

**Nepali-Italian Archaeological Sites and Monuments Excavation
and Restoration Project**

His Majesty's Government of Nepal - Archaeological Department
Istituto Italiano per il Medio ed Estremo Oriente

**Centre for preservation and architectural studies
Programme for the preservation, restoration and study
of murals in the Kathmandu Valley**

**A) Royal Palace ("of the 55 windows"),
Durbar Square, Bhaktapur**

PRELIMINARY REPORT

On the First campaign carried out between November '84 and January' 85

Rome, February 20th 1985

Preliminary report on the first campaign for the preservation and study of the mural paintings in the Royal Palace of Bhaktapur

1.1

Preservation and study action concerning the Bhaktapur palace of the 55 Windows is envisaged in the agreement signed at Kathmandu between the Archaeological Department of Nepal and the Istituto Italiano per il Medio Estremo Oriente (IsMEO). As is known this agreement regulates the work of two quite separate missions from the above Institute - one operating in the sector of archaeological research and the other in the sector of the conservation and restoration of monuments. The second sector has been entrusted to the "Centro per la conservazione e gli studi di architettura" of IsMEO.

1.2

The selection of the places and the proposed action in favour of the murals, considered as an integral part of the architecture, were decided upon in full and cordial co-operation with the Nepalese authorities during two short exploratory missions carried out by Mr. E. Galdieri, an architect, in February 1981 and May 1983. During the first mission Mr. Galdieri was assisted by a restorer, Mr. E. Papparatti.

1.3

The chief restorer, Mr. R. Boenni, carried out a first technical inspection of the mural paintings of Bhaktapur on February 10-17th 1984. A short report of this survey, during which Mr. Boenni was assisted by two chemists from the Archaeological Department,

Messrs. Bhimvar Singh Thapa and U. Sapkota, is set out in section 3.1 below. Mr. Boenni subsequently spent a period of seventy days in Nepal to begin the restoration operations. Because of the numerous holidays, frequent black-outs, the shortage of suitable illumination equipment, etc., the number of actual working days was reduced to fifty. During this second operational phase Mr. Boenni was assisted by Mr. G.M. Singh and Miss S. Kumari Manandhar, respectively a chemist at the Archaeological Department and a plaster moulder at the National Museum of Kathmandu. The report on Mr. Boenni's work is set out in section 3.2.

1.4

At the same time as Mr. Boenni's mission and for the duration of 25 days, a preliminary fact-finding survey was carried out by Mr. A. Grossato, an iconologist and an expert on Hindi literature. The aim of this mission was to make a preliminary approach to the iconographic problems connected with the paintings in restoration. As good a knowledge as possible of these problems is the best guide to their study and represents a necessary instrument of control over the preservation action. Dr. Grossato's report is set out in section 4.1.

1.5

Also the architect, Mr. E. Galdieri, spent 25 days on the site. He had meetings with the Departmental officials, and was responsible for coordinating the restoration, survey and study operations; he was also active in gaining

further knowledge of the historical and architectural environment in which the paintings are situated with a view to making concrete proposals for the protection of the monument as a whole and thus also of the mural paintings under restoration. During this phase he was assisted by Mr. T.R. Tamrakar, a restorer from the Archaeological Department. His report is set out in section 2.1, while the conclusions and preliminary technical proposals are contained in sections 5.1. through 5.4.

1.6

On several different occasions Messrs. Boenni, Grossato and Galdieri inspected also the external mural paintings of Bagh Bayrava Mandir at Kirtipur. A very short preliminary report on this monument appears in section 6.1.

2.1 (the historico-architectural environment)

The building containing the murals under restoration is the well-known Royal Palace of Bhaktapur (Bhadgaon), also known as the Palace of the 55 Windows. The term "well-known" obviously refers to the outward and tourist-attractive appearance of the whole building, since the palace, or rather, the oldest part of the existing construction, has by no means been studied as much as it perhaps deserves, also because not all of it is open to visitors. The whole complex, which goes by the generic anglicized name of 'Durbar Square'¹ today consists of a certain number of variously shaped buildings from different periods and with different functions, without counting the various different uses to which the various sections were put during last century. If we add to the already complicated original architectural situation the direct and indirect effects of the three main earthquakes

(1808, 1833 and 1934) and the subsequent restructuring, it is easy to imagine the difficulties involved in making a systematic and detailed study of the building housing the paintings. An approximate outline of the historical and physical events related to the complex has recently been published by W. Korn² on the basis of information taken from the western bibliographic notes on Nepal and in particular of the less recent one.

In order to have a clearer idea of the physical environment in which the murals we are interested in were painted it is thus necessary to concentrate on that part of the building known as the Palace of the 55 Windows. It has now been demonstrated that this building, now obviously incomplete, was built by King Malla Bhupatindra (1696-1722 A. D.) towards the end of the century.

There is considerable historical and literary evidence concerning this particular event, as well as the extensive building activity displayed by the king and by Visvalaksmi, one of his brides and the Queen Mother, in the city of Bhaktapur and in the other lands belonging to his kingdom. As far as the Palace is concerned, we learn from Regmi³: "To him (King Bhupatindra Malla) goes the credit of adding more wings to the royal palace which had seen many additions during the three generations of his predecessors (i.e. of the kings Naresmalla, 1637-1644 A. D.; Jagatprakasamalla, 1644-1673 A. D.; Jitamiramalla, 1673-1696 A. D.). The main courtyard of the palace containing the shrine of Taleju as also other courtyard inside were refurnished and many wings left unfinished were completed by him. According to an inscription (⁸²⁶ *Jyestha*

krsna 4-5. satbhisa naksatra ayusmana yage budhavara), Bhupatindra repaired the temple of Taleju with a gold roof and a top on which stood gold finials supervening. About the royal palace, the chronicler observes, "It has fifty-five windows, in one of which there is a small pane of glass, presented to him by a man from the plains of India. This piece of glass was considered so rare and valuable that the Raja placed it in the window as an object of wonder for the people". It goes without saying that there is no trace now of the "wonderful" pane of glass, nor is its exact original location known.

