

TRADITIONAL SYSTEMS IN TEMPLE RENOVATION

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1. INTRODUCTION

Vastuvidya covers within its scope the planning, design, construction and conservation of all types of buildings. Temples forms an important category of symbolic buildings (prasadavastu) among these buildings. They form focal structures in any settlement system. According to a temple survey project by the Census Department, there are more than 20000 temples - large and small in Kerala state. In the Dravida desa, consisting of Maharashtra, Goa, Karnataka, Andhra, Tamilnadu and Kerala, the total number of temples in worship will exceed 5 lakhs. Most of these temples are age old, built between 6th to 16th century. Perhaps temples in ruin, will be more than this in number. The upkeep of temples in worship and the renovation of temples in ruin are challenging tasks for our society. These efforts will have great social, economic and technological impacts.

2. IMPORTANCE OF TEMPLE CONSERVATION OR RENOVATION

The importance of temple arises out of their socio-religious roles in a traditional society. Although the traditional society is fast changing into a modern global association, temples continue to be the focal points where people come together to participate in socio-cultural functions and festivities. The religious importance of temples similarly continue to be a strong force attracting devotees to them in a pan Indian scale for darsan, rituals and penances. The temples in worship thus continue to be living entities. The temples in ruins also continue to attract attention owing to their aesthetic appeal, sculptural wealth, epigraphical records, political importance etc. and often serve as major tourist attractions.

Temples were economic centres of traditional society, managing land and agricultural production on the one hand and promoting artisans, craftsmen, and artists on the other hand. They served as major employers of manpower. Even today this position has not been fully eroded. A scheme of regular maintenance and conservation of temples in worship and renovation of temple relics will serve to regenerate and revive arts, crafts and technology indigenous to this land. In addition to the temples such a renovation effort could be extended to ancillary facilities like temple tanks, lands, gosalas, chaultries, padhasalas, craft centres, theatres etc. These efforts will put to productive uses of temple tanks for water supply and irrigation, lands for the production of fruits and flowers, temple chaultries for accommodations of visitors, padhasalas for revival of Sanskrit studies, gosala for dairy development, craft workshop for temple craftsmen and theatres for temple performance. Such an effort can gather momentum for the development of the society at large.

3. CLASSIC THEORY FOR MAINTENANCE WORK

The building maintenance was explained by an analogous theory that the building has to be compared to a man. This analogous model of Bhavanapurusa, is attributed with the four stages of life, viz. childhood (balyam), adolescence (koumaram), youth (youvanam) and old age (vardhakyam) It is now well known that the first three stages normally covered only one fourth of the full life of a man,

and it is hypothesised that old age sets in gradually depilating the human body with gradual loss of faculties. According to geriatric medicine, the old age of a human being starts at the age of 30, but it can be prolonged technically upto 120 years. This same philosophy was applied to buildings constructed with strong and durable materials. The setting of deterioration (jara) of any structure could be delayed considerably, say 100 years, and then regular maintenance could keep it serviceable for another 300 years, making the life span of the best (uttama) building at least 400 years. Yet it may completely collapse, indicative of a fifth stage of life, viz. death (marana). The whole effort of silpins was to postpone this stage to its ultimate limit by best of design, construction and maintenance practices. A new dimension was added to this life cycle by evolving an approach of renovation (jirnodharana) whereby the Bhavanapurusa practically takes a rebirth in physical (adhibhoudika) and metaphysical (adhyathmika) sense, in form (rupa) and its expression (bhava).

3. AGAMIC PRESCRIPTIONS FOR JIRNODHARANA

The importance attached to this process of renovation is best illustrated by the fact that all Agamic texts contains one chapter (patala) exclusively on this topic (jirnodharana). Invariably this chapter is very brief, as it does not detail the practices of renovation. As renovation is as good as a rebirth one has to fall back on the main technical part for design details and construction techniques. In all Agamic texts this technical part is the 'Kriyapada' which follows the Jnanapada (dealing with knowledge of cosmology) and Yogapada (dealing with the relation of self with cosmic power) and which is followed by Karyapada (covering ritualistic practices). The Kriyapadas of different Agamic literature (Agama, Samhita, Tantra) give extensive and exhaustive details of technical importance such as location, planning and designing of buildings, materials selection, processing and assembly, finishing work like painting sculpture etc. which guide the craftsmen in the construction and/or reconstruction works. To put it in another way the renovation of a derelict structure was to be carried out using materials and techniques, to its original form This clearly is one of the cannons of the present day approach to Heritage Conservation also.

