PATAN CONSERVATION AND DEVELOPMENT
PROGRAMME

PATAN DARBĀR NORTH WING
CONSERVATION PROJECT 1993-1995

His Majesty's Government of Nepal
Ministry of Education, Culture, and Social Welfare
Department of Archaeology

urban development through local efforts

Patan Darbār North Wing

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Precis

This first international restoration effort on a building several generations later than the well-known Malla architecture of the Kathmandu Valley is noteworthy on many counts. First, the structure, which appears to date from the first decade of the 19th century , is one of the very first examples of European influence in Nepal, certainly the first on a Darbār Square . In this case, the building with its unfamiliar mix of Moghul and neoclassical elements shows a provenance via 18th century North India where the hybrid style was a norm, as can be seen in the historicl buildings of Lucknow. Secondly, the conservation project focuses attention on an interior space, the upper reception hall (Nepali: *baitak*) of Rana Bahadur Shah. Its restoration and refurbishing as a semi-public and income-generating function room is seen as a model for adaptive re-use particularly appropriate at this important site on the Darbār Square. Lastly, coordination between Department of Archaeology and the Municipality, which contributes financially to the project, is a model for future collaborative works.

Architectural description

*The arrangement attempts a more "regular" facade with regularly spaced windows of the same size on the top floor, nevertheless the variation of decorative details on the individual windows is typical of the local architecture.

*Proportion and span of the *baitak*: perhaps the first building in Nepal to reproduce the high-ceiling, large-spanned interiors of western palace architecture--compare with the low-ceiling Newar interiors always divided by a central line of pillars. Although the hall is conceived quite grandly, access to that room by a series of ladder stairs relates the building to the local tradition of very simple interior arrangements as does the second floor rather than *piano nobile* location..

*Important historical features of the building include the intact principal and rear facade arrangements. At the smaller scale, several generations of window shutters are determinable; glazed panels are later additions; the balcony outside the *baithak* appears to be original icluding fragmentary evidence of historical pigments. Facade veneer brick in excellent condition.

*The interior itself may retain original mud-plaster cornice register with floral designs showing Moghul influence in the stairhall, An oddly-proportioned, although striking fireplace in the *baitak* may be Nepal's first--its chimney is curiously vented not through the roof, European style, but rather into the attic reminiscent of the open and unvented attic kitchen fires, typical of a Newar house.

Existing conditions

The building is largely intact, in a sense more neglected than damaged in its present use primarily as a store by the school. The original *baitak* floor (brick tile?) and *jhingati* roof cover have been lost. The water-damaged timber roof structure is the principal endangering condition to this historic structure.

Conservation goals

The project will demonstrate the principle of favoring repair over rebuilding, in an effort to retain as much historical material and patina as possible. Thus, almost all of the damaged timber roof structure will be repaired *in situ*, while restoration of the timber balconies, to take one smaller scale example, will mend individual broken elements rather than have them reproduced by able local craftsmen.

The Neoclassical in Nepal
From the Anglo-Indian to Art Deco

The selection of the Patan Darbār North Wing as a conservation project is a model effort, the first time an international collaboration restores a building post-dating the well-known Malla period of Nepal. The building, largely intact from its construction 1790-1810, captures the moment of transition from the medieval to modern periods, being the first palace construction conceived in the Anglo-Indian style, a hybrid rich in Moghul and European influences. The following overview of the development of European architecture in Nepal provides an historical context for assessing this structure, whose focal space is the entertainment hall of King Ran Bahadur Shah, grandson of Kathmandu Valley conqueror Prithvi Narayan Shah.

For a century (1848-1951) Nepal was ruled by the Ranas, a powerful clan self-appointed as prime ministers, who maintained, but left powerless the Shah monarchy. History of this period is often simplified-- focusing only on the iron hand of their rule, their closing of borders to the outside world, or the ostentatiousness of their state ceremonies and imported luxuries. But alas, the tale is not so simple, and with time, many of the Rana achievements have become clearer---such as their ambitious civic improvements which included monumental riverside complexes with temples and *dharmaśalas* modeled after Benares, the construction of schools, the establishment of a Public Works Department, and most charmingly, the propagation of a European-style architecture on Himalayan soil.

Most striking, even today, is the grand sequence of palace buildings from 1840-1950, which attempted virtually every twist from baroque to art deco as time and patron would demand. It was the custom for each of the Rana Mahārājas to build not only for himself a palace, but also one for each of the appropriate kin---hence the number and clustering of palaces around Kathmandu which included at one time 40 major ones in all. Meanwhile, a curious dialogue developed between the imported architectural language of the palaces and the building conventions of the local Newar carpenters and masons. As imported forms trickled down into the vernacular, for example, the proportions of traditional carved windows grew taller to resemble more vertical European prototypes, while angels and Corinthian capitals mixed in with the Hindu pantheon of symbolic woodcarvings.