We have already mentioned the extensive damage caused by the various earthquakes, particularly that of 1934. The whole appearance of the square in front of the royal palace is quite different today, as many temples previously located there were not rebuilt. However, even prior to 1934 many of the internal courtyards or *chawk* around which the reception building were constructed had slowly disappeared. According to popular tradition they ranged in number from 12 to 99 (*sic*!), although only 6 are now identifiable and used (see fig. 1). The last earthquake also caused the collapse of much of the top floor of the Palace of the 55 Windows (the present gallery of the Museum of Wooden Sculptures with its characteristics continuous windows) together with the roofing. The top floor was completely rebuilt in past years, mostly using original materials.⁴ However, this did not prevent dangerous rainwater infiltrations from badly damaging the underlying murals. The whole of the outer wall of the middle floor (the one housing the paintings) has rotated some ten degrees towards the exterior, dragging the roof rafters with it (see section in fig. 3).⁵ This unhappy static condition was only worsened

by the building's long occupation by the Army (who left it only a few years ago), and we can count ourselves lucky that the paintings are still even partially visible after the irreparable damage they have undergone. In addition to the large room A (12.00 x 2.65 m.), there is another smaller room B, currently covered with protective plasterwork. Under this layer it seems likely that there are other pictorial decorations, although there is serious concern over their state of preservation. There does not seem to be any hope of finding other paintings in other parts of the building. On the painted wall facing south, a continuous windowless wall, there are now two gaps; the larger of these consists of a doorway that unfortunately opens a brutal breach in 4 registers or "bands". Sondages in the masonry have revealed without doubt that this door did not exist when the painting was executed. It is therefore suggested that the gap be closed and the continuity of the wall restored. The second gap consists of a 7 cm thick vertical cleft in the extreme right end of the wall around which all traces of colour are missing. The decorative panels continue, although the horizontal continuity between the panels and frames on both sides of the cut has not been respected. This seems to suggest the use of one of those wooden dividers (excellent examples can be found in the ancient royal palace of Kathmandu) which are finely worked and thus semi-transparent.

2.2

A special report will be drafted on the characteristics and conditions of the wooden fixtures of the rooms housing the paintings at the end of the second campaign (1985-86).

2.3

Also of architectural-decorative interest

are the niches made in the south wall (and in the north wall in room B). These are shaped like vases and flacons according to a definitely *moghul* taste, which somehow clashes with the world described in the painted panels.

2.4

In order to facilitate the identification of the various pictorial panels, particularly when the iconographic problem comes to be dealt with systematically, the four walls of room A have been represented schematically in fig. 4.

A typical cross section through the axis of window n. 3 is shown in fig. 3.

2.5

Attached to the present report are several photographs illustrating the conditions of the room and its paintings before and after the restoration work.

3.1 (Boenni report, February '84)

On 10/2/84, with the assistance of Messrs. Thapa and Sapkota, a start was made on the examination of the mural paintings located in room A of the Palace of the 55 Windows, i. e. the present Museum of Bhaktapur. The aim of the examination was to ascertain the state of the paintings and the materials and tools required in any restoration work. This room, completely covered with paintings, not only on the walls but also on the wooden fixtures and the window jambs, had previously been occupied by military units. The marks of their presence are unfortunately still visible: numerous nail holes can be seen on the coloured walls. On the upper part of the N wall, opposite the windows, the colours have been washed away entirely by water infiltrations. At first sight the technique used seems to have been tempera and the medium gum arabic or the like, in any case something water soluble.

The painting backing consists of a "rough casting" of earth mixed with vegetable fibres and a thin layer of clay mingled with other substances yet to be identified. Wood was extensively used in the building's construction and subsequently incorporated in the masonry work. After being plastered over, the timber parts are subject to internal movement (variations in humidity, dehydration, etc) and external movement (vibrations due to people walking, carts passing, earthquakes). Consequently there are numerous cases of the "rough casting" having fallen owing to the above movements. The painted surface bears marks of restoration work, e. g. cleaning and fixing, carried out in relatively recent times, probably using unsuitable materials. The resulting visual disharmony is quite jarring; as a result of the fixing operations most of the light colours have disappeared, thus giving the observer the impression of looking at "shadowy" paintings. In other parts, where the paintings have not undergone any restoration the impression is of brighter colours. I was also told that the paintings examined had been fixed with polyvinyl acetate; if this is true, the chemical removal of the film will be long, difficult and certainly dangerous for the underlying painting layer. On 15-16 February, within the limits imposed, a photographic survey was made of the paintings; it was, in fact, impossible to illuminate the paintings in order to achieve good colour shots. Pigment samples were also taken to prepare slides and thin sections.

3.2 (Boenni report, November '84-January '85)

The restoration work proper began on November 2nd; the surfaces involved were: the right half of the W wall and about three metres of the N wall, starting from the west. These zones were chosen because they provided

examples of all the possible difficulties that would have to be tackled in the rest of the room, i. e. consolidation of plaster, fixing of thin layer of plaster finish, fixing of the pictorial film, and the removal from the entire painted surface of a fixative (applied during some recent restoration work performed by workers from a neighbouring country), the cleaning of the surface itself, the removal of the mixture of earth, dung and pigment covering about 30 cm of the lower part of each wall, the cleaning of the pictorial decoration on the wooden portions of doors and windows, the replacement of fallen or shoddy plaster work, the fixing of the colours after cleaning and finally the reharmonization of colours in the damaged and in the intact parts.

Conditions of the W wall (right side) - band of register A: Rainwater had previously dripped onto the central part from the floor above. This had washed away and completely destroyed part of the upper floral frieze and damaged the whole of the scene below, including the decorative band. Wall E, opposite the W wall, has been less severely damaged. On a level with register B (starting from the top) there is the wooden architrave of the door with its polychrome decoration. The wood has swollen with the water falling on it and has caused the adjacent painted portions to become detached and be completely ruined. Immediately after being damaged by the water, the paintings were dried, particularly the upper portions, probably using a cloth. As a result the preparation of the pictorial support has mixed with the pigment and has led to irreversible damage with the original pattern being lost.