4. FACTORS WARRANTING RENOVATION

Indeed there were situations where, time alone was not the causative factor of building deterioration Agamic texts specially mention cyclone, fire, and action by waves and floods as the important natural forms of disasters and subtly imply human vandalism, wars and desecration as man made forms of disasters. Under the influence of man made disasters, monuments generally get discarded and consequently they are transformed as historic relies. Tragically it is such monuments that are described as "picturesque ruins" in tourist literature. The monuments, which are under the protection of Archaeological Survey of India, are mainly such types of structures. They are the vestiges of a bygone era, the fossils of cultural history to be preserved for posterity without further deterioration. The Archaeological Conservation activities have essentially this goal. The Conservation manual prepared by John Marshall the first Director General of Archaeological India in 1923 remain today as the Code of Practice for such Conservation works.

5. EMPHASIS ON RENOVATION AND NOT ON CONSERVATION

Treatises on Vastuvidya or Silpa do not cover the protection of relics from further decay as conservation at all. The discarded building is assumed as having extended to the stage of death. The emphasis in classical texts is on renovation of buildings damaged by natural disasters or the relocation of buildings submerged or destroyed by erosion under sea waves, floods etc. The Jirnodharana covers mainly

these cases. It is here that the texts prescribe that the renovated structures shall have the same prime dimensions and materials as those of the original buildings.

The prime dimensions of monuments are reckoned as perimeter or lateral dimension. In the case of a temple for example, the width as measured at paduka, jagati or utara was referred to as the danda, the reference module. All elements of horizontal composition starting from the cella (garbhagrha) to the outermost boundary (prakara) was proportioned from this module. Hence, from the most fragmentary evidence it was possible to work out the entire reconstruction work. The Sthapatis knew this horizontal rhythm (talachanda). The plan also decided the vertical composition (urdwachanda) and the dimension of elements in that. The knowledge of materials and their assembly was zealously guarded by the hereditary silpins. Hence renovation work became a routine affair in this context. It was almost a repetition of original construction.

6. MATERIALS FOR RENOVATION WORK

It will be interesting to know some of the guiding principles in the choice of materials for construction or renovation works. Stone for example was to be quarried from location where site slopes are auspicious. The bricks were to be marked and used in their natural position. The cementation material was lime mortar, specially made by grinding coral shell and sand with admixture of vegetable herbs and insect repellents. The laying of stones was to ensure minimum joint thickness by a process of sliding the blocks over plastic mortar to set them in position. Timber was to be selected based on strength, workability and durability, felled in the evening, seasoned by immersing in oil and worked with accuracy as marked by the master carpenter.

The joinery details were to be selected based on the nature of forces (compression, tension, bearing, flexure etc.) which the member will be subjected to. The framing system was such that it could be strengthened against buckling, distortion or deformation by ties and bracing. Above all the whole structure could be dismantled with ease and reassembled facilitating refinements to be carried out to the ultimate perfection. Consistent with the structural function, the mixing of old and new materials was permitted under compatible condition. Elaborate procedures were also prescribed for decorative treatment by painting, sculpturing, metal cladding etc. such that the renovated building presented the form of a creation or rebirth.

7. RENOVATION TO GRANDEUR

Although the general prescription in renovation was to stick on to the prime dimension and materials of the original structure, it is mentioned that the renovated structure could be built with more grandeur. This Agamic prescription has generated certain controversies among silpins and sthapatis. While many hereditary silpins hold the view that renovation is always to be adhered to the original size and materials, silpins of another school interpret that it is not the size, but the prime dimension such as the width of the shrine, the danda, which is to remain unchanged from the original structure. They argue that by increasing height to width ratio, the building of original prime dimension could be imparted grandeur. Texts specify categorisation of buildings based on five proportions of height to width for symbolic buildings, viz. Santika - peaceful (1.41), Poustika- prosperous (1.50), Jayada- successful (1.75), Adbhuda - wonderful (2.00) and Sarvakamika- all desired (2.25). Hence renovation to additional height adhering to the principles of vertical composition (urdhachanda) appropriate to each category is a method of imparting grandeur without changing the prime dimension. This is attempted in some cases as in the renovation of Mahadeva temple at Chowallur in Kerala.

Indeed if the renovated temple could be taken to greater height, keeping the original dimension of 'danda', we are really varying its size. Correspondingly the loads imposed by the structure also varies and superior materials and techniques can be used in renovation. Here it appears that the prescription that the temples should be renovated to its original size, has to be interpreted as a prescription to carry out the renovation atleast to its original size. When partial modification and repairs are carried out to any structure, sticking to its original size and materials is necessarily advantageous. However when the structure is completely rebuilt, there need be no restriction regarding both. The general dictum that Vastuvidya shall be 'desochitam' and 'kalochitam' is to be followed in all renovation work. This justifies use of new materials (concrete, steel and composition) and new techniques (mechanical devices, tools and process) in renovation works.