The notion of "imported", however, should be clarified. All traditional architectural vocabulary and typology in Nepal up to the 18th century, for example, is generally acknowledged to rely heavily on forms inherited from the architecture of the Kushana and Gupta empires (200-600 A.D.) in Northern India--although this is not to take away from the innovation, appropriateness, and creative synthesis which Nepal's master builders achieved in the Licchavi (6th-9th c.) and Malla (1420-1769) periods. The arrival of European neoclassical forms in the 19th century might be considered then just another chapter of such cultural exchanges, which in the meetings of East and West began with Alexander the Great two millennia ago.

The forerunner Anglo-Indian Style

The roundabout route taken by the European architectural language on its journey to Nepal is perhaps worthy of mention. For its earliest local expressions at the turn of the 18th century, the Nepalese began to borrow from their nearby neighbors in Lucknow, Indian Nawabs, as it were, building in a curious but memorable hybrid Moghul and European style. This Anglo-Indian style first took root here in temple architecture and a handful of residential and palace buildings (1790-1840), including the north wing of the Patan Darbār. These buildings with their domes, arched niches, and plastered finishes show a relation to Moghul architecture, while their classical orders tie them to the British architects of the East India Company working in nearby Calcutta.

Stylistically, the Anglo-Indian buildings represent a critical stepping stone in the transition from a medieval Hindu architecture to later and full-blown neoclassical examples. Not only did the Anglo-Indian buildings introduce the notion of a "white' plastered building, but, more fundamentally, they made the first move away from the complex arrangements of a symbolic Hindu architecture towards the more regular schemes of the Classical school.

Neoclassical climax

Later came more "direct" connections to Europe through the architectural efforts of a three Nepalese engineers who studied in India under British masters at the turn of this century, as well as from formative visits by Nepalese prime ministers to Europe in the 19th and 20th centuries. The climax of the palace building was reached in 1911 at Singha Darbar, in its day the largest palace in Asia and designed by two of the Indian-trained Nepalese engineers, Keshore and Kumar Narsingh Rana. Their convincing rendition of a neo-Baroque palace and extensive gardens provided the setting for imported western paintings and furniture, exotic species of trees from Japan and Australia, automobiles and musical instruments.

Urban planning

A devastating earthquake in 1934, which laid waste to most of the Kathmandu Valley, provided the opportunity for the Ranas to try their hand at urban planning. In addition to an impressive and until now under-praised rebuilding of the Valley cities, an impressive boulevard of sorts, New Road, was carved out of central Kathmandu. The intentions of the Ranas to be up-to-date and participate in 20th century world culture--albeit autocratic--cannot be underestimated, as suggested by the words of then Prime Minister Juddha Shamsher Rana. In the wake of the earthquake, he did not merely call for re-building, but rather for the raising of "a new styled city" in the more earthquake-resistant "Japanese style".

A slightly earlier example of a Mahārāja's grand vision of urban space is found around the 17th century Ranī Pokharī, where construction under Chandra Shamser (ruled 1901-1929) of a school, college, and clock tower created an impressive and unified neoclassical ensemble in the first two decades of this century--a grouping which would have looked fashionable virtually anywhere on the continent. When the clocktower was rebuilt after the earthquake a decade later, the most talented architectural practitioner of Nepal, Keshore Narsingh Rana, took the opportunity to update it in the streamlined International Style, then fashionable in Europe.

Concluding observations

In the end, the Rana architectural achievements are perhaps better compared with early American efforts to build Washington D.C., than say to the British, French and Spanish development of Asia, Africa, and South America--although all might be termed colonial. Perhaps a key question is whether one builds as an insider or outsider: while an architect of the British Raj in India would always have kept separate his notions of home and "country", here in Nepal, the Rana patrons and architects of grand palaces, extensive public infrastructure projects, and riverside temple complexes were aggrandizing their own *and* mother country.

Key project and conservation issues

Elaborated during site visit February 4, 1994
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0. Exterior

General

In excellent condition with intact brick veneer and little damage from rising ground dampness. In the ground level passage through the building later cement plaster and modern reception window have been added by the school. To the rear a makeshift platform connects the historical gallery at second floor level to a newly built school wing.

Timber elements.-general

As a rule damaged extant timber elements will be repaired and not replaced wherever possible. This is particularly applicable to historical balcony railings, louvered window shutters, and window frames. Determination of the historical painted color scheme of these timber elements will be attempted through laboratory testing. The oversized and sagging entry door (big enough for elephants per local tradition) will be strengthened by adding angles.

Exterior balcony:

In general, the prominent balcony railing is structurally sound, needing repair of individual components including rails, balusters, and posts. A good portion of the baluster base and top plates will be able to be conserved if timber plugs are inserted in numerous time-worn and loose joints. An historical red pigment as well as an indeterminable coating are visible on many balusters--a sample will be sent abroad for laboratory testing.

Iron rods which have been added in the last 20 years to brace the balcony should be removed. If necessary, less intrusive steel bracing could be introduced on the backs of posts and tied into the floor back to the wall.

Window shutters

One window retains a full pair of what appear to be the historical louvered shutters. The individual louvers are oversized and still operable. The original double-extension hinges in brass survive allowing these shutters to open *out* and against the facade in spite of the window frame's inset location. Evidence of these hinges on all of the windows is found. Later replacement shutters on all but two of the windows are characterized by smaller, more tightly spaced louvers. In some of the locations where these replacement shutters are found, an original balustered window apron has been replaced by a fixed louvered panel.

It is agreed that the original configuration and design of shutters and apron should be restored on all windows, front and back facades, except at end locations where they never seemed to hve existed. Here an historical plaster surround precludes simple shutter installation. Detailed work description and cost estimates will be completed window by window.

1. Ground floor

For public and festive events, access will be provided through existing door adjacent to stair which has been closed for many years. An adjacent window--also blocked--will be opened to improve the entry. A toilet must be provided adjacent to the stair hall accessible only for visitors to the *baithak*.

2. First floor

The ladder-like staircase is in fair condition, requiring minor repairs to strengthen it. The stair railings at first and second floor landings appear to be original, consisting of closely set miniature balusters. The design is similar to the several intact window aprons. A room presently used by the school as storeroom must be made available as a service area to accomodate entertainment in the hall above. For catering needs, a sink could be provided, although serious consideration should be given to provision of water which would necessitate new storage tanks above and below.

3. Second floor-*Baitak*

General

Intact window seats need repair.

Plaster

Careful repair of plaster surrounds inside and out are necessary. Damage is characterized by small broken areas the palm-sized and smaller. Below laters of whitewash, an historical mud punning (finish plaster) gray in color is visible., This mud plaster is a sign of the building's great age since by the middle of the 19th century techniques of limeand brickdust plaster predominated in Nepal.

Paint

The present rendering (sponged?) of the upper wall area and ceiling in a black and white speckled pattern probably dates from the 1950's. Inspection of broken corners of woodwork and plaster suggests a predominance of white in historical color schemes, although further laboratory testing is planned.

Flooring

Existing brick tiles are of mixed sizes and sloppily laid with oversized joints. The historical floor is indeterminable, but probably consisted of such tiles, perhaps those of larger size (20 cm. x 20 cm.). Present efforts by Patan Darbār Conservation Project to improve modern brick tile quality may help restore a tile floor which is more durable.

4. Roof structure

In general the roof structure is intact and sound, requiring repair rather than rebuilding.

Inspection of the visible upper inclined members of the massive historical roof trusses suggests that the trusses are largely intact and structurally sufficient. Two trusses have failed: the horizontal member of the southernmost truss and the two inclined members of the northernmost truss. The critical bottom connections of each truss with its tie member will be checked after removal of the upper wall. If necessary, additional concealed steel tie members could be inserted.

Rafters

The condition of these members varies: some are sound but sloppily fixed, while some show signs of wet rot. Wherever possible, these members will be re-used.

Structural consolidation: Earthquake resistance

Discussion of possible seismic reinforcement techniques favored introduction of a stiff plate (at attic floor level) instead of a perimeter ring beam. The perimeter ring beam (generally in reinforced concrete) has been somewhat of a norm in international conservation projects since its introduction at Hanuman Dhoka Project. At Vãbāhā recently, Patan Programme consultants developed and inserted a timber ring beam as a model for seismic reinforcement which avoid reinforced concrete.

The stiff plate technique, however, is more structurally efficient and can be less invasive to the historical fabric as floors generally have to be replaced anyway. The ring beam technique is generally more appropriate for structures without floors, such as the pagoda temples.

Two alternatives were discussed for insertion above the ceiling of the *baithak*: first a heavy, but easily-fitted concrete slab and second, a lightweight steel frame. The considerable load created by a self-supporting concrete slab was seen as an obstacle. The difficulties of fitting the steel frame to the irregular historical structure will be considered after a test fitting in one or two bays. It can be recalled that Sir Bernard Feilden was positive about the strategy of reinforceing with steel, provided the steel is well connected to the timber and thus acts together with the timber structure as one element. Given its interior location, use of stainless steel is not necessary. Tying of this horizontal frame structure into the walls is not considered critical.

An attic mud floor at present rests on the *baithak's* ceiling planking. It will be removed with the general seismic strategy of reducing weight in the upper portions of the structure, while marine plywood will be installed attached to the ceiling planks, allowing even some of the damaged historical planking to be maintained.