Conditions of the N wall: the type of

damage described above is common to the whole room, although it is particularly noticeable precisely on the N wall. Where the water has dripped from the floor above, the colour has disappeared completely. The surface of five or six register is highly abraded and large areas have been scratched. The woodwork of the doorstep corresponding to the doorway on the west side has caused the plaster to fall again as a result of swelling. Upto a height varying between 30 and 40 cm a mixture of clay and dung has been applied in some unspecified period to the lower part of the walls and the window jambs, perhaps for the purpose of protection.

In the northwest corner the walls have moved about 2 cm apart as a result of movement in the masonry, perhaps caused by an earthquake. Also in the northwest corner there is a non-original opening, perhaps made some fifty or so years ago, linking room A with the external balcony behind it. The fact that the opening is not original can be seen also from the fact that the bricks have been cut off, from the reconstruction of the side walls carried out at a later date and from the presence of new timber supports for the section above the door. Opening this passage caused the destruction of about two square metres of painted surface. Again on the N wall, about 2 metres from the west corner, an area can be seen in which the colours and plaster have been eroded over a width of about 15 cm; this area runs vertically through all the painting registers. Also this damage may be attributed to water infiltrations. On the N wall, in the band of register A, not more than 30% of the original pigment can be identified.

Work carried out: On both the W wall and the first three metres of the N wall the old cement stucco has been removed. The material used in the replacement was very fine sand and slaked lime, i. e. materials much more like the original ones. The same material was used also to patch up the plaster where it was missing. The work of patching the plaster was necessary mainly in register B on the N wall. The work of fixing the plaster and the plaster finish was begun starting from the centre of the S wall and working westwards. Also on the S wall work was begun on the window jambs and frames (windows nos. 3 and 4). The complete plan of operations envisages the cleaning, fixing, consolidation and reharmonization of the colour layer.

The S wall has an inclination towards the exterior of about 10 degrees, which means an approximately 5 cm gap at the top. Work was begun on fixing the falling layer of plaster and on removing the old cement patches. In this area the plaster has crumbled badly, again because of the water infiltrations. Also the S wall has suffered the same type of damage, and large sections of plaster are also missing. The wooden window frames are in a very bad state of repair in many places. Where the woodwork joins the plaster edge has come away in most places and has either fallen or is still hanging in situ. In the south and southwest zones, the remaining portions of pictorial layer are extremely small. The plasterwork applied to the lower part of the room is higher here (about 50 cm) and covers the lower frieze, wherever the latter still exists, up to and including the last inscription. The same is true of the window jambs.

At the end of this stage work was

completed on the northwest corner of the room, except for a possible final protective coat of paint to be applied only if and when deemed necessary. After the whole painted surface has been restored it might be considered appropriate to proceed with a general chromatic revision of all the work carried out, in order to harmonize the various parts. Colour slides and black and white photos were taken before and during the execution of the work described above.

4.1 (Grossato report, December '84)

With regard to the large group of paintings that Mr. Boenni began to restore, and in view of their present conditions, I can only say for the moment that: there is no doubt that it is a *Krsnalila*, i. e. a representation of various episodes in the earthly life of the eight *Avatara* of Visnu, whose bluish complexion often appears in the painted episodes. The direct literary reference, which cannot for the moment be identified with any accuracy, is perhaps a work written in Newari (as seems to be indicated by the almost illegible legends written in Newari that accompany nearly all the episodes represented). This work is probably a sylloge of several different traditional Sanskrit texts, particularly the *Mahabharata* the *Bhagavata Purana* and the *Gitagovinda*. In this connection it could be extremely useful to solicit the collaboration of at least two well-known local epigraphists, Messrs. Hem Raj Sakya and Satya Mohan Joshi (the latter was introduced to me by Mr. Janak Lal Sharma). The large polycephalous figure at the centre of the N wall is without doubt a representation of Visnu Visvarupa, and refers to the well-known episode of the *Bhagavad Gita* in which Krsna manifests to Arjuna his macro-

cosmic form. It is in any case a truly unusual and interesting iconographic variant since the God is depicted embracing his Sakti. It thus consists of a particularly rich and complex tantric representation, the exegesis of which will call for a detailed study of the specific vaisnava tendencies active in Nepal at the time the paintings were commissioned. As far as the date this period is concerned, the one suggested by local tradition seems perfectly acceptable to me: the commissioning of these wall paintings is attributed to the king of Bhaktapur, Bhupatindra Malla. In any case, the attribution of the paintings to the beginning of the 18th century seems to be supported by the considerable similarity in the content and style with the scrolls preserved respectively at Cambridge and Benares, and partially reproduced in *Vaisnava Iconology in Nepal* (Calcutta 1970) by Pratapaditya Pal. Indeed, in all likelihood, it was one of these scrolls that provided the *exemplo* for the craftsmen executing these actual miniature murals. It would therefore be very interesting to be able to examine the Cambridge and Benares specimens directly, later making a detailed survey of everything likely to be contained in the well-appointed "Durbar Library" in Kathmandu. Quite clearly it would also be very useful to be able to make a comparison with the *Krsnalila* painted in one of the "forbidden rooms" of the Hanumandhoka Palace, again in Kathmandu.

5.1 (Conclusions)

From the three specific reports (paintings, architecture, iconology) it is clear that the painted surface and its backing are in an advanced state of deterioration. The natural causes of ageing (e. g. those linked to the type of materials originally used) have been compounded by two external causes identified as

the mechanical consequences of earthquakes and infiltrations of rainwater. In addition to these unavoidable causes, however, there have also been several attempts at "preservation", an improper use of the premises and a total lack of maintenance. A further source of deterioration has arisen in recent years which, in the long run, could be the cause of irreparable damage, and not only to the paintings, i. e. vibrations transmitted by motor traffic in the vicinity of the building. Although no certain data are available concerning the nature of the surrounding soil or the depth and quality of the building's foundations, passing motor vehicles, particularly lorries transporting goods, coaches and buses, can be assumed to transmit vibrations to the mixed wood-brick structure, which is already in anything but ideal static condition. Now that the external walls, particularly those of the middle floor, have been disconnected from the rest of the building, the damage caused by vibrations transmitted through the clayey ground become increasingly dangerous and direct. This is especially true of the adhesion between the painted surface, its backnig and the masonry. One further observation can be made concerning the daily cleaning system: currently being used. Dust, mostly from the exterior, but also due to the passage of visitors, is not removed but merely circulated through the rooms. It resettles on the paintings, the woodwork and the floor within ten minutes of each cleaning. There is no need to stress the abrasive action of the dust, which contains tiny flakes of mica, on the very thin and already weakened painting layers.

