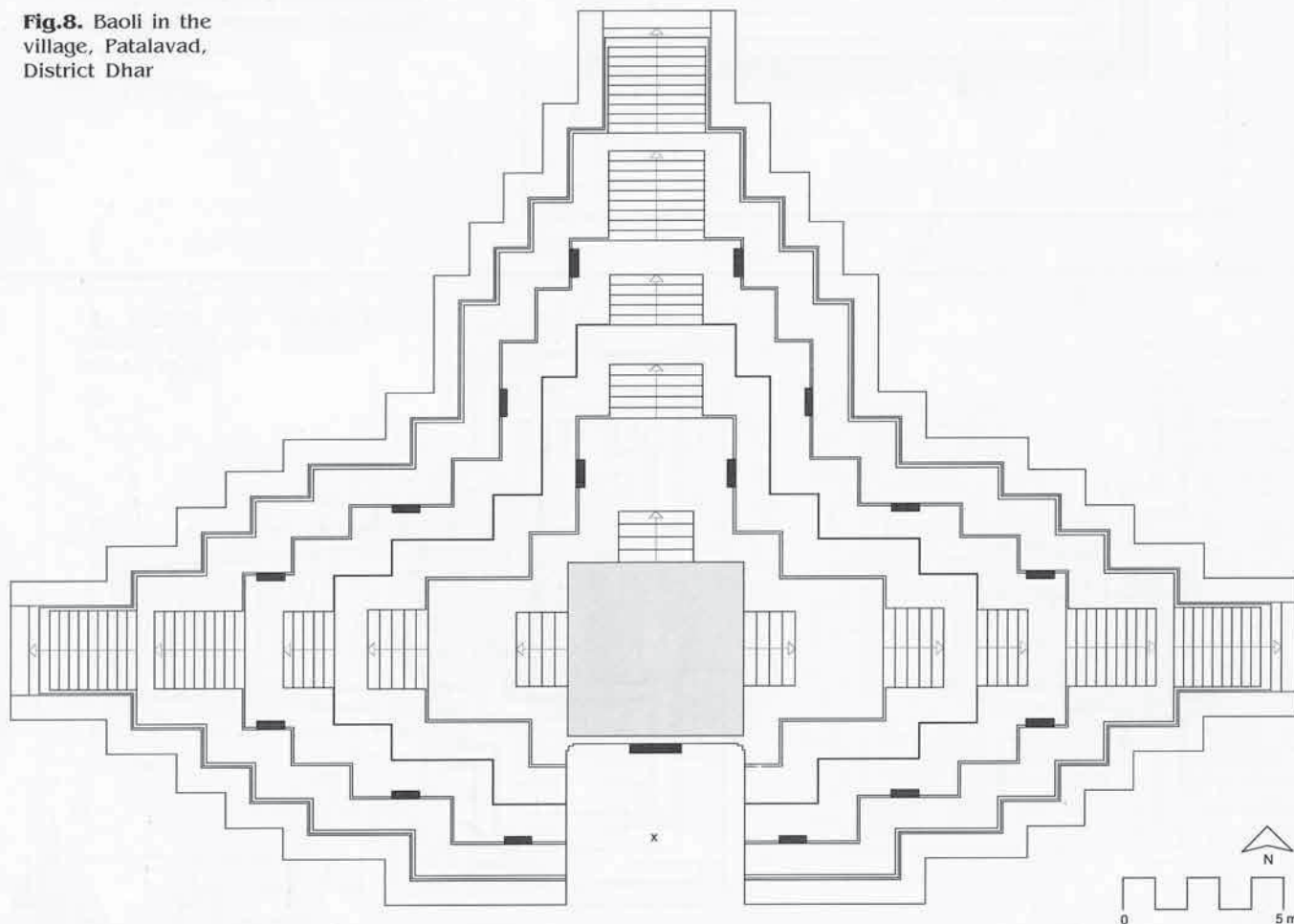
various origins. In Daulatabad, three *baolis* of this type are associated with the defences of the city (Fig. 9) whereas the one in Ellora village fed a religious establishment (Fig. 2). On these two sites, the function of the *baoli* was essentially to provide water to soldiers and pilgrims i.e. *people in displacement* and these *baolis* where thereforefull of framework of caste. The images of gods are also rarely found here. On the other hand, the stepped approach does not go down directly to the water but bends at a right angle. This was probably to avoid a direct vision of the water thus ensuring that any impure glances cast by passers by would not soil the water contained in the *baoli*. A parapet wall possibly framed this type in order to ensure better protection against pollution. Unfortunately more among the specimens of this type which were surveyed extent retained their original boundaries.

From the 15th century onwards, this type of *baoli* developed and multiplied under Muslim domination. But the stepped approach is no longer bent at a right angle; instead it proceeds straight down to the water (Fig.6). The *baoli* serves to supply water to public places as well as to gardens. In some cases, it is specially intended for bathing and for convivial gatherings, and is accordingly equipped with *ghats* and benches (Fig.7). Finally, some *baolis* are provided with stone slabs and a

Fig.9. Baoli inside the eastern barbican, Mahakot, Daulatabad

x : drawing table

N

0   5 m

Fig.10. Baoli in the Garden of the Bahmani Palace, Sultanpur, Gulbarga

0   5 m

Fig.11. Baoli inside Ambarkot, near Bastion B6, Ambarkot, Daulatabad

0   5 m
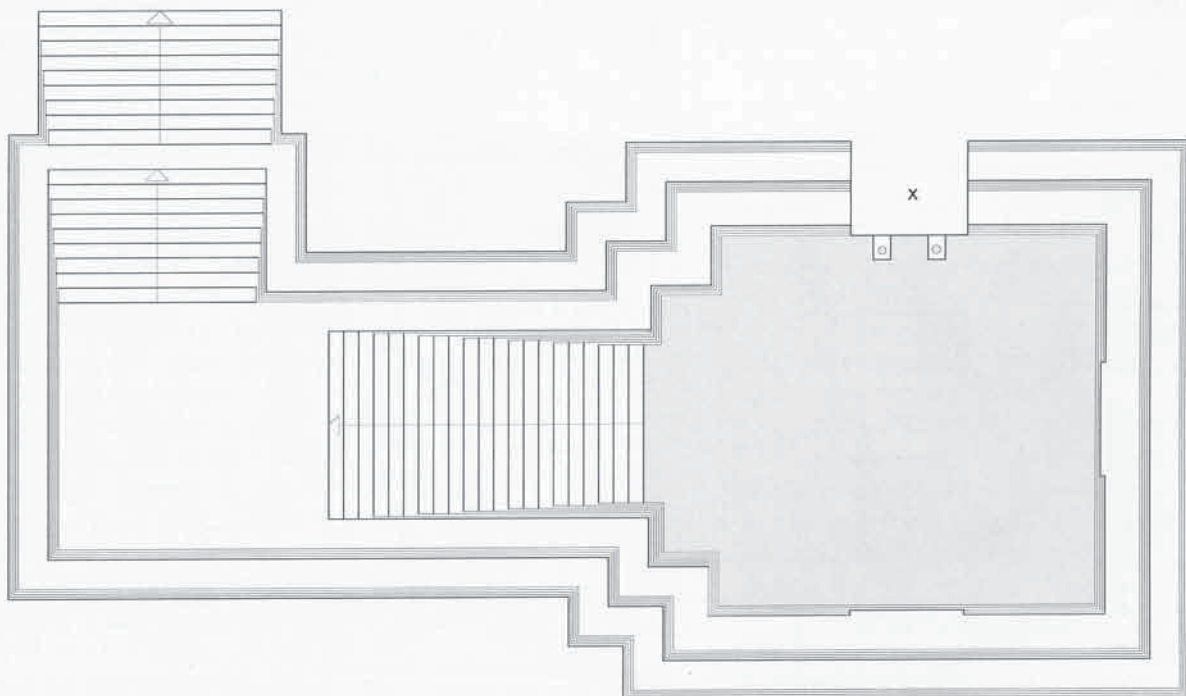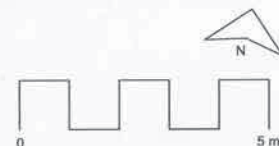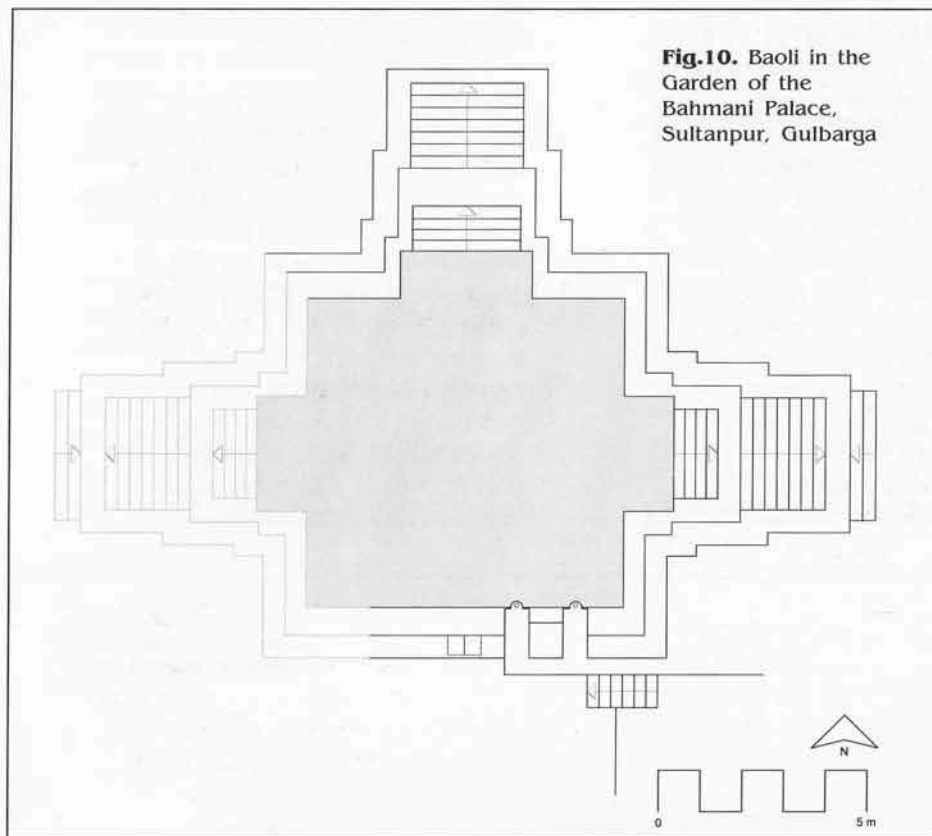
pulley for drawing up water to irrigate a garden or water the cattle. The Muslim jurisdiction probably found the *baoli* with the single stepped approach in keeping with the egalitarian ideal of Islam. On the other hand, the *baoli* with three approaches and a temple which supplied water to a specific caste was not suitable any longer.
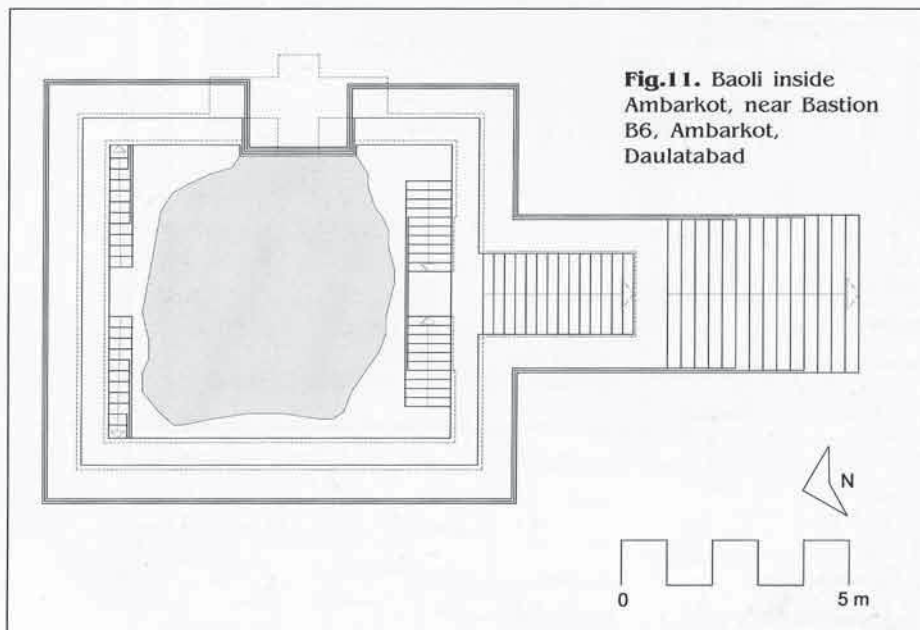
It is unfortunate that these *baoli*s have recently become dump yards for refuse. They are an important part of India's heritage and urgently need to be appropriately restored or should be at least kept clean so that they can still serve as meeting points for the villagers or as a recreational areas for the local youth. If the water is regularly used and the age old structures of the *baoli*s are kept intact, they could perform the dual function of preserving heritage and contributing towards solving the water crisis of India.

Documenting Temples

The Center for Art and Archaeology of the AIIS was set up in 1965 to promote Indic Studies. The documentation program of the Center was initiated to support its core research program on temple architecture. The intensive site documentation undertaken through this project has resulted in a photo archive that has diversified over the last forty years to cover nearly all phases of ancient and medieval Indic art and architecture. Hindu, Buddhist, Jain and Islamic architecture, numismatics, sculpture (in metal, stone, and terracotta), and painting traditions have been documented both *insitu* and through museum collections. The material available in this archive is fully classified and catalogued, and also available online.

The research program has, in addition to building impeccable documentation material, also resulted in the publication of an Encyclopaedia of Indian Temple Architecture. The core intellectual

Left. Stone Relief on the walls of Ajitnath Temple, Taranga, Gujarat

Overleaf. Intricately carved water spout in Ajitnath Temple, Taranga, Gujarat

concern of this project has been to study the vocabulary of Indian temple architecture in its varied regional and period styles. The project gathers together a range of historical, cultural and technical information sourced from ancient texts, records and field documentation.

Most of the Center's documentation has been undertaken by its own research team consisting of experienced and renowned researchers, photographers and draftsmen. The meticulous research and documentation of sites and monuments has been supervised for over thirty five years at the Center by Professor M.A. Dhaky, a well known authority on temple architecture. The Center's expertise lies in the documentation of sites and monuments from all over India and South east Asia. This extensive field documentation has involved a two-pronged strategy including (i) detailed photography, and (ii) the creation of architectural drawings of each monument.

Each monument is photographed in a meticulous and planned manner, proceeding from general views to details of architectural elements and sculpture, from the base to the finial, from all directions. The photographs taken for purposes of documentation clarity and the preservation of records has been consistently shot in manual mode in black and white.

The first stage of making architectural drawings is undertaken at the site itself and consists of notes and sketches made by the team. This includes drawings of floor plans, elevations and details of sculpture as well as their measurements. These field notes are made in pencil or in pen and ink. At the secondary stage, these initial field notes are transferred into plans made on graph sheets. Finally, the drawings are turned into inked drawings, which are made to scale. The superb quality of these meticulous and skillfully made drawings is a testimony to the skill of the Center's draftsmen, who are trained in the traditional *vastu shilpa kala*.

The Center's comprehensive documentation records have immense value not just for research and archival purposes but for conservation as well. Given that art heritage is prone to destruction through natural causes and

from left to right
Drawing 1. Field Survey Sketch
Drawing 2. Translation of Sketch Plan
on a graph paper
Drawing 3. Final Measured Drawing
Plan of Lakshmeswara Temple

Hind Raja's temple (Puar-Sa'ra garbh), East elevation
Village : Royad, Tk. : Vadnanana, Dt. : Kutch, Gujarat

(Courtesy : American Institute of Indian Studies, Gurgaon)
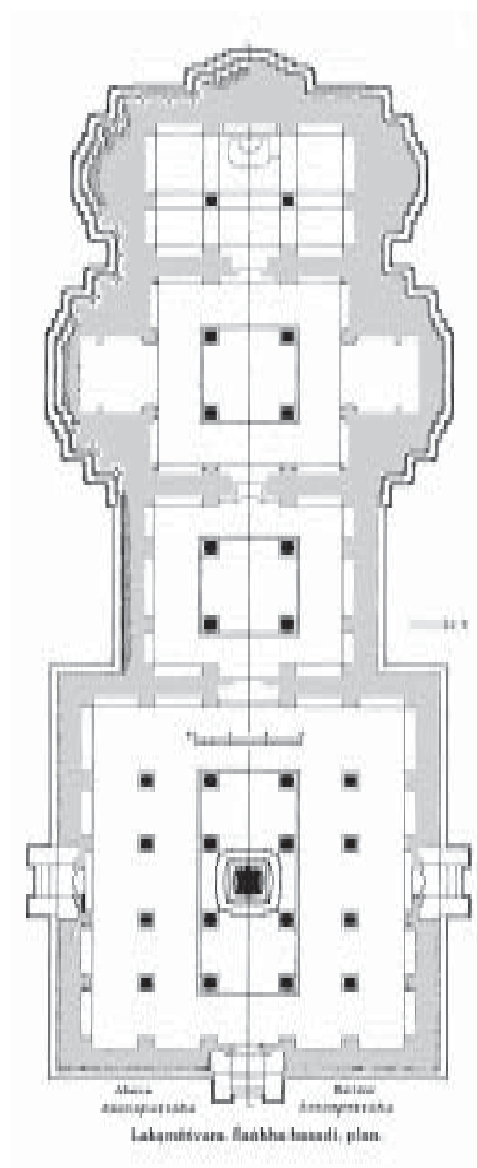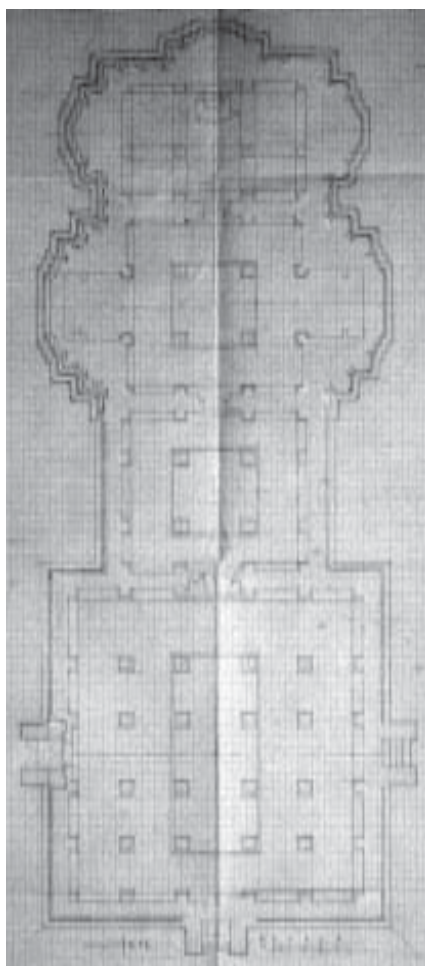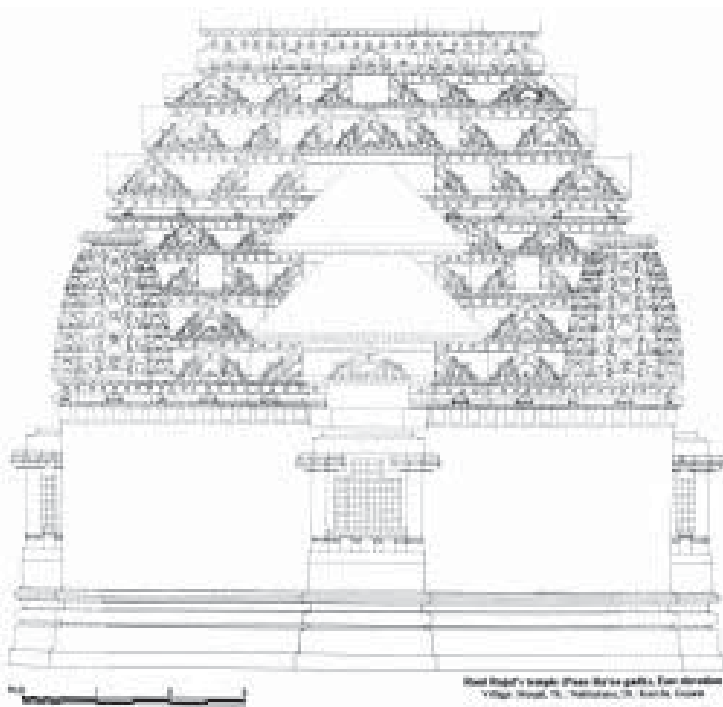
historical and political acts of vandalism, their documentation serves to preserve accurate records for posterity. The recent destruction of the Bamiyan Budhas and the Kabul Museum is a case in point. The Center has documentation coverage of both sites undertaken in 1971 by the well-known art historian, Professor Walter Spink.

The Center recently played a role in the conservation efforts of the Gujarat State Department of Archaeology to restore monuments damaged through the earthquake of 2001. A pilot project undertaken by the center documented the Rani Rajai temple located at the Puan Ra'no Gadh site in Manjal, within the Kachch region to provide the conservation team with necessary documentation data and information. This monument, initially documented by the center in 1976 was re-documented in 2004 using the older photographs, measurements and drawings as a research base. Comparison with earlier documentation records enabled the team to provide several missing links about the severely damaged temple's structure and plan.
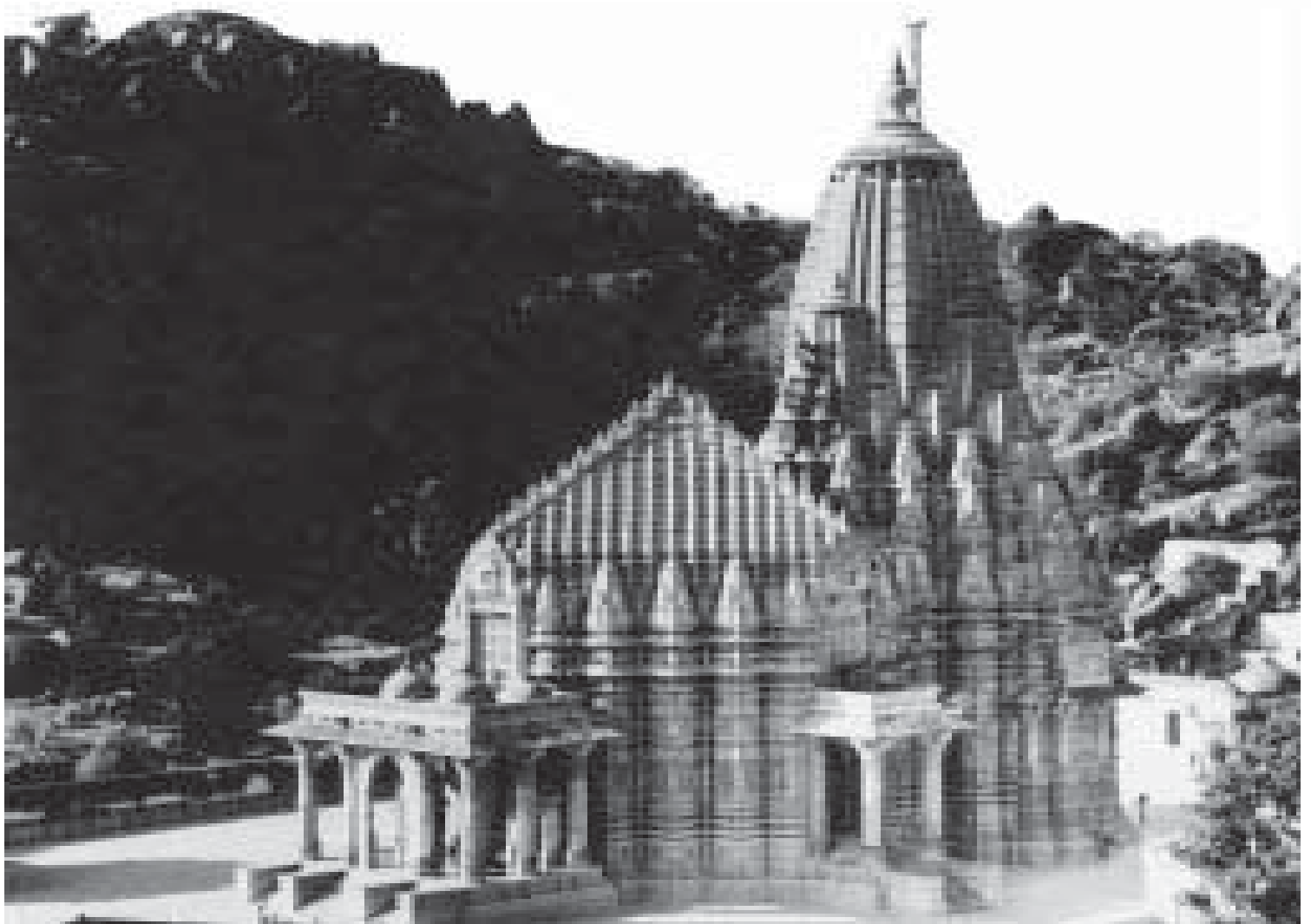
Above: Complete View of Ajitnath Temple, Taranga, Gujarat
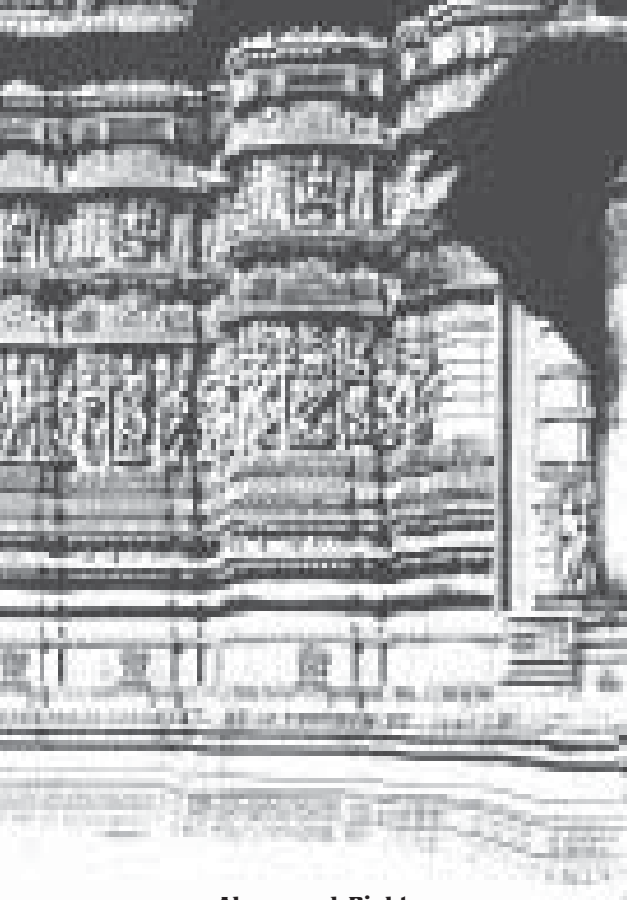
Above and Right:
Carvings on the walls,
Ajitnath Temple, Taranga,
Gujarat

The monument is situated about 30 miles west of the city of Bhuj on the way to the town of Lakhpat. The site was a fortified settlement with several other archaeological remains of historical significance. The temple, datable to the late 9th or early 10th century indicates an adherence to the Maha-Gurjara style, prevalent in Gujarat and Rajasthan in the medieval period.

