The restoration of the *nirvana-stupa* of the Buddha at Kusinara, India

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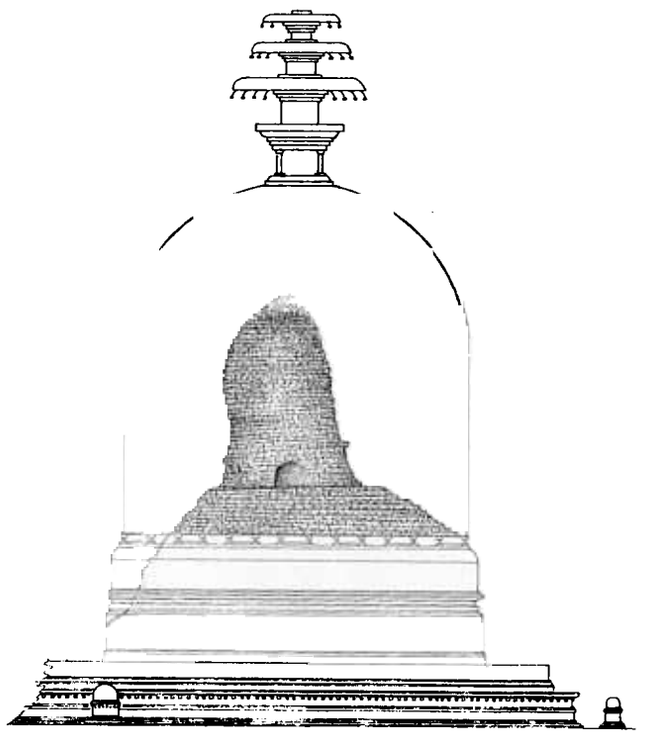

FIG. 1. The *nirvana-stupa* as found in 1876, and the outline of the hypothetical renovation executed in 1927 with donations from a devout Buddist.

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The *nirvana-stupa* at Kasia or Kusinara, which enshrines the mortal remains of the Buddha, collapsed in 1963. It has since been restored to the earlier form it had before the fall; but why did this happen, and what does the restoration mean?

Kusinara, which is in the Deoria District of Uttar Pradesh, was sanctified by the presence of the Buddha during the last days of his life (*mahaparinirvana*). Since then it has been regarded as a Buddhist place of pilgrimage. In fact, Buddha himself declared that Kusinara was one of the Four Great Places which a Buddhist 'should visit with feelings of reverence and awe'. The other three, according to the text *Mahaparinirvana Sutranta* of the Digha Nikaya (dating from the second to the first century BC), are Lumbini, his birthplace; Bodh Gaya, the place in which he attained enlightenment or Buddhahood; and Sarnath, where he delivered his first sermon.

Literary sources say that at Pawa, after eating a meal of pork served by Chunda, the Buddha suffered an attack of stomach trouble and became weak. He expressed a desire to go to Kusinara, where in seven of his previous incarnations he had left his mortal remains. There, inside the Upavarttana *sala*-grove of the Mallas, he had a bed made up between two trees, laid himself down and passed away for the eighth time. His body lay in state for seven days at the *Makutavandhana chaitya*, where he was cremated as he had directed Ananda. The place of cremation is identified as the site on which the fragment of the Ramabhar *stupa* now stands. After cremation, the remains of the body were divided into eight parts and distributed so that *stupas* might be constructed over them; but of these only that at Kusinara has been identified, with the help of a copper plate dating from the fifth century AD, terracotta seals depicting a coffin between two trees, and another showing flames, all of which have been recovered during excavations on the site.

The earliest *stupa* at Kusinara was said to have been erected by the Mallas of Kusinara in the sixth century BC. This was replaced when the Emperor Asoka of the Maurya dynasty constructed one in the third century BC; but the remains of these two structures have not been located. However, in the seventh century AD Xuanzang reported three *stupas* having been built by Asoka at Kusinara and in its vicinity; and the Chinese pilgrim saw two stone pillars there. On one was an inscription recording the events of Buddha's death, and the second was standing by the side of the *stupa* built by Asoka on the spot where the remains were divided and distributed. Archaeological excavations carried out in the past did expose structural remains of monasteries dating from the early historical period (first to second century AD) up to the time the site remained inhabited in the tenth to eleventh century.