5.2 (Recommendation)

The current work of fixing, preserving and restoration will amount to little unless accompanied by a constant service of the programmed maintenance. The later will have

to be preceded by a series of investigations to check the existence and intensity of the vibrations and then to ascertain the work required to prevent or at least to absorb these vibrations.

It is therefore recommended as a temporary measure that the walls should be dusted with very light dusters and the dust (and particularly the earth!) on the floors should be removed using a small electric vacuum cleaner.

It is also recommended that for at least one year two printing fleximeters be applied to the North and South walls respectively. At the end of twelve months observations special rules for further safeguarding can be made.

5.3

One advantage is the microclimate and environmental humidity of the room containing the paintings. An uninterrupted 30 day test showed that the relative humidity gradient inside room A is not only surprising constant but actually favours the preservation of the paintings. Although it will be subjected to further tests of this type, the environment will probably not need any corrective.

5.4

During the next campaign to study and preserve the paintings a project for the rational illumination of Room A will be submitted to the approval of the authorities. This project will take aesthetic requirements into account and will allow the visual enjoyment of the paintings on all four walls. Above all it will allow for the possible damage to the painted surface that can be caused by "hot" light sources.

6.1 (Paintings at Kirtipur)

As already stated in section 1.6, numerous visits have been paid to the Bagh Bayrava

Mandir at Kirtipur. Until such time as internal inspections can be carried out, our attention has been focused on the murals situated on the four external walls of the temple cell. All the paintings are in very poor conditions. Also these paintings are of the "descriptive" type and executed on three different registers, which are in turn surmounted by an upper decorative band which is taller than the others and characterized by large medallions depicting gods. At first sight it would seem that we are dealing with a case of bichromy. Unlike the Bhaktapur paintings, where all the principal traditional pigments are present (orpiment, vermilion, indigo, chalk or conch-shell white and black) those of Kirtipur, which some attribute to the 15th century, seem to be based on white and red alone. Generally speaking, the themes seem to reflect a greater attention to the ritual aspects, almost as though exemplifying the numerous Nepalese religious feasts (E. G.).

6.2 (Grossato report, February '85)

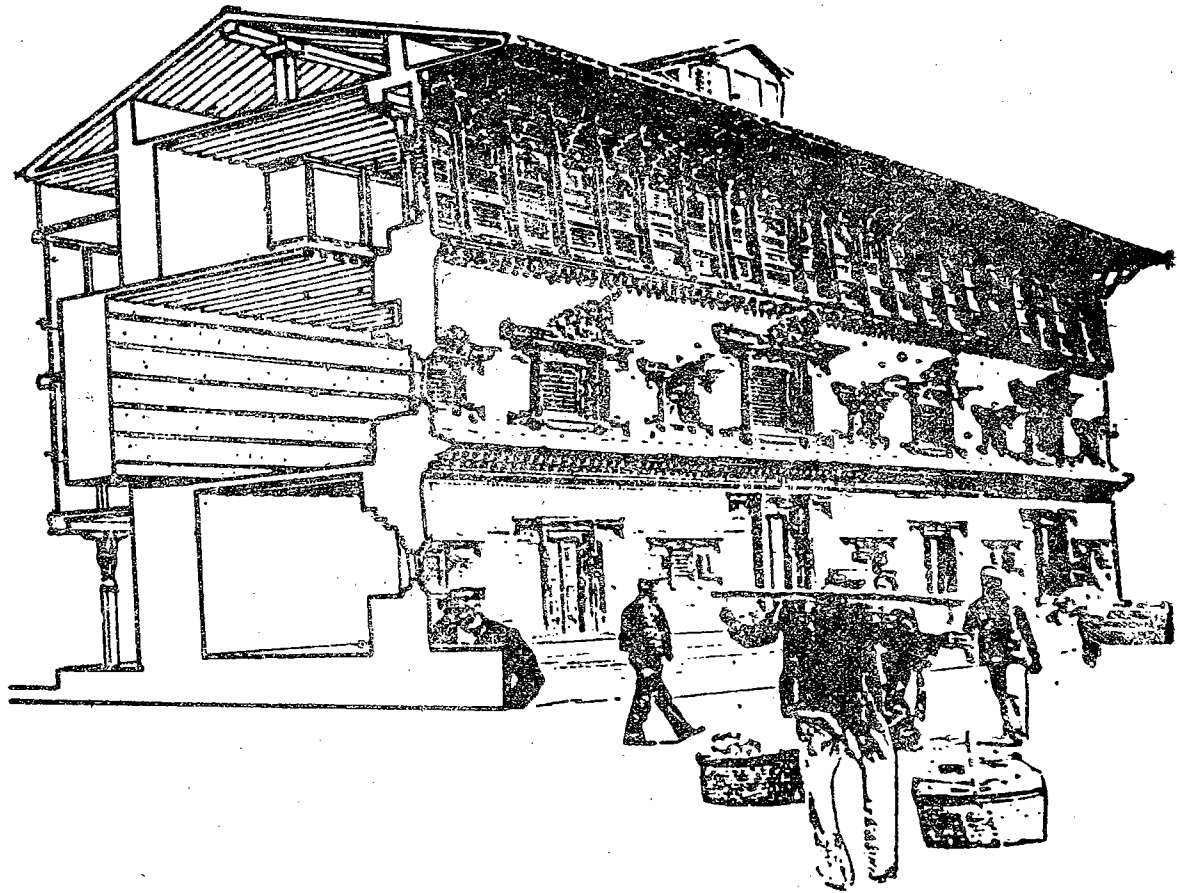
Dr. Amatya introduced us to the Pradhan Pancha of Kirtipur, Mr. Rudra Bahadur Pradhan, as well as to the *pujari* of the Temple, Silal. He also authorized Mr. Boenni, whenever he deems fit, to take a small sample of the external bands of the paintings. Messrs. Amatya and Tamrakar then went into the Temple to see whether there were any traces of internal murals. According to what they told us on coming out there is well-founded suspicion that there is something at least on one of the inside walls currently covered by a thick layer of soot.⁹ Mr. Boenni was then asked to provide a solvent so that one of the chemist-restorers from the Department could attempt to clean the wall. According to Messrs. Amatya and Tamrakar there is no obstacle to making an immediate start on restoring the group of

paintings running round all four external walls of the Temple (the importance of which has been stressed also by Pal in *The Arts of Nepal: Painting*: "Among the earliest murals existing in the Kathmandu Valley (...) they are totally exposed to the elements"). The Nepalese

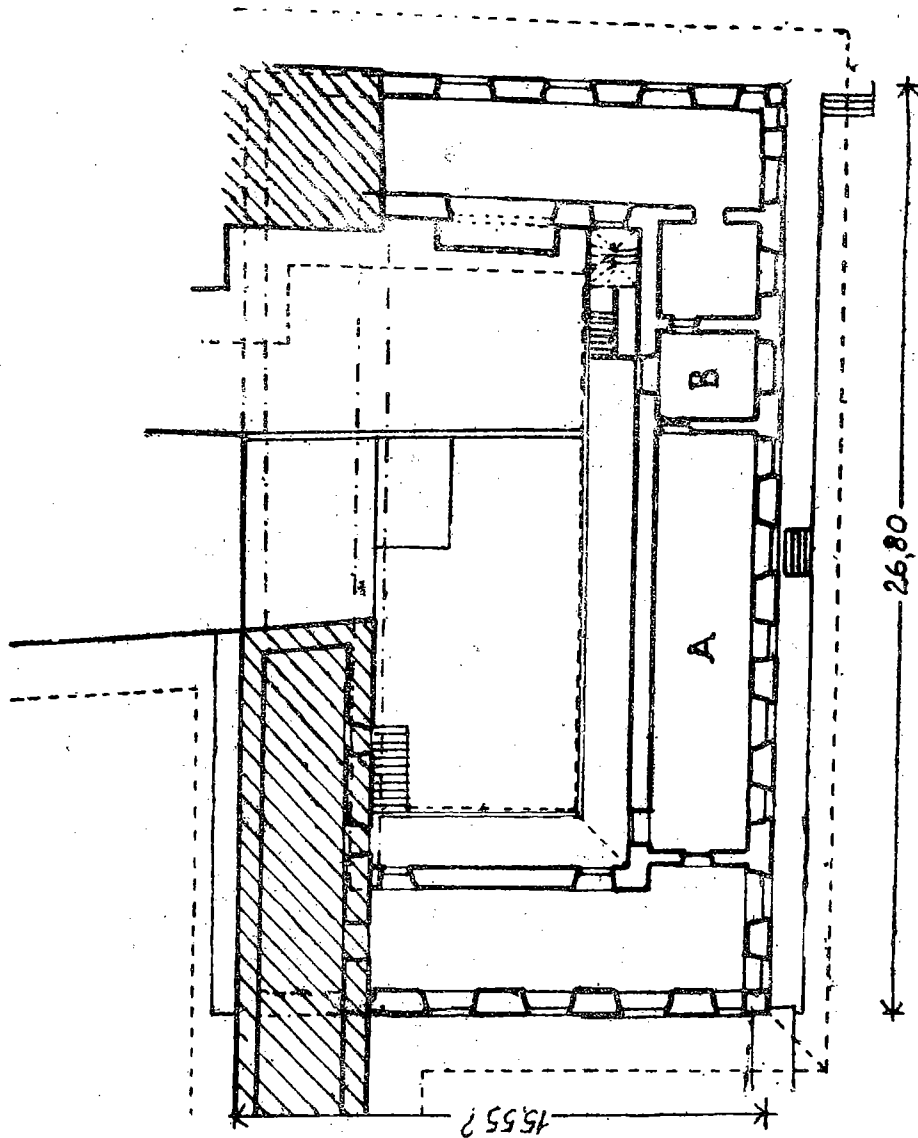
authorities would in any case prefer a restoration of the entire temple complex, rightly considering that there would be no point in restoring the paintings alone without having previously consolidated the architectural structures.

Notes

1. *Da-bar* is a word of Persian origin meaning "entrance to the palace" and, by extension, the whole palace itself. The phoneme obviously reached Nepal through *moghul* mediation. See also MacDonald A. W., Vergati Stahl A., *Newar Art*, New Delhi 1979, p. 112, note 1.
2. Korn W., *The Traditional Architecture of the Kathmandu Valley*, 1976¹, reprinted 1979, Bibliotheca Himalayca, Varanasi 1979, pp. 57-59 and fig. 27.
3. Regmi D. R., *Medieval Nepal*, Part II, Calcutta 1966, pp. 235 ff.
4. In the reconstruction subsequent to 1934, perhaps for economic reasons, it was neglected to reconstruct the projection of the wooden gallery; this projection characterized and lightened the entire top storey, as is apparent from the old engravings and water colours from last century. "It was restored with minor alterations, so that the former bay-windows on the third floor no longer protruded to form a long balcony as before" (Korn W., *op.cit.*, p. 58).
5. The project originally drafted by UNESCO (No. 18-Durbar de Bhaktapur : BMZ-1) entailed an estimated cost of 173,000 dollars (1984) for the restoration of the Palace of the 55 Windows alone. See Sanday J., La vallee de Kathmandu, *Monumen's historiques nepalais a restaurer*, UNESCO, 1984, ISBN 92-3-201992-2, p. 92. No provision is made in this project for any preservation work on the murals.
6. Among other things it has been enhanced by a particularly complex, and obviously much larger, *torana* (see photo).
7. See Regmi D. R., *op. cit.*, p. 242. (8) See Singh M., *L'Art de l'Himalaya*, 1968, p. 205; Ray A., *Art of Nepal*, New Delhi 1973, pp. 53-54; Pal P., *The Arts of Nepal*, Leiden-Kolon 1978, vol. II, fig. 193 and p. 129. (9) See Oldfield H. A., *Sketches from Nepal*, London 1880,¹ repr. New Delhi 1974, vol. I, p. 129: "Inside the temple is a painted image, not of a man, but of a tiger [note: from which the temple is called Bagh Bhairab—that animal being looked on as a symbol of the god]" (E. G.)

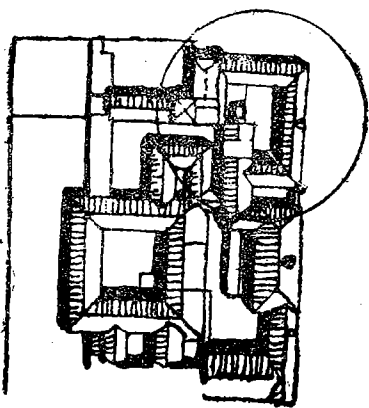


Royal Palace ("of the 55 Windows") Durbar Square, Bhaktapur



GENERAL PLAN - 1:200

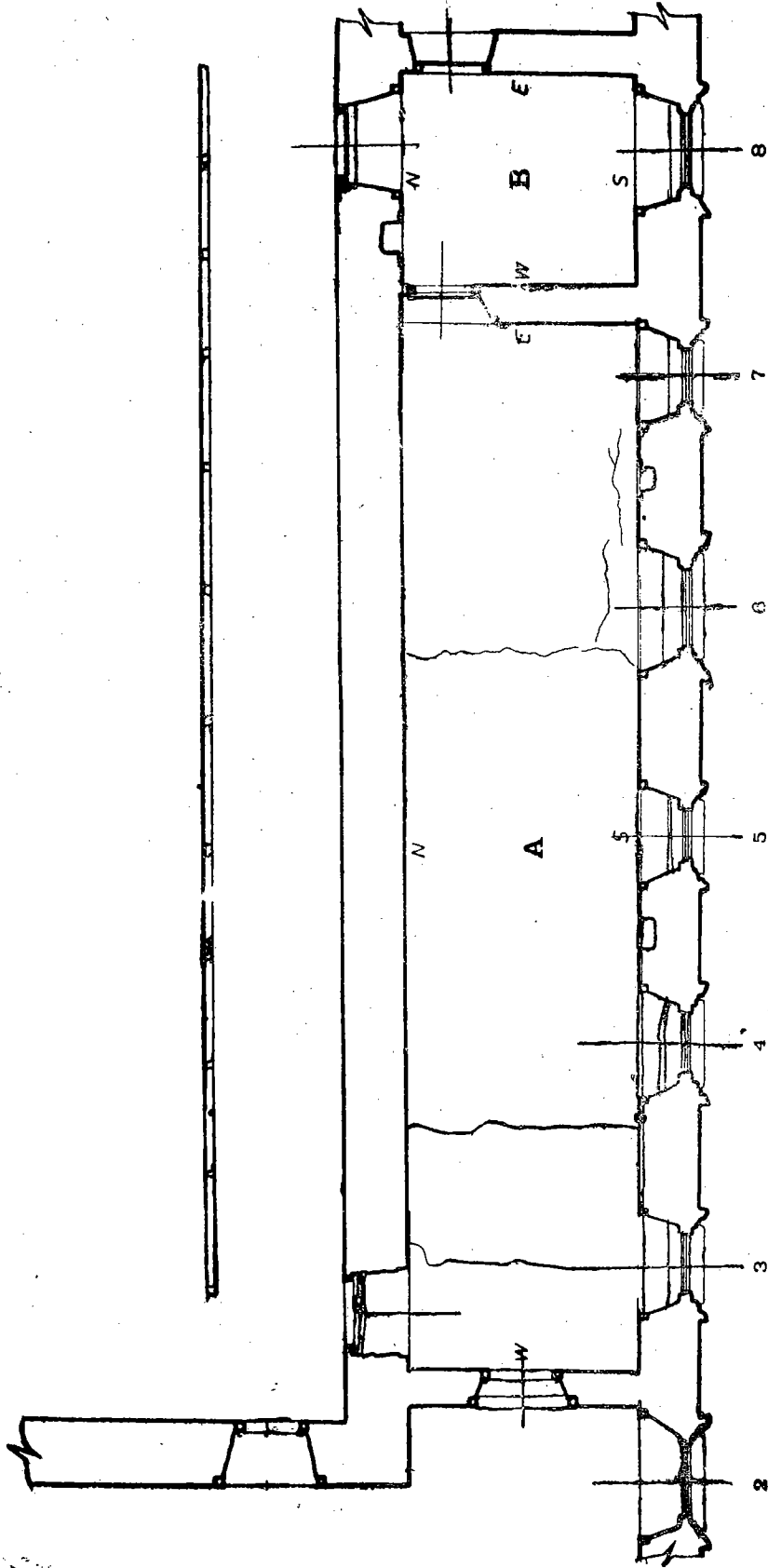
--- supposed extension of the old building
 // // // // // new building



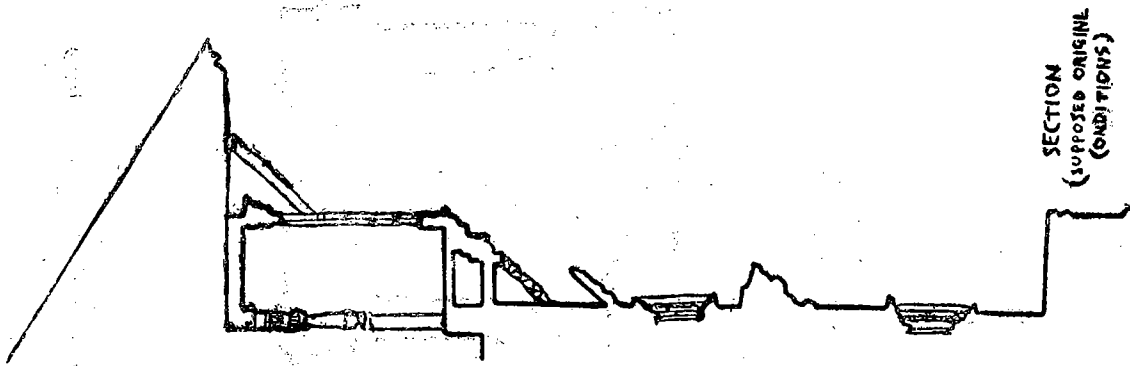
Preliminary.....

13

2

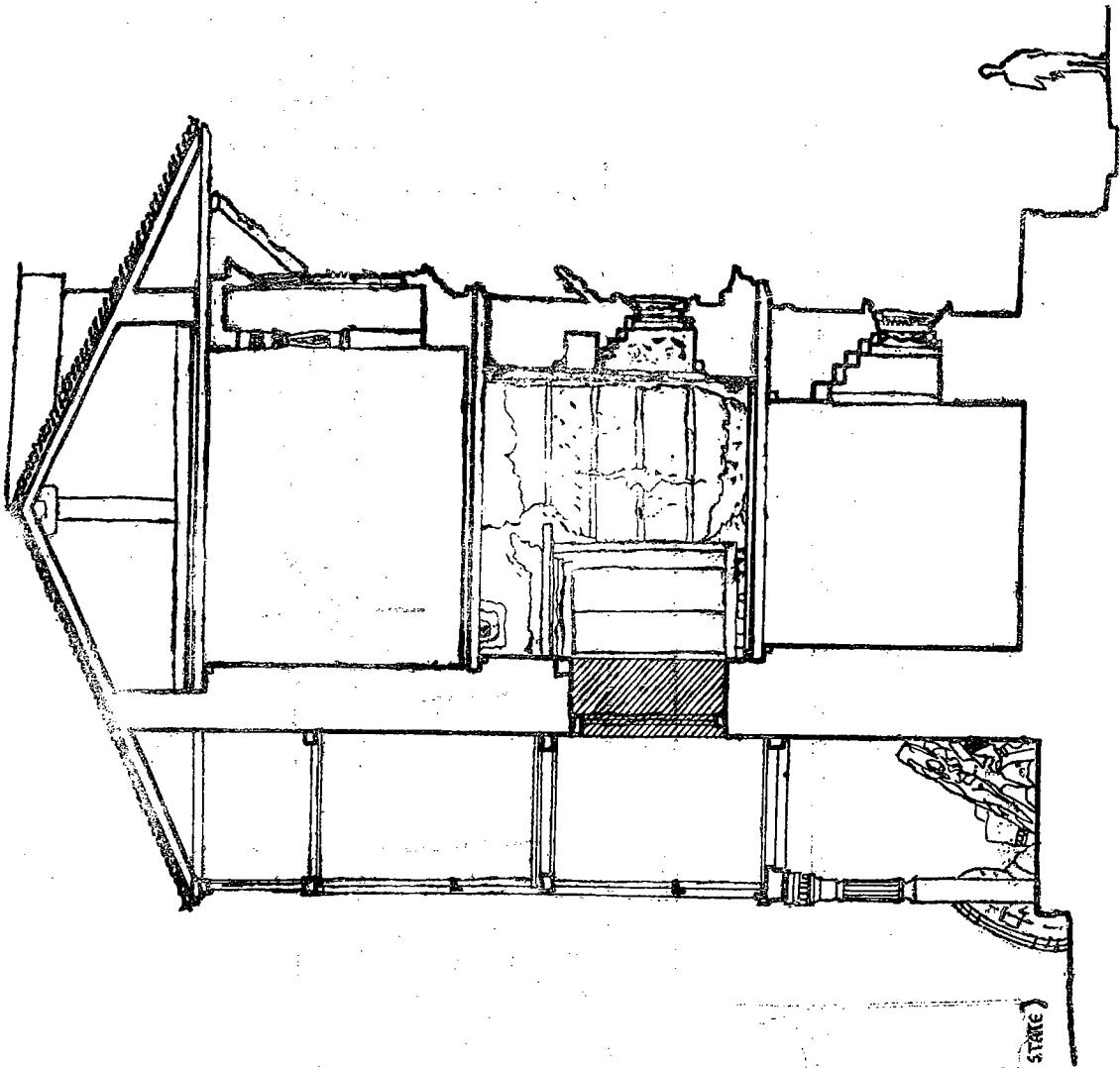


Room A B plan - 1:50

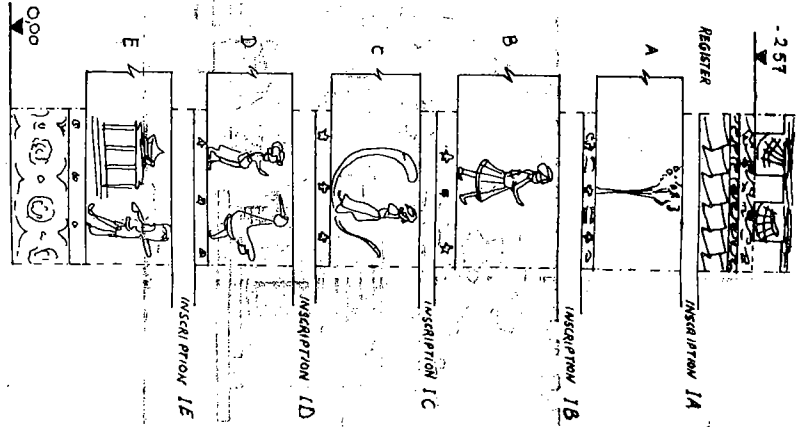
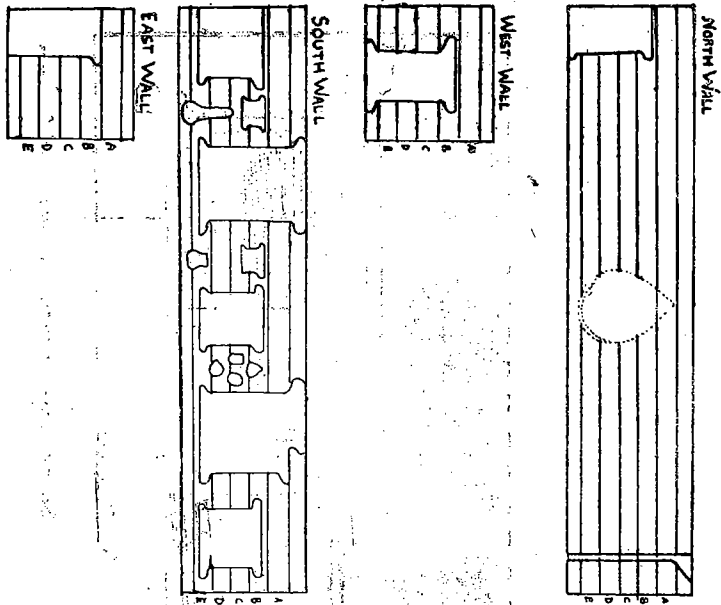