The temple stands on a vast, badly battered *jagati* or platform that measures 49.10 m x 17.50 m. The extant height of the elevation is about 11 metres. The fieldwork by the Center's team confirmed that the temple was a *sandhara* temple and had an inner circumambulatory path. The presence of smaller sub-shrines surrounding the main temple of the complex and that of a *Yajnakunda* and a *Nandimandapa* were revealed to the team through the process of re-documenting the temple site. The team was also able to distinguish between the original structure and contemporary attempts to re-assemble it on the basis of its previous documentation photographs.

Methods & Approaches

Silent Histories: The Recent Past of the Shakthan Thampuran Palace, Thrissur

ANURADHA NAMBIAR

Abstract

This paper is derived from fieldwork conducted in 2003 towards an MPhil thesis at De Montfort University (U.K.). Based on a case study of the Shakhthan Thampuran Palace at Thrissur, Kerala, and its ongoing adaptation into a 'Museum of Kerala History and Heritage', the thesis explores the manner in which historic sites may be mobilised as participants within contemporary projections of vernacular identities. Furthermore, the thesis argues that in the process of constituting the site as an instrument of a specifically local memory, the palace in question has been disembodied from much of its lived-in past and its history moulded to facilitate the projection of a particular interpretation of Kerala. This paper presents one such phase of the palace's biography[1] that has not found expression in the palace's newly propounded "history".

Introduction

Conventionally, cultural artefacts are studied in terms of what was done to them – how they were created, when, and where – rather than how people engaged emotionally, subjectively and variably with them. This is perhaps most true with respect to studies of

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Front elevation, the Shakthan Thampuran Palace, Thrissur

architecture; spaces are generally interpreted through an analysis of their form, function, and dynamics and contextualised within the socio-economic environment they were created and inhabited in. In the 'Poetics of Space,'[2] Bachelard argues that in privileging the visual, space is not perceived in all its phenomenological associations: That is to say that by granting dispersed images of the "house" predominance, one excludes the intimate values of the inhabited inside spaces that both constitute it and are contained by it. Following Bachelard, this paper attempts to perceive the built environment not as an abstract, neutral entity divorced from the body and its sensations but as the locale of lived experience.

Arguing for Memory as Valid Historical Evidence

In order to create such an ontological narrative of the Shakthan Thampuran Palace at Thrissur, a city in the south Indian state of Kerala, the primary documentary sources used are personal interviews (informal and loosely structured) with the last royal occupants of the palace[3]– and others who have witnessed the metamorphoses of the site during the last eighty odd years. Tapping memory and familiarity is crucial to reconstructing the site's history, especially in the wake of colonialism and its archival silences, ruptures, and depredations. Without this oral history, the events that have influenced the palace's biography would remain otherwise undocumented (either due to their being considered too recent to validate their inclusion in "history" or due to their rather non-picturesque nature) and face the danger of lapsing into oblivion with the demise of the elderly repositories of such information.

Before presenting a collation of their individual experiences, it is imperative that private memories be established as valid historical evidence. Memory is usually seen as compelling but also as "interested, provisional, and characterised by lapses of forgetting, silences, and exclusions."[4] In other words, memory has been presented as dependent and mendacious (fictional, fickle) and of dubious authority and reliability. In many respects this tendency to cast memory as unreliable and fictional represents the fate of most if not all testimonial evidence whether it be through oral narrations, biographies or ethnographies. An otherwise laudatory review of Suvir Kaul's 2001 collection of essays on the partition, for example, lamented that "although oral history and unstructured interviews constitute the most fashionable discourse today, how far can the

diagnosis of individual psyches be extended to form general conclusions? What about questions of reliability, validity and authentification?"[5]

How do we know the narrator is telling the truth? We do not and we cannot always cross check the information to ensure that it is the truth, but then the same may be said about written, "official" testimonies as well. In any event, the presumption that memory is closer to fiction than to history (seen as the "truth") can disqualify it – or at the very least, call it into question – as evidence, and therefore, as an archival source. Such reasoning is in danger of obscuring the historical process through which "facts" and evidence become so.

Big battles over the legitimacy of personal testimony and oral histories were fought and mostly won by the end of the 1980s, yet despite the recognition of the false dichotomies of history and fiction, such work is often categorised these days as "cultural studies" (rather than history) or accepted as a supplement to an extant "master narrative." The most common critique directed against memory, especially via oral history, is that recollection is suspect as historical evidence because "narrators…get it wrong," an evaluation that speaks to the empirical bias, even fantasy, that continues to influence history as a social "science" discipline.[6]

The insistence on reading memory as history encourages a reading of memory as both an archival site and as history-in-the-making: as legitimate and as subject to interrogation, as official policy documentations or other artefacts of the state or other accounts of the past that are deemed as some originary – and therefore somehow pure – site of historical knowledge. As we have seen in the previous section, all archives are provisional, interested, and falsified in both deliberate and unintentional ways; that all archives are, in the end, fundamentally unreliable – the archive of memory no more or less so than the other. Memory has evidential status if and when it is read as an interpretive act: as neither truth, nor fiction, but as a continual reminder of the historicity – and of course, the political valences – of all traces from the past. What follows is therefore, a juxtaposition of a variety of counter-histories of the palace's colonial modernity from which may be extrapolated a host of judgements about the plight of the royalty and their holdings in the post Independence milieu of Thrissur.

The Palace as a home

This narrative is essentially that of Bharathan Thampuran and his wife, Rema Devi, who were the last royal members of the Kochi Swaroopam to inhabit the palace prior to its usurpation by the Directorate of Archaeology in 1993. With the integration of the princely kingdoms of Travancore and Cochin in 1949 and the 1956 inclusion of Malabar and the Kasaragod taluk in what now came to be the state of Kerala, the last vestiges of princely rule in Kerala disappeared. Only a few of the royals continued to receive governmental allowances as an extension of the privy purse system, the rest were forced to find alternative means of earning a livelihood and soon the joint family system began to erode and the royal family dispersed. Kottakkakom and Tripunithura however, continued to be the strongholds of the Cochin royal family with many of the royals finding both residences and employment at these cities itself.

Due to the considerable finances required for the upkeep of the palaces, they were allocated to different branches of the royal family, although under the custody of a freshly constituted body known as the Palace Administration Board. The palace at Thrissur was provided for Bharathan Thampuran's mother and her family's use since her ailing husband was receiving treatment nearby.

Bharathan Thampuran's early memories (of the 1930's) include that of his younger brother and him chasing animals through the grounds, climbing trees, plucking fruits and generally racing around the compound – all with a palace servant dutifully following behind them to ensure they didn't get into trouble. At that time, although the Ashokeshwaram temple had already passed into the hands of Devaswom Board, the pond was not yet reserved for the sole use of the temple and the men from the royal family took their daily baths at the *kollam* while the womenfolk bathed at the palace itself using water drawn from the well.

The well in the *thoppe* is a much later addition undertaken by the Horticultural Department shortly before the government acquisition of the palace and all the households requirements had to be met by the one well directly behind the

kitchen – surprising given the notions of purity still prevalent. The landscaping of the frontal gardens in a style resembling formal European gardens is also a later intervention by the same agency. The courtyard and the raised plinth around it were then made of cow dung (locally known as *chanagam*) and most of the daily activities of the members of the household would be conducted in this space. The sparse minimalism of the palace would be softened only during visits by the *Velliyathampuran*, the senior uncle, when carpets would be laid out in his honour. The Thrissur palace was not the family's permanent residence though; Bharathan Thampuran and his siblings spent a considerable amount of their time at Tripunithura where they studied at the Kezhakkakotta with other cousins, returning to Thrissur on visits or to attend functions at the temples.

The palace as inheritance

As per the matrilineal system of property inheritance followed by the Kochi rulers, in 1959 the palace in question passed to Subhadra Thampuran, Bharathan Thampuran's younger sister. A teacher at the government school at Tripunithura, she elected to live at Tripunithura and granted Bharathan Thampuran both the right to live at the palace and the onus of maintaining it. The contents of the palace she chose to publicly auction off. The event was for many of the townsfolk[7] a novel opportunity to examine firsthand the residence and lifestyle of the local royals. Many of the locals who were interviewed made references to the presence of silverware and crystal, the heavy furniture, numerous artworks and colonial curios amongst the lots that were sold. These objects, which had thus far been passed on within the family, were dispersed amongst members of other classes – a clear indicator of the distressing financial condition of the royal family.

The Palace as a source of income

In 1966, Bharathan Thampuran and his wife came to live permanently in the palace. The childless couple occupying a palace that was now obviously well past its age of splendour, adopted Ajith Kumar "Raja", a child whose parents were poorly off and couldn't provide for his education. Due to his position as a member of the royal

family, Bharathan Thampuran was receiving a monthly allowance of two hundred and fifty rupees from the government, a sum that was in those days still sufficient for the three of them to live comfortably and sponsor Ajith Kumar's studies through class five until his college degree.

With inflation and the changing value of the rupee, his allowance could not cover the costs of maintaining the property and in 1969 Bharathan Thampuran began renting out the upper section of the palace to the Public Works Department (PWD). The PWD gave up their lease in 1974 and were replaced by the Central Excise Department who occupied the upper storey of the palace from 1975 until 1977. In both instances, the leases were signed by the heads of the respective administrative body on behalf of the Government of India and by Rama Varma[8] Bharathan Thampuran as the representative of the owner of the palace.

In 1976, the school of the Chinmaya Mission had joined the list of lessees and were utilising the lower rooms of the palace. What had once been the Velliyathampuran's room was now converted into the principal's room with a sign on the door reading "No Entry." Bharathan Thampuran and his wife were now occupying only the smaller rooms near the rear of the palace. With the departure of the Central Excise Department in 1977, the upper storeys of the palace too were taken over by the school. Today, bells nailed onto the large teak wood ceiling beams are the only vestiges of the days when the building echoed with the voices of children chanting their morning prayers and multiplication tables.

As the private residential structure thus became semi-public, previously existent norms concerning restrictive constraints on the mingling of genders and castes, substantive or pollution based notions of caste based on birth, maintaining prescribed distances between members of different castes and communities came to be publicly discounted. The palace became accessible to many more, if not "all" people, and this rapidly enlarging circle of regular visitors to the palace received a further boost when the Thampuran began allowing various acquaintances of Thrissur to utilise the palace hall and the grounds as venues to conduct wedding festivities and other such functions. In return the hosts of these functions would contribute towards the maintenance of the palace by whitewashing

the exterior and having the lawns mowed.

The royal residence goes public

In 1986, the fortification surrounding the palace was broken down and the area was converted into an improvised football stadium used for daily boisterous matches organised by the local youth, especially during the summer holidays when school was closed. As a concession to its historical significance, Tipu Sultan's flagstaff was salvaged from the wreckage and placed outside the gates of the palace.

The bus stop that today stands in front of the palace – the Vadekkechera Bus Stand – was then a large *kollam* (bathing tank) open to the public and was frequented by the young men after a match was over. The women and children would also bathe at this pond but in carefully segregated, partially screened off areas that allowed a modicum of privacy. The *kollam* was filled in some time in the late 1970s to make way for the bus stand and gradually the large houses that surrounded it were torn down to make way for *chayakadas* (roadside eateries) and shops catering to the needs of travellers and commuter. By then most of the local population had installed western style toilets and bathrooms in their houses so the demolition of the *kollam* impacted far more on the social life of the community than on a utilitarian front.

Contesting ownership: The government versus the royals

Due to a decree ruling that municipal taxes had to be paid on the palaces, the Palace Administration Board, unable to meet the tax demands, had surrendered ownership of the palace properties under their supervision to the Government in 1964. The government ruled that the occupiers of the palaces ought to pay the taxes on the property they inhabited and the ownership of the palaces reverted to the Palace Administration Board on the 30th of March, 1976. An additional clause was added stating that the royal inhabitants of the palace were to pay the Board a sum of ten rupees per month towards the tax.
It was shortly after this that the Palace Administration Board filed a case against the royal family, stating that they did not have the legal authority to rent out any part of the palace premises and having done so must vacate the palace immediately – an extremely ironic gesture given that two of the parties who had occupied the palace on a lease basis were government departments, one of which was operating out of the palace premises at the time and continued to do so for yet another year after the introduction of the lawsuit.

Bharathan Thampuran retaliated against the injunction based on the ruling of 1964 that had allowed the royal family the right to inhabit the palace. Furthermore, he alleged that the filing party, the Palace Administration Board were a defunct body. This statement is based on the act passed during the Integration ordaining that the Palace Administration Board must be constituted by the Highness and that once nominated, the tenure of the Board would last for three years at the end of which time the Board would have to be reconstituted by the then Highness. In 1971, the royal family were transformed into ordinary citizens when the constitution ceased to recognise them as privileged members of the community and withdrew their privy purses and titles. At the time of the lawsuit, the tenure of the Palace Administration Board had expired a year before and as a result of the 1971 ruling, there was now technically no Highness who could rightfully nominate them for a second run. On this basis, Bharathan Thampuran and his lawyers argued that the Palace Board were no longer a legitimate body and as such did not have the right to file claims against the royal family.

The case was declared pending and the state government got involved in the issue, passing an act authorising the senior most member of the royal family to nominate the Palace Board in the absence of a Highness. To this Bharathan Thampuran retaliated by issuing a writ declaring that the State Government could not contravene an act that was passed by the Central Government. This motion was denied and in 1979 Bharathan Thampuran took the case to the Supreme Court.

Finally in 1993, the royal family were evicted from the palace, which had been their home for so many years. For about a year now, the Shakthan Thampuran Palace has been caught up in a Ministry of Tourism and Culture sponsored project of promoting Thrissur as the cultural capital of

Kerala. Under the auspices of the Directorate of Archaeology, Thiruvananthapuram, the palace is being "restored" and converted into a 'Museum of Kerala History' and its grounds, into a 'Heritage Garden'.

Conclusion

As in the case of many accounts of royal architecture, the representation of the history of the Shakthan Thampuran Palace is silent regarding its post-Independence, unromantic past while its reinvented avatar glorifies specific aspects of its "golden age" and by extension, that of the ruler and kingdom that it is attributed to. This tendency to gloss over the 'un-picturesque' past of royal architecture is not an isolated incident, particular to this palace or even to this region. Literature on the palaces of India has largely viewed its subject matter as an archaic reminder of a bygone era, "freezing" the structures in question at the time of their creation or at what is commonly perceived to be their "golden age". Tourism has furthered this image by representing palaces and their royal residents as inhabitants of a fantastic aristocratic world that is becoming increasingly remote from daily social reality. Media, consumption and global cultural flows have spawned new forms of travellers; projected as "refuges of romantic but embattled traditions and loyalties," the capitals of the erstwhile princely states have become major venues for the marketing of historic Indian into discreet, comprehensive units.

Through its narration of Bharathan Thampuran's memories of inhabiting, inheriting and fighting for his right over the site, this paper contradicts tales of royal life that are populated by the massively idealised and deeply regressive form of royalty that stalks the middle class imagination. Although this paper discusses only the otherwise unrecorded past of a particular palace in Kerala, it argues both for memory as a valid historical archive and for the inclusion of the recent, if sometimes unglamorous and tempestuous, pasts of historical buildings or areas in narrations of their history.¶

Notes and References

[1] The notion of a 'biography' of an object is derived from Davis (1997) and his construction of narratives of specific Indian religious images, the different worlds of belief they have come to inhabit over their lifetimes and the conflicts over their identities that have arisen from the varied receptions they received. Davis in turn bases the notion of biography on Igor Kopytoff 's proposal for a "culturally informed economic biography of an object [which] would look at it as a culturally constructed entity, endowed with culturally specific meanings, and classified and reclassified into culturally constituted categories (1986, p. 68 as quoted by Davis, 1997, p. 7)

[2] Bachelard (1964)

[3] The contents of this section are derived from personal interviews conducted on the 26th of December, 2003 with Bharathan Thampuran and his wife, Rema Devi.

[4] Saidiya V. Hartman's (1997), p. 12, *Scenes of Subjugation: Terror, Slavery, and Self-Making in 19th Century America* (New York: Oxford University Press) as quoted in Burton (2003), p. 21

[5] Burton (2003), p. 21, footnoted as Suhrita Saha "Book Review: Tales of a Broken Land", a Review of Suvir Kaul's 'The Partitions of Memory: The Afterlife of the Division of India,' (Delhi: Permanent Black, 2001), in *Telegraph*, May 25, 2001

[6] Burton (2003), p. 24

[7] Interestingly, although many of the visitors to the auction, the townsfolk as I have called them above, were making their first foray to the site, they appear to by and large have been upper caste Hindus. This raises questions regarding notions of appropriate ownership, how the auction was so organised and how caste or class restrictions impacted on the social milieu of Thrissur at that time.

[8] All male children of the royal family bear the name Varma; and either Rama or Raja is usually prefixed to it. Varma is believed to be a caste name signifying the royal status of the bearer.

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Dynamics of Psycho-Spheres
Ellora Caves and Tadao Ando

AJAY KUMAR

ABSTRACT

This article interrogates bionomic, non-anthropocentric, approaches to art, architecture, and design practice as well as the manifestation of these disciplines as ontological practice viz. an inter-relation of the built edifice, the humans who frequent it and the wider landscape throughout. The article has a greater emphasis on the spectatorship as opposed to the object.

This is a trans-historical and trans-cultural investigation which starts with the Tantric rock-cut edifices at Ellora in India and it continues with a comparative analysis of the Ellora caves with the Water Temple in Awajishima, Japan - a site of Shingon, Tantric Buddhism designed by Tadao Ando in 1991.

Essentially the essay examines the correspondences between the conception of space and time engendered at some of the sites at Ellora and those seen in the realm of contemporary design viz. Ando's work. It discusses possibilities for re-conceiving in current space-time, particular art-architecture-ontology dynamics that arguably reached maturation around fifteen hundred years ago in India with the conception and construction of edifices at Ellora.The initial section of the article elaborates on some of the major points in relation to Ellora and the Water Temple. It than discusses in

Ajaykumar works as an academician and artist. He is a co-founder of the Shapes-Design studio which engenders gardens, as well as furniture and lighting that come into 'being' through the manipulation and 'play' of others (www.shapes-design.com). He is concerned with an interrogation of art, design, and architecture as an ontological practice, non-anthropocentric approaches to these disciplines, and spectatorship. In relation to this the Shapes-Design Studio has conceived, designed, and is currently realising, a garden entitled Luminescence – A Garden of the Night and Day, for one of the London estates of the Peabody Trust. This project has been developed in association with the Royal College of Art.

Ellora Edifice 29, Interior including side entrance view

greater depth and detail the contemporary situation - how current ideas in science art, architecture and design, re-conceive and further interrogate notions originally relating to Ellora.

INTRODUCTION

In the Tantric rock cut edifices of Ellora one may deduce an aspiration to a synthetic practice of architecture and ontology.[1] What is of concern is the contemporary pertinence and evolution of a hypothesis of being between the so called body and the so called external space, and its pertinence in the secular realm beyond its specific religiosity. This study begins to investigate how certain ideas in contemporary science parallel and further evolve such conceptions. Lovelock's 'Gaia theory',[2] Margulis' evolution of the notion of symbiogenesis,[3] and Maturana and Varela's conception of auto-poeisis[4] re-locate the human, the sense of being, and the sense of mind.

While contextualising Ando's work in relation to the secular world it is pertinent to recollect that Buddhist and Animist notions consider each and every phenomenon as sacred and that some Buddhist schools believe that the true self is found in the mundane world of the every day. Philip Rawson has described Tantra as "a cult of ecstasy, focused on a vision of cosmic sexuality. Life-styles, ritual, magic, myth, philosophy, and a complex of signs and emotive symbols converge on that vision."[5] Such vision takes into consideration the elusive notion of a painterly practice not as paradigmatic of thinking, but rather as thinking itself. Ando said, "For me, making architecture is the same as thinking".[6] Ultimately, any mundane life activity may serve as a vehicle for the realisation of "thinking", such an "art".

When thinking about the practice of contemporary architecture, art, and design as an ontological practice, one is thinking about a symbiotic,

Ellora Edifice 29, Central Shiva Lingam

non-anthropocentric, art, architecture, and design practice. There are four crucial concerns here:

• The significance of the human body and its kinaesthetic physicality in the creation of an artistic event and experience.

• The magnitude of inanimate elements in actively engendering that experience

• The ability to re-conceive, beyond their specific religiosity and culture, using contemporary technologies and materials, ideas that matured in South Asia more than fifteen hundred years ago.

• The conception of an art experience or event outside of galleries and other professional centres of art, which find central focus in an active, apperceptive, spectatorship.

For example, with regard to architecture, let us consider a perception of architecture not merely as a built edifice, but as something existing only in an inter-relation of built edifice, the humans who frequent it, and a wider landscape. Such a perception can be expanded to the disciplines of art and design. The pivotal dynamic here concerns spectators and spectatorship. Adolphe Appia – the scenographer and significant twentieth century philosopher of the theatre wrote of a living art that was beyond theatrical art, where the most profound art was not on the stage but in the forms before it i.e.human spectators. Appia discussed the aspiration of the spectator to live art. Today the term 'live art' is coming to replace the term 'performance art', and to re-conceive its conceptual parameters. In this article, it is conceived primarily in terms of spectatorial experience. Appia writes: "For a long time we have separated art from our life and our homes, in order to shut it up in museums, concert halls, or theatres. Living art knows not these sad compromises; it lives, we live in it, it lives in us."[7] For Appia, such an art evidently destroys the dualism of one person always being a producer

and another always being a spectator. Such a human body is both the work of art and the spectator. Such ideas of an art of spectatorship have historically found profound resonance in South and East Asian art. The concern here is to contextualise such spectatorship, such readership and such experience as non-anthropocentric, relational, symbiotic presencing. It is this ideology that is at the core of the experimentation with furniture and garden design undertaken by Shapes-Design.[8] Objects such as furniture, lighting, and gardens come into 'being' only through their engagement with the mood, the space, and the imagination of those who acquire them. As objects these items hold no interest rather it is the play, the inter-action, out of which emerges an art work, furniture, or a garden. Unlike Appia, there is a lesser concern with the human body than with the entity or space that incorporates the human body. This space has been described by the Zen teacher, Daisetz Suzuki, as a psychosphere.[9] The article discusses such ontological processes in domestic design.