Among the ruins of the excavated monastic remains, a shrine and a *stupa* on a high platform were excavated in 1876 (*Fig. 1*). Some parts of the ruined *stupa* were cleared away or dismantled to lessen the top-weight, since the monument overhung and leaned slightly towards the temple, on which it was in danger of falling. An account published in the Archaeological Survey's annual report for 1910–11 notes that the domed top had gone and the extant part of the drum was in a more or less dilapidated condition. After this dismantling a shaft was sunk from the top down the centre of the structure (*Fig. 2*) in order to ascertain if the *stupa* contained any relics, and at a depth of more than four metres a copper vessel and a copper plate were found. On the latter the Buddhist text, the *Nidanasutra* in Sanskrit was written in black ink with the first line only having been engraved. At the end of the inscription it was recorded that the donor was Haribala, the Chief Superintendent of the monasteries, and the plate was deposited in the *nirvana chaitya*. A colossal image of the Buddha in *mahaparinirvana* pose, housed in the adjoining shrine, had also been donated by the author of the copper plate.

Kusinara is located at the point of discharge of eight old channels or rivulets which ultimately joined the river Hiranyavati. Frequent flooding and water stagnation might have caused damage to the ancient settlement. In the *Mahasudarsana Sutranta* it is recorded that when the Buddha reached Kusinara, the place was already reduced to a small and forlorn surburban habitation, although it was said to have been known previously as Kusavati, the prosperous capital of King Mahasu-

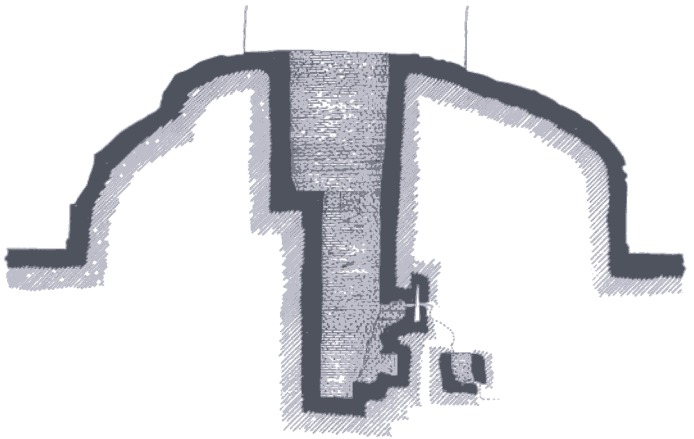

FIG. 2. The *stupa* in 1910, showing the 'excavation' in the form of a well sunk through the centre in a search for relics.

darsana and at the centre of an extensive, densely populated area. There is no reference in the Buddhist text to the possible flooding of this earlier settlement; but it was probably because of the danger of flooding that the *stupa* and shrine had to be constructed on a high platform.[1]

On 4 October 1963, following six days of incessant rain, the renewed *stupa* at Kusinara collapsed with a great noise (*Fig. 3*). Because of its extraordinary importance, this caused dismay and concern among Buddhists all over the world, and there was a demand that it should be restored to its earlier shape. An assurance was given in Parliament that this would be done, although it is not government policy to build a religious structure of an arbitrary design on an archaeological site. But as the earlier renovation dated from before Indian independence, nothing could be done to alter it even though the decision is one that is not likely ever to be repeated. The rebuilding of ancient monuments is strictly limited to anastylosis, i.e. restoring the fallen members. In this unusual case of the *stupa*, since a drawing of the earlier structure was available, it was decided to restore the original form. This was a departure from the accepted principles of archaeological conservation, and the exception was made specially in order to respect the religious susceptibilities of those who worship the great teacher.