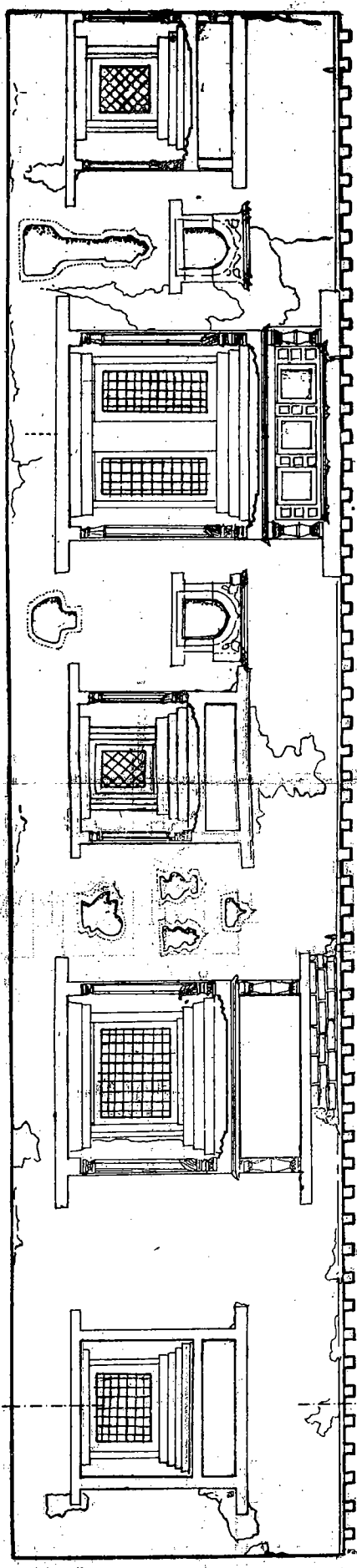
SECTION
(SUPPOSED ORIGINAL
(CONDITIONS))

1:50



SECTION
(PRESENT STATE)





SOUTH WALL INTERNAL ELEVATION - 1:25 638

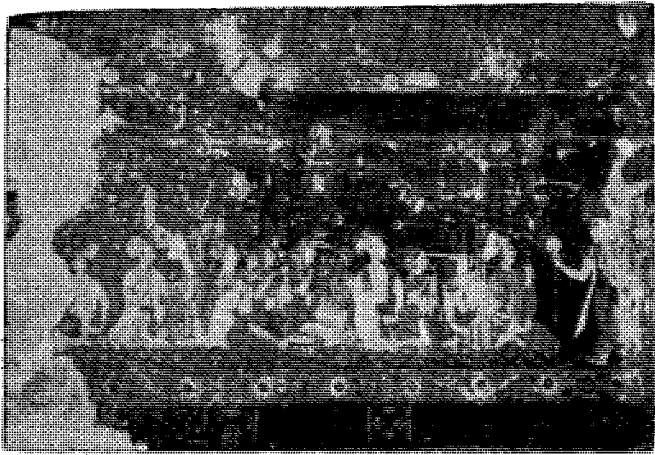


Fig. 1 A

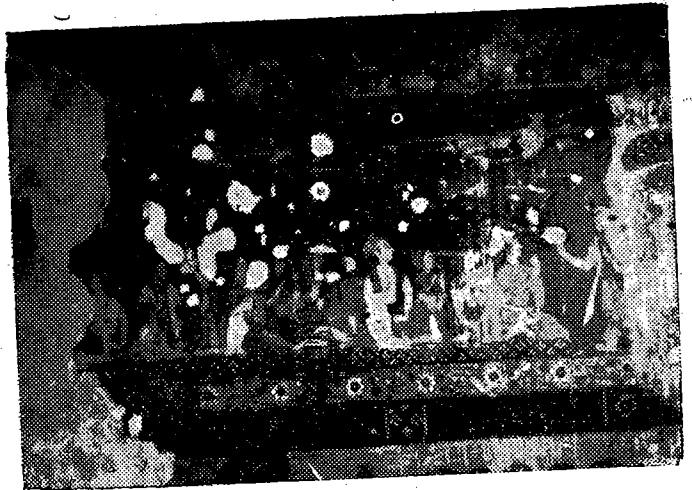


Fig. 1 B



Fig. 1 C



Fig. 2



Fig. 3

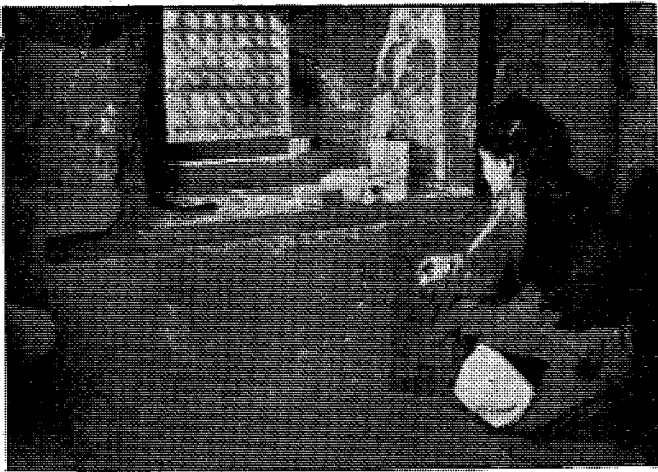


Fig. 4



Fig. 5