

THE RESTORATION OF THE CYASLIM MANDAP IN BHAKTAPUR

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INTRODUCTION ¹

Since 1972, when UNESCO first became involved in the restoration of the Hanuman Dhoka Royal Palace,² the uniqueness of Nepal's vast national heritage of historic buildings has become well known and acknowledged throughout the world.

Valuable experience was gained in 1971-72 when the Pūjahari Math in Bhaktapur was restored with the financial and technical aid of the Federal Republic of Germany.³ This was the first attempt at the conservation of a historic building making use of ancient Newar building techniques. The result was so encouraging that a large-scale, long term project was launched by the FRG in Tacāpal tol,

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- ¹ Thanks to the energetic activity of the chairman of the *Vereniging Nederland-Nepal*, Dr. Noordijk, the organisation of the whole project could be made possible. Without his enduring patience the restoration project would not have been carried out. Thanks are expressed to the Department of Archaeology under its director Ramesh Jung Thapa for cordial cooperation. The project was guided with devotion by Krishna Prasad Shrestha from the National Art Gallery in Bhaktapur. Mr. Shrestha had already gathered experience during the restoration process of the Pūjahari Math and through extensive studies of preservation projects in Western Germany and neighbouring countries. Due to his active help the project was able to be completed. It is hoped that in the future he will be of further service to his beloved hometown.
 - ² The first phase of the reconstruction of the Hanuman Dhoka Palace was completed in January 1975. See: *John Sanday: The Hanuman Dhoka Royal Palace Kathmandu - Building Conservation and Local Traditional Crafts. AARP (Art and Archaeology Research Papers), no 6., London, December 1974.*
 - ³ The restoration of the Pūjahari Math was made possible through a grant from the Federal Republic of Germany on the happy occasion of the wedding of His Majesty the King Birendra Bir Bikram Shah in February 1971. Due to the active help of Dr. Rau, president of the Max Muller Bhavan of India and Dr. Seemann of the Embassy of the Federal Republic of Germany in Kathmandu, the restoration project was sorted out. Mr. Wolfgang Korn managed the survey of the building complex in summer 1971. And the reconstruction work was carried out by a team of German architects: Gerhard Auer, Hans Busch, Niels Gutschow, and Wilfried Kröger. On 28th June 1972 the finished building was officially presented to Her Majesty Queen Aishwarya Rajya Lakshmi Shah Devi.

Bhaktapur. This project was conceived as an integrated effort at both urban development (infrastructure, economic development) and the preservation of historic buildings in important monument zones.

The restoration of the Cyāsilim maṇḍap, however, has proceeded somewhat differently from these government-sponsored projects. In this case sponsorship has come through a private association, the Vereniging Nederland-Nepal, which is made up of individuals, mostly Dutch, who have come to love Nepal in a more personal way. Returning year after year, they have been fascinated by the Newar towns and villages in the Kathmandu Valley—those countless communal spaces which form the framework for an abundant festival life. For them Nepal has become a rich and lasting experience.

These experiences and feelings created a sense of obligation towards the ancient monuments, which in this age are so threatened by decay. It was therefore decided that the Association would make a contribution to the restoration of an historical building from the limited funds available to the group.

Relying on private sources, funds were in fact extremely limited—nonetheless it was believed that even a small scale project would serve as an example to incite similar ventures. Responsibility, in addition to financial support, was handled entirely by those involved directly with the restoration. The Association hopes that similar ventures be undertaken by other institutions, and that funds could be raised on a much wider scale. The members were extremely pleased to be able to contribute to the preservation of such a national monument on the auspicious occasion of the coronation of His Majesty, King Birendra Bir Bikram Shah Deva. The project symbolizes one goal of the progressive cultural policy of His Majesty, that of the preservation of the ancient art and architecture of the many traditions represented in Nepal.

II STRUCTURAL AND FUNCTIONAL IMPORTANCE OF THE CYASLIM MANDAP

Having resided and worked in Bhaktapur on numerous occasions, the author was in a position to recommend a suitable project to the Association. He recommended the Cyāsilim maṇḍap (pronounced “chashin” in Newari, meaning “eight-cornered”; maṇḍap in Sanskrit means “pedestal.”), which was located on the Yahsiṃkhel near Chupin ghāt, at Bhaktapur. This site was compatible with the project, which was intended to be small in scale and completable within two months. The maṇḍap is a freestanding one-storied building on a two-stepped pedestal (2.40 m above ground level). As such it was considered to be suitable for a pilot project, which could test the capability of the new approach to organized restoration work.

The building stands at the outskirts of Bhaktapur, at a point where the enclosed space of the built-up town begins to open out, funnel-shaped into the country. The opening is rendered dynamic by the noticeably sloped character of the ground. The inclination is at first fairly steep, easing off after a short distance; and at the bottom of the inclination which also marks the end of the town, a panorama of countryside will open to the observer. From this point the river running below is not visible. The maṇḍap is placed on the lower third of the inclination, below the point where the path is paved with bricks. Above it an elevated paved path partitions the lower section of Yahsimkhel. It leads past the maṇḍap and a circular mound to the Vaisṇavi pith. The mound is made from builders which are piled up to form the base (Yahsimpava, "hole of the linga") of the big pole which is annually erected at Bisket Jātrā, the New Year Festival.

The maṇḍap has been placed at a point which marks the end of one of the most important roads leading out of town to the riverside. The main road of Bhaktapur, which forms the axis of the city, runs in an east-west direction parallel to the Hanumante river. At irregular intervals the road widens to form squares, the most important of which are Dattatreya square in the east (in Tacapol tol) and Taumāḍhī square in the west. The latter is joined to an extension in a southwesterly direction, called Gah hiti, and only a narrow lane connects it with the royal palace in Lasku Dhoka. From Taumāḍhī the road down to the riverside is filled with temples and shrines, each with a particular ritual meaning for one of the many groups and castes in town. No procession fails to move through this area.

The complex, integrated system of spaces which form the axis between Taumāḍhī and Chupin ghāt should not be considered only an aesthetic creation. Space, time and ritual action each played an important role in its construction, and the resulting creation forms a unique indivisible whole.

Examination of a cross section of the Taumadhi-Chupin ghāt area reveals how the height of buildings and their degree of elaboration decreases with the distance from the Nyatapola pagoda, the pinnacle of which marks the highest point of the town. Comparing this arrangement to Newar Settlement patterns shows clearly an ordered sequence, not only in space but also with respect to the social structure. The social status of inhabitants is expressed by the greater or lesser proximity to the center of the city. Thus near Taumāḍhī we find Chathariaya (high caste Newars following Hindu tradition) whereas at Yahsimkhel there are untouchables (Pore), who earn their livelihood as sweepers, fishermen, and basket-makers.

Celebration of Bisket jātrā (the New Year Festival in April) includes performances which are of interest in attempting to understand the function of the axis described above. The festival starts four days before the New Year on Taumadhi

square. The god Bhairava is taken from his permanent residence and is placed in his chariot, which is then pulled through the town by crowds of Jyapus (traditionally farmers) on either side. The progress of the chariot is timed so that it reaches Yahsimkhel late in the evening on the last day of the year. The moment the chariot arrives, the lingam is erected to mark the beginning of the New Year, and Bhairava is placed in the Cyāsiliṃ maṇḍap. A few hours later at dawn the people of Bhaktapur flock to Chupin ghāt to take their ritual bath on the first day of the year. Having performed the necessary rituals at the ghat, the people begin to enter the Cyāsiliṃ by climbing up the ramp from the southeast. They wait in a long queue until it is their turn to perform the ritually prescribed puja, then leave the maṇḍap by stepping down towards the northeast.

The Cyāsiliṃ maṇḍap is utilized only during this festival, its sole function being to house Bhairava during the important New Year puja. Thus for only few hours of the entire year does the system, within which the building forms an integrated part, become readily perceptible. From this it is clear that, like so many of the buildings of the Newars, it can only be understood in the context of space and time.

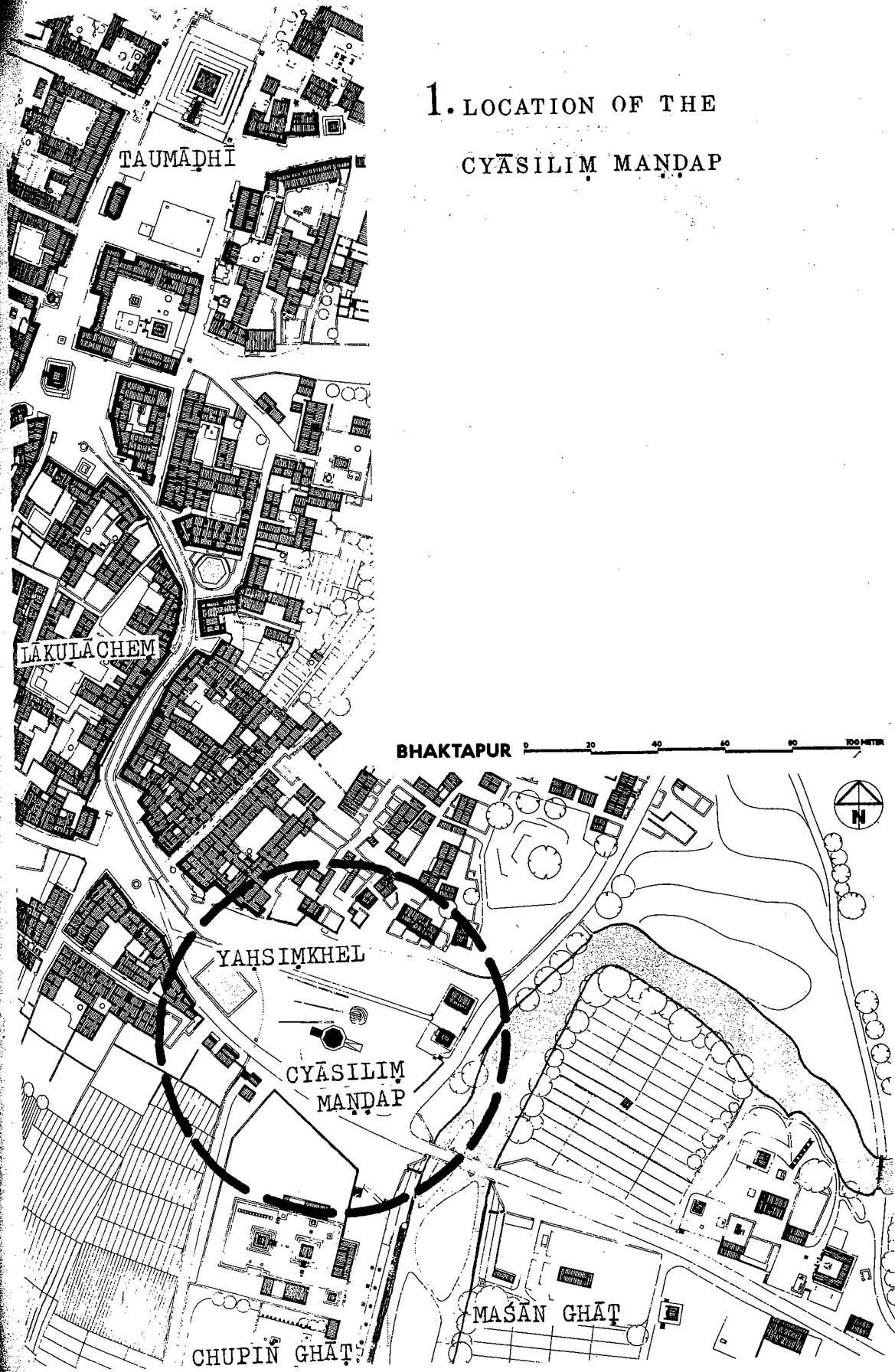
The Building. In former times the Cyāsiliṃ maṇḍap was a three-tiered pagoda constructed on an eight-cornered pedestal. After the devastation of the 1932 earthquake it was restored, but it was reduced to its present one-story shape. The building marks the place where the god Bhairava appears once a year. As described above, having bathed in the holy waters of the Hanumante, the devout worship the god in this place and make their way around the building. Ramp, open hall, and steps illustrate the notion of movement as the temple absorbs the procession. With the completion of their rites for Bhairava, the worshippers return to Bhaktapur entering the town as if "new-born."

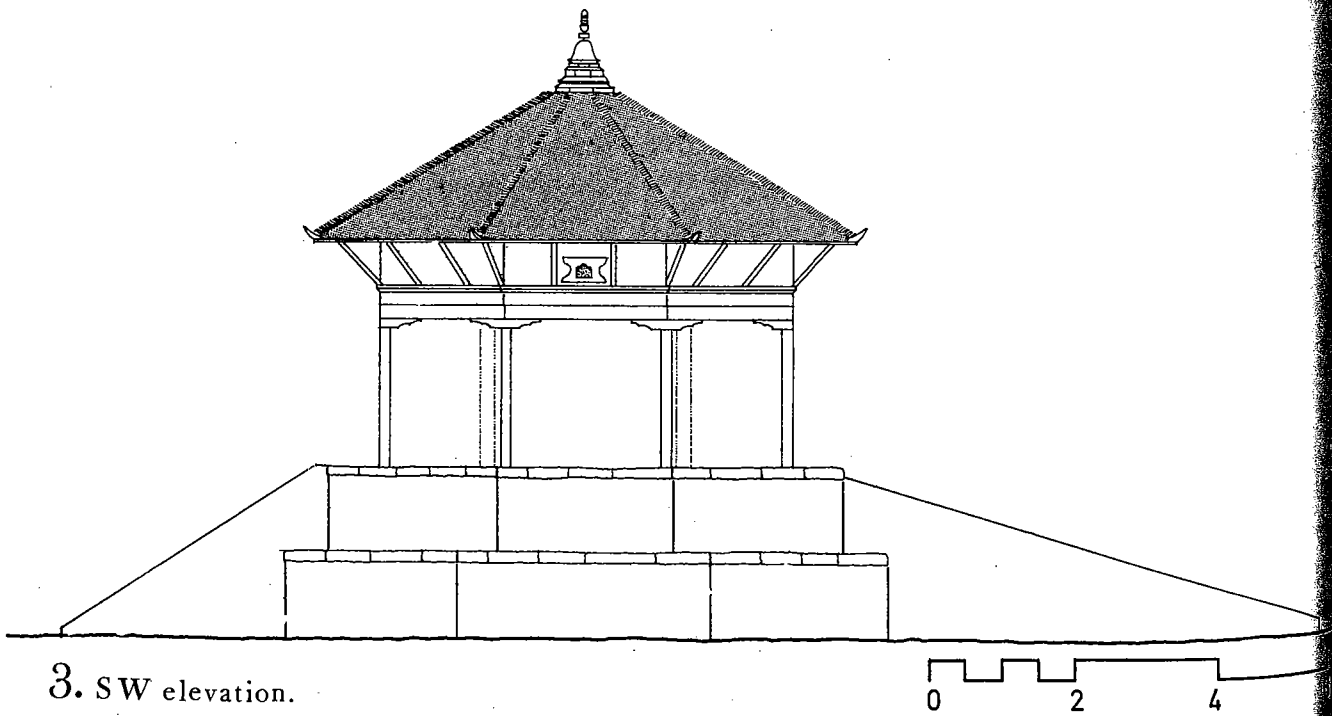
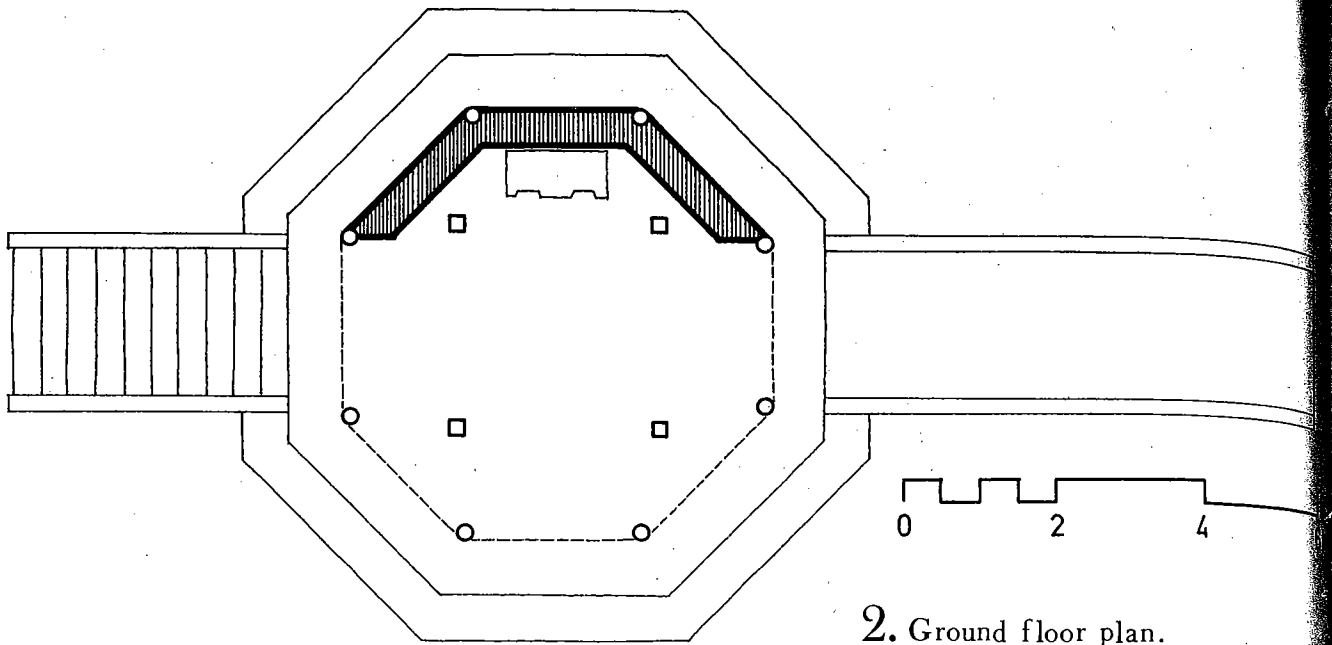
Such a combination of location (spatial component) and pathway (component of movement) is rather unique in architectural history. With some allowance it may be compared to the situation of the holy boats of ancient Egypt, which rest on pedestals on the way from the Amun Temple of Karnak to Luxor. In this sense the Cyāsiliṃ maṇḍap pedestal marks a raised "station" in the course of the ritual procession. Above the "station" the three level structure dominates the scene and clearly marks the holiness of the place.

The raised platform is closed to the northeast. The enclosing walls do not have a support function and the wooden pillars are embedded into the brickwork. The design as a whole is somewhat confusing and leaves open to question what the former structure of the ground floor was. The roof which projects out 90 cm formerly had the usual slope of 30 degrees.

The earlier three-tiered pagoda probably was built c. 1725, when the King

1. LOCATION OF THE CYĀSILIM MAṆḌAP





of Bhaktapur, Bhupatindra Malla, introduced the Bisket jātrā in its present form. Influences from India seem to have been active during the introduction of the jātrā (note the rath-yātrā festival of Jagannath in Puri, Orissa), and the patterns are similar. In order to accommodate properly the different stages of the festival, the King had various other buildings erected within the Taumāḍhī-Yahsimkhel area.

III PROCESS OF RESTORATION

Condition of the Building in 1974. Although dilapidated the Cyāsiliṃ maṇḍap was not threatening to collapse when the project began in 1974. With its important function in the religious life of the people, a certain minimum amount of maintenance was assured and had, in fact, been carried out since the post-earthquake reconstruction. The building was nevertheless in poor condition. The roof timbering consisted of a jumble of rafters which supported the roof at a slope of 18 degrees. The supporting beams above the eight pillars were severely gnawed by insects, a phenomenon well known from the other recent restoration projects. Whereas 200-year old rafters and beams are still unimpaired (e.g. the case of the 1971/72 restoration of the Pūjāhari Math), young wood of inferior quality was generally affected by insects.

The floor, which was renewed only a few years ago, was also undermined and several holes were broken into it. The severe monsoon of 1974 caused the collapse of the supporting walls on the southeastern side of the pedestal. Thus for the first time it was possible to examine the inner core of the raised platform. Inside, the supporting walls proved to be rather weak, backed only by 30 cm of brick rubble. Whereas the ramp still served its function, the steps were also threatening to crumble. It was therefore decided to take down the supporting walls and begin a complete renovation of the building from the ground up.

Aims of Reconstruction Work. The immediate aims of the reconstruction work were to renew the supporting walls, and for the ramp and steps to be made passable. The most important decision, however, was to replace the ugly tin roof with a traditional tile roof sloped to 30 degrees.

There remained the issue of whether to restore the maṇḍap to its pre-earthquake condition. This would be aesthetically pleasing, and the former shape of the pagoda could be positively identified from a 1928 photo. Nevertheless, it was decided to restore the building in its reduced shape, not only for the obvious reason of limited resources. The maṇḍap had existed for over 40 years in its present shape, and with the passage of time this provisional form had to be evaluated as a condition accepted by the society. The conditions in 1934 forced them to choose a provisional reconstruction to ensure a needed religious function. Since

then a whole generation in Bhaktapur has not felt inclined to replace the provisional arrangement. Thus it was decided that in this situation an initiative coming from the outside should not be an ostentatious attempt to restore the "grandeur" of the past.

In the process of restoration all our efforts should be guided by the aim to help enhance what could be called "structural improvements" within precisely limited urban spaces. These improvements should then stimulate further environmental changes on the part of the people themselves. In the end the fabric of certain zones can be preserved, even at the cost of all too theoretical adherence to the past.

Demolition. In early February, 1975 the existing structure could be pulled down. Ramp, steps, and supporting walls were totally removed. Not a single brick was left in situ. The supporting wall proved to have no foundation.

Reconstruction. Supporting walls were built 50 cm strong (2.5 stone breadth) on a foundation of 40 cm depth. The Newar type of brickwork shows only stretchers. Previously, masons used to insert only brick rubble behind the front course of bricks. Therefore the horizontal joints received mortar of a threefold composition.

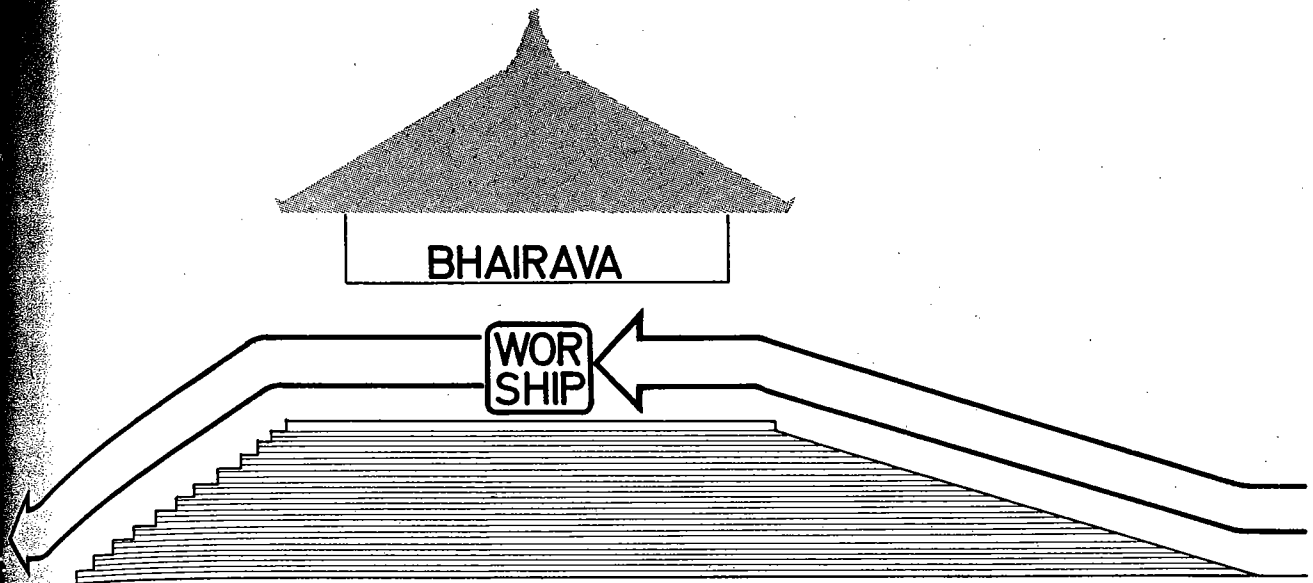
In the restoration, new local klin-burnt bricks (sized 20⁵x 12⁵x5) were laid in fine yellow mud (3 cm fairfaced joint). The layer of mud is followed by cement on a range of 30 cm (see Fig.10). The facing front layer therefore received a solid joint with the second brick in depth. The third brick in depth, however, was laid in black mud to save cement (prices of cement increased sharply in 1974). Front bricks were followed by brick rubble 40 cm in depth, while the core of the structure was left as it was, consisting of solid black mud.

The ramp was extended for 90 cm which, as it had proved to be too steep, was the firmly expressed wish of the population. The steps leading down from the pedestal were totally removed and the natural stones fixed again on a foundation of bricks in cement. Four out of eight pillars were replaced by new ones made by local wood carvers, who had already been trained on the Pūjāhari Math and Hanuman Dhoka projects. The brackets above the pillars were replaced as well. The ring joint consisting of eight parts was nearly totally renewed.

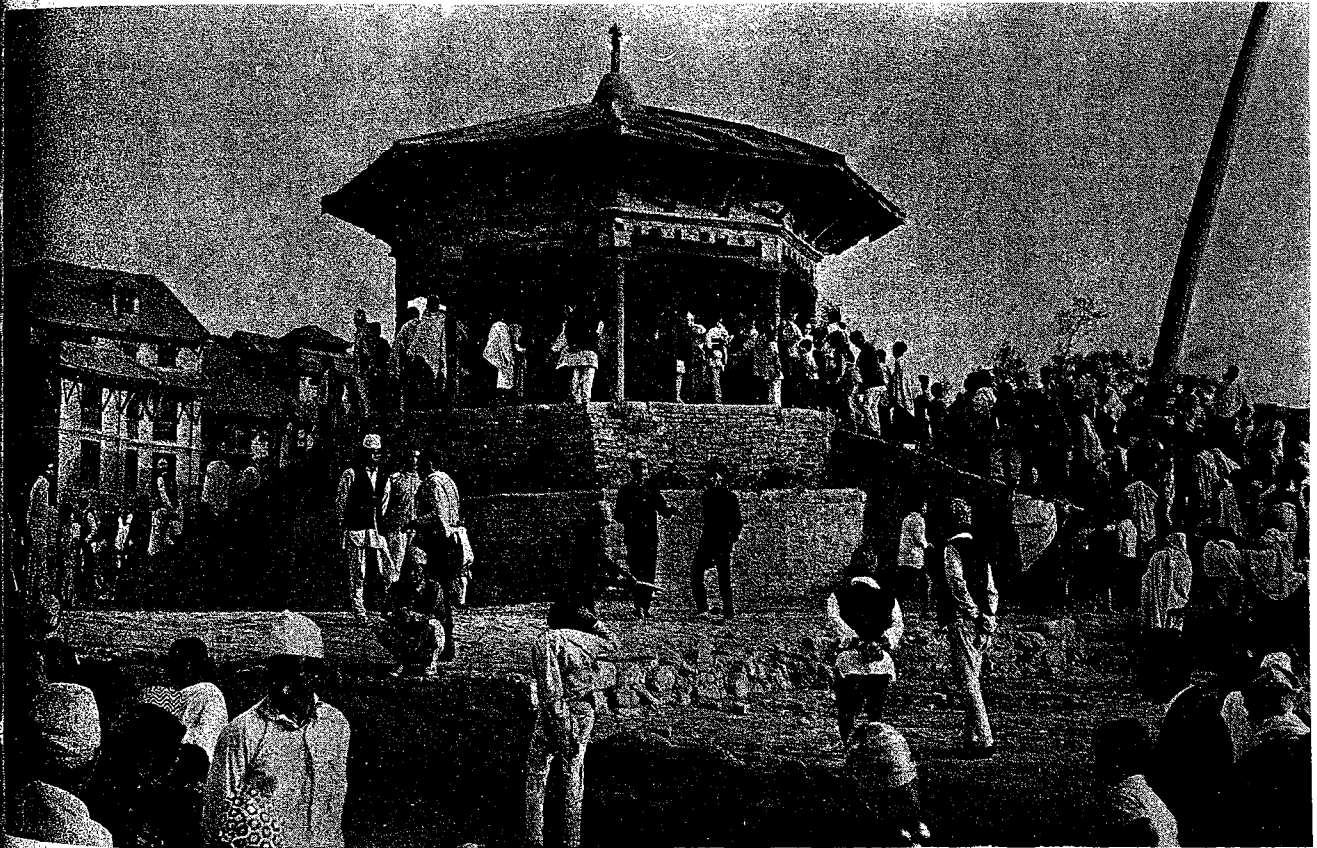
The roof structure was completely renovated. Eight angle ridges meet at the top (7.70 m above ground level), where they are joined with the central post. The other rafters are placed vertical to the eaves and are jointed with the angle ridges. The spacing of these rafters is regulated by a 22 cm long "lower" roof tile. With a span of 3.10 m the angle ridges are extremely heavily loaded, but the system as just described saves considerable wood in comparison with the traditional roof design.



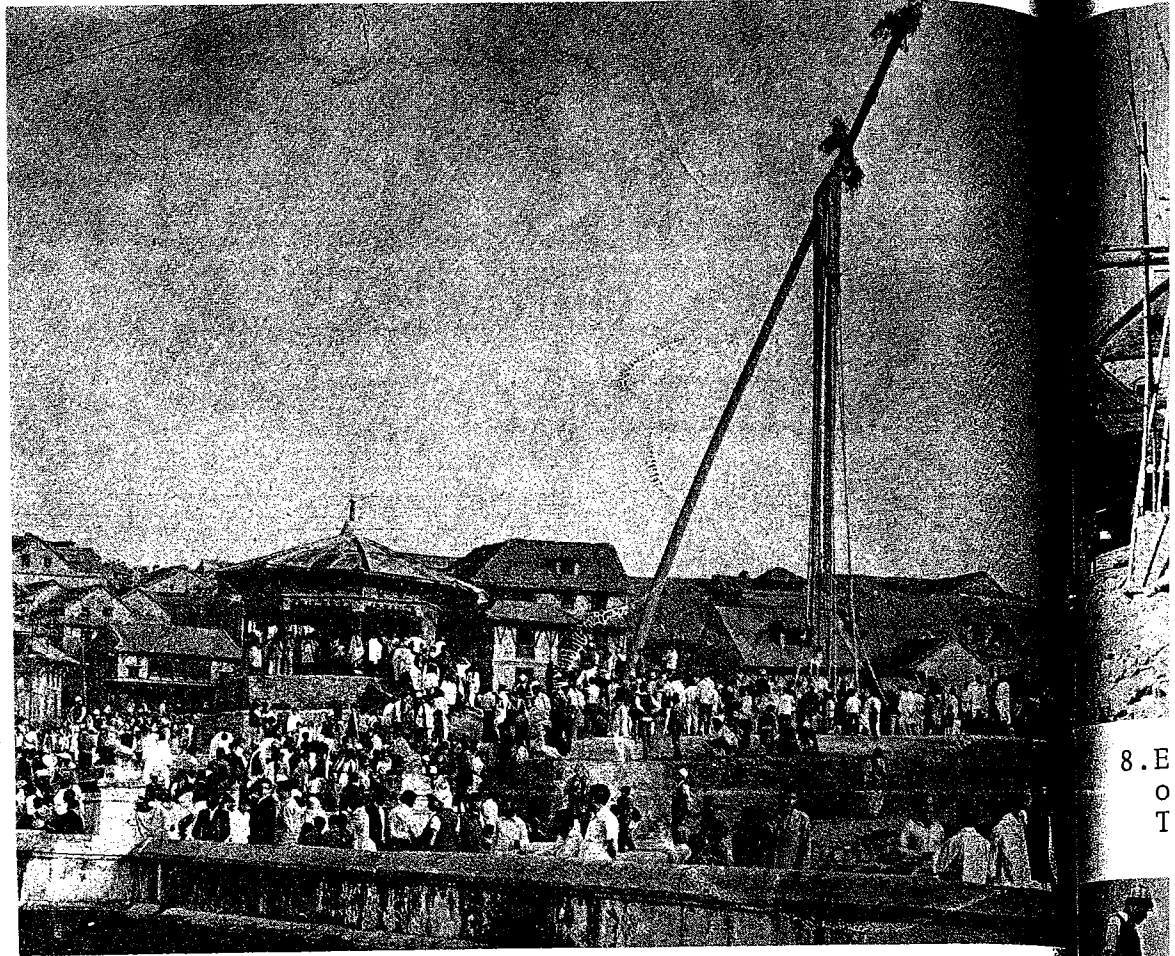
4. Flow



4. Flow of worshippers.



5. April 1974. People are moving up the ramp, worshipping Bhairawa, and descending the steps.

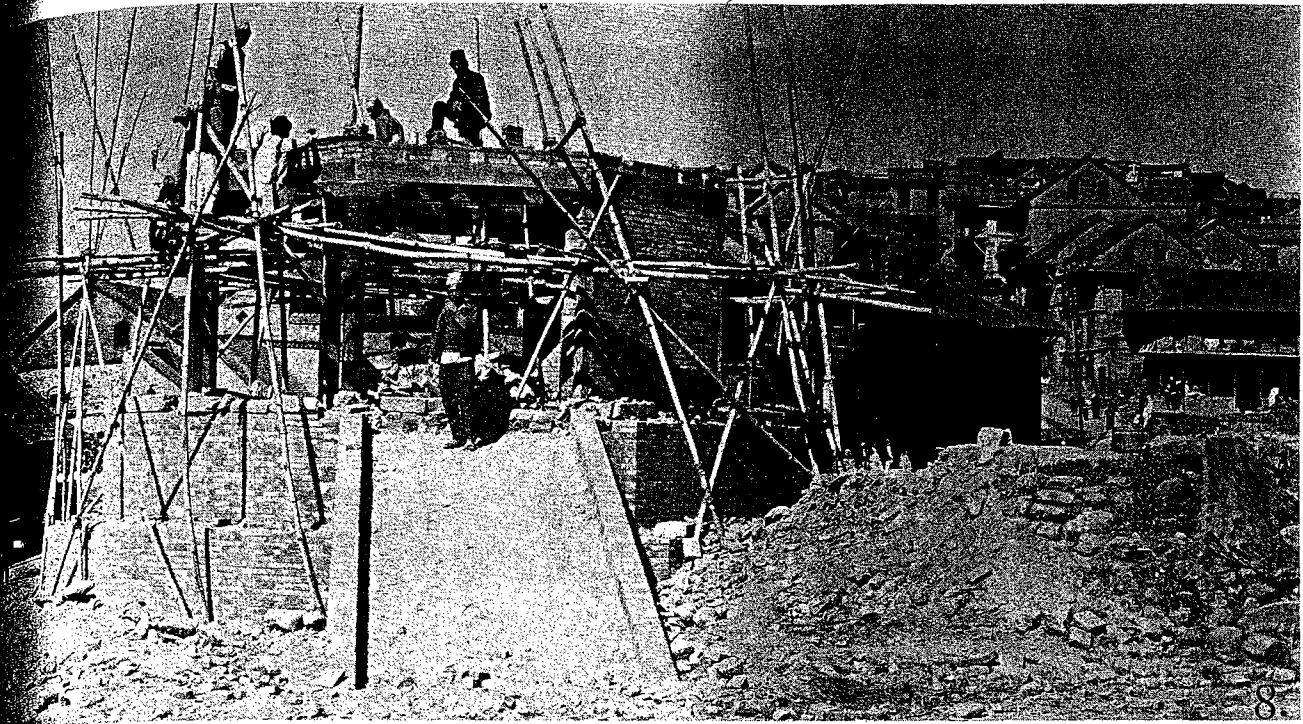


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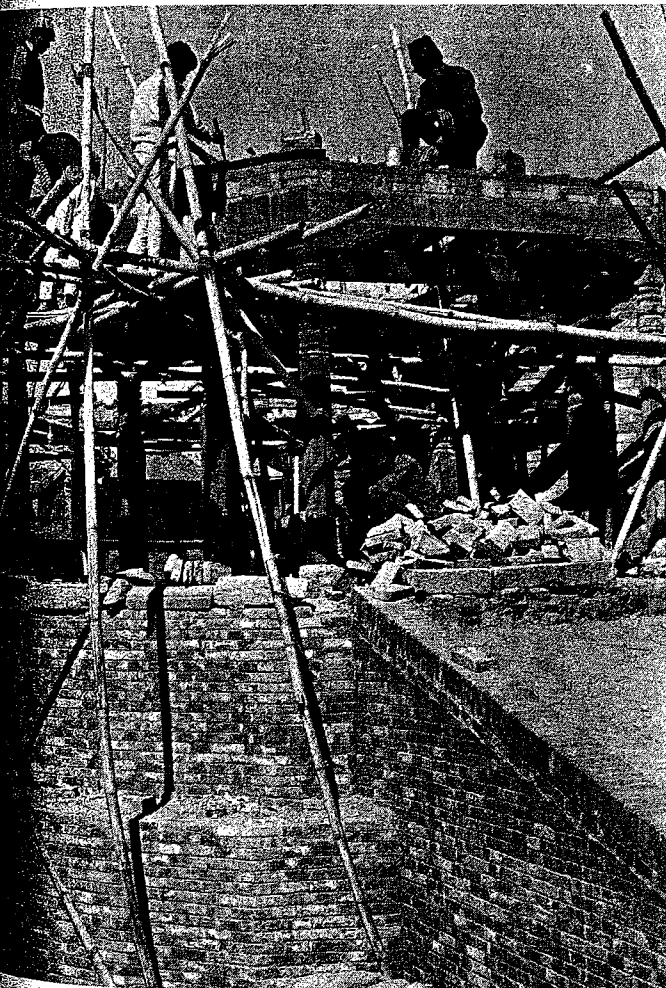
6. April 1974. The raised pole (lingam) marks the first day of the new year. In the night people climb the pole and place a pa... coin at the cross-beams. At dawn, thousands of people flock to the Hanumante river to take a ritual bath before worshipping Bhairawa on the raised pedestal of the mandap.

7. Process of restoration, early February 1974. The encircling brick walls of the pedestal are removed step by step and replaced by a 50 cm. brick wall.

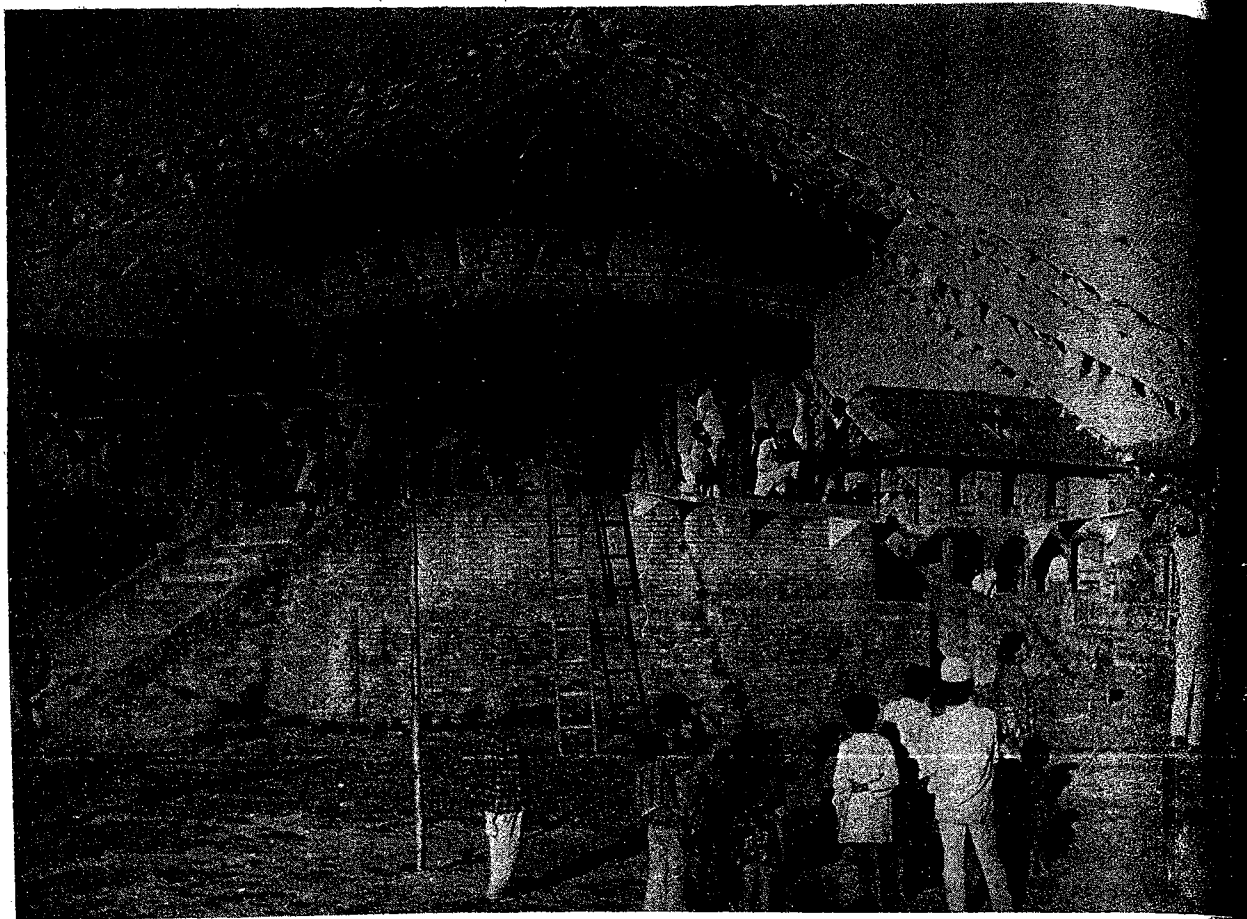




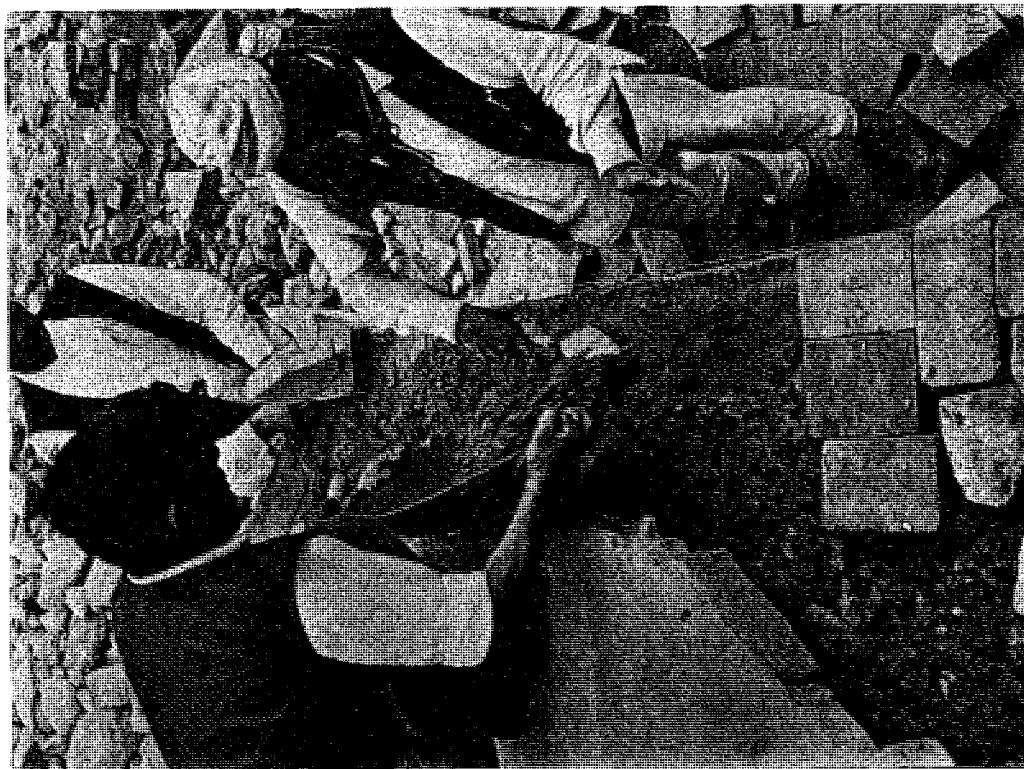
8. Early March 1974. View from south-east. The pedestal and the open hall of the eight-cornered building is already restored. The roof is ready to be assembled by the able Newar carpenters.



9. Early March 1974. Masons (avali) and carpenters (silpakar) prepare to install the roof.



11. Cyasilim mandap after reconstruction. (October 1975)



10. Construction of the encircling walls of the pedestal. Kiln-burnt bricks (local production in traditional size) are laid in three types of material. First, two inches of yellow mud to ensure sm-

The layering of the roof follows the traditional pattern with a lower tile, a 6 cm mud layer and a covering roof tile with threefold overlap. Old roof tiles from demolition sites were used, as a new production of traditional roofing has not yet been undertaken. A rather ugly structure of cement was pressed into service as provisional pinnacle. The rising of further funds should ensure its replacement by a traditional pinnacle of silvered tin.

IV COSTS

A. Wages.

Carpenters	Rs. 14/day	Rs. 2546
Masons	Rs. 14/day	2275
Stone masons	Rs. 12/day	112
Watchman	Rs. 8/day	440
Unskilled labour	Rs. 8/day	4384
Total		Rs. 9657

B. Material.

Wood		Rs. 8698
Cement (62 sacks, Rs. 90 Rs. 10/ sack)		5580
Special tiles		45
Floor tiles (25 ps. each)		400
Lower roof tiles (30 ps. each)		564
Bricks (16 ps. each)		4149
Nails, ropes, misc.		188
Total		Rs. 19634

C. Commissioned Work (transport, sewing, etc.)

Rs. 1760

Grand Total

Rs. 31051

The most striking figure is the relatively high (nearly 15%) share of the cost of cement. Inflation has hit countries like Nepal very hard, and prices of goods which had to be imported by truck seemed to rise without end. By the spring of 1975 Nepal had begun production of its own cement, but even existing needs will hardly be fulfilled.

The share of the cost for wood (20 % of the total cost) seem to be about normal, based on comparison with other similar projects.

Regarding wages, the high share of costs for unskilled labour was due to the total demolition of the building. It would seem reasonable for further projects of the type advocated here to plan action long in advance, and to incite people of the surrounding area to provide unskilled labor free of charge. Daily wages for skilled workmen have risen from Rs. 10 to Rs. 14 between 1972 and 1975, and other wages have risen correspondingly.

It still seems to be the rule of thumb that cost for materials is about double the cost of labour. This proportion corresponds closely to previous experience.

V CONCLUSION

Several lessons were learned in the restoration of the Cyasilim mandap, which might well be applied to other similar projects. Future work should be well planned in advance, to ensure the participation of the local community with respect to unskilled labour and certain materials like mud and sand. The process of work should be divided into two campaigns. The first campaign should be devoted to an analysis of a chosen building, estimation of cost and discussion of the scope and nature of restoration measures. The necessary materials should be supplied in time to ensure smooth progress during the second campaign, that of the restoration work itself. Foreign assistance seems to be still necessary for the first campaign in order to facilitate a thorough analysis and a careful discussion of the proposed work.

In conclusion, a quotation from the preliminary draft recommendations of UNESCO would seem suitable. These recommendations concern the safeguarding of historic towns, quarters and villages and their surroundings, and their integration into contemporary life (II, 5):

“Every historic town, quarter and village should be considered in its totality as a homogeneous whole whose balance and specific nature depend on the fusion of the parts of which it is composed and which include human activities as much as the buildings, the spatial organization and the surroundings. All valid elements, even the most modest, should thus have a significance in relation to the whole which must not be disregarded.”

The General Conference of UNESCO will hopefully adopt these recommendations in October, 1976, and member states will be asked to coordinate all the necessary legal, technical, economic, and social measures for its implementation,

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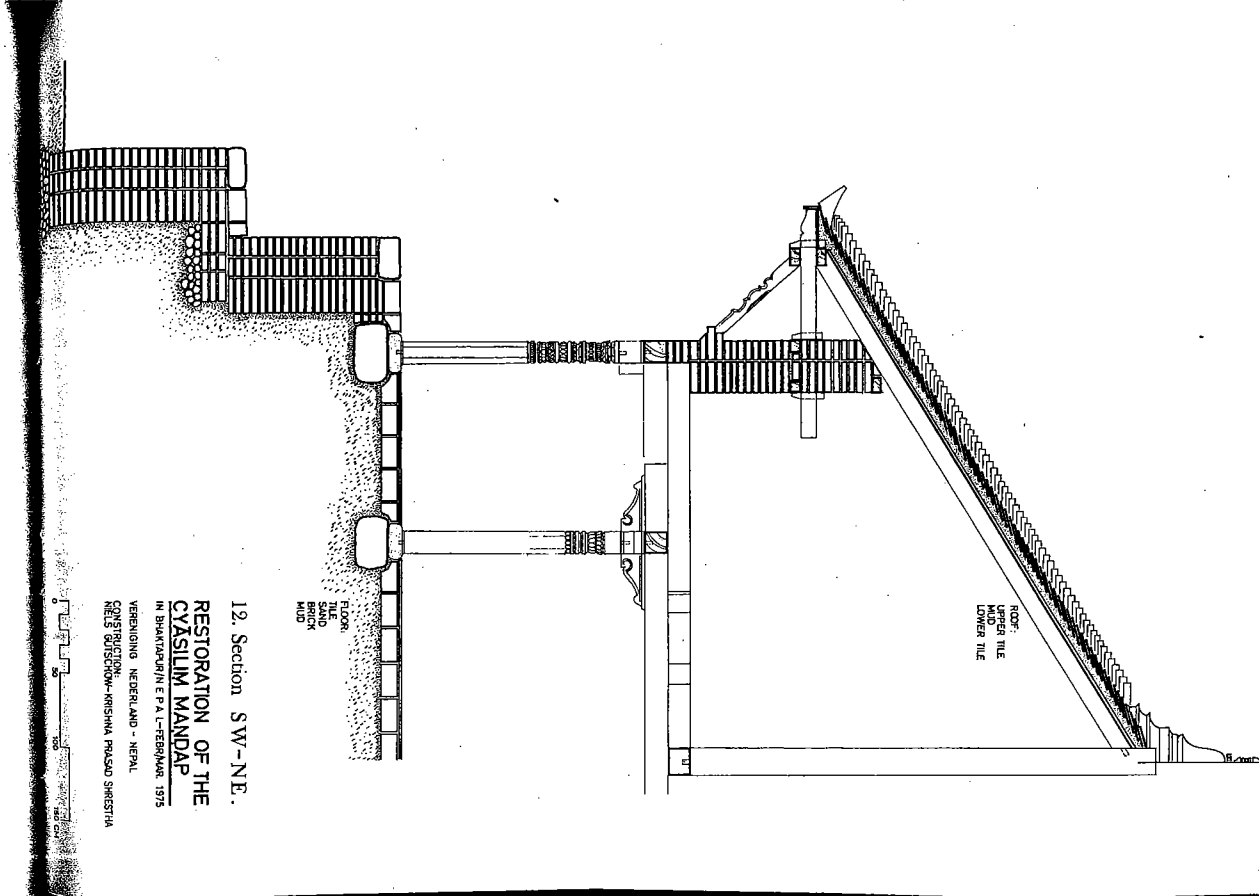
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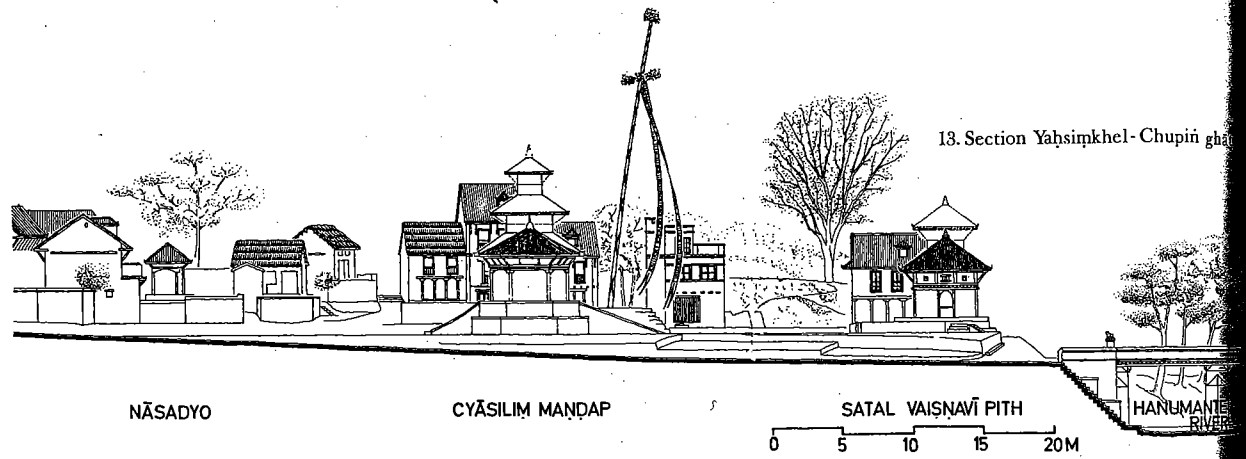
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 IN BHAKTAPUR/N E.P.A.-FEBRUARY, 1975
 ARCHITECT: VERNERUNG, NEDERLAND - HENRI
 CONSTRUCTOR: NELS, GUTSOW-KRISHNA, PRASAD SURESTHA



Realistically, it will take a long time for Nepal to follow up the UNESCO recommendation, but it would be helpful to develop a national policy towards historical monuments, keeping in mind that isolation of restored monuments provides only a museum-type of atmosphere. Rather than this, a view should be encouraged which is helpful in enhancing wider environmental preservation.

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