8. RITUALS IN RENOVATION WORKS

Renovation work of religious buildings present problems related to the continuance of rituals unaffected by the work. Three aspects are involved in such cases.

1. If there are major damages to the deity, which demands repairs, metallic covering or replacement of the icon, there are tantric procedures to be followed. The procedures involve

Transfer of the energies of the deity to another make shift shrine idol (Balabimba) or sacred pots (Kalasa)

Disposing the original icon by burning, depositing in water or melting in the case of timber stone or metallic icons respectively

Making new icons and installing it with proper rites, and

Transferring back the energies to the installed deity.

Generally these functions are independent of civil works connected with conservation.

2. If there is no major damage to the deity and if the renovation work can be carried out within a period of one year, the renovation work is executed with "Sankoca" rites. In this process after each worship, the energies of the main deity as well as the secondary deities in the temple complex are 'shrunk' into the shrine room, with proper rituals. Work is carried out considering the shrine as a closed box, unaffected by what takes place outside. Here there is no major dislocation of facilities. Just prior to the next worship sprinkling holy waters (punyaham) sanctifies the premises and rituals dilate the powers of deities.
3. When there are major damages to the structure which cannot be expected to be finished in a year, or under conditions where the sanctum or deity itself needs renovation, the work is carried with 'Nishkramana' rites. Here an alternate makeshift shrine (balalaya) is constructed and the whole energies are transferred there in. All rituals are carried out in this small shrine' till the original structure is renovated. The work gets completed with the consecration of shrine with elaborate purificatory rites (kumbhabhiseka) as well as reinstallation (punapratistha).

9. CONSERVATION STRATEGIES

Each society has to evolve its own norms and policies for heritage conservation. The classical approach of conservation movement as maintaining a historic vestige as a fossil of a bygone era is valid only in cases where the present society has no cultural affinity to these ruins/monuments. In India, this rule cannot be applied in the case of innumerable monuments reduced to the present state by natural and

human interventions, political and religious aggressions and socio-cultural changes all beyond the control of people at large. In such a scenario the International charter that incorporate within the scope of conservation activities such as renovation, adaptation and relocation becomes quite meaningful and relevant in Indian Culture. The controversy regarding conservation verses renovation had figured significantly in the case of Somanath Temple in Gujarat. This shrine which had a hoary past was looted destroyed and desecrated a number of times and remained a pile of ruins since the 14th century. The socio religious importance of this shrine however remained alive and the scheme of renovation was evolved in the middle years of this century under the inspiring guidance of Sri. K.M. Munshi while the ASI stood strongly for conservation of the historic ruins, the socio political will was for renovation and consequently from the ruins arose the new shrine. The dormant state of the ruins was just one stage (death) of its life cycle, and it got regenerated as if it had kept the genetic code of life within its fragmentary tissues. The case of Somanath demonstrates that in India no ruin can be treated as dead fossil, unrelated to socio cultural values of the society.

10. RELEVANCE OF CONSERVATION STUDIES IN INDIA

India has innumerable monuments of the past era. Of these only around 5000 monuments have been brought under the domain of the ASI. The need today is to start a massive effort to locate and document monuments and artifacts of heritage value specially using techniques such as remote sensing and GIS, evaluate them for appropriate conservation strategies using criteria relevant to the relic and initiate steps for conservation, renovation, adaptation or translocation as the case may be in a phased manner. Apart from serving as valuable tourist attraction they will remain as the milestones of Indian history.

A large number of historical monuments could be protected from further deterioration by using conservation strategies. A large number of palaces, forts etc. could be adopted for new uses like hotels or museums. However a much larger number of relics, mostly of religious importance, adored and cherished by the people are to be renovated to their original form as places of worship. What will be the financial outlay for such a mammoth effort? The cost of construction or renovation of the temple has two components - the structural costs and decorative costs. Both are equally important for temple structures. However combining the two as in traditional techniques, will increase the time duration of construction. Hence the approach shall be to separate the two aspects. The structural work shall be carried out using modern materials like concrete and steel and adopting design techniques ensuring strength, durability and serviceability under most adverse conditions like earth quakes. The decoration work of sculpture, painting, embellishments etc. shall be done using traditional methods. This will help to optimise the cost and time of construction. The traditional crafts and modern engineering can be synthesised in this process. The college of temple architecture at Mahabalipuram has adopted this approach and structural design and construction has been well integrated in the syllabus.

The conservation effort will provide impetus to the upgradation of technical skills and create jobs for traditional and modern craftsmen. Above all it will be an inquiry into our own culture and value systems, shrouded in the present day globalisation mist.

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