Ellora and Ajanta

The twenty-eight edifices at Ajanta, and the thirty–four temples and monasteries at Ellora date from approximately 2,300 years ago until in the tenth century C.E. The edifices at Ajanta were essentially Buddhist in origin but interwoven with Tantric thinking. Almost every wall, floor, and ceiling, are painted with frescos. Although Buddhist, Jain, and Brahmanical in origin the sites at Ellora are also interwoven with Tantric philosophy. Fewer of the paintings survive here, but sculptural and architectural aspects remain. All these were carved out of the rock in their entirety, including the Kailasha Temple, which took one hundred and fifty years to complete. Tantric practice perhaps reached maturation in South Asia around the sixth century C.E. and are exemplified by and embodied in certain Ellora edifices. The architecture, painting, and sculpture at Ellora could be considered to embody the philosophic outlook of a civilisation that aspired to a relational entity of architecture, art, body, health, nature, ontology, science, space, time,

Ellora Edifice 29,28,27   and waterfall

technology. These are sophisticated attempts at a *gesamtkunstwerk*, a total work that is a synthesis not only of art, but also science and philosophy. It elucidates the original sense of technology (*tekhnologi*) as the ancient Greeks understood it. Edifice 29 at Ellora has been less written about than other sites because the art and sculpture in other temples are asserted to be of greater artistic merit. However, of all the temples, it most graphically indicates the physical and metaphysical journey and' the relationship between the moving body, nature, and the humanly constructed, in relation to ontology. In instances such as relation to Ellora, Ajanta, and Ando's contemporary buildings such as the Water Temple, 'nature' serve as active narrative agents. There are a number of correspondences between the Water Temple, built on the island of Awaji, in Japan's Inland sea, and the edifices at Ellora. These include:

• Sites of Tantric practice.
• Circumambulation.
• Physical journeys that are elliptical.
• Journeys into and under the ground.
• Experiences of emptying and emptiness.
• Side entrances to the temples.
• Corporeal, kinaesthetic meditation.
• Intimacy between and integration of humanly constructed substance and the existing material i.e. the landscape.
• The relationship between solid material, water, and sky.
• The significance of water and ritual cleansing.
• The relationship between darkness and light and the inter-play of the two.
• Four dimensional *mandalas* of space-time.
• How the notions of space-time and emptiness-presence, find manifestation in an active engagement between the human being, human construction, natural manifestation and human ideas of a single producer-spectator, or ideas of both spectator and instigator - whether artist, philosopher, priest or architect.

In South Asian civilisation, the artist has been perceived as a *yogi*, and art as *yoga*. The legacy of the thinking and practice outlined in the first paragraph can also be found in an ancient seminal treatise on art aesthetics, The *Natyashastra*,[10] and commentaries on it, such as those of Abhinavagupta.[11] The *Natyashastra* was derived from an earlier text, the Natya Sutra, which is perhaps the earliest known discourse on the arts.

Ellora Edifice 10, Buddha at sunset

The *Natyashastra* theorised a systematic practice of a total art work*,* with a detailed hypothesis of art and aesthetics, involving a synergy of text, stagecraft, scenography, stage construction, lighting, colour, make-up, costume, movement, gesture and music. The *Natyashastra* elicited and discussed in detail a synthetical theatrical form combining visual art and aural art, and incorporated sophisticated notions of spectatorship. If it were to be written today, one could envisage that it would also theorise and embrace electronic and multi-sensory possibilities, as well as the concerns of technoetic artists and scholars. The *Natyashastra* has been enthusiastically considered by some to be a fifth Veda.[12]. The ninth century aesthetician Bhatta Nayaka believed that aesthetic experience, being characterised by the immersion of the subject in the aesthetic object, to the exclusion of all else and therefore by a momentary interruption of his everyday life is akin to the beatitude of ecstasy or the experience of *brahman.* Any form of pleasure is an epiphany of the divine beatitude, which is the very essence of consciousness.[13]

In Vedic philosophy, *Brahman* means the absolute reality or all-pervasive supreme principle of the universe. The *Natyashastra* emphasised the primary aim of creating an art as its affect, a *rasa*. Literally meaning taste or flavour, *rasa* essentially signifies beauty or aesthetic experience. The tenth century Tantric scholar Abhinavagupta, whose writings have been amongst the most influential on South Asian aesthetic thought,[14] formulated one of the earliest theories of artistic detachment. He cited the aesthetic pleasure of *rasa* 'as where the supreme "bliss" of the absolute

as existence-consciousness-bliss, (in Sanskrit, *sat-cit-ânanda)* is realised through the physically embodied sensuous beauty of imaginative art and literature.'[15]

The aspect of physical embodiment and the critical kinaesthetic aspect of such an ontological process at both Ellora and the Water Temple will be discussed now. The Japanese word *shintai* is normally understood today by the Japanese as 'body'. Tadao Ando's interpretation of *shintai* is a body that exists in relation to space only.[16] It defines architecture as that which comes into being only through the interaction of the human, with the built edifice, and with a wider landscape of so called 'nature'. Could one not also look at it conversely, as a body that comes into being only

Ellora Edifice 29, side entrance stairs

through interaction with the built edifice and external space? In this context does the notion of 'architecture' become synonymous with the notion of 'mind'?

The *raison-d'être* of cutting into rock should be understood. It was not because they were incapable of building above ground level.Since the period of the Indus Valley civilisation, two thousand years before the earliest constructions at Ellora and Ajanta, there already existed the capability to build sophisticated constructions such as above-ground temples. Therefore, those who constructed the edifices at Ellora and Ajanta had a specific reason for cutting into rock. They

envisaged this specific architectural process as a precise means to experience the void, 'bliss', or *Brahman.* The techniques employed involved manipulation of light and sensory faculties. A 'natural' cave would not have fulfilled the aspirations of these human beings to literally and emotionally, construct a relationship with the mountain the representative of the deity; their act of cutting into the rock was an act of empowerment.

For Ando *shintai* acknowledges the world and at the same time acknowledges the self. "Man articulates the world through his body...At the same time, the body is articulated by the world."[17] Consequently does a body only come into 'being' through interaction with external space? In this context does 'architecture' become synonymous with 'mind'?

Berkson explains that in 'ancient India, one did not enter the cave as an isolated individual but each as an integral element in the coordinated reality of the cave.'[18] Berkson writes of the context of Ellora's construction:

> During the vast stretches of time in prehistory, in face of external dangers from drought and flood, lightning, illness, and hunger, from man and beast, an increasing awareness of the numinous developed, generated by fear, accompanied by awe, and by that great yawning gap - existential separateness, and isolation. The need for belief in a higher power intensified and deepened. While the surrounding sky is first conceived as the locus for the deity, it is a remote and unreachable deity. Now man began to seek salvation in the mountain, which touched the sky, as the convexities and powerfully swelling contours encouraged expansive feelings. By virtue of its silence and impenetrability, it symbolized the eternal, and was identified with the goddess who evolved in the imagination.[19]

This evidently resonates with Lewis Mumford's ideas concerning the origins of permanent architectural sites not as the first dwellings but as places where ceremonies and rituals pertaining to the elemental concerns of life and death took place (For instance caverns deep below the ground).[20]

In the context of South Asian speculation on an embodied mind - notions of a body conceived as

'mind', 'no-mind', or plausibly neither 'mind' nor 'no-mind' - the research of certain contemporary scientists re-enforce the outcomes of such earlier research. Maturana and Varela's systems theory of autopoiesis postulates that the brain is not necessary for the mind to exist.[21] Even simple organisms without brains are capable of perception and consequently of cognition; mind and matter seemingly correspond to the same phenomenon of life. Furthermore the entire dissipative structure of an organism is involved in the process of cognition. Cognition takes place in formations other than the brain. Neuroscientist Candace Pert's believes that neuropeptides and their receptors are the biochemicals of emotions, carrying information in a vast network linking the material world of molecules with the non-material world of the psyche.[22] Receptor sites are located throughout the body and form a network of communication, linking the brain, endocrine and immune systems. Pert believes that it is increasingly logical to think of 'a single integrated entity, a body-mind'. She has found a correspondence between the most concentrated areas of enrichment of certain neuropeptides, and the location of yogic *chakras*.

Beyond these notions of the body-centred mind, one further needs to contemplate a mind, a self, an intelligence, which may be conceived as emerging in body-space. Such thinking begins with a perception of a body that is not differentiated from what today is conventionally known as the external space or environment/ nature but is rather a self or an intelligence that is found in an interstitial space. Architectural and ontological practice manifests at Ellora in an intangible realm between disciplines, between minds, between relations of human beings to environment. In edifice 29, the corporeal kinaesthetic meditation, communing with space, provokes a particular intelligence. Indeed, a*kasha*, the Sanskrit word for space, is perceived as having substance. The awestruck metaphysical speculation finds contemporary validation in other hard science, Lovelock's theory of Gaia (another goddess of the earth) whereby the self-regulation of the planet involves its entire entity, including air, oceans, and rocks.[23] Some Buddhist thinking considers mind and 'true self' to be found not in the body in relation to the space, but in-between the body and space being 'neither two but two' in an interstice of perpetual inter-action.

The ancient Japanese had no word for the human being that was distinct from nature. They also conceived space and time as one four-dimensional realm, *ma* or space-time.[24] As well as space-time, *ma* has come to have numerous related meanings such as 'space', 'place' 'interval', 'emptiness-presence', and 'void-affirmation'. There is here a further correspondence with ancient Japanese civilization, in terms of the belief in the *kami*, the spirits found in rocks, trees, and other entities of what is conventionally termed 'nature'. Moreover, in Shinto and other Animistic belief systems, anthropocentrism is de-emphasised, with the human being not placed at the top of a hierarchy followed by animals, then plants, and finally insentient objects. Rather, all phenomena are
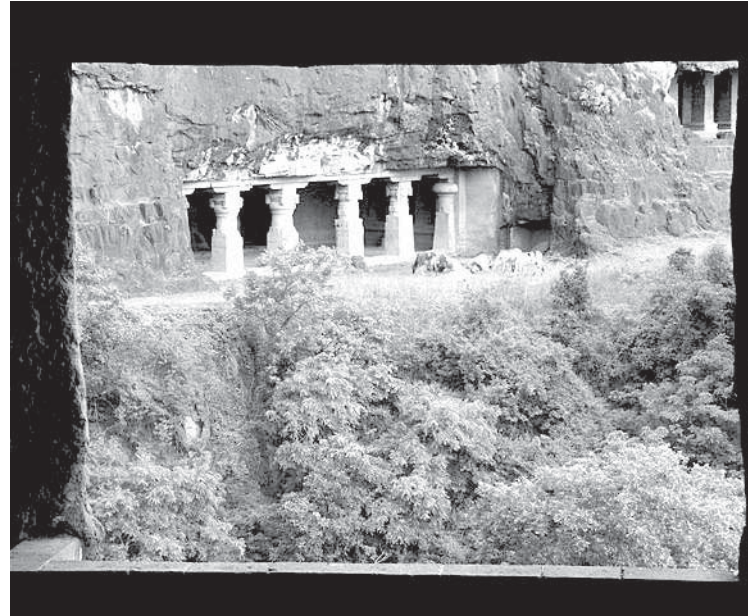
Ellora Edifice 29, View from side entrance

considered equally sacred. In his study of place, time and being in Japanese architecture, Kevin Nute regards the original Shinto tectonic act of enclosing trees and rocks as the first Japanese architecture i.e. as the first Japanese built responses to place.[25] As our global society increasingly embraces a post-human technology and condition with a concomitant humanist apprehension, the reappraisal of such animist ideas together with those of *Yoga*, Tantra and Buddhism, may be of individual and collective therapeutic value in dealing with existential crisis; as well as in contextualising the human situation in a wider cosmological realm.

The original journey to arrive at edifice 29 involved walking along a thin and occasionally precarious path that had been cut into the almost vertical rock face into which all these temples were hewn. The immensity of the mountain is easily felt, as is its violent power over the individual. It should be noted that congregation at Ellora was most populous during the monsoon season. This walk of several hundred metres takes the journeyer underneath a high waterfall which empties into a small lake via smaller shrines that also line this path. Essentially, it is a progressive transcendental journey, a psychic distancing from the world of daily life to the world of the sublime. Passing under and through the water fall is a purification process; a symbolic, and sometimes literal, showering.

Through this journey, one enters the temple from, quite unusually, the side. There are a number of sculptures in the temple as well as a vast expanse of emptiness. Emptiness is a constituent of the architecture. The voids in the architectural sites are in direct relation to the voluminousness of the sculpture. As Berkson states, these "voids are the statue as well."[26]

The journeyer makes a circumambulation around the main shrine consisting of a Shiva *lingam*. On one of the walls is sculpted an eight fold *mandala.* Geri Malandra has noted that a number of the edifices at Ellora present a rare example of architectural attempts to transform a three tiered *mandala* into a structural form.[27] There is a systematic construction of a physical journey through a four dimensional *mandala* of space-time - the physical journey is a process of 'emptying' to facilitate another 'presence'. Ando writes:

> In order to perceive an object in all its diversity, the distance between the self and the object must be changed in some way. This change is brought about through the movement of the *shintai.* Spatiality is the result, not of a single absolute direction of vision, but of a multiplicity of viewpoints made possible by the movement of the *shintai*.[28]

Linda Hartley's emphasises the ontological significance of kinaesthetic intelligence even in pre-nativity:

> It might at first seem that the fetus (sic) would not necessarily need to move at all in order to ensure it biological survival. It is passively fed all the nourishment it needs continuously and is protected, warm and safe within the womb. However, movement is in fact essential for the physical, sensory, perceptual, psychological and mental development of the child. Through movement the fetus' nervous system develops, awareness of itself and its environment begins to emerge, and a foundation for future learning and modes of interaction and response is established. The health and future realization of the individual's full potential depends at least in part, on the experience of itself as a moving being in this early stage of life.[29]

Ando not only places emphasis on the movement of the *shintai*, but on "natural" movement such as that of light, rain and wind. The Shiva *lingam* at edifice 29 remains in semi-darkness all day until illuminated momentarily in the evening by the setting sun. Light and darkness play significant roles at all Ellora sanctuaries. Sculptures and murals would be illuminated at different points as the earth circumambulates the sun. Different climatic conditions also play their part in instantaneously and momentarily lighting and darkening, in varying degrees, aspects of the iconography. New relationships between icons are constantly being engendered. Such infinite possibilities also engender infinite space-times of presencing. The central shrines within each rock-cut edifice primarily face west. Consequently, it is most illuminated at sunset. One can envisage the scenarios of an acolyte in some kind of prayer or meditation in virtual darkness right through the day until a particular moment of literal illumination of an icon may possibly serve as precipitor for a metaphysical one.

Water Temple by Ando

Ando's Water Temple is significant, not only because it is a site of esoteric Buddhism, but because its architecture appears to integrate form and theme. This is quite unusual in Japanese temple architecture, which historically has been modelled pre-dominantly on Chinese pre-Buddhist architecture. The Water Temple's simultaneous physical and ontological journey involves climbing up a winding hill road, then up a set of stairs, taking a meandering passage involving walking around two walled structures, and eventually arriving at an oval pond. For Ando, these walls set a boundary and a fissure with the world of the

everyday. He states, 'a single wall severs, interrupts, opposes and violently alters the site on which it is placed'.[30] As aforementioned, the Water Temple has not one but two such walls - long part of the process of entering what Eliade described as 'sacred space'. The overall journey is intended as a process of emptying.

As one walks around the second wall and sees the pond, one also sees the hills and sky in the distance. The pond is filled with water lilies, as well as with the reflections of the hills and sky. Circumnavigating it, one descends a set of stairs, which intersects the pond, in order to reach the main shrine, under the ground. The symbolic travelling through and under the water corresponds with the journey under and through the waterfall at Ellora. At the bottom of the stairs, one enters the temple, once again, from the side. The main Buddha shrine is also surrounded by a circumambulatory path and another circular wall made of vermilion wood panels. The shrine room itself is only lit naturally by a single west-facing window, behind the central Buddha statue. On the walls on either side of the statue, are images of a 'diamond world' *mandala* signifying wisdom, and a 'womb world' *mandala*, signifying compassion. These *mandalas* correspond with the iconography at Ellora and Ajanta. In this vermilion walled shrine, as at an Ellora cave, one feels immersed in the womb. Here one witnesses again, Malandra's notion of journeying through and witnessing a four dimensional *mandala* of space-time. While it is customary in Tantric practice to contemplate the two-dimensional surfaces of the two *mandalas*, in the Water Temple, Ando immerses the visitor into these two worlds three and four dimensionally, engendering walks through them and being amongst them.[31] It is a theatrical space of seeing the etymology of theatre. *Teatron* in Ancient Greek, means 'a space of seeing' physiologically and psychologically (in the original sense), where spectators are also performers. Ando expresses his 'desire to inspire internal vistas within the individual which correspond to spaces the individual harbours within himself.'[32] The shrine remains in semi-darkness throughout the day. As at edifice 29, only at one moment, at sunset, does literal illumination take place.

This *ma* of interval generates the possibility of a *ma* of sacred space-time. Ando, who has engendered similar dynamics with other sites such as with the (Christian) Church of the Light, stated; The architectural space becomes alive only in correspondence with the human presence that perceives it. In our contemporary culture, where all of us are subjected to intense exterior stimulation, especially by the electronic environment, the role of architecture as a spiritual shelter is crucial.[32]

Philip Drew writes that "light is the special medium which he (Ando) uses to clarify emptiness in his architecture."[33] In contrast to Ellora, at the Water Temple the window is behind and not in front of the central Buddha statue. As the sun sets therefore, what is most illuminated is not the statue, but the person who sits before it. Ando appears to highlight a Buddhist dictum - eroded in influence historically through the increasing deification of 'the Buddha' through his iconification - that each person is potentially a Buddha, and that one must not worship statues or treat Buddha as a god, but rather strive to reveal the qualities of the Buddha in our own lives. However there is a more crucial understanding to be sought here. There is not only a two-way dynamic between the light of the sun and the human being, but a three-way one: the statue remains between the two, in a third, interstitial space. It is this third space that reminds us of another Buddhist conception that the true self is found in the inter-action between human and external world, between the interior and external. The statue of Buddha embodies this realm, physically and metaphysically placed between the two realms of the human body and the celestial one.

Using light, Ando brings nature into the architecture in a way that is both confrontational and, ultimately, generative of harmony. His incorporation of water, light, and sky in his work acts as a critique of abstraction in modern architecture, restoring architecture's bionomic relationship to the earth.
With regard to the notion of circumambulation, one should not only consider the circumambulation of the human being, but the circumambulation of the earth around the sun which generates the journeys of light, which in turn precipitate ontological journeys. At the Water Temple it is changes in the light as the earth circumambulates the sun that creates animation, while the human being remains still before the

Pathway between the two walls of the Water Temple, designed by Tadao Ando
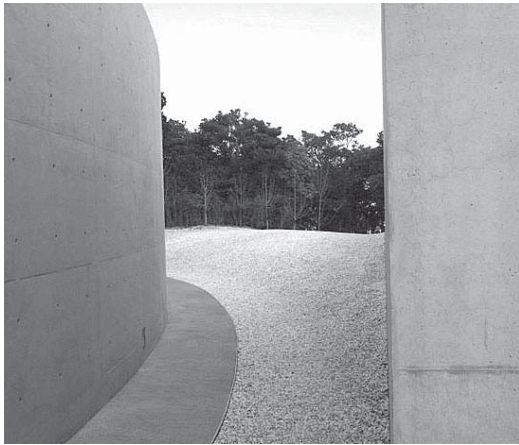
Path to the Water Temple

Pathway around second wall and to the pond of the Water Temple

before the Buddha statue. It is only a corporeal stillness, while internally there is intense activity. One can apply Berkson's thinking on Ellora to the Water Temple when she states that "the sculptured components there are in effect aggregates which are never independent. The forms are in a continuum of mutual transformation existing only in relation to each other."[34]

The conventional geometry of *mandalas* is a square containing a circle, in which is placed an image of a Buddha. Two such *mandalas* hang from the wall on either side of the main Buddha statue - the womb world *mandala* and the diamond world *mandala*. Ando's edifice is iconoclastic in as much as it inverts this dynamic through the use of circular walls with a Buddha statue at its epicentre, surrounded by a rectangular wooden lattice. Is this also a process of abstraction, to create a historical and cultural disjuncture, revitalising the dynamic of space-time where the sacred can be experienced once more?

Ando has attempted to create such sacred spaces in all his designs, irrespective of religiosity, and always using concrete. Although, as Frampton expresses, it is sometimes "hard to imagine anything more materialistic in its constitution than reinforced-concrete wall,"[35] Ando uses these concrete walls, to generate a fissure in the chaos of daily life and to facilitate the creation of such spiritual centres. Ando uses current technology to generate spiritual foci and treats concrete as sacred material.

Ando's concrete is compositionally unique as he uses specific techniques[36] so that his walls that have a near glass-like smooth surface to express a plurality of light conditions and shadow effects. The reflective quality, as Drew comments, dematerialises the wall, despite its mass. This provokes particular sensory experiences for those who journey through his spaces. Ando uses contemporary materials such as concrete, together with traditional materials such as pebbles, wood, water, and emptiness, placed in a way that is both familiar and unfamiliar to Japanese.

At Honpukuji, before arriving at the point of stillness before the statue, there has been, as aforementioned, a preparatory physical journey that is meandering and circumambulatory, a transcendental journey scaling the hill to the temple site, climbing the temple steps, following a path through foliage, going around two concrete walls, around and underneath an oval lotus pond, and encircling its principal shrine. The concrete walls do not serve as protective walls or walls of enclosure, for on the south side one could easily bypass the meandering journey that the walls help construct, and reach the lotus pond and subterranean shrine in a more direct manner. Moreover, on the north face of the site there is no wall and one is offered a clear view of the landscape.

This corresponds to the process of kinaesthetic presencing at both the Water Temple and Ellora

Stairways through Lily
Pond to semi-underground
shrine, the Water Temple
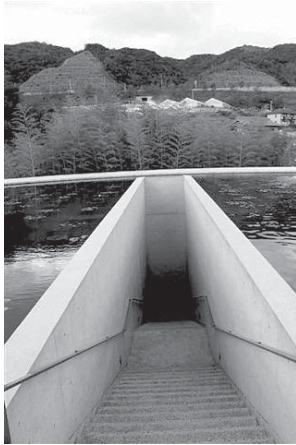
Lily Pond and Landscape,
the Water Temple

The two walls of the Water Temple

where *akasha* (the Sanskrit word for space) is presencing. *Ma* has significance in this context. Kunio Komparu, whose family has practiced Noh for several hundred years, regards this ritual theatre as an art of *ma*. 'Noh acting is a matter of doing just enough to create the *ma* that is a blank space-time where nothing is done, and that *ma* is the core of the expression, where the true interest lies.'[37] *Ma,* as Komparu explains, may be engendered through the presence of a single post or a person only; it is an art of abbreviation.

These correspondences in the two sites - despite or in spite of the fact that they have been constructed by architects with varying aims and approaches, in differing cultures and in historical periods that are radically at variance in a number of ways (particularly in terms of the place of organised religion in society, mass education, and wider democratisation) indicate that there may exist, in the words of Günter Nitschke, "common human denominators below the complexity and differences of the diverse outward manifestations of built form on our planet throughout history."[38] Ando's ideas relate not only to works created for religious purposes but for the secular world, for all his projects.

Psychospheres and Cyberspace

Although Ando writes of the problematics of our electronic environment, Michael Heim believes the technology and technological practice of cyberspace may ultimately also be a *modus*

operandus to engender similar spiritual centres or psychospheres. He correlates four principle qualities of *cha-no-yu* (Japanese, trans: the tea ceremony)*,* with features of cyberspace, suggesting that the dynamics of the ceremony may be a guide for developing a sense of place. The four features are *wa* (harmony), *kei* (respect), *sei* (purity) and *jaku* (serenity). For Heim, each of these features relates to pertinent virtual design issues that currently need to be addressed. *Wa* refers to systematic coherence, currently lacking in the Web. *Kei* refers to a respect of the materials used and of the presence of other people. For Heim distance is crucial in engendering respect and he believes that the telepresence of the web in part erodes this respect. *Sei* manifests in the minimalisms of the tea ceremony, corresponding to the emptiness and minimalism of cyberspace. Heim cites another designer, William Bricken, at the University of Washington's the 'Human Interface Technology Laboratory' who conceives of cyberspace as *sunyata*, (Sanskrit, trans: void). Yet Heim also believes that there is a need to address the issue of this emptiness rapidly filling with junk, particularly junk mail and states that "we need to reflect the essential loneliness of cyberspace in the electronic environments we create".[39] Cyberspace currently does not offer the holistic privacy to enable *jaku* (serenity), thus "when we write e-mail, we might as well be shouting our message from the rooftop".[40] A number of net artists have explored subjects around this theme. Some have taken a contrary

Cute Micro Garden, exhibited in the design exhibition, design imagination, process production exhibition exploring and celebrating the advancement in design excellence-at the study gallery, Poole,UK. 19th March-14th May 2005

position such as the Italian based media group 0100101110101101.ORG who, in their work *Life_Sharing*,[41] see privacy as a redundant notion. There are a number of pertinent themes here with respect to relationality thatcan be explored further. For now, it is worth noting that Heim, taking Alfred North Whitehead's perception of concrete reality as a dynamic process, believes the idea of the world as event-based and occasion-centred is significant for comprehending virtual worlds. This notion is of course, resonant with Ando's aforementioned notion of *shintai*. Heim writes: Despite the Western predilection for substances and permanence, the virtual worlds team must accept the passing, changing, flowing nature of actual occasions. By accepting the flow, the virtual worlds team regains the power of actual experiences in a culture that increasingly receives its realities in pre-packaged formulas.

One of the implications of flow, then, is that the unit of intelligibility and of value shifts. Instead of the sacred book, the event comes to foreground. Instead of information, the event receives priority. We misconstrue the Internet if we think of it as a vast information library or system of information. The Internet is also a test bed of new life forms like *avatars*. And *avatars* come to life through interactive events. The event combines literacy

and playful sociality in a series of meaning-conferring events that imprint themselves as memories through their visual strength and topical cogency.[42]

The current actuality of cyberspace is far from Heim's vision, or that of William Bricken. However, in the context of the omnipresent and almost all pervasiveness of this electronic world, and in relation to Tantric, Animist, and Buddhist notions of all phenomena being sacred, the practical investigation of cyberspace designers such as Heim will be of ever-increasing importance in generating virtual psychospheres.

Drew believes that Ando eliminates anything extraneous to reveal, to those who may perceive it, the essential quality of the space which is a presencing emptiness.[43] Komparu - discussing both the tea ceremony and the Noh, as well as intimating life in general - believes that "elegance is born when the ordinary is abbreviated, concentrated, and reduced to essentials… eventually leading to *ma*."[44] While Heim discusses this in terms of the contemporary technology and practice of cyberspace, ultimately, if any mundane activity is perceived to be sacred, such performative rituals may be located in any aspect of daily life, where the human body is

simultaneously an apperceptive instigator and spectator.

In this context, creative design of and for the home and working spaces have significance. They relocate the discourse and the focus, beyond the conventional centres of art – such as galleries and museums – and returning to the world of the mundane. For example, Shapes-Design conceived the aforementioned 'Cute Micro Garden', as a garden where a person who acquires it, can shape the contours of its landscape, the location of the bonsai tree that stands upon it, and the composition, kinds, and colours of the flower petals that may be placed on the terrain, according to her/his creativity, taste and mood. This was a garden for anybody, particularly for those who have no garden. It is a micro-garden that fits in almost any room in the home, or on an office desk. It requires no water, only care and imagination. One can tend the garden every day, or never, as one wishes. The emphasis here is clearly with the spectator. There is an aspiration to re-conceive particular bionomic processes toward a re-defining of conventional notions of 'nature'. Ronan and Erwan Bouroullec have designed *Algues* a plant-like module that grows like a climbing plant through the shaping and imagination of those who acquire it. Other works, such as *Twigs*, and *Vases combinatoires*, function similarly. Discussing *Vases*, Erwan

Bouroullec states, 'these are vases that we made in nine pieces, and which can be recombined to make other vases in different shapes. What we do is make a few "tools," and the individual has to decide how to use them in his or her life.'[45] *Argues* and *Twigs* borrow from conventionally understood 'nature', using contemporary materials, to engender new organic and relational processes. Here again 'nature' may be perceived as incoporating plastics and other contemproary manufactured materials and process. Such design permits certain creative autonomy. It attempts to shift emphasis from the designer, to those who acquire it, its spectators, thus contributing towards an art of spectatorship. Moreover, this "work" is less a static form than a flow.

In conclusion, as afore mentioned, Gunther Nitschke interrogates whether, there may lie "common human denominators below the complexity and differences of the diverse outward manifestations"[46] Perhaps a critical 'common denominator' could be perceived, as the poet Basho has expressed, as the importance of autonomously and perpetually seeking 'the truth of beauty',[47] the ultimate poetry, in the world of daily experience - a moment by moment, space by space, finding of a psychosphere. The tea ceremony engenders an opportunity to rethink all daily actions, including drinking tea. ¶

Notes and References

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[14] Ibid

[15] Ingalls, Daniel, Masson J, and Patwardhan, M (trans), op cit

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[22] Pert, Candace: (1999) *Molecules of Emotion,* London, Pocket

[23] Lovelock, James: (2000) Gaia : *A New Look at Life on Earth*

[24] Arata Isozaki curated the exhibition, Ma, Space-Time in Japan, in Paris, for the Festival D'Automne, in 1977-8; later at other sites including the Copper-Hewitt Design Museum in New York; and finally at the Tokyo National Museum of Fine Arts and Music in 2000. (See exhibition catalogues) For more information on 'Ma', and Nitschke, Günter: (1993) *From Shinto to Ando*, London, Academy, pp48-61

[25] Nute, Kevin: (2004) *Place, Time and Being in Japanese Architecture,* London, Routledge

[26] Berkson, opt cit, p93

[27] Malandra, Geri (1993) : *Unfolding a Mandala*, New York, SUNY, p122

[28] Refer Notes 16 and 17

[29] Hartley, Linda (1995): *Wisdom of the Body Moving,* Berkeley, North Atlantic, p27

[30] Dal Co, Francesco (ed), ibid, p445

[31] ibid, p444

[32] ibid

[33] Drew, Philip (1996): *Church on the Water and Church of the Light.* London, Pahidon, p.9

[34] Berkson, Carmel, op cit, p35

[35] Frampton, Kenneth (2003): *Tadao Ando, Light and Water*, New York, Monacelli, p6

[36] See Drew, op cit, pp11-13

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Reviving the Historic City Centre, Dalhousie Square, Kolkata

MANISH CHKRABORTY

ABSTRACT

On 24 September 2003, Dalhousie square was selected as a significant cultural heritage site by an international panel of experts and was featured among the World Monument Fund's (WMF) annual listing of 100 significant cultural and historic sites from across the world. This listing will bring international attention and support to the protection and preservation of this site and will further enable to generate competitive funds for specific projects.

Dalhousie Square was nominated to the listing of the WMF (World Monument Fund) by ARCH (Action Research in Conservation of Heritage) who have been researching and campaigning for conservation and maintenance of this significant city centre. Their efforts were bolstered by a grant award from the India Foundation for the Arts, Bangalore and support from the local chapter of INTACH. This article summarizes the key issues that lead to the selection of this historic zone for the esteemed listing in World Monument Fund's 100 most endangered monuments.

INTRODUCTION

During the eighteenth and nineteenth centuries, Calcutta reigned as the capital of the British Raj in India. At its heart stood Dalhousie

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This article is a part of architectural documentation of heritage buildings in Dalhousie Square by ARCH supported by Indian Foundation for the Arts, Bangalore

STUDY AND DOCUMENTATION
OF HERITAGE BUILDINGS
IN DALHOUSIE SQUARE, KOLKATA

1. GREAT EASTERN HOTEL	6. TOWN HALL	11. METCALFE HALL	16. COLLECTORATE	21. RETURN LETTER OFFICE
2. RAJ BHAWAN	7. BIDHAN SABHA BHAWAN	12. MILLENIUM PARK	17. WRITER'S BUILDING	
3. GOVERNOR'S STABLE	8. FORGOTTEN FOUNTAIN	13. ROYAL INSURANCE COMPANY	18. STATUES OF Dr. B. C. ROY & BBD	
4. ST JOHNS CHURCH	9. HIGH COURT	14. GENERAL POST OFFICE	19. ST. ANDREWS CHURCH	
5. A.G. BENGAL	10. PRESIDENCY COURT	15. SITE OF HOLWELL MONUMENT	20. CURRENCY BUILDING	

DALHOUSIE SQUARE HERITAGE ZONE

HERITAGE WALK

PROJECT	RESEARCH	SUPPORTED BY
STUDY AND DOCUMENTATION OF HERITAGE BUILDINGS IN DALHOUSIE SQUARE, KOLKATA	A R C H ACTION RESEARCH IN CONSERVATION OF HERITAGE AA 171A, Salt Lake, Kolkata 64 archeritage@yahoo.co.uk	INDIA FOUNDATION FOR THE ARTS (IFA) BANGALORE

Square, surrounded by the operations of the political, financial and social world of the Indian Empire until the shift of the capital to New Delhi in 1911. Following Independence the square was renamed Binoy, Badal, Dinesh (BBD) Bagh after three national leaders who were killed during the Independence struggle. Dalhousie Square, the historic city centre with its large central water body constitutes one of India's few remaining colonial city centres to have retained a great number of period buildings that illustrate the significant stages in the evolution of the city of Calcutta from 1695 to Independence.

The proposed Dalhousie Square Heritage Zone or precinct includes not merely the tank square but also the riverfront and the banking district behind the Writers' buildings. The entire precinct of Dalhousie square has a grid iron layout with pronounced north-south and east-west axes. The St. Andrews Church lies, in a classical manner, along the road flanking Dalhousie Square East. The steps of the Governor's house again lies on the classical axis with the 'Writers Building' only to be brutally disturbed by the Telephone Bhavan. The square has suffered decades of neglect and many historic buildings were demolished over the years to be replaced by incongruous, insensitive, high rises and irresponsive development. Significant historic buildings have survived 'development' as they have been mostly occupied by corporate institutions and the state government of West Bengal.

THE ISSUES AND RECOMMENDATIONS

Parking is the most contentious and most urgent urban issue in the Dalhousie Square. Coincidentally, when the parking problem reached its zenith, efforts to revitalise Dalhousie square were already afoot. The solution to the parking at Dalhousie square does not lie in a multilevel car parking below the tank alone. The architectural design workshop on Dalhousie Square organized by ARCH recommended the following:

• The number of cars entering Dalhousie square has to be reduced
• The timings of thoroughfares of private buses have to be altered and controlled
• The terminus facilities of the minibus has to be relocated

• Examining the possibility of creating parking lot at the ground level of the warehouses on Strand Road.
• Pollution-free electrical buses to do their rounds in prefixed loops for public convenience.
• Creation of a multilevel car park that is completely submerged in the ground with well-worked out ingress and egress points and extremely high fees for parking.

Any attempt to revitalise Dalhousie Square will pivot around the conversion of existing space from low to high efficiency usage areas. This project in turn hinges on the extent to which spaces, both built and non-built, are reclaimed. The interpretation of the word redundant has to be extended to include spaces that are occupied by wasteful activities and not merely to signify spaces available in-between building lots, back yards etc. The footpaths are heavily encroached upon and are functioning at low efficiency. Attempts have to be made to decongest them. This might be achieved by relocating vendors and hawkers in a more organised manner. The minibus stand is also occupying prime land and is an eyesore in the middle of the city center. Relocating these facilities will add to the land stock of Dalhousie square. Pedestrianisation in Dalhousie square needs to be more pronounced and safer. Reclaiming of footpaths and designing the right linkages through the tank square will go a long way in achieving this objective. The reclaiming of footpaths is an absolute necessity and must be attempted at any cost. Displacement of street vendors and their rehabilitation will however have to be addressed simultaneously.

The Strand Road and the vast redundant built up spaces of the warehouses is a most valuable urban asset and should serve as an opportunity to address the possibilities offered by food courts, parking galleries, restaurants and office spaces.

The presence of the water tank in the middle of a city-centre is a huge plus point. It is an invaluable asset when one considers that Trafalgar Square has only a fountain and Mumbai has only the semblance of a city-centre with Flora Fountain as the focus. The most visible and obvious area that needs sensitive landscaping is therefore the tank square itself. The ingredients are all there. The walkway around the tank still exists as do some of the other features like lampposts and benches.
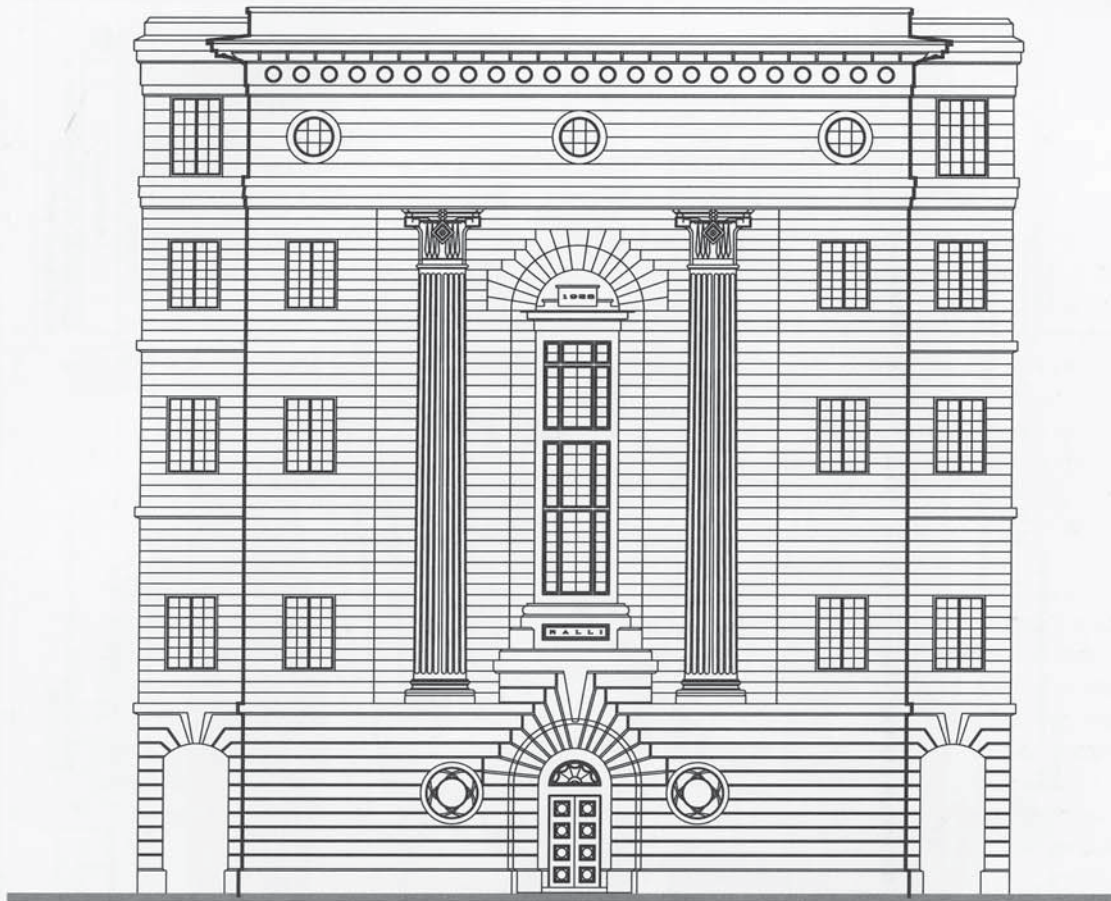
Above: Elevation of LIC Building
Below: Balmer-Laurie Building Elevation

DALHOUSIE SQUARE HERITAGE ZONE

ARCHITECTURAL CONSTRUCTION PERIOD

SUPPORTED BY

INDIA FOUNDATION FOR THE ARTS (IFA)
BANGALORE

RESEARCH

ACTION RESEARCH IN CONSERVATION OF HERITAGE

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A R C H

PROJECT

STUDY AND DOCUMENTATION
OF HERITAGE BUILDINGS
IN DALHOUSIE SQUARE, KOLKATA

HISTORIC TANK

GREENS/ LANDSCAPE

RIVER

< 1800

1800 – 1850

1850 – 1900

1900 – 1940

The base of existing trees are currently of different types and sizes and in an extreme state of disrepair. They need to be standardised in detail and treatment. Illumination is another aspect that needs serious consideration as this would go a long way in enhancing the visual appeal of the place and extending activities and utility into the night for the area.

The 'visual pollution' of Dalhousie Square is so pronounced that a separate drive is necessary to clear the building surfaces. It is absolutely possible to bring in some order and control in the necessity to advertise rather than mindlessly vandalising the surface of heritage buildings. A balance has to be struck in what is acceptable in the interests of Dalhousie Square as a heritage precinct and what the civic administrators have to say regarding a drop in revenues caused by the ordering and regularization of hoardings and signages. It is possible, for example, to provide the beautiful wrought iron arches along the eastern side of the tank with appropriate detailing to hang standardised sign boards for establishments. The names of streets, traffic indicators, facility signages and plaques in front of all heritage buildings, an Illuminated map of Dalhousie square can likewise be thought out and standardised. These projects are expected to

have ready sponsors from the Corporate Sector following the initiative taken by Hong Kong Bank towards the improvement of the area in front of the Hong Kong Bank in Dalhousie Square.

Local preservation efforts are on the rise. The campaign to preserve the square is indicative of a larger struggle to preserve India's colonial architecture and shared heritage. The government has started showing interest in preserving the square and the surrounding area.

The design, development and management of the significant historic city centre of Dalhousie Square cannot be left to chance and cannot be the same as for the other areas of the city. A more careful approach is necessary in order to achieve the vision of Dalhousie Square - a better designed, managed, conserved and enhanced image of the city centre.

It is therefore urgent to declare this significant area as a heritage precinct under the Heritage Act and to formulate a specific strategy emphasing the need to initiate conservation, upgrading, enhancement and improvement with design control guidelines, in order to ensure that any new development is conducive to the character of this heritage zone.

The Historic Urban Core
of Kolkata - Another Approach

SATYAKI SARKAR

ABSTRACT

Kolkata, the capital of West Bengal was the hub of business and industry for the British. With time, a part of it, i.e. the B.B.D. Bag area, evolved into the central business district of the city.

Due to the loss of its historicity, the rupture of its historic fabric, the tremendous economic pressure and the inroads made by external elements, the B.B.D. Bag area is today under severe stress. The rapid deterioration in the condition of the area and its numerous historic buildings has led to it being declared a World Endangered site' by the World Monument Fund.
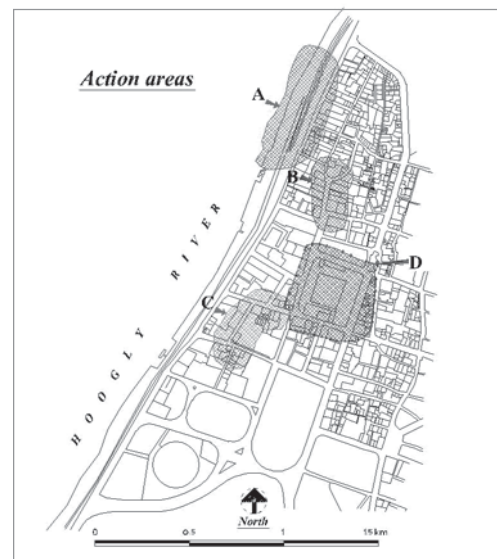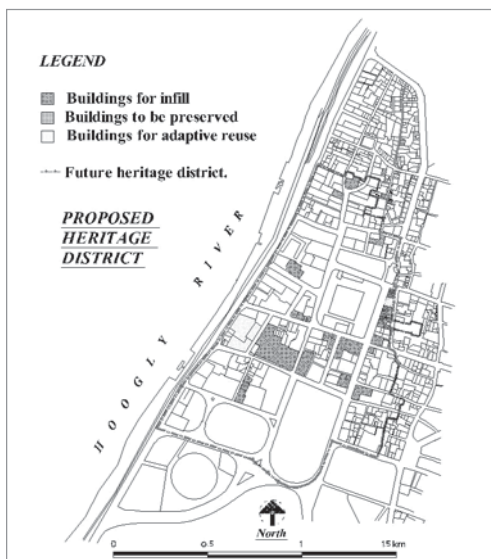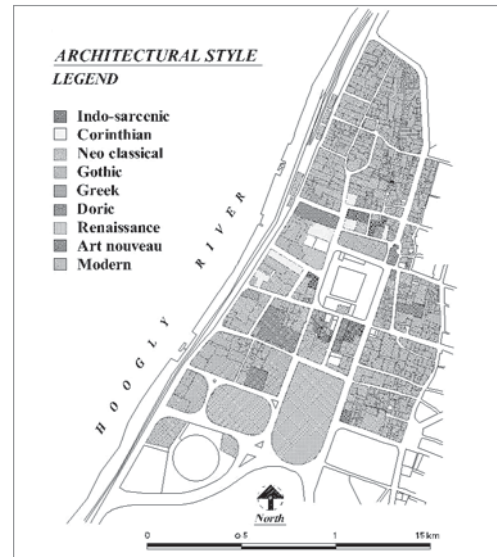
This paper documents the present situation and suggests few feasible developments in areas existing in and around the B.B.D. Bag area to improve the degenerated condition of fabric.

INTRODUCTION

Calcutta, the 'City of Joy', is one of the oldest metropolises of India. The foundation of the city now known as Kolkata were laid following the purchase of the three villages of Sutanati, Govindpur and Kolikata from the then *zamindars* by a Job Charnock of the East India Company.

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CHRONOLOGY
LEGEND
- Pre British days upto 1693
- Company's factory, 1717-1740
- Zamindari days, 1742-1757
- The Company Raj 1758-1800
- Capital of British India 1803-1912
- After shifting of capital 1912-1947
- Post independence 1947-till present date

North

STATE OF PRESERVATION
LEGEND
- Good
- Fair
- Partially Delapitated
- Delapitated
- Ruins

North

HEIGHT OF BUILDINGS
LEGEND
- 1-2 storied
- 3-5 storied
- 6-8 storied
- More than 8 storied

North

ARCHITECTURAL STYLE
LEGEND
- Indo-sarcenic
- Corinthian
- Neo classical
- Gothic
- Greek
- Doric
- Renaissance
- Art nouveau
- Modern

North

LEGEND
- Buildings for infill
- Buildings to be preserved
- Buildings for adaptive reuse
- Future heritage district.

PROPOSED HERITAGE DISTRICT

North

Action areas

A
B
C
D

North

Today, at the beginning of 21st century, Calcutta is on the verge of rapid change. Trade and commerce is growing steadily with the city's changing lifestyles and the economic boom. Kolkata, the most accommodating of cities still continues to encompass all facets of life and livelihood. All roads in Kolkata lead to Dalhousie Square, the area that was renamed the Binoy Badal Dinesh Bag after Independence and is eventually shortened to B.B.D. Bag. This picturesque area is the hub of West Bengal's administration and commerce and all the important Government and commercial institutions are clustered around it.
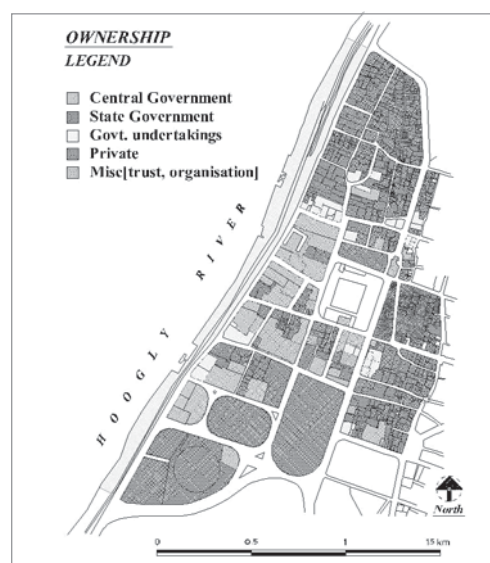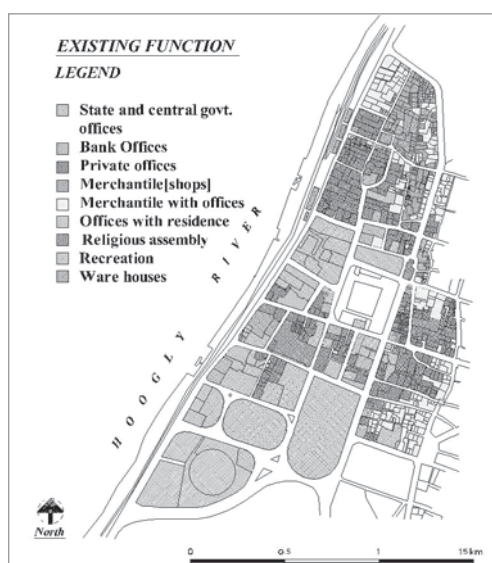
ACTION AREA 'A' - RECOMMENDATIONS			
PROPOSALS [PHYSICAL]	**STATUS OF THE SITE**	**RECOMMENDED IMPLEMENTATION AGENCY**	**RECOMMENDED SOURCE OF FUNDING**
Extension of Millennium Park upto Rabindro Setu.	Presently belonging to Port Trust, to be taken on lease.	K.M.D.A.	Govt loans to be repaid through the collection from entry fees.
Utilization of the ware houses through introduction of activities related to entertainment like clubs, hotels etc.	Presently belonging to Port Trust, to be taken on lease.	K.M.D.A.	Self-funding by agencies investing in the activities.
Housing the existing flower market within the ware houses through adaptive reuse of them.	Presently belonging to Port Trust, to be taken on lease.	K.M.D.A.	Government loans to be repaid back through the collection from rent.
Creation of multilevel car parking.	Presently belonging to Port Trust, to be taken on lease.	K.M.D.A.	Govt loans to be repaid back through the collection of fees.

Over time, the area has gradually been transformed into the central business district of Kolkata. Various agencies have built their office spaces in the B.B.D. Bag and consequently the intensity of use has increased manifold. Preservation of local environment and urban character has not yet been acompanied by simultaneous attention to environmental and urban qualities. Moreover, the absence of any holistic conservation guidelines in this area has led to the dilapidation of various historic buildings. In spite of the damage suffered, B.B.D. Bag still continues to be an extraordinary heritage zone. The urban heritage that exists here constitutes a living document of morphological evolution and technological progress. In order to meet the needs of the present day, many of the areas and structures of the B.B.D. Bag need restoration, preservation, reuse and adaptation.

There is therefore, a pressing need to understand, explore and utilize the potential aspects of the historic fabric so that the area continues to function as a vibrant urban core and as the nucleus of the social and economic life of the citizens of Kolkata.

All recommendations made in this paper follow the framework/guidelines laid - down by ASI, ICCROM and other International Charters, the proposed perspective plan of Kolkata, and the broad landuse structure proposed in the development plan for Kolkata. The discussions and suggestions are primarily aimed towards the conservation of this historic urban core of Kolkata and its specific constraints and problems. A systematic approach for the delineation of a Heritage District is discussed, followed by the identification of diverse issues in various pockets in this area.

SURVEY PROCEDURE AND DATA COLLECTION

Several reports and publications that have documented the evolution of the B.B.D. Bag, Kolkata, are available. However, to have a clear understanding of the existing issues and development potentials, the author carried out a primary survey. This includes:
• Physical survey
• Socio-economic survey
• Land use survey

ACTION AREA 'B' - RECOMMENDATIONS			
PROPOSALS [PHYSICAL]	STATUS OF THE SITE	RECOMMENDED IMPLEMENTATION AGENCY	RECOMMENDED SOURCE OF FUNDING
Preservation of St.John's church and upgradation of the site.	Presently belonging to Diocesan trust, to be taken on lease.	K.M.C.	Lottery funds
Preservation of the warehouse in this area through adaptive reuse of the defunct floor spaces.	Different public and private holdings.	K.M.C.	Lottery funds
Construction of new buildings in dilapidated sites and sites under ruins.	Presently belonging to Central Govt., to be taken on lease.	K.M.C.	Funds generated from private markets through the sale of floor spaces
Relocation of hawkers to specified areas.	Traffic Corridors	K.M.C.	Government loans to be repaid back through collection from tax.
Introduction of street furniture and street hardware.	Worn out or absent	K.M.C.	Sponsorship by Corporate houses

ACTION AREA 'C' - RECOMMENDATIONS			
PROPOSALS [PHYSICAL]	**STATUS OF THE SITE**	**RECOMMENDED IMPLEMENTATION AGENCY**	**SOURCE OF FUNDING : PROPOSAL**
Strengthening of the vista in the form of Standardised building, preserving the building facades leading to the vista.	Different public and private holdings.	K.M.C.	Lottery funds
Construction of new buildings in dilapidated sites and sites in a ruined condition.	Presently belonging to Central Govt., to be taken on lease.	K.M.C.	Funds generated from the pre-sale of floor areas.
Relocation of hawkers to specified areas.	Traffic corridors	K.M.C.	Government loans to be repaid back through collection from tax.
Introduction of street furniture and street hardware.	Worn out or absent	K.M.C.	Sponsored by corporate houses

- Survey on age and condition of buildings
- Traffic survey
- Social survey

The survey has been broadly nominal in nature. For public opinion surveys, simple random sampling was applied. Information was collected through interviews, direct inspection and observer's participation. Questionnaires were prepared for each section of stakeholders such as for commuters, tourist, owners, people on rent, offices, establishments and experts.

SURVEY FINDINGS

An analysis of the study area based on survey findings show that the ownership pattern in this area indicates that the buildings belong either to the State/Central government or to government undertakings. This pattern holds true mainly of the areas adjoining the tank square. In the areas past the tank square towards the north and east, the ownership pattern changes to private individuals or trusts. The chronology of evolution suggests that the building activity started around the Tank Square and slowly dissipitated to adjoining areas.

The survey data on the existing function and height of the prevalent buildings furnish similar results regarding the gradual change of character from the Tank Square to the periphery. Survey findings on prevalent architectural style show a dominance of architectural styles such as Gothic, Indo-saracenic etc near the Tank Square while a dominance of modern architectural style is observed as one moves away from the Tank Square.

The survey findings with respect to all the sixty-nine enlisted buildings, precincts etc. gives us a detailed idea of the percentages of buildings to be conserved. A detailed study of each enlisted building has been carried out with respect to parameters like the state of preservation, signs of deterioration, restoration requirements, historic value and use value. This leads to definite conclusions about the extent of preservation work required for each building.

The state of conservation for various heritage buildings, as depicted from the survey, highlights the fact that various piece meal approaches towards the conservation of these enlisted buildings (for example, in the ease of the restoration of the Town Hall and the Currency Building) have often led to anomaly, debate and confusion.

This phenomenon has cropped up due to the absence of grading and has resulted in *adhoc* decisions to demolish heritage buildings and precincts.

ACTION AREA 'D' - RECOMMENDATIONS			
STATUS OF THE SITE	**PROPOSALS [PHYSICAL]**	**IMPLEMENTATION AGENCY: PROPOSAL**	**SOURCE OF FUNDING : PROPOSAL**
Different public and private holdings.	Strengthening of the vista in the form of St. Andrew's church	K.M.C.	Lottery funds
Presently belonging to Central Govt., to be taken on lease.	Construction of new buildings in dilapidated sites and sites in ruin	K.M.C.	Funds generated from the pre-sale of floor areas.
Corridors for traffic to be pedestrianised.	Relocation of hawkers to specified areas	K.M.C.	Government loans to be repaid through collection from tax.
Mini transport hub, meant for public use	Redesigning of the node, reorientation of the traffic flow, introduction of proposed parking within the Tank Square with abolition of the tram within the square and shifting of the minibus stand from its present location.	State Government	BOT with private sector organization.

DELINEATION OF HERITAGE District

Based on the analysis of the buildings' existing state and preservation status, a zone may be delineated a "Heritage District". A new set of rules, regulations and building byelaws are to be formulated for this zone. Along with the declaration of this Heritage District, grading needs to be done for all enlisted buildings and precincts so as to ensure a better future conservation procedure. Heritage trails should be proposed for better visualization of the historic core.

ACTION AREAS: PROPOSALS AND RECOMMENDATIONS

There exist few areas within the 'Historic District', which appear similar to the others with respect to their state of dilapidation and deterioration but are different in the form of action needed for their revitalization. Various zones have therefore been identified and specific issues and recommendations for Action Area A, Action Area B and Action Area C have been outlined in tabular form in this article.¶

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Watershed Development Programmes: Who Gains?

DIVYA SHARMA

ABSTRACT

Although the last two decades have witnessed an increasing inclination towards community based Natural Resource Management Programmes in India, such development programmes have failed to achieve equity and sustainability at the grass root level. Watershed Development Programmes in India were conceived as a tool for correcting the regional imbalance in agricultural development created by the Green Revolution through investment in Soil and Water Conservation and Natural Resource Management programmes. While the initial soil and water conservation programmes were purely technically oriented, they have gradually evolved into more integrated and participatory programmes aiming at the management of natural resources with the aid of organizations of beneficiaries and more recently, through the targeting of livelihoods as an area of potential improvement.

Though the overall impact of Watershed Development Programmes has been positive and significant (Rao, 2000), with the increase in physical and economic access to groundwater (Chandrakanth, 2004), small and landless households hardly benefited from it. Furthermore, there is still no convincing evidence regarding the equitable distribution of benefits and successful alleviation of poverty in vulnerable sections. This paper supports the premise that

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TABLE – 1 COMPARISON OF OBJECTIVE OF WATERSHED DEVELOPMENT PROGRAMME (WDPS) GUIDELINES	
Guidelines	**Objective Statement** **Theme: Drought**
1994	Optimum utilization of the watershed's natural resources like land, water, vegetation, etc that will mitigate the adverse effects of drought and prevent further ecological degradation.
2001 and 2003	Mitigating the adverse effects of extreme climatic conditions such as droughts and desertification on crops, human and livestock population for over all improvement of rural areas
1994	**Theme: Economic Development** Promote the economic development of village community, which is directly or indirectly dependent on watershed. Special emphasis to improve the economic and social conditions of the resource poor and disadvantage sections of the watershed community such as asset less and woman.
2001 and 2003	Promoting overall economic development and improving socio-economic condition of the resource poor and disadvantage sections and inhabiting the programmes areas.
1994	**Theme Employment Generation** Employment generation and development of the human and other economic resources of the village in order to promote savings and other income generation activities.
2001 and 2003	Employment generation, poverty alleviation, community empowerment and development of other economic resources in rural area
1994	**Theme: Ecological degradation/balance** Optimum utilization of watershed's natural resources like land, water, vegetation, etc that will mitigate the adverse effect of drought and prevent further ecological degradation.
2001 and 2003	Restoring ecological balance by harnessing, conserving and developing natural resources i.e. land, water, vegetative cover especially plantations.
1994	**Theme: Resource development/Management** Optimum utilization of watershed's natural resources like land, water, vegetation, etc that will mitigate the adverse effect of drought and prevent further ecological degradation.
2001	Developing wasteland and degraded lands, drought prone and desert areas on watershed basis, keeping in view the capability of land, site conditions and local needs.
2003	Harvesting every drop of rainwater for purpose of irrigation, plantation including horticulture and floriculture, pasture development, fisheries etc to create substantial income for village communities as well as drinking water supplies.
	*(**Sources**: Common and revised Watershed guidelines of year 1994, 2001 and 2003)*

the introduction of Watershed Development Programmes in rural, degraded areas does influence the promotion of natural regeneration but tends to adversely affect the livelihood of small and landless farmers with limited resources at their disposal.

INTRODUCTION

Watershed development has been widely projected as a panacea to alleviate poverty and watershed guidelines in India have been successively revised to achieve this goal through more and more involvement of community institutions. However, with the exception of a few successful cases it has been observed that the participation of the economically deprived category i.e. small and landless farmers is especially low and has hardly benefitted from this programme, especially in the village communities that are distinguished by caste. Having clinically analyzed the reasons behind this phenomenon, it was found that there is inherent discrimination between the rich and poor based on initial endowments and power.

Recent watershed development activities in India have had significant impact in terms of increased crop production and productivity. However, these activities also appear to have accentuated the inter-household inequities by ignoring or sometimes negatively affecting small and landless households. Recent evidence indicates that in many watersheds inequities increased, because access to drinking water, grazing lands and other natural resources decreased for non-land and non-well owning households (Kerr 2002, Batchelor et al., 2003).

Watershed approaches in India

Concept: A watershed is commonly defined as an area in which all water drains to a common point.[1] From a hydrological perspective, a watershed is a useful unit of operation and analysis because it facilitates a systematic approach to land and water use in interconnected upstream and downstream areas.
Approaches to watershed development have moved away from a focus on the rehabilitation of natural resources towards a more holistic version, which sees watershed development as one approach to tackling rural poverty.

Realizing the importance of rehabilitating micro-watersheds, from 1990 onwards the Government of India (GoI) set aside substantial budgetary provisions for a programme called the "National Watershed Development Programme in Rain-fed Areas" (NWDPRA). While this programme focused mainly on the delivery of technical inputs through government machinery on agricultural lands, it did not attempt to link them with uncultivated lands and did not incorporate a widespread people's participation. The overwhelming evidence from natural resource management projects is that without the involvement of the people, the benefits of such programmes are not sustainable.

Based on the report of the Hanumanth Rao committee, which has reviewed Drought Prone Areas Programme (DPAP) and Desert Development Programme (DDP), the Government of India had sponsored the development guidelines for implementation of watershed programs in 1994. Following the publication of these guidelines, a 'Common Principles of Watershed Development' was jointly prepared by the Rain-fed farming Division of the Ministry of Agriculture and the Ministry of Rural Development (MoRD) in 2000. In 2001, this was revised by the Department of Land Resources of the Ministry of Rural Development and circulated as the 'Guidelines for Watershed Development (Revised 2001)' or GWD (also referred to as common guidelines by some people). The common guidelines propagated a holistic area-oriented, integrated watershed development approach involving comprehensive treatment plans including Soil and Water Conservation (SWC), water harvesting structures, horticulture and pasture

development and the up-gradation of the existing Common Property Resources (CPRs). In March 2003, the GoI issued new guidelines called "Hariyali" for Watershed Development Programmes. While marking a major departure in terms of institutional arrangements by making the Panchayat[2] bodies (Gram Sabha,[3] Gram Panchayat, Block Panchayats, Panchayat Samitis and Zila Parishads) the only agencies allowed to manage and implement watershed development activities, there remained a lot of commonality between the 2001 and 2003 guidelines with respect to the objectives of watershed development (Table - 1).

Understanding Watershed Development framework

In most cases, watershed development is taken as "land development" in its physical sense. Although, whole land areas have been treated based on the 'ridge to valley' approach, existing property relations and differences in the entitlements are widely ignored in this arrangement, thereby further accentuating the difference between the rich and the poor instead of lessening it. It has been observed that the watershed programme benefits people in the proportion of their land holdings. There is more obvious discrimination on the basis of the amount of landholdings. Again, in this arrangement landless and small farmers lose. Likewise, the development interventions which are taken after the land development programme is implemented exploit the conditions generated through it, further creating differences on these lines. As compared to the relatively better-off farmers, small and landless farmers could hardly derive their share of the benefits from the watershed development programme. It is very clear that the conventional approach to watershed development support the private property regime, which also means that it supports the economically better-off and powerful people of the community. More often than not, these powerful people dominate the community institutions, which further facilitates in protecting their interests. These people do not have much interest in the development of common property resources. In order to achieve its goals, watershed development will therefore have to begin with an understanding of these power relations and an attempt to balance these through democratic community institutions.

TABLE – 7 CLASSIFICATION OF BIASES AGAINST THE SMALL AND LANDLESS FARMERS IN WDPS	
Investment Bias	Disproportionate amounts are spent on private lands usually located in the more productive lower lands within a Watershed, and usually owned by the relatively wealthy.
Technological Bias	Over emphasis on Water Harvesting structures likely to be used by better-off farmers.
Capital formation Bias	Opportunities for savings and credit, the creation of assets and infrastructures, the creation of human capital (leadership skills) and institutional and social capital are all biased towards the wealthier areas and individuals within the watershed.Skill in, for instance, assertiveness, leadership and conflict resolutions rarely found among the weaker section.

Source: Mascarenhas, 1998

Who gains?

Generally, small and landless farmers are socially excluded or have only a token presence in development programmes. This phenomenon may be attributed to three main factors – class, caste and gender. The presence of rich upper caste households always hinders the rights of the deprived sections in a village. According to Jindal (Jindal, 2000), a village pastureland that appears to the outsider to be in a state of open access may not be so. For example, one powerful caste group may prevent people of weaker groups from using the pasture at certain times. When any development agency (usually the government) comes to the village with proposals to rehabilitate land, a few better-off, dominant farmers come forward to participate in the development initiative and thereby constitute the beneficiary group (user group). Hence, the decisions made invariably exclude certain groups from the development process. The most vulnerable group among the small and landless farmers is that of households headed by women. The provision of a special quota for women in different institutions created during the Watershed Development work seems to be making space for them in the development process but such programmes also need to create a social space for them in order to build their confidence. Participation is sometimes reduced to contributing voluntary labour. Involving people in the building of structures and the physical work involved in it seems to be a useful way of encouraging community participation and ownership. But often those who contribute free labour are women while the men may only get involved when the labour is valued and paid for (Seeley, Batra, Sarin, 2000).

TABLE –2 PARTICIPATION SMALL LANDOWNERS IN WATERSHED DEVELOPMENT PROGRAMMES (WDPS) DECISION-MAKING						
Decision making in WDP	Landless	Marginal (<2.5 acres)	Small (2.5 - 5 acres)	S-Medium (5-10 acres)	Medium (10-25 acres)	Large (>25 acres)
Presence of farmers (%)	8%	38%	25%	19%	8%	2%
Presence Livestock owners (%)	25%	84%	86%	89%	95%	100%
Active[4] in village (%)	0%	13%	16%	17%	20%	25%
Able to influence decisions in WDPs (%)	12%	45%	51%	54%	63%	69%

Sources: LEAD (Livestock Environment and Development in Watershed) Seva Mandir, Udaipur, Rajasthan Household Survey Data (2003)

It has been seen that the WDPs is biased in their providing benefits to different categories of farmers. The table given below explains the biases against the small and landless farmers in the WDPs context and is grouped into three main categories of investment, technological and capital formation biases.

Thus, it now appears that although the WDPs are based on the aim of equity and poverty alleviation, they ignore the weaker section of the participant communities.

In Rajasthan, the main objective of the watershed development policy is "conservation, up-gradation and utilization of natural resource endowment in an integral manner". The watershed guidelines and policies developed by both the central and state government, which have been considered the main catalysts for the development and growth of drought prone areas in the last 30 years, have paid only lip service to the economically deprived category (including small and landless farmers) and have not evolved an integrated or holistic policy for their better livelihood.

In Rajasthan, the livelihood of landless, marginal and small farmers is mainly dependent either on wage labour or on livestock. Their major livelihood activities are dependent on Common Property Resources (CPRs). Though such poor farmers constitute a larger section of the society, they neither have social (group strength) power to voice their interests nor economical power to appease the state machinery. The participation of all the categories of farmers is especially crucial for success of any development programme.

Table 2 in this article confirms the meagre involvement and influence of landless farmers in decision-making in WDPs. The data and information in the table were collected during a household survey organized by Seva Mandir, Udaipur, Rajasthan during the LEAD (Livestock Environment and Development in Watershed) project in 2003. Under this survey 200 households were selected in ten villages of Kalyanpur watershed in the Udaipur district. It has been seen that marginal, small and small-medium farmers have the utmost participation in the decision making of the Watershed Development programme as compared to landless and large, land owning farmers. A few large, landowning

households have been able to influence decision making in their favour. On the whole, the involvement of livestock owners and, more specifically, of small and marginal landowners in village level decision making seems to be quite good, they are less active and unable to influence the decision- making process. Interestingly, across all the ten villages, the proportion of households that are active in village decision-making under the WDPs increases with increases with the size of their landholdings.

 A key question is "what makes a watershed development project successful?" A major part of the benefits of WDPs goes directly to the wealthier farmers. Watershed development activities such as the construction of water harvesting and recharge structures improve the recharge capability of groundwater. However, only those farmers whose wells are located in the area influenced by the structure would get the benefits, despite the contribution from the whole community. One way to address this problem of inequitable distribution of benefits is to make the beneficiary farmers (who contribute the user groups) pay for the additional benefits they receive, given the complex geo-hydrological characteristics existing in many areas (especially hard rock area), it is practically impossible to demarcate the influence areas of recharge structures, making it difficult to demarcate the beneficiaries to the farmers. The institutional mechanisms available under the watershed guidelines are inadequate to address the issue of access and equity in groundwater for the landless, as they do not have any rights to groundwater in the watershed area.

The other form of exclusion of landless and small farmers occurs in the user groups, as the notion behind the formation of the user groups is that it includes only those farmers having land or benefiting by the newly constructed or renovated assets. Usually, wealthier farmers or those having land constitute the users; such categories always exclude small and landless farmers. Sometimes, members of the higher caste community don't want to include members of the lower caste in their group or are simply not interested in the betterment of the lower caste community through the development programme. Such exclusions of this small section of user groups have in the past involved conflicts, community riots and murder.

The first objective of the new watershed guidelines stated in Hariyali (2003) deals with the harvesting of every raindrop of water. "Policies and practices are needed that are based on accurate information, that seek long term solutions and that have a strong emphasis on promoting the management of natural resources at all levels". (Batchelor et al, 2003) In reality, the water harvesting structures and recharge structures can provide benefits only for those having land. Though there has been mention in the policy that watershed treatment on private land should include the small and marginal farmer's land in the majority. But as always the economically deprived section i.e. small and landless farmers doesn't receive benefits. Only those farmers having land in the catchments area of the water harvesting structure reap the benefits of the same, although the whole community has contributed in the development programme. The 'Ridge to Valley' concept in Watershed Development was developed as a parallel to the approach to land development, which is based on private land and does not include a single patch of common land. This approach also discriminates against small and landless farmers and women-headed households. In addition, the restriction of grazing area under the watershed treatment plan also adversely affects the feeding practices of livestock and those households where livestock rearing is the major source of livelihood. This policy seems fail in finding alternative grazing options, thus raising questions regarding its effectiveness.

The other objective of poverty alleviation emphasizes the economic development and improvement of the socio-economic conditions of the resource-poor section of the community. As it is hard to visualize a positive impact on the livelihood of the poor by such short-term development programme, the accountability of this objective may be questioned. Watershed development programmes always provide a short-term income generation source, which is too meagre to have an impact. As the land development programme is oriented to the physical development of the land, it always benefits those farmers who already own land. For an uneducated, poor household to understand new processes of credit or thrift is not easy and even if they wished to adopt such processes it takes time to do so. Provision of thrift or credit is not a long-term income generating solution, until

Kalyanpur Watershed, Udaipur, Rajasthan

or unless it is acompanied by training on some non-farming, skill developing activities.

The other gap in policy is that less emphasis is placed on capacity building from the bottom to the top level. There is an urgent need for a major programme dealing with capacity building at all levels, with a focus on improving awareness, participation, equity and gender issues among government staff, raising the technical capacities of NGOs and providing both technical and management training to village level institutions. The method of training should be designed in such a manner that it caters to the location and the type of community (tribal/non-tribal) in that area.

Conclusion

The approach to sustainable watershed development needs to be redefined and understood in the context of existing power relations and property arrangements. Before undertaking development initiatives it is necessary to understand the grassroots level challenges. A re-examination of policies that encourage biases in the distribution of benefits in Watershed Development Programmes is needed. Clear guiding principles, operational mechanisms and administrative instruments will also be required to bring such changes into effect at the grassroot level. In other words, it is necessary to explore those factors that enable maximum participation and equity in distribution of benefits. One also needs to prioritise the devotion of time and resources towards the building of social organisation. The social organisation should be heterogeneous and composed of people from diverse or sometimes competitive interests. The groups should include people from different religion, caste, landholding status, occupation, gender and so forth. It is essential for them to present their view and suggestion in decision-

making. The participation of different sections of villages would result in a common interest, which benefits all the sections in the Watershed Development Programme. Before starting the Watershed Development Programme, it is necessary to resolve existing community differences and conflicts in the village. In addition, it is imperative that alternate solutions to short-term income generation activities are found as such activities are unable to provide sustainable livelihood for small and landless farmers. In order to introduce these changes and sustain any development intrevention, long-term investment in community institutions is essential. The existing inadequacies in the Watershed Development Programme policy could be balanced through incremental improvement and modification at various levels.¶

Notes and References

[1] This definition corresponds to the definition of "catchments" provided by Swallow, Garrity, and Van Noordwijk (1991), and represents the common use of the term in "watershed" projects.

[2] "Panchayat" means an institution (by whatever name called) of self-government constituted under article 243B, for the rural areas. (Source: 73rd Amendment Constitution of India)

[3] "Gram Sabha" means a body consisting of persons registered in the electoral rolls relating to a village comprised within the area of Panchayat at the village level. (Source: 73rd Amendment Constitution of India)

[4] Here, the term 'active' means giving suggestions or ideas during the decision making process of Watershed Development Programmes.

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Methods & Approaches

Environmental Sanitation Institute, Ahmedabad

YATIN PANDYA, VASTU SHILPA FOUNDATION

ABSTRACT

The Environmental Sanitation Institute has been undertaking pioneering and innovative work in rural sanitation since several decades. One of the major activities of the institute is to conduct training, education and awareness programmes in the field of environmental sanitation and health and to bring together professionals and workers at all levels of decision making and implementation. The article idescribes the sustainable design of the institute's relocated and expanded building on the new site in Sughad village in Gandhinagar to cater to its increasing demands and provide newer and better facilities. The institute established aim of tackling the problems of environment, energy, shelter, health, education and employment through a non-conventional and holistic approach.

Objectives of the institute

The Environmental Sanitation Institute works with the following underlying objectves:
- Motivation and demonstration of appropriate action-aimed sanitation technology for developing countries
- Eradication of the inhuman practice of transporting nightsoil as headload by specific communities (Bhangi Kashta Mukti Programme)
- Development of human resources for the popularisation, acceptance

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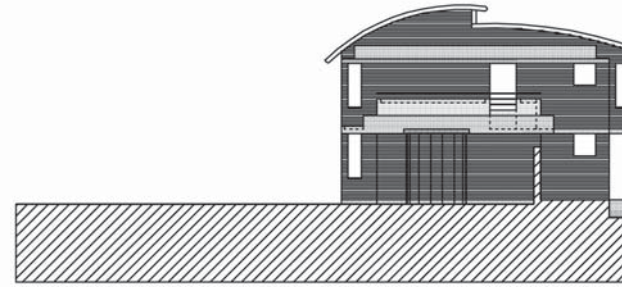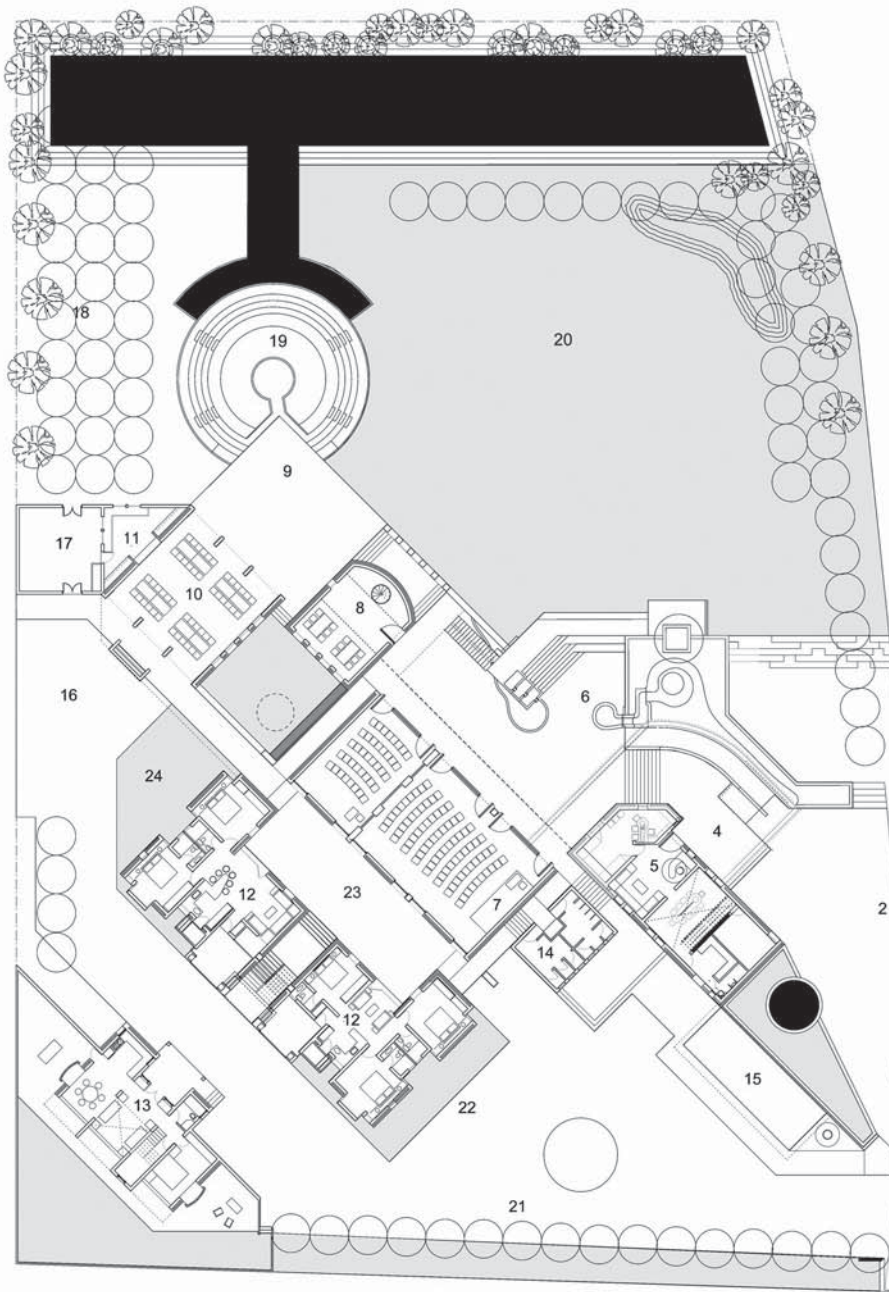
SOUTH EAST ELEVATION

NORTH EAST ELEVATION

2 0   5   10M   GROUND FLOOR

SCALE

NORTH

1	ENTRANCE PLAZA
2	DISPLAY PLATFORM
3	OPEN AIR STAGE
4	FOYER
5	ADMINISTRATION
6	AMPHITHEATRE
7	CLASSROOMS
8	LIBRARY
9	DECK
10	MULTI-PURPOSE HALL
11	KITCHEN
12	VIP GUEST HOUSE
13	DIRECTORS HOUSE
14	TOILETS
15	BUILDERS YARD
16	SERVICE ROAD
17	SERVICE COURT
18	KITCHEN GARDEN
19	WATER HERVESTING POND
20	LAWN
21	ROOT ZONE TREATMENT TROUGH
22	SOAK PIT
23	RAIN WATER HARVESTING TANK
24	BIO-GAS PLANT
25	ENTRANCE AND SECURITY

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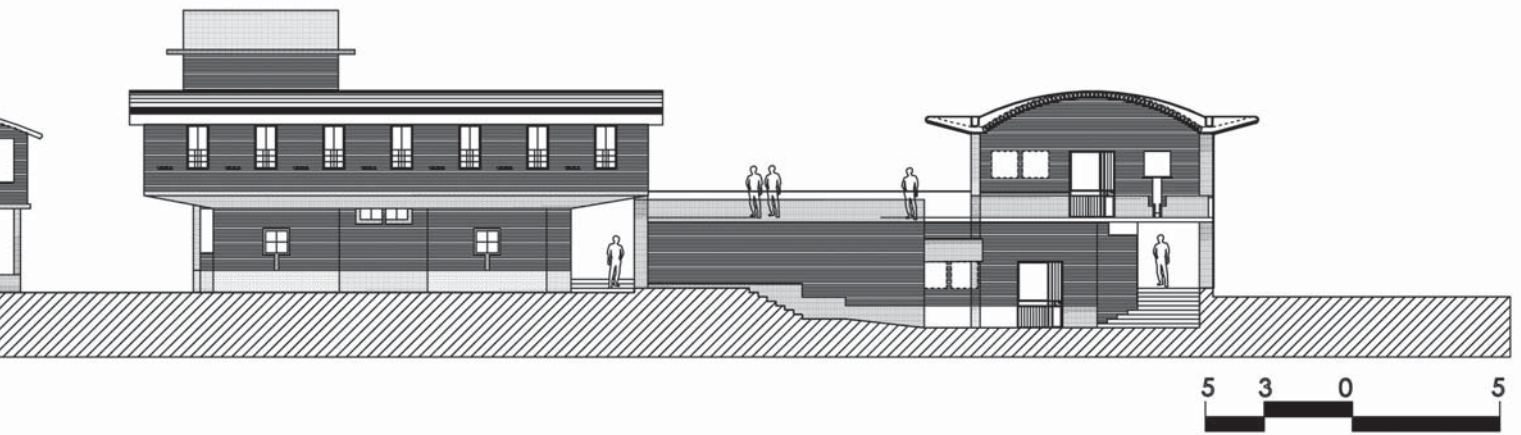
and implementation of a low-cost sanitation programme in a holistic health care fabric
- Creating and encouraging voluntary agencies for integrated preventive health practice
- Catalysing association, agencies and agents connected with concepts, concerns and convictions on low cost sanitation technologies
- Publishing literature on low cost sanitation practices in local languages
- Producing audio/audio visual cassettes and telefilms on low cost sanitation and related topics for mass communication
- Networking with national and international agencies for effective implementation of sanitation programme
- Generating a, socio-cultural revolution in sanitation service, thus leading to a better quality of life and updated gross natural product of developing countries.

The Programme Brief

The method of working, the ideals of the establishment as well as the built environment of the institute exemplifies the Gandhian philosophy, which is the backbone of the effort.

Mahatma Gandhi, who is known to be the prophet of social justice, also believed firmly that every human should take from nature only what can be restored.

Gandhian principles, programmatic requirements and ecological sustainability were translated and interpreted as the following in the design process for the environmental sanitation institute:

- A campus for learning, which is set amidst nature connected with open spaces, unobtrusive built forms and uninterrupted vistas.
- Freely ordered and overlapping spaces allowing mutual interaction, fostering meeting, and regulating movement.
- The building as a demonstration of the Institutes teaching of the value of living in harmony with nature.
- Building must, in terms of scale, material and style, merge with the surrounding landscape and be largely ground related.
- Building should meet international standards in space, facilities and quality of environment. At the same time the should be rooted in its specific site context in terms of aesthetics, spatial organisation and ambience.

SOUTH WEST - NORTH EAST SECTION

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SOUTH EAST - NORTH WEST ELEVATION

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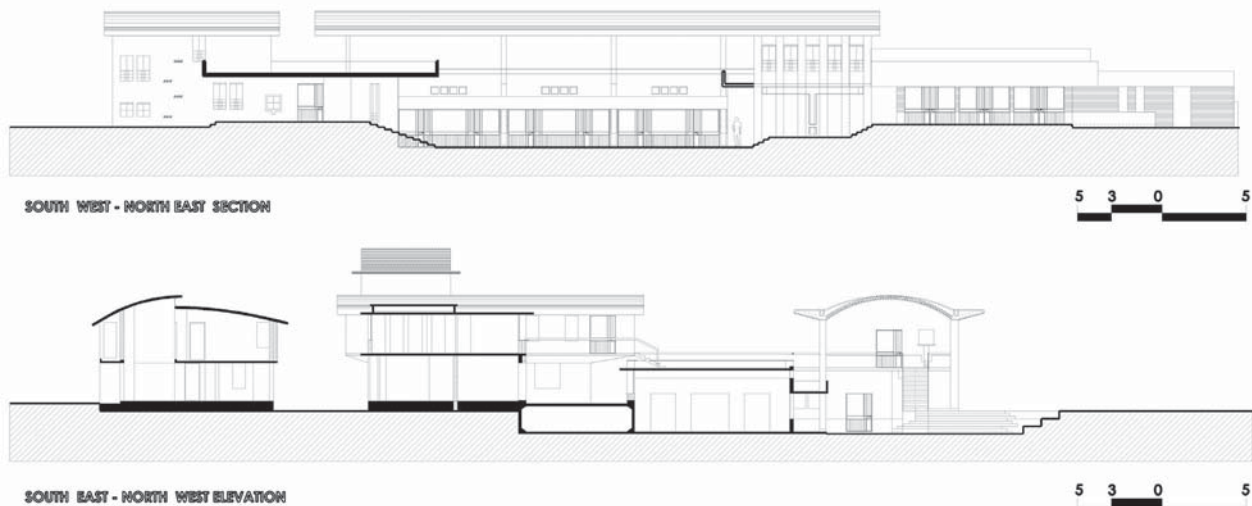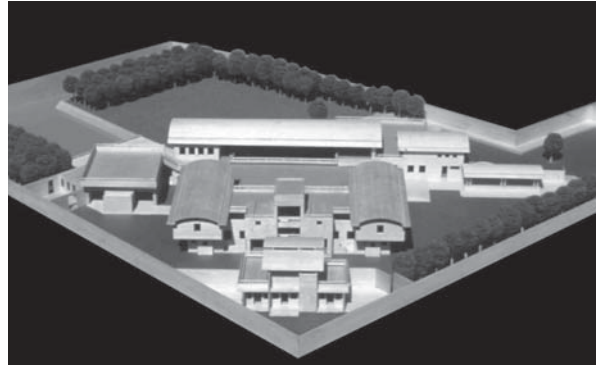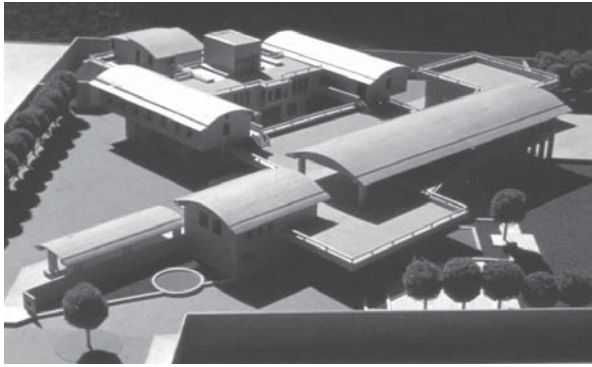
Administration Space
CONSIDERATIONS

Visitors reception and waiting area - Semi open space with views into campus, journey to waiting area as a narrative of space exhibition enroute or seen from waiting area.
Director's cabin - Small scale, sub-space in overall scheme, detailing of image generators at an intimate scale - continuous fused space.
Secretary and support staff - Collective entity, individual identity
Administrative staff - Buffering to sun, passive solar design.
Accounts - Orientation around central court. Breakup of vertical surfaces to east and west

RESIDENTIAL
Dormitory - Provision of storage spaces and treatment of vertical planes. Common activity space in the lobby, lounge at ground level. Massing G+1 with mutual shading and terraces to north and open spaces. Small scaled residential open spaces leading to larger public space. Built edge and building interface. Street-square.

Rooms (Individual & for 3 persons) - North oriented spaces. Private terraces and overhangs for more interaction with multilayered open space and interesting street section.
Staff quarters - Permanent residential areas (houses).
Dining+kitchen+store - Common space of entire residential section, major interaction area (square). Accessible from service road also. Proximity to service core.

ACADEMIC
Classrooms - Clustered arrangement for climate control. Vistas and generous spaces. Reduced solar gain-orientation, shared walls, shading devices. Glare control and daylighting. Common space for all 3 units and demonstration space. Space organisation with consideration to growth.

Demonstration+model display+exhibition - Outdoors (uncovered/semicovered). Multiple space use in interaction area.
Conference hall Auditorium+support spaces - A/V facilities, controllable natural light and views. Circulation.

ENVIRONMENT MANAGEMENT			
RESOURCE	CONDITION	STATEMENT OF GOALS	MEANS
1:SUN	Very hot (41*C) in summer and cold (14*C) in winter. Greatest radiation on horizontal plane, south and west walls. Large range of temperature and duration of sunshine.	Cooling required in summer and heat loss to be avoided in winter. Minimised exposure of vertical planes to these directions. Maintaining thermal comfort conditions throughout the year.	Close (clustered) arrangement of units for mutual shading. North orientation with longer walls along E-W. Shared walls for reduced heat gain. Subterranean architecture and berming. Appropriate technology and materials for efficient thermal insulation.
2:WIND	Hot and dry summer wind. W-SW (2m/s). Average temperature: 34ºC Cold winter wind. E-NE (1.5m/s). Average temperature 22'C	Cooling and humidification of air for alleviating discomfort conditions (hot). Not by increased wind velocity. Cold conditions. Slight warming required. Reduced wind velocity. Shielding the south western portion of the site from summer wind and sun.	Passive cooling: Evaporative cooling, shading, convective heat loss, narrow inlets, dust filter and wind tunnels. Reduced openings to the east. Controlled exposure of south wall to low altitude winter sun. Vegetation (tree) belt along SW of the site echoing main pedestrian (diagonal) route defining secondary movement (service), to act as buffer.
3:WATER	Mean annual rainfall of 741.9 mm (740 litres/sq.m). Monsoon period (Aug-Sep) contributes most of the rainwater.	Collection and storage of harvested rainwater to augment water requirements of the institute. Waste water recycling.	70% collection from built area of 2150 sq.m amounts to 11,13,700 lts. 30% collection from unbuilt spaces of 4715 sq.m amounts to 10,46,430 lts. A total of 21,60,430 litres. Recycling of waste water by natural rootzone process. Biogas production from garbage.
4:LAND	Large bulit area w.r.t site area (30%). Landlocked main plot Triangular small entry plot with access road and 2 trees Views to north and west	Unobtrusive builtform creating sense of space and openness. Conformity with by-laws: footprint, setbacks Regenerative and reproductive use of land. Compact planning and optimised land use. Exploit views and create vistas.	Small entry plot could serve to contain parking lot and initiate pedestrian movement. Built form along diagonal of site to allow for open spaces on NE. Determining the massing of spaces-G, G+1 and subterranean. Build up of mass towards NW of site (visible from bridge). Open spaces to double up for multiple uses. Diagonal axis of built form with massing and openings oriented to provide good views and provide shade, control glare.

Acoustics and circulation with special consideration to location – VIP's and visitors
Spillover spaces displays multiple space use.
Link to lounge and administration
Library - Major space and key building in the campus.
Relation to classrooms, residential areas, lounge.
Pivot for expansion and future growth.
"Institution "court/amphitheatre - major interaction space of whole campus.
Faculty room - Proximity to classrooms, library and administration.

The DESIGN PROPOSAL

The design results from addressing four primary considerations - the programme, the physical context of the site, the ideology of design and the demonstration of environmental sustainability and ecological balance.

The Programme: The institute conducts training, education and awareness programs in the field of environmental sanitation and health and brings together professionals and workers at all levels of decision making and implementation, both international and local. The program includes academic areas, library and resource centre, computer rooms, outdoor demonstration spaces and support spaces like a administration, multi-purpose halls as well as residential spaces both for students and staff. The age group of the students, the participatory rather than instructive nature of learning and the Gandhian idea of learning by living together act as directives in the conception of the idea of the institute as an unrestricted arena for interaction, involvement and interchange.

The design responds to the site both at the local and the locational levels. Located in the rural taluk of Sughad in Gandhinagar, the design attempts to retain the rustic ambience of the place. Informal space organization, low skylines, ground hugging profiles replete with plinths and courts, simple material and technology and the imageabilty of distinct parts of the otherwise contiguous built form

CLIMATIC CONSIDERATIONS	
ORIENTATION OF VERTICAL PLANES:WALLS	Longer walls along east-west. Shorter walls along north-south. Shared walls to be increased for reduced heat gain.
HORIZONTAL PLANE:ROOF	Consider inclination towards north for reduced summer heat gain and increased south wall exposure for winter heat catchment. Curvilinear profile with N-S axis. Insulation properties of system against heat and rain.Overhangs for shading.
STREETS	North-south streets may be wider since the shading due to 3m high walls (3pm - 9am) is min. 2.6m in summer and 4.4m in winter. East-west streets should be narrower since the shadow throw due to E-W walls is negligible in summer and min. 3m in winter. Streets must be paved for water harvesting but with materials that minimise glare and heat radiation.
RAIN AND WATER HARVESTING	Water proofing of exposed surfaces and protection of openings by overhangs. From building: collection from slope of roof and surface runoff from west and south walls in monsoon. From landscape: Crowns and drains of street network and from vegetation.
WIND	In summer (May-June): narrow openings to southwest and west to control dust, heat. Small wind tunnels and evaporative cooling as microclimate control options.In winter (Nov-Jan): Avoid openings to East and Northeast to prevent heat loss to cold breeze.Reduced openings to north to prevent cold winter breeze (Jan).Important spaces, residential areas and classrooms.
FENESTRATION	Convective air movement and heat loss in the interiors.Minimised insolation due to openings, shading devices, Views and vistas to be exploited. Glare control-direct/indirect.
DAYLIGHTING	Diffused (indirect) lighting in classrooms, library, residential areas. Reflective surface treatment.
MATERIALS AND TECHNOLOGY	Selection of materials based on their properties towards microclimate control-heat capacities, porosity, specific gravity. Technology to reflect Gandhian philosophy - labour intensive, energy efficient, economical, eco-friendly and sustainable.
LANDSCAPE	Landscape design to facilitate microclimate control-local shading, wind turbulences, prevention of soil erosion, surface glare control, passive solar design like berming, sunk levels, evaporative cooling

through the roof are some of the design features in this attempt.

The Physical Context: The smaller triangular plot on the southeast is the only accessible area from the road and thus becomes the entry plaza, initializing the movement sequence into the institute. The existence of three trees in this plot is exploited by using them as visual guides in this process. The constriction caused by the junction of the rectangular and triangular plots of land demarcates the main movement route to the institute from the one which leads to the residential and service areas. The garden on the north orders development along the institutional corridor which forms the edge between the built and orders the un-built along the diagonal of the site from the entrance. Residential and service areas are accommodated in the southern half of the development with clear demarcation from the institutional areas. Higher massing at the south west of the site exploits view to the garden as well as shades the lower masses on the north. They also

become the main visible feature from the bridge across the canal.

Kinesthetics: The design emphasizes the narrative aspect of spatial experience in which the resolution of the spaces in the institute actively engage the visitor. This experiential dimension to architecture, of movement through a sequence of spaces in an episodic manner and the sense of discovery of gradually unfolding spaces, vistas and inter connected elements is epitomized. In this method of space making, the dialogue set up between the visitor and the built environment in the process of understanding the space through the decoding of visual, tactile and sensorial clues personalizes the experience by involving him in it. Thus, the choices presented in the process of moving through the ensemble becomes the main determinant of the way the space reveals itself to the visitor.

Gandhian Values: The Gandhian philosophy of austerity, denouncement of ostentation and truth

translate into the built environment as the expression of the inherent aesthetic of the material and construction without applied decoration, simplicity of form and free flowing, transparent spaces. The solution thus is a series of overlapping spaces with a diverse range of connectivity and relation to other adjacent spaces offering a choice to the student of his degree of participation. Gathering spaces for formal congregation as well as chance meeting and interaction spaces of different scales are carefully ordered in relation to the movement sequence through the institute and in proximity to activity nodes. The built and un-built spaces diffuse into each other extending activities from the covered indoor areas to semi covered and open spaces, being flexible to adapt to various kinds of usage patterns. Courts, balconies, overlooking terraces, shaded verandahs, covered corridors, colonnaded loggias, open decks, plinths and amphitheaters all enrich the space in terms of contrasting light and shade as well as animate the area with activity.

Environmental Sustainablity: The built form, epitomizing and demonstrating the understandings of environmental sustainability is a veritable showcase of an effort in maintaining the ecological balance and harmonizing with nature in the hot, dry climate of Gandhinagar. Orientation to regulate breeze and reduce solar gain are responses to the macro-climatic conditions of the site. Increased massing towards the south west exploits shaded areas to the north east by accommodating the activity areas, courts and streets along them. North facing terraces in the upper floors, decks and plinths that are open to the sky provide multiple use probabilities. Fenestration regulated to control convective heat loss and optimize daylighting are features integrated into the design.

Design decisions are made with the priority of regulating the microclimate for comfort conditions. Brick cavity walls insulate the interiors from the high ambient atmospheric temperatures and incoming solar radiation. The subterranean built form along with shared adjacent walls prevents excessive heat gain from exposure to the sun. Massing is selectively controlled to provide mutual shade and maximize shadow, breaking up continuous surfaces and thereby reducing reflected glare. Overhangs determined by shadow-throw studies and sun angle analysis over the year control solar penetration and also help in reducing atmospheric glare in the interiors.

In terms of managing available resources of land, the landscape design facilitates and fosters microclimate control. Localized shading provided by trees are used to an advantage in areas with south facing walls. Wind turbulences and eddy spaces formed by both the built form and vegetation assist in dust control and are positively used as open air activity areas. Ground cover vegetation helps in the prevention of soil erosion and also aids surface glare control. Land management and landscape treatment in terms of cut and fill on the flat site for passive solar design like berming, evaporative cooling and sunk levels also create spatial and visual interest. Orchards and kitchen gardens are active and productive means of optimizing available resources such as land in the setback margin, treated sullage for irrigation, mulched organic waste from the kitchen as manure etc. These features not only absorb these effluents which would otherwise go waste and need management but also yield produce as a by-product of the landscape effort for no extra cost, participating in the sustainability of the system and actually adding value.

The combined water requirement of the institute, for drinking, sanitation and gardening purposes have been met by rain water harvesting, both from the roofs as well as from the open ground and garden. The clearer and unsullied water collected from the roof is stored in an underground tank and supplements the flushing water requirements of the toilets. A controlled amount of the surface runoff from the ground is stored in an open air tank which becomes a major feature in the landscape of the garden and also meets the annual water requirement for gardening. Ground water recharging from percolating wells are combined with sullage treatment by root-zone tanks to return water to the ecosystem in a naturalized and harmless way. Solid organic waste is used to make bio-gas which fuels the kitchen and is also managed through soak pits. Lavatories designed with minimized water-borne carriage system enhance the performance of these techniques while simultaneously maintaining high standards of sanitation.

Solar photovoltaic and heating panels along with humidifiers and fans are envisaged as low-energy, active means of controlling the microclimate to supplement the passive solar design. This balance of priorities, from energy to ecological sustainability, administrative ideology and design philosophy, all come together harmoniously in creating a high

quality, low energy, sustainable environment which reflects the ideals it stands for without compromising on its international, contemporary outlook as a premier educational institute.

Design Manifestations

The design displays several features of energy efficient 'Passive' solar design such as
a) orientation to maximise breeze and building massing to provide shade,
b) Terraces and plinths that are open to sky, oriented towards the North and as cool, activity areas,
c) Controlled openings designed to reduce heat gain and glare.
d) Overhangs designed to provide optimal shade in summer,
e) Mutually shaded subterranean spaces and cavity walls to reduce heat exchange and,
f) Evaporative cooling devices and humidifiers.
Significant elements of resource management are visible such as :
Land as a productive resource - kitchen garden/ orchards
• Landscape design to regulate microclimate- waterbodies, shade trees
• Ground cover/vegetation to prevent soil erosion, control glare
• Land management of digging, filling and levelling with materials on site
• Harvested rain water to supplement the water requirements of the institute for gardening and sanitation
• Ground water table recharging through the use of soak wells
• Waste water recycling by natural 'root zone' system
• Specially designed toilets to minimise water use
• Organic waste optimised by bio-gas plants, soak pits and mulch
• Solar photovoltaic options for street lighting and water heating.¶

Futuristic Bye-Laws for Improved Urban Environment

SUCHANDRA BARDHAN

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The article argues the necessity of including environmental regulations within the framework of building byelaws incorporating green building measures in the context of contemporary developmental practices in metropolitan cities. Furthermore, it recommends the introduction of environmental byelaws and their integration with existing building byelaws so as to make these practices mandatory for every household, and to ensure that their manifold advantages benefit the urbane as well as the urban environs.

The World Commission on Environment and Development has defined Sustainable Development as "Sustainable Development is that which meets the needs of the present without compromising the ability of future generations to meet their own needs."

Since any development would involve the use of precious natural resources, even a partial alteration in terms of quantity and quality, leaves lasting and permanent damage on the local nature base - be it soil, vegetation cover or water bodies. Also the initial alteration apart, activities thereon can have recurring and long term negative impact on the area, depleting the natural resources to an irrevocable extent.

If we think of our own houses and consider the unit damage they inflict, it would seen negligible with respect to the earth's own repairing ability. But when houses combine to form a block, blocks to form neighbourhoods, neighbourhoods to form a city and so on, then the unit damage gets multiplied and the cumulative damage of the whole urban area becomes a cause of great concern. It is important to introduce environmental byelaws that can be integrated with the municipal building bye laws, in order to ensure the optimal use of natural resource base. At present, apart from the municipal bodies that grant sanction to the construction of a particular house, clearance from the Fire Department and the Traffic Police is required for larger projects. Recent environmental awareness has also caused Department of Environment & Forestry and the Pollution Control Board to participate in ensuring that certain environmental guidelines are followed. For example, the planting of five trees to replace one tree that is being cut is now a common prescription against the anti- environment ailment from which the urban populace suffers. Although this is a positive step towards improving the environment, a fast and major breakthrough is essential in the present context.

These guidelines need to be integrated cohesively with the building byelaws in order to yield results that are not restricted to a few odd sites with matured trees. Ideally, these guideline and their impact ought to expand and extend to the entire urban development, such that plantation is integrally woven into the urban fabric. In addition, these guidelines must also be part and parcel of the Development Control Rules to ensure that they contribute towards the improvement of the urban aesthetics as well as the environment. Henry F. Arnold in his book '*Trees in Urban Design*' pointed out that "*Vegetation is the most exquisite but sparingly used raw material of Urban Design.*"

Thus, a new mantra for practicing architects, engineers and planners need to be evolved on one hand while academicians and researchers are required to provide a rational base to achieve these. Again, the policy-makers and decision-making authorities forming the third vertex of this triangle can complete the circuit through the implementation and enforcement of these rules.

Todays' mantra for professionals shall not only be limited to the 3 '-ty's of utility, stability and beauty but of the 3 '-tions'- Environmental protection, Energy conservation and Disaster induced damage prevention.

The aim of the byelaws would be to develop more green areas around new houses coming up in planned new townships to enable reduced pollution, protection of natural animal habitats,

A building as a tree model.

Sun (energy)

Air (vegetation releases oxygen)

Earth & Water

RWPs may be so located that they are close to toilets

Overflow pipe to next cistern

W.C.

Gravel pit for excess rain water
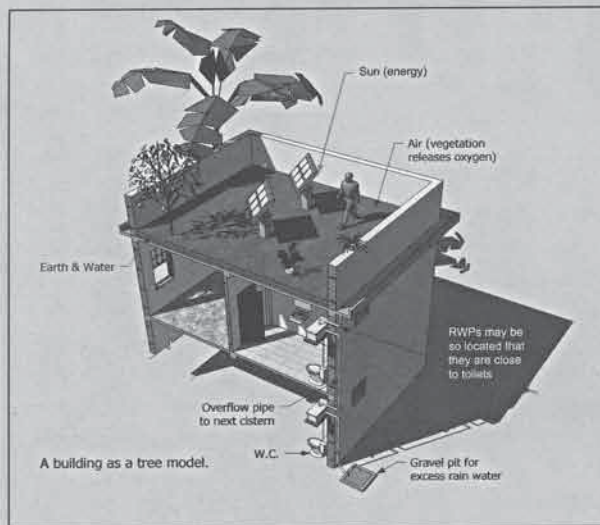
ground water recharge, soil conservation and reduction in energy demand. Trees on the Western side can reduce cooling loads drastically. They act as environmental moderators through absorption, interception and reflection of solar radiation - somewhat like natural air-conditioners. In light of the many virtues of vegetation, the proposed outline has been delineated, as under, which may be applicable for houses occupying plot areas of 140 sqm and above:

1. Any one side open space shall have a minimum of 1.0 M wide green strip for provision of plantation with trees having medium to large foliage and small canopies.

2. The back open space, similarly, shall have at least one medium size tree planted along with grass/ other vegetative cover.

3. A minimum of 15%- 20% area shall be under soft cover to allow natural percolation of rain water. The proportionate softscape has to be quantified based on research findings.

4. Use rain permeable material for hardscapes like car bays and driveways eg. hollow concrete

blocks laid on sand or loose gravels spread on sand.

5. Roof top plantation on at least 50 % of the roof area specially on the sunny side to intercept rainwater and act as thermal insulation cover to the space below, thereby bringing down the cooling load (may be applicable for buildings with areas more than 1000 sqft). The layout may be done in such a way that it integrates installation of solar PV Panels.

6. Backyard must have provision for compost pit for decomposing bio-degradable waste generated by the household, to be used as organic manures for the garden as also to enrich the microbe content of the soil.

7. Grey- water recycling (to the extent possible) and rain water storage for usage in toilet flushing, car washing and garden irrigation purposes. Excess of rainwater may be allowed to pass through the backyard garden soil.

Under the bye laws, each house is visualized as a self sufficient and self-sustaining urban unit where it is reusing and recycling resources and its generated wastes within its own premises. The same can be framed with respect to the hierarchy of urban development - houses, housing and neighbourhoods and other land use types like roads and pavements, parks and playgrounds, canal bank and piver bank areas etc. that together form a large percentage of the urban area and hence, would substantially contribute to a healthier and sustainable urban environment under a stringent 'Plantation and Horticultural Policy'.

Heritage Album - 1

Text and Photographs:
Prabha Prabhakar Bhardwaj

Journalist from Osmania University, Hyderabad is working as Consultant on environmental issues and gender issues in the context of environment, development and culture. She has developed Policy for United Nations Environment Programme, Nairobi, entitled "Women and Environment in the African Context" and has been advisor to the World Bank, East Africa Chapter for writing Environmental Policy and related issues.

GURGAON VS ARAVALI

" THE CRITICAL BALANCE OF NATURAL RESOURCES IS ESSENTIAL BUT THIS AWARENESS IS ABSENT IN THE PLANNING PROCESS OF PROJECTS "

Five elements of nature are the basis of every creation on this earth. When this balance is disturbed due to human activity or otherwise, chaos follows. Most natural calamities are caused by this imbalance. The critical balance of natural resources is essential but this awareness is absent in the process of project planning. There is a need for active policymaking and guidelines to prevent and check haphazard urban growth that endangers human and other life in the long run. The
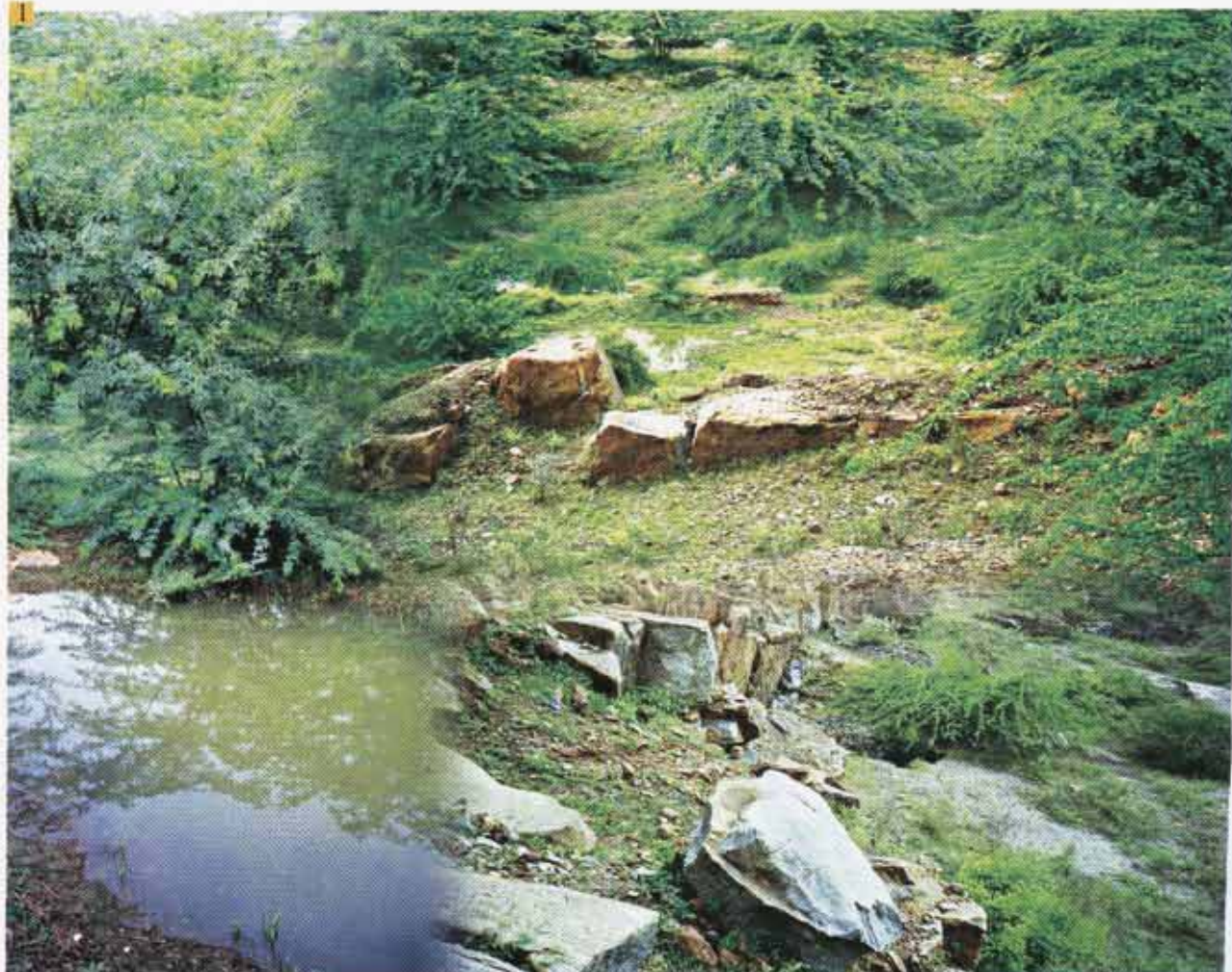
1. Forest cover helps retain the underground water table as well as the natural water reservoirs created by craters or depression in the ground. More importantly, for millions of years these Ranges have acted like a barrier to protect Delhi and its surroundings from the advancing desert of north-west Rajasthan.

result of this phenomenon is visible in the changing skyline of suburban Gurgaon.

Abandoned quarries are an ample proof of exploitation of one such resource that is depleting natural forests and bare rocks all over the Aravali Ridge, specifically in the area that passes through Gurgaon towards Faridabad. When forests are destroyed, the habitat of many birds and animals disappears leading to an ecological instability. The entire **Aravali Range** is protected under the Indian Forest Act. The Supreme Court

2. The Aravali Ranges are nature's bounty and if rapid urbanization had not destroyed it, this view could have been enjoyed from all over the ridge.

3 & 4. Uncontrolled/unmanaged stone quarrying to satiate the construction needs has left scarred hillsides. One wonders if these bleeding stones will ever be covered with greenery once again.

defined it as 'forest land' on Dec 12, 1996. It is now being denuded constantly in the guise of development. Population pressure and location of industries creates the need for new housing in this area.

The Aravali range spreads in about 700 square kilometres of area. It is estimated that as recent as about five years ago there may have been 10,000 to15,000 mines in Gurgaon employing about 70,000 workers. Due to the Supreme Court intervention of June 2003, the mining activity has been curtailed but the environmental damage has not been rectified. Although the Haryana Government and local Citizen's groups are trying to green the area by planting trees, the results are not evident as yet. Neither environmental awareness nor any other result of the restoration work is visible at present.

5 & 6. From Gurgaon side on the ridge road towards Faridabad, one can view the ongoing construction. Not long ago, this area was covered with foliage and acacia trees.

7

"THE CHANGING SKYLINE OF GURGAON IN LAST TEN YEARS HAS DISTURBED THE ECOLOGICAL BALANCE "

8

New housing colonies have been built on a large area, which highlights the perpetual conflict of interest between the natural environment and built colonies. The builders' argument is that they undertake construction only after taking relevant permission from the authorities. This may be true on paper but the ground reality remains that the rocks, shrubs and trees have to be cleared before buildings and towers can come up. If uncontrolled construction was not taking place, it is certain that greenery and the height of the ridge would have been intact.

Just behind Mehrauli-Gurgaon Road, a cluster of multi storey housing blocks has come up. As yet the other side of the road has its green cover intact. The cows relax and mulch their food. In one corner, another building is under construction.

7. In the last ten years, the changing skyline of Gurgaon has disturbed the ecological balance. A view from Faridabad Gurgaon Road.
8. Natural elements in their glory.

Heritage Album - 2

BASTAKIYAH
A Heritage Village in Dubai

Text and Photographs:
Shikha Jain

*Architect, academician
and conservationist
based in Gurgaon and
Director of DRONAH
(Development and
Research Organisation
for Nature, Arts and
Heritage)*

Dating back from the early 20th century, the Al Bastakiyah area in Bur Dubai occupies the eastern section of the old town along the Creek. The area is approximately 300 metres in length and 200 metres in depth. The area was developed by merchants who moved from Persia to settle in Dubai when the town evolved from an earlier fishing village of 18th century into a prosperous trading port. This area was named Bastakiyah after the Bastak region in southern Persia. Following the Al Fahidi fort, the earliest monument of Dubai, the

1. Entrance Gateway to the Heritage Village of Bastakiyah, Dubai
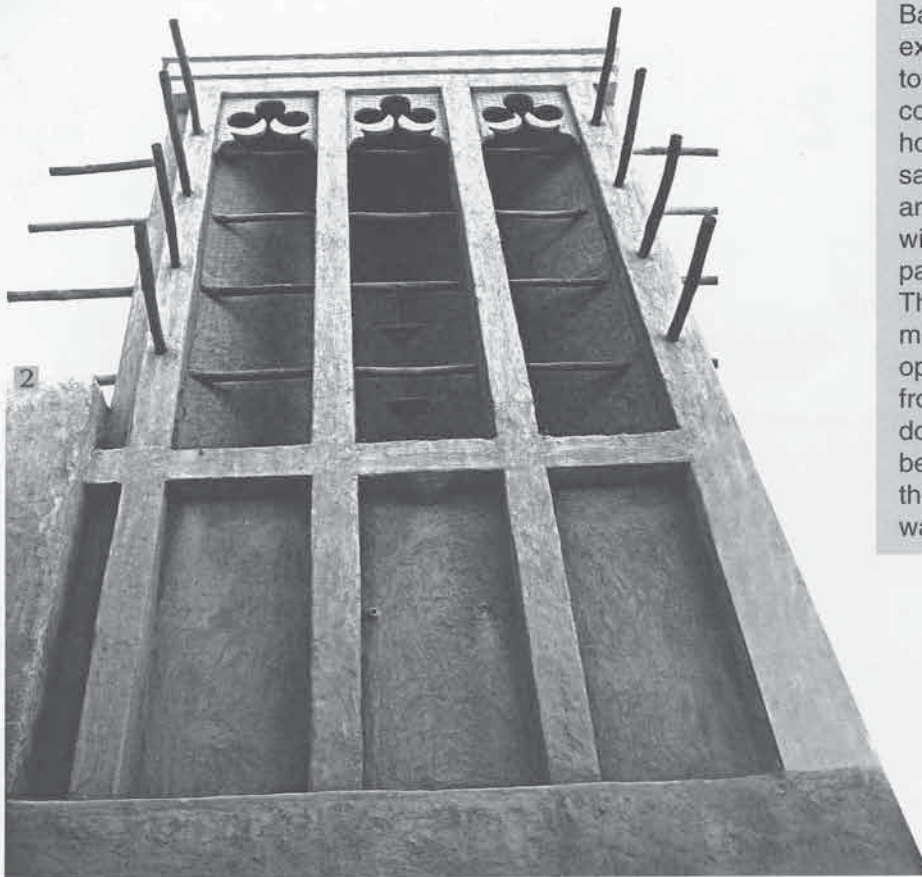
Bastakiyah district is a unique expression of the traditional old wind-towers and coral houses. The construction material used in these houses is gypsum sourced from the salt marshes at the end of the creek and locally available coral stone. The wind tower is one of the oldest forms of passive systems of air-conditioning. These towers usually rise about15 metres above the inner rooms. The open shaft at the top traps the breeze from all sides and directs it downwards. Often the floor of the room below the tower would have water and the house would be cooled when the water beneath the towers evaporated.
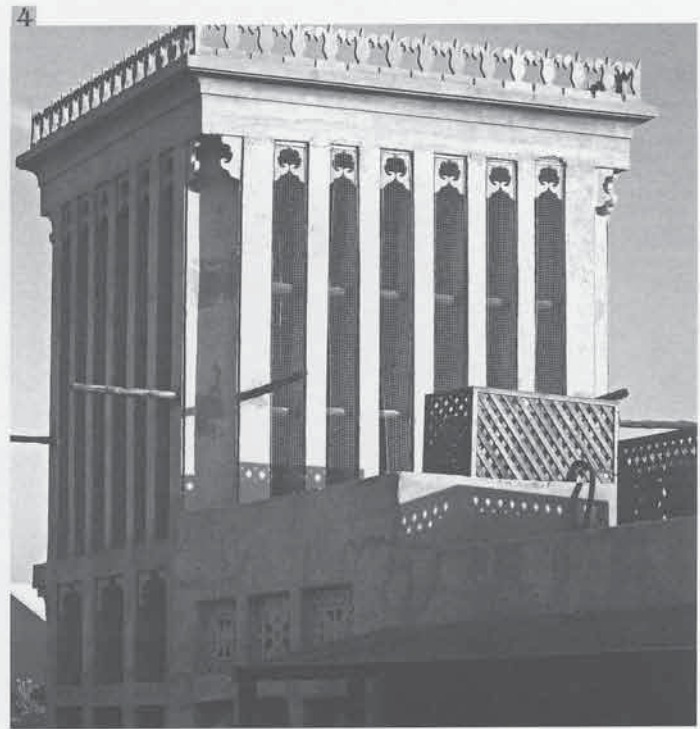
2. The typical wind tower with timber reinforcements.
3. A courtyard house in Bastakiyah district with stone parapet. Skyline of modern Dubai forms the backdrop.
4. A close up view of a corner wind tower with ornamented openings and parapet.

Recently the Dubai government has earmarked Bastakiyah for heritage tourism development. Extensive restoration work has been done and a museum, cultural centre, and an art gallery in the complex are already functional. About 55 traditional houses with wind towers have also been restored. Some of them have been converted into art galleries and restaurants.

5. Restored Inside Courtyard of Sheikh Saeed House, Bastakiyah
6. Restored timber framework supporting roof and staircase, Sheikh Saeed House, Bastakiyah

7. Restored plaster screens, walls and columns in the inner courtyard of a house, Bastakiyah.
8. Interior view of restored walls and ceiling of a building that now serves as a museum and interpretation centre for the Bastakiyah area.

Charter for the Conservation of Unprotected Architectural Heritage and Sites in India: The International Perspective

NAVIN PIPLANI

"**Drawing** upon the experience of the Indian National Trust for Art and Cultural Heritage (INTACH) in conserving the unprotected architectural heritage and sites of India within an institutional framework for two decades;
Respecting the invaluable contributions of the Archaeological Survey of India (ASI) and State Departments of Archaeology (SDA) in preserving the finest monuments of India;
Valuing ASI's pioneering role in promoting scientific methods of practice and establishing highest standards of professionalism in preserving monuments;
Acknowledging the importance and relevance of principles enunciated in the various international Charters adopted by UNESCO, ICOMOS, *et al*;
Conscious, however, that a majority of architectural heritage properties and sites in India still remains unidentified, unclassified, and unprotected, thereby subject to attrition on account of neglect, vandalism and insensitive development;
Recognising the unique resource of the 'living' heritage of Master Builders/ *Sthapatis/ Sompuras/ Raj Mistris* who continue to build and care for buildings following the traditions of their ancestors;
Recognising, too, the concept of *jeernodharanam,* the symbiotic relationship binding the tangible and intangible architectural heritage of India as one of the traditional philosophies underpinning conservation practice;
Noting the growing role of a trained cadre of conservation architects in India who are re-defining the meaning and boundaries of contemporary conservation practices;
Convinced that it is necessary to value and conserve the unprotected architectural heritage and sites in India by formulating appropriate guidelines sympathetic to the contexts in which they are found;" (The India Charter 2005)

The charter for the conservation of unprotected architectural heritage and sites in India was formulated, and duly adopted by INTACH on 4th November 2004. The need for an India Charter for Conservation has been realized for a few decades now, particularly when the notion of the 'universal' relevance of the Venice Charter (International Charter for the Conservation and Restoration of Monuments and Sites - 1964) was questioned by many societies. Amongst the international charters and guidelines governing the conservation of architectural heritage, the Venice Charter is the most widely accepted and adopted. Although it is not equally successfully applicable, or even appropriate for many cultural contexts, its underlying principles are still respected and govern conservation practice.

The shortcomings of the Venice Charter become strikingly apparent when they are removed from their western context, and applied to non-European cultures. The contradiction begins to appear with the first two lines of the Venice Charter, which refer to historic monuments of generations of people as 'living witnesses of heir age-old traditions'. This clearly implies that these dead or ruined structures are the surviving evidences of past traditions and cultures. This idea is very much aligned with Alois Riegl's definition of 'pastness' or 'age-value'. He defines 'age-value' as that which is "rooted purely in its value as memory… (which) springs from ones appreciation of the time which has elapsed since (the work) was made and which has burdened it with traces of age." (Colquhoun, 1991)

This understanding of valuing the past for its 'pastness' is prevalent, and according to Riegl, quite appropriate in European cultures. It also implies a certain linear progression of time, where there is a beginning and perhaps a consequential end. The Western attitude to conservation devotes more time and importance to surviving historic structures or ruins – the relics, and emphasises the remaining evidences of the past. This belief identifies a strong distinction between the past and the present or future times, underpinning the significance of 'loss' or 'what was', removing it from 'what is' or 'what will be'. John Ruskin's idea of the 'golden stain of time' (Ruskin, 1849) originated in this Western culture, and suggested an irreversibility of events in time leaving behind their trace or evidence of their once upon a time- fairy tale kind of existence. Another such idea related to time and its physical manifestation in the material fabric was introduced by Cesare Brandi in his *Teoria Del Restauro* (The Patina of Age). The Venice Charter was very much inspired by Brandi's thought, and articulated this core idea through the fundamental concepts of authenticity and reversibility.

Contrary to this, the Indian worldview of cyclic time influences its own diverse cultural responses, and provides a unifying concept of 'eternal becoming' (Coomaraswamy, 1974). More than 'what was' (the past), the emphasis is on 'what will be' (the future), which is a consequence of 'what is' (the present). According to A G K Menon (Menon, 1998) the (architectural) past provides models for the development of a contemporary Indian architecture because the past represents timeless architectural values, and is distinct from the term 'pastness'. In addition to this differing perception of time, the specificity of Indian situation also lies in recognizing the organic relationship between historic monuments and cultures that produced them.

In the indigenous Indian context, more than historic buildings the notion of authenticity is associated with the historic ways of building. The traditional master builders – *sompuras, sthapatis* and *mistris* – still exist and practice their craft in conformity with their cultural traditions. Original intentions and traditional building processes are venerated more than original materials and historic building fabric. Authenticity is associated less with preserving historic monuments and their original fabric alone, and more with retaining and perpetuating the age-old traditions and practices that created these monuments in the first place. The still prevalent and continuing building traditions of our indigenous cultures and traditional craftspeople constitutes the 'living' heritage of India, and this needs to be preserved and handed down to the future generations.

The Euro-centric bias and converging view point of these international charters and conventions is more evident through the exclusive participation and representation of organizations and professionals who work and operate primarily in European or the so called 'developed' countries. A large majority of the people who attended the meeting in Venice and drafted the Charter represented the European context. Therefore, "it is natural the Venice Meeting … should have been heavily influenced by European attitudes and views" (Erder, 1986). In the 9th ICOMOS General Assembly meeting and symposium at Laussane (1994), it was acknowledged that, perhaps the participation from less developed or 'developing' countries would have contributed significantly to the discussions and, "might have helped to overcome the impression of some that the Charter and possibly ICOMOS itself are reflections of 'European thinking'" (International Symposium,

Laussane 1994). It was in this background that the broader aim to guide, reinforce and coordinate the objectives of conservation in the Indian context and the need to formulate an India Charter was translated into a draft document prepared by Prof. A G K Menon in August 2004. This initiative was taken by the Indian National Trust for Art and Cultural Heritage (INTACH), with a primary objective to consolidate INTACH's experience in the field of heritage conservation and management over the past two decades.

The need for a national charter for conservation was identified in 2002, when INTACH conducted a workshop on formulating a National Policy for Heritage Conservation and Management. Since then, the India Charter for Conservation has been a subject of discussion in several meetings, seminars and workshops. In March 2004, the INTACH-AusHeritage workshop provided another crucial forum to debate the recommendations of earlier discussions, and focus on formulating a draft document that could then be developed further, and formalized into the Indian Charter for Conservation. At the concluding session of this workshop, a draft structure for the Charter was outlined. It was also decided that the final draft should be developed for the INTACH National Convention in November 2004 to mark the twentieth year of its founding.

By August 2005, this first draft Charter was ready for dissemination and elicited views from a wider cross-section of experts. The document was also posted on the web, and a lively dialogue on its comments was conducted by way of emails. In addition to national debate, an equally varied spectrum of responses was received from the international community of professionals engaged in the realm of heritage conservation, management and education.

The intent of this paper is to highlight the international perspective on the spirit of this Charter, and bring to the fore the comments on the relevance and need for such an attempt in the present context. The comments received from experts across the globe were quite pertinent, and reflected an in-depth understanding and critique of the views expressed in the document. The nature of these remarks varied from general observations to detailed and precise comments on specific articles of the Charter text. In order to retain the authenticity of authors' intention, these comments are reproduced here in the form of quoted statements.

Sir Bernard Feilden, an eminent architectural conservation consultant and Director Emeritus ICCROM commented, "the concept of 'living' heritage of India inspires the whole document and ensures the 'Indian-ness' of Conservation in the sub-continent." Sir Bernard has always expressed a hope that India will some day develop its own charter for conservation, and has been ever encouraging towards any such effort. He further continues, "Your Charter is magnificent. It is a cultural statement worthy of India." He did suggest a minor change in the Article 4.12: "… street furniture should [not 'can'] add to the experience of heritage. No mention is made of the awful wirescape of electrical installations."

Sir Bernard also expressed his concern over the applicability of the 'Conservation Guidelines' prepared by him for INTACH in 1989, and suggested undertaking a revision of this technical manual that has been guiding conservation works undertaken not only by INTACH through its widespread network of chapters, but also by individual professionals and organizations that are equally active across the country. "The Guidelines are seriously out of date, referring to the 1964 Venice Charter and also the Burra Charter [1978, which has been revised]. The whole thrust of this 2004 Charter is different and better", asserted Sir Bernard.

Prof. Ken Taylor, member of AusHeritage Board and Visiting Fellow at the Humanities Research Centre, at the Australia National University made a few observations in relation to specific articles. Article 1.2 highlights the fact that unlike other societies, there is still a significant amount of 'living' heritage in India. To this statement, Prof. Taylor suggests: "With respect I think it better not to make a comparative statement, but perhaps to say that India is fortunate in having a significant amount of living heritage which contributes palpably to the country's sense of pride and its very character. There are other Asian Pacific countries where living heritage abounds and, of course, like India it is under threat." In Article 5.4.1 on Listing, there is a reference to 'important persons', to which Prof. Taylor expresses his concern: "Would it be helpful here to point out that important does not mean rich and famous but includes people, and ordinary people, who have made/ make significant contribution to India's living heritage." He continues further to comment on Article 5.5 on 'Historic Integrity', and said: "Integrity relates also to intangible value such as association and

cultural traditions and I think it would be helpful to the Charter to include these." Prof. Taylor agreed with the stance that the Charter takes on the issue of allowing changes in the physical integrity of buildings; he supported this approach. He cited his own experience on "an AusHeritage visit to Myanmar and at Bagan-a most remarkable and memorable place/ cultural landscape of living heritage/ history"- where he was reminded of "the sheer importance of understanding how change and rebuilding in eastern culture is part of the tangible and intangible value of buildings and places. The very act of applying traditional skills and craftsmanship is part of this value." Prof. Taylor suggested adding to the Article 4.3.3 in order to "extend the parameters of your reference to experiential qualities of the built environment. This would then link over to the additions under integrity and be a good cross-reference." He emphasized the need to link the tangible with the intangible, for this "would serve to strengthen the point on reconstruction."

Prof. William Logan, UNESCO Chair of Heritage and Urbanism and Director, Cultural Heritage Centre for Asia and the Pacific, Faculty of Arts, Deakin University, Australia commented in an extremely specific manner and detail on almost every article. At the outset of his comments he stated: "It is a comprehensive document and makes a strong attempt to address the specifics of the Indian situation." He did express his concern and said, "My general concern is that it may give too much support to developers and encourage the too rapid destruction of the architectural heritage. It is not always clear exactly what the significant elements of that heritage are and I would like to see more discussion of 'Heritage Significance' (how it is defined; how it will be identified in the listing and planning processes, etc). This no doubt reflects my familiarity with the Australian Burra Charter, which has the determination of significance (Statement of Significance) as the key element in the conservation process. All conservation decision-making and policy implementation or site management flows from that determination." In Article 2.2, it was mentioned that both tangible and intangible architectural heritage together form the 'living' heritage, to which Prof. Logan commented: "All of it? Surely not. I think you need a reference here to 'significance' and a section under Conservation Ethics on the need to start the process by determining the heritage significance of places." Article 2.5 stated, 'Conservation in India is heir, not

only to Western conservation theories and principles introduced through colonialism …' Prof. Logan corrected this point of view and said: "Many of the theories and principles have come to India in the post-colonial period as a result of the UN system, through UNESCO moving into heritage conservation field. ICOMOS and other parts of the international system that generates theories and principles about heritage conservation also post-date colonialism in India."

Prof. Logan was critical of Article 2.7, and stated: "This seems to be giving a complete upper hand to development proposals and social welfare. I have no quarrel with the latter, but would it not be wise to qualify the reference to 'development' in some way? This could be done by adding at the end of the sentence the words 'while seeking to achieve maximum protection of the significant values of the architectural heritage'." On the interpretation of 'cultural landscape' and 'authenticity' as mentioned in Article 3.1, he commented in detail: "Isn't the tangible and intangible heritage, traditional knowledge systems etc. also reflected in historic towns and other places that would not be termed 'cultural landscapes'? This clause seems to use the concept of 'authenticity' in an unusual way. I wonder if there is some confusion with 'heritage values' (or even criteria) here. Authenticity normally means that a place faithfully reflects the significant values for which it has been conserved and/or protected. It is the heritage values that should be determined by the context." Prof. Logan felt that the sub-article 3.3.1 was "better related to 'authenticity' rather than 'integrity', and clarified that "the latter refers to ensuring that there is not such an amount of change that the place loses its meaning or 'reliability'." Article 3.6 suggests that 'patina' should not compel the preservation of a ruin as it exits, and it could be sacrificed for the continuity of living cultural traditions; to which he commented: "It depends whether the patina is part of the place's significance." He suggested that Article 4 be titled 'Conservation Objectives' and not 'Conservation Criteria' as it was called in the draft Charter. With reference to Article 6.1.1, Prof. Logan felt that Sir Bernard Feilden's 'Guidelines for Conservation' should be included as an attachment to the Charter document.

Prof. Logan expressed his reservation toward the inclusion of Article 5.1, and commented: "Is it necessary or appropriate to include this rhetorical and descriptive introduction to Article 5?. The other

Articles do not have similar introductory passages. This sort of rhetoric and description belongs to the start of the whole document." In relation to Article 5.8 on the methodology of Listing, he suggested that "determination of significance being the key component of the methodology" be mentioned. Prof. Logan's critical review of the draft Charter and his specific comments on the articles were indeed useful, and contributed immensely to the formulation of the final Charter.

Dr. Niels Gutschow, a conservation architect from Germany who has worked for two decades in Nepal, commented that the Charter was "long (too long)". His advice was to "separate the code of conduct from the paper because it makes you aware of misuse in such a way that you (me) get embarrassed." Dr. Gutschow distinguishes the India Charter from the international charters by emphasising on the fact that it is the living heritage of *sompuras* and *raj mistris*, this existant resource, which leads to consideration of issues "like replication, reconstruction and other issues which the 'international charters' have been out ruling." He appreciated the article on 'conjecture' (Article 3.2), and supported the argument by his own professional experience: "the continuity of traditions out rules any other concept of authenticity." Dr. Gutschow was responsible for the conservation of Patan and Bhaktapur in Nepal, and has undertaken 'conjectural restoration' at these sites. Dr. Gutschow also requested that the author's point of view on "local community" be clarified and that they, elaborate on their own heritage. With respect to Article 8.5.1, where the Charter questions the "universality of foreign ideology", Dr. Gutschow raises his objection on the use of the term 'foreign', due to its creation of an opposition between "us" and "the others". He suggested the modification of 'universality of foreign ideology' to 'universality of any ideology'. He also suggested restructuring the document as the main body or 'centre piece' followed by sub-parts.

Prof. Peter Burman, former Director, Centre for Conservation Studies, the University of York, UK contributed immensely with his inspiring reflections on the subject of conservation in India. He acknowledged the unique resource of the "living heritage of master builders who follow the traditions and practise the skills of their forebears." Prof. Burman expressed his concern and contentment both over the prevailing situation in his own context,

when he commented: "Although we have nothing like the living tradition of India, we do have a surprising number of craftsmen still who are following in the footsteps of their fathers and grandfathers." He believes that "living heritage defines the character of a country in a more intrinsic manner than iconic monuments, or certainly than iconic monuments alone." In Article 2.2, Prof. Burman found it highly inspiring to include in the intangible heritage, "the still extant culture of traditional buildings skills and knowledge, the rites and rituals, social life and lifestyles of the inhabitants …" The article further elaborates that this intangible heritage, together with tangible heritage constitutes the 'living' heritage.

Prof. Burman empathises with the proposition that "official and legal conservation pratice is appropriate for conserving 'protected monuments', but not necessarily appropriate for the wider heritage". He warmly appreciated Article 3.4 about *patina*, and cited examples of 15th/ 17th century tower houses in Scotland "being brought back from ruinous condition to living, comfortable and highly interesting homes." He found it a sensible inclusion in the section on 'listing': the making and the purpose of an Inventory of Properties/ Buildings, and encouraged the suggestion made in Article 5.1.4 for preparing a Register of craftspeople. He reiterated that listing should be presented to both scholars and the general public in a "simple, readable format which would then aid conservation by generating public awareness." Prof. Burman ended with a stimulating review of the draft charter, saying: "Your Charter enables INTACH, however, not only to look back and celebrate the achievements of the past but also to look forward to a future inspired by a coherent and well worked out vision."

Prof. Wim Denslagen, a well respected and widely published academic from the Netherlands, said that he understood the difference between the proposed charter for India and its western counterparts, and stressed that these differences should have been made more explicit. "There is a considerable difference between the article about conjectural restorations and the Charter of Venice", he asserted. He also pointed out that the Charter is silent on the very popular issue of 'critical regionalism' in the world of architecture, and felt the Charter does not clarify its stance on its rejection of this, and the degree of the same. Prof. Denslagen was concerned when the Charter suggested eliminating the distinction (or any physical separation) between

the 'old' and the 'new' (Article 3.11). He was critical of this idea, and commented: "The Charter destroys 'the contemporary stamp' happily, but why also destroy the distinction between what is old, really old, and a reproduction or a pastiche? Why complete harmony? A living culture, in which building traditions are continued, is not necessarily against the maintenance of historical consciousness. You can respect traditions and express historical consciousness in restoration." Prof. Denslagen holds a strong point of view on this issue of replication and reproduction, and this is evident in the publication that he edited along with Dr. Gutschow: '*Architectural Imitations: Reproductions and Pastiches in East and West*' (Denslagen and Gutschow, 2005). Article 4.3.3 interests Prof. Denslagen, and according to him it "deals with a strategy against globalisation", and this idea, "could have had a more important place in the Charter." He hoped for a favourable reception of the Charter.

Prof. Jane Grenville, present Director, Centre for Conservation Studies, the University of York, UK congratulated the author of the draft Charter for the "articulation of a central idea – the western hegemony in conservation philosophy is no longer acceptable as a blanket international standard since western views cannot simply by 'draped' over the top of other cultural systems and expected to work." Prof. Grenville's comments made specific reference to each article. Whilst positioning herself as an outsider to the Indian situation, she found the distinction between the protected and the protected heritage somewhat unclear, and suggested further deliberation on this subject. She felt that the idea of intangible heritage is critical to the whole document, and needs to be "identified and articulated very clearly in Article 1." She commented: "The first two sentences of Article 3.2 articulate the central conundrum that faces Indian conservation." She continues to comment on Article 8.5.1: "… you note the falseness of the 'universality' of foreign ideology simply by placing 'universality' in inverted commas. This is the central point, for me, and if you can find ways of sharpening the expression and bringing forward the best articulation of it to the very beginning of the document, this will strengthen it (although also, of course, make it more controversial)."

Prof. Grenville found the distinction of Indian heritage according to its legal status, quite radical. She suggested including Article 3.2.4 as a section of its own "rather than try to squeeze it into 'conjecture'

where it sits rather awkwardly." She felt that the last sentence of Article 3.8.1, 'In the first instance, however, conservation should attempt minimal intervention', is critical to the main idea of the Charter, and could be put somewhere in the earlier articles. "The discussion of cyclical perceptions of time and of *jeernodharan* seem central to the whole idea of the Charter and perhaps could be aired in Article 1 or 2?" she suggested. With reference to Article 4.5, Prof. Grenville felt there are cases where traditional craftsmen want to use the 'efficient' means of construction, and wondered how would one address this issue in these situations. She remarked that Article 4.7 on sustainability needs to be more precise and relevant to the context. In her understanding "much of the spirit of this Charter runs contrary to the views of Sir Bernard." And this is indeed quite a fair observation, as Sir Bernard himself had commented on the relevance of 'Conservation Guidelines' prepared by him for INTACH in 1989. Prof. Grenville suggested that Article 6 is to do more with operational matters, and therefore need not appear within the main body of the Charter; it could probably form a separate document. "… there are many principles enunciated here that are very useful and central to the thinking of the whole document …" she remarked about Article 8, and suggested inclusion of much of this in the earlier sections of the Charter. To her the Article 9 forms a basis of a separate document, "but there may be a political imperative" for which it is put as a part of the draft Charter as a whole.

Dr. Roland Silva, a practicing conservation architect of Sri Lanka and Honorary President, ICOMOS, in his Valedictory Note at the National Convention of INTACH, called the Charter a landmark and attempted "to record a simple set of notes on the magnificent draft of a Charter that has been painstakingly prepared by Prof. A G K Menon, with a whole team of experts …", and hoped for the endorsement of the Charter at the Convention. He addressed the Charter as a "futurist document of Heritage Preservation." Dr. Silva commented further that "The Charter very rightly presents the background to the need of Conservation for the Unprotected Architectural Heritage of India. It also records the backdrop to the sensitive beginnings of the conscience of India in evolving the recent interests in the subject both at a human and at an official level." He quoted from the ninth century texts of Mayamata, the record of the renovation principle and practice that establishes traditional continuity in the ideology of the Charter.

Dr. Silva indicated that the definition of heritage in general and specifically of monuments and sites needs to be reconsidered and redefined in the Indian context: "… the follow up action on the new Charter may need to come to terms with other Government Institutions as to how the Monuments and Sites or a combination of both systems could be used with an acceptable definition in relation to India. Under the same heading, the concept of protected cities or villages may also need to be considered, if the whole town or villagescapes under exceptional circumstances would need to be listed as legally protected."

About Article 2 of the draft Charter that attempts to define what to conserve, Dr. Silva commented: "This matter has, with time, matured to its true significance, and the community is consequently more enlightened. The evolved thinking in this regard would be to preserve the intangible and living heritage of cities and villages, and even the rituals that accompany such urban and rural settlements, in terms of their daily activities, weekly practices, monthly rituals and annual ceremonies. This idea has been well outlined in the proposed Charter …" Having cited a short conversation between Lord Buddha and his chief disciple Ananda, Dr. Silva further advised on the selection process: "The wisdom of two thousand five hundred years ago should hold the key to our intellectual acumen, to be selective, and not be over sentimental in our perceptions or want, and to be prepared to avoid the extremes of romantic greed, in attempting to conserve and preserve every edifice constructed by humans." It would be appropriate to mention at this point that learning from this wisdom forms the thrust of the draft Charter.

Dr. Silva continued further and commented on each article in the sequence that followed the format of the Charter. For each point of view enunciated in the Charter he added his own opinion based on his vast and equally informed experience in this field of heritage conservation and management, particularly as an active member and former President of the International Council on Monuments and sites ICOMOS. His observations and critical review of the draft text was indeed valuable to this marathon attempt of preparing the Charter. In conclusion to his inspiring note on the Charter Dr. Silva said: "… we wish to extend our highest admiration to INTACH for initiating so many pioneering activities during the twenty years of existence. However, to our mind, this

Charter constitutes the finest of them all, when considering the future of the profession of conservation practice."

Dr. Silva recommended: "Our firm and sincere recommendation is that this Charter, in its present form be accepted, with possibly a final clause indicating that the substance of the Articles will be reviewed, and if necessary, revised every five years." The idea of a periodic review of the Charter was a significant contribution by Dr. Silva. This helped make the Charter document flexible and accessible, both in terms of its structure and content - it can now evolve with time whilst retaining its relevance to the changing cultures.

This paper attempts to collate the observations made by the international community of conservation professionals, and share their ideas, views, comments and criticism on the Charter document in the most transparent and informative manner. The basis for the methodology was to make the Charter-making process participatory and democratic. In this process, it was believed that, the Charter document would emerge significantly informed and widely acceptable. And so indeed it has.

This review of the Charter by the wider international conservation community provided an equally diverse spectrum of general observations and pertinent comments. It may not be incorrect to deduce that the international perspective on the India Charter is quite aligned to the core idea upon which this entire document and its various articles are developed. The intention of formulating an indigenous conservation philosophy that is evidently distinct from the Western conservation ideology, and which is rooted in the specificity of the Indian context is not only clearly understood but also well received across the globe. The spirit of the Charter is inspiring, and one that holds the potential to provide much needed guidance and direction to the conservation of unprotected architectural heritage and sites in the India. It would indeed be appropriate to conclude that the India Charter does accomplish, and rather successfully, the intended task of redefining 'authenticity' by establishing and recognising the value of the historic *ways* of building and not so much that of the historic building, whilst devising conservation approaches and practices.

The Charter defines new imperatives of conservation that "allow change, consider conjectural additions and alterations, accept replacement and even allow new buildings using traditional craftsmen, materials and techniques" (Menon, 1998). The main thrust of the Charter is on the conservation of the 'living' heritage of our craftspeople and their indigenous knowledge systems. The principles and practices elucidated in the Charter encourage, promote and value the work of traditional craftsmen as "constituting an authentic tradition to be conserved for future generations." (Ibid)

The message imbibed in the Charter content, if appropriately interpreted, recognizes and respects the reality of the Indian situation where in traditional building cultures have continued to create authenticity rather than preserve or freeze it in time and space. The principles enunciated in this India Charter (2004) attempt to maintain this characteristic cultural continuity in our contemporary society, thereby retaining the meaning and relevance of conservation for contemporary cultures.¶

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Reviews

BIODIVERSITY OF MANGROVE ECOSYSTEMS

By K. Kathiresan and S.Z. Qasim, Hindustan
Publishing Corporation (India), 2005, 251pp.,
Rs.875/-, ISBN 81-7075-079-2

Mangroves are the only forest ecosystem in the coastal zone that support a vast range of organisms, hundreds of plants and animal species. They have the capability to adapt to and overcome extreme variable conditions, i.e. high salinity, tidal variations, strong winds, high temperatures and anaerobic swamps. India has a rich growth of mangroves, especially in the Andaman and Nicobar Islands, and the Sunderbans.

Prof. K. Kathiresan and Dr. S.Z. Qasim, renowned marine biologists, have found through scientific study and review that mangroves have immense ecological and economic value — they protect the coastline from erosion and from natural calamities (cyclones, tsunamis, etc.). They also generate a substantial quantity of fisheries, and provide useful forestry products, bark for leather industry, pharmaceuticals, etc.

However, mangrove forests have shrunk globally — more than one-third of the ecosystem has disappeared in the last 50 years. The authors have discussed the causes of their destruction and degradation — natural calamities like tropical storms, tsunamis, etc., top-dying disease, parasites, as well as man-made phenomenon such as urbanization, agriculture, aquaculture, oil pollution, dumping of wastes, chemicals and mining operations.

The authors have recommended the sustainable harvesting of mangroves, as well as continued monitoring and thorough assessment of their recovery process. The restoration process would consist of conservation, sustainable utilization of fishery and forestry products, as well as the protection of coasts from tidal waves and cyclones. Apart from efforts on the part of experts, community participation and collaborations between the various stakeholders are also suggested.

The book is of contemporary significance — the authors have successfully underlined the fact that biodiversity is an index of a healthy economy and society. In addition to its role in creating an awareness of the status of the mangrove ecosystems and their significance in terms of biodiversity, the book will be of immense value to researchers and ecologists.

Dr. Kishore Kumar

Events

Twentieth Century Buildings: Conservation Solutions
Date: 15th November 2005 Location: London UK
Twentieth century buildings present some of conservation's greatest dilemmas – whether it is the repair of relatively modern materials, the long term survival of structures of a very temporary nature, or the management of often very large and complex developments. Added to this is the dilemma that while public appreciation of buildings from the 1920s and 1930s is now well established, the majority of people still see little value in Post-War buildings, and often associate them with many of society's social ills.

This one-day conference is to be held in Denys Lasdun's Grade I listed Royal College of Physicians (1960-64) and aims to provide an insight into an unparalleled period in our architectural history. It will examine the conservation of modern architecture, and also offer practical solutions to some of the most frequently faced problems.

Contact: Nick Collins at 020 7973 3739 or
Nick.collins@english-heritage.org.uk

International Interdisciplinary Conference on Sustainable Technologies for Environmental Protection ICSTEP

Date: 7th – 9th January 2006 Location: Coimbatore India
Organized by: Coimbatore Institute of Technology,Coimbatore and College of Engineering,University of Toledo,Ohio   The objectives are to provide a interdisciplinary forum for presenting new approaches from relevant areas of environmental science and technology, to foster integration of the latest developments in research into applicationsContact: Dr.P.Meenakshi at smeena@md4.vsnl.net.in http://www.cit.edu.in/

Delhi Sustainable Development Summit Terri 2006
Date: 4th February 2006 Location: New Delhi India
Organized by: TERI
DSDS is the principal annual event for sustainability in Asia and the Pacific and attract world leaders and opinion formers from all over the world.
Contact: Annapurna Vancheswaran at
mailto:avanche@teri.res.in, http://www.teriin.org/dsds/2006/

8th Highway and Urban Environment Symposium
Date: 12th – 14th June 2006 Location: Nicosia, Cyprus
Organized by: Charlmers University of Technology and the Cyprus Institute The aim of the symposium is to provide a forum for recent research and development on all aspects of the highway and/or urban environment. This symposium will be broad in scope and will include a special session on air quality in the Eastern Mediterranean.
Contact: Greg Morrison at greg.morrison@charles.se

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Con*text*
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Published by DRONAH (Development and Research Organization for Nature, Arts and Heritage)

NOTE FOR CONTRIBUTORS

Word count 2000-2500 words, **Quality** pictures, **Figures** printed on A4 size sheets, **Text format:** double spaced in, Times font, 12 size in Electronic copy, **Reference format:** author, title of paper, title of book or journal, vol. no, page no, town, country and year of publication, **Brief description** of the author

The article should focus on either of the following:
COMPILING RECORDS, METHODS AND APPROACHES, SUSTAINABLE SOLUTIONS

THE LAST DATE FOR RECEIVING ARTICLES FOR THE NEXT ISSUE IS JANUARY 30th 2006

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Zaha Hadid, UK
An icon, she is known for her intense, avant-garde and deconstructivist designs. Zaha Hadid was awarded the Pritzker in 2003.

Mario Botta, Switzerland
Switzerland's pride, Mario Botta won accolades for building the Capuchin convent in Lugano, the Craft Centre in Balerna and the Administration Building for the Staatsbank in Fribourg.

Stefan Behnisch, Germany
The firm is associated with a form of architecture, which is characterised by transparency, lightness and a decidedly modern approach.

Kisho Kurokawa, Japan
Kisho Kurokawa's buildings explore the notion of 'engawa', the "in between space", where public realm and private space co-exist in harmony.

Kengo Kuma, Japan
The work of Japanese architect Kengo Kuma is one of modulation: of light and shadow, of physical response to materials, of flexibility and specific reasons to sites; very innovative in

Jurgen Mayer H., Germany
He focuses on works at the intersection of architecture, communication and new technology.

Ben van Berkel, Netherlands
One of the most interesting young Dutch architects, his forte has been constantly experimenting with newer materials & methods of production.

Plasmatic Concepts, USA
Headed by David Hartwell and Sarah Lorenzen, it is a multidisciplinary research and design firm. They specialise in finding innovative ways for companies and institutions to strengthen their brand identity.

Bernard Tschumi, USA
Award winning designer Bernard Tschumi's practice spans the world and his architecture is context & material sensitive. An outstanding example of his work is Parc de la Villette, Paris.

RMJM, Hong Kong
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