The collapse appears to have been due to the earth filling which had become saturated and so greater in weight and volume; this had caused undue pressure on the enclosing wall, which had finally burst open. The area around the platform on which the *stupa* stands, having been excavated to expose the old structures, remained under water during the rains and for some time after. The sub-soil water level rises high enough each year to permit capillarity, and this was to a large extent the cause of the saturated filling. The disappearance of the gilding on the outer surface is due to the same saturation of the fabric and a consequent rise in salinity. The heavy rains during the six days preceding the collapse only hastened the fall.

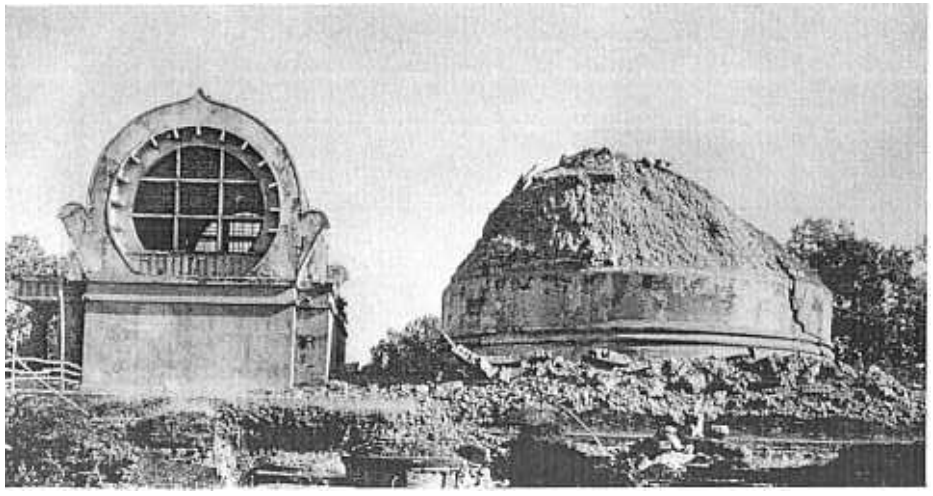

FIG. 3. The *stupa*, after renovation in 1927, collapsed in 1963. The temple was restored in 1956.

[1] It is interesting that at Pawa, where another *stupa* was constructed by the local Mallas over their share of relics, ruins have been found of a *stupa* and shrine on a raised platform similar to those at Kusinara. Only 19 km away from Kusinara, Pawa is located in the same low-lying area where floods occur frequently; but the date of the platform and the structures on it could not be fixed before the fifth century AD.

The earlier behaviour of the *stupa* is interesting. It seems that cracks appeared generally during the monsoons, with a consequent rise of the sub-soil water level and increased moisture through capillarity. The cracks used to widen gradually, but they were filled in regularly, as they had been before the collapse in 1963; at the time their width varied from 5 to 7 cm. After filling in, glass tell-tales were fixed in order to monitor any further movement. After two months it was observed that out of six repaired cracks, three very narrow ones reappeared on the surface of the drum. According to local officials of the Archaeologial Survey, these remained unchanged without any further widening until the day before the collapse.

Among the long-term measures, it was suggested that the area around the *stupa* should be kept water-free by draining the stagnant water through a channel connecting the excavated trenches with nearby streams. As for arresting the recurrence of the cracks, since filling in alone would not work, the recommendation was to open up and repair them after the monsoon. Any earlier action was out of the question, since the cracks could not be opened up during the rains without allowing even more water to percolate.

The ruins of *stupas*, the Dhameka at Sarnath and the Ramabhar at Kusinara (*Fig. 4*) are solid structures. For that reason this *stupa* also was assumed to be of similar construction, and it was suggested that the cracks be opened up for repair with full-sized bricks so that proper bonding could be established. It seemed unthinkable that such a huge structure should have a thin encasing wall only. Had the facts of past restorations been maintained and available, it would have been possible to take immediate remedial measures by covering the *stupa* to prevent further seepage of rain water, removing the saturated filling from inside the structure by opening a section of the shell, and withdrawing the cause of the outward thrust that was causing the cracks. Thereafter, further measures to control the capillarity and to strengthen the faulty structure could have been taken.

But there was no record of the construction and no reason to believe the cracks were danger signals; and after the increased saturation of the earth filling because of the six days of rain, nothing could save the *stupa* from collapse. The thin encasing wall—a defect in the original design—could not sustain the extraordinarily excessive thrust produced by the mass of wet earth.

During reconstruction, care was taken to strengthen the foundation by

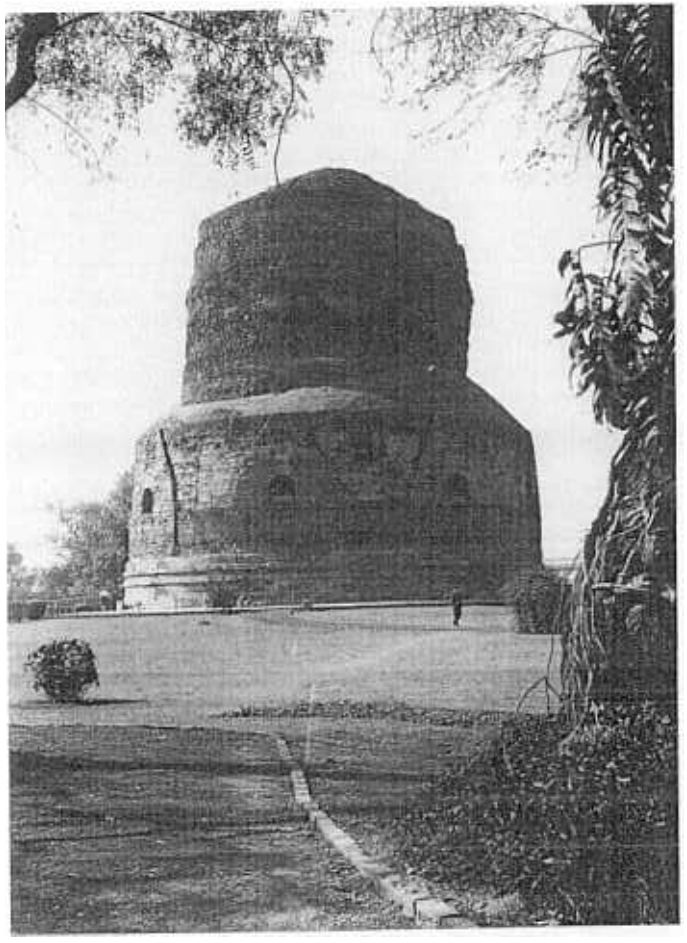

FIG. 4. The Dhameka *stupa* at Sarnath; note the shape and the solid brickwork.

providing a reinforced concrete raft to guard against any differential settlement. A waterproofing compound was mixed with the concrete to prevent any rise of moisture through the brickwork of the platform, the base of which remains in contact with water for much of the year. It was decided to fill all the existing trenches to avoid the problem of stagnant water around the monument. The superstructure has been strengthened, especially that part which would be under circumferential tension, by providing reinforced concrete rings embedded horizontally in the brickwork at different levels. These are tied with mild steel stirrups placed vertically at intervals. In the earlier construction of 1927, the Public

Works Department had fixed angle-iron bands in the brick shell; but these did not take care of the tension and vertical cracks resulted. The surface of the brickwork has been plastered, and a waterproofed colour-wash has been applied to give protection (*Fig. 5*). Thus, the *stupa* which had collapsed was restored, and provision was made to counteract the potential causes which had led to its downfall.

While the *stupa* suffered badly, the fifth-century sandstone sculpture of the reclining Buddha in *nirvana* pose in the temple did not fare any better. The original temple had been rebuilt more than once, and in its place now stands an irrationally designed modern structure. When excavated in 1876, the image of the Buddha was found to be in a badly damaged condition and its pedestal was broken. The excavator listed the missing portions—upper part of the leg, both feet, left hand, parts of the body above the waist, and parts of the head and face. He noted too that part of the left arm had been repaired with stucco or brick covered with strong plaster. Oviously this was an earlier attempt to restore the image, which is of red sandstone like most Mathura sculptures. During the excavations, some of the missing parts were retrieved and used in its restoration. Even

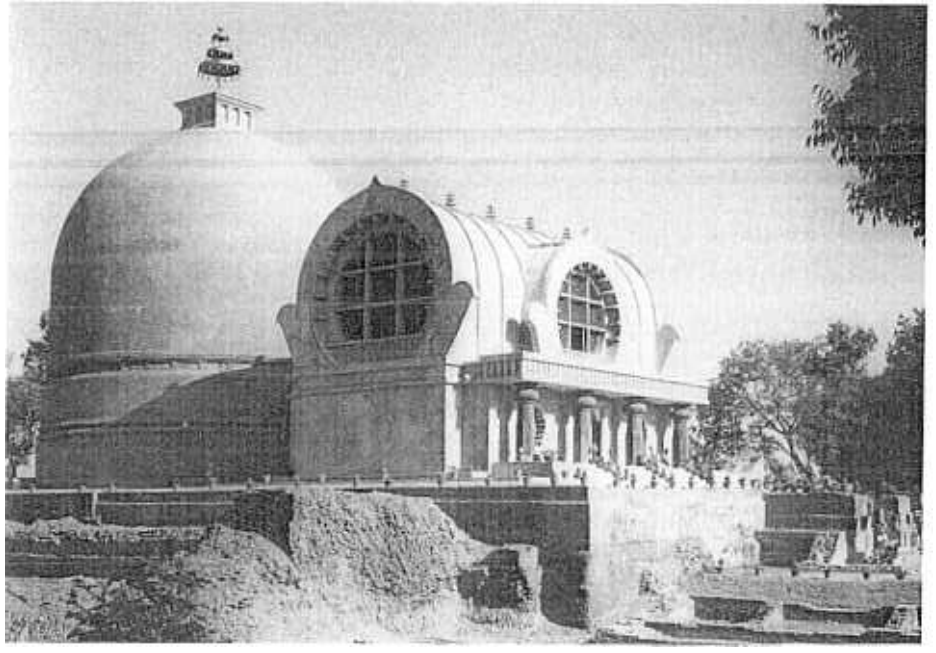

FIG. 5. The *stupa* after restoration and the restored temple of 1956, with the excavated ruins and trenches around them.

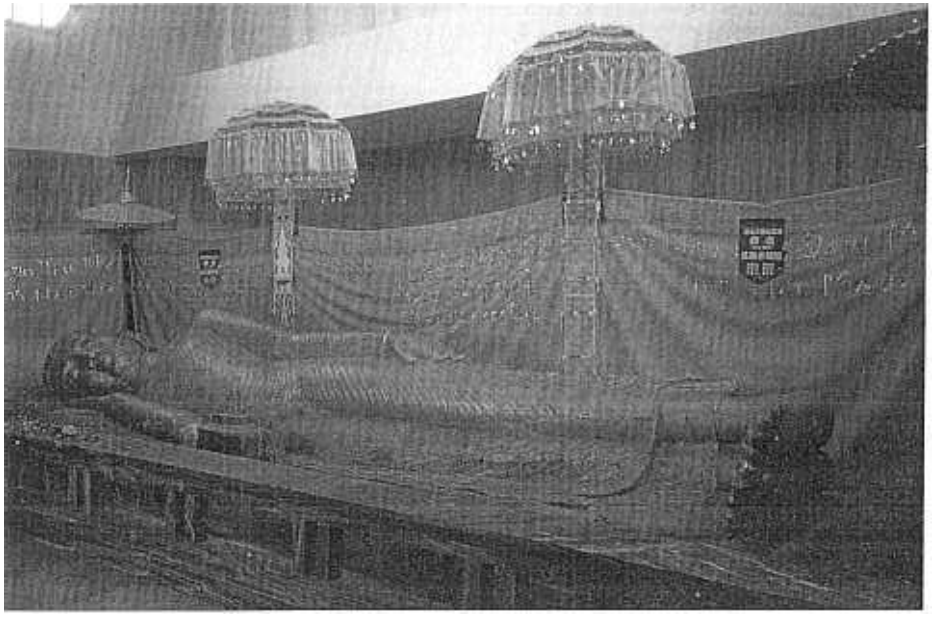

FIG. 6. The statue of the Buddha in *nirvana* pose enshrined in the temple.

[2] The entire area remains waterlogged, and as the water level of the nearby river is high there is not sufficient fall or gradient to allow the water that accumulates at the side of the *stupa* platform to drain away. Sinking of a number of tube-wells for pumping out water, as recommended for the protection of the ruins at Mohenjodaro, is not expected to lower the level of the sub-soil water in that area.

[3] James Fergusson, who had to his credit probably the greatest number of publications on ancient Indian architecture, reputedly said that Alexander Cunningham 'chose his assistants not because of their fitness for the work so, several parts were missing. As recorded at the time, in 1876, the cavities were filled with a 'strong compound-like stucco, composed of a cement formed of various ingredients among which was Portland cement'. Having completed the repairs, the excavator then applied a coat of paint and coloured the face, neck, hands and feet with a yellowish flesh colour. The drapery was painted white, and the hair black. Fortunately these colours are no longer there, and the image has been more appropriately gilded with gold leaf (*Fig. 6*).

In places, the plastered parts of the image make a hollow sound when tapped; in other places the stone has flaked off in thin layers, as usually happens when sedimentary sandstone is affected by salt or hydration. For protection, it is proposed to provide a horizontal waterproof membrane at the base; this will have to be placed blow the floor level so as to remain concealed.[2]

The temple itself was restored in 1876 by Carlleyle,[3] reputedly following the available evidence of the earlier construction. From old drawings it appears that the temple had lateral projections similar to those of the Vaital deul (seventh century AD) at Bhubanesvar, the Bhitargaon temple (sixth century AD) (*Figs 7, 8*), and Telika Mandir (*c.* sixth century AD) at Gwalior. During the restoration Carlleyle did not follow the

FIG. 7. The Bhitargaon temple.

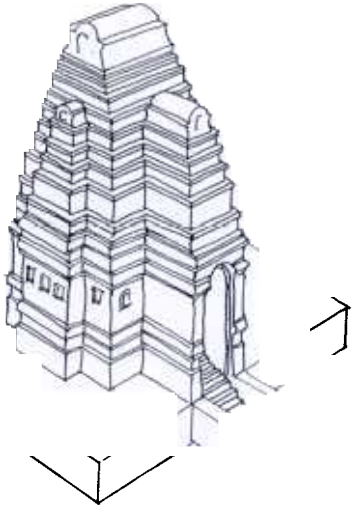

FIG. 8. Conjectural form of the Bhitargaon temple (after Percy Brown), which is suggestive of the likely shape of the *nirvana* temple.

original layout, but erected a simple rectangular structure with a porch. The original form was supposed to have been covered with a vaulted roof, of which fragments recovered from the site were assumed to be part. It is difficult to understand why there was such a deviation from the known designs of contemporary structures, and why the plan of the temple should have been changed (*Figs 9, 10*). The image of the Buddha also seems to have been shifted from its original place without any justification. In Brahmanic temples, the reclining image of Visnu and the Seven Mothers are required to be enshrined in rectangular structures with vaulted roofs. In this particular case of a Buddhist temple, the ground plan also had to be rectangular because the statue is reclining; and as it is probably the only one of its kind in India, it ought to have been preserved by careful restoration. But the 1876 form has been retained, and there has not been any attempt in the recent restoration to revert to the original design despite the availability of some old drawings and some evidence on the site.

To conclude, what we find now at Kusinara is a deformed version of the original *nirvana*-temple which has undergone major changes by thoughtless restoration. Similarly the *stupa* also has an imaginary shape suggested by the original restorer. From an architectural point of view

they have to perform, but rather because of their incompetence in order that they may not forestall the credit he thinks may accrue to him for the great work he one day hopes to be able to publish on Indian archaeology. He seems to be afraid that some one should appropriate to himself a share of what he thinks belongs to him and him only. On any other thesis, at least, it seems impossible to account for his employment during so many years of so incompetent an assistant as Mr Carlleyle'. Cunningham, an army engineer who became the first Director General of the Archaeological Survey, had neglected conservation totally while concentrating on his

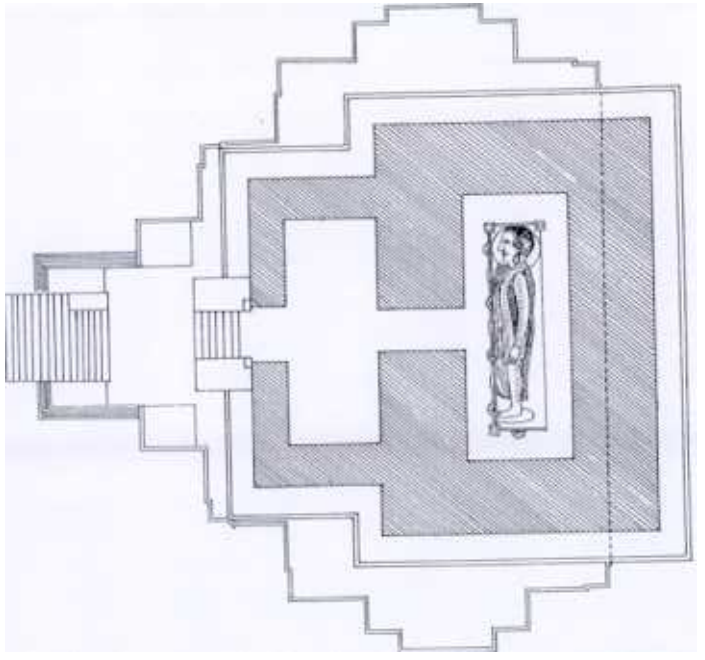

FIG. 9. Plan of the original *nirvana* temple exposed by excavation. The superimposed hatched plan shows the alterations made during the 1876 restoration.

'search for past architectural styles, art treasures, coins and inscriptions'. This lapse on his part, however, drew attention to the necessity of preserving the ancient monuments and caused a subsequent demand for the creation of a post of Curator of Ancient Monuments for conservation; but the request was turned down on the grounds that the job could be done by the Director General and the proposed post would be 'an unnecessary fifth wheel in the coach'. Since then a conservator-restorer has never formed part of the team of Indian archaeologists.

FIG. 10. Elevation of the temple as restored in 1876.

none of the structures has retained its old character, and yet the place maintains its sacredness and is visited regularly and venerated by devout Buddhist pilgrims from all over the world. To them the place still retains it aura, its emotional appeal through association with the Buddha's presence; and because of that its restoration is believed to be justified.

Résumé

La *stupa* sacré de Kasia ou Kusinara qui contient les reliques de Bouddha s'effondra en 1963. Il fut restauré à l'identique mais la question est de savoir pour quelles raisons il tomba en ruines et que veut dire, dans ce cas, restauration?

Un autel et un *stupa* situés sur une haute plateforme furent dégagés en 1876 au milieu de ruines du Ier et IIème siècle ap. JC dans un site qui était encore habité du Xème au XIème siècle. Certaines parties des ruines furent alors dégagées et reconstruites; mais en 1963, après six jours de pluie incessante, l'édifice reconstruit s'effondra dans un grand bruit. A cause de la haute valeur symbolique du monument, sa destruction eut un grand retentissement parmi les bouddhistes du monde entier qui demandèrent restauration bien que ce n'était pas la politique officielle de construire une structure religieuse de plan arbitraire sur un site archéologique.

L'effondrement fut causé par l'augmentation du volume du remplissage de terre qui était saturé d'eau et qui provoqua l'éclatement des murs. L'auteur décrit les fissures qui avaient été remarquées auparavant et il souligne que rien ne laissait prévoir que la construction de *stupa* différait des autres constructions étant donné qu'aucune description des restaurations précédentes n'existait. Il n'était venu à l'idée de personne qu'il s'agissait seulement d'une mince paroi qui retenait un remplissage de terre. Au cours de la reconstruction, les fondations furent consolidées et recouvertes d'une couche protectrice imperméable. La superstructure fut également consolidée grâce des anneaux de béton armé insérés dans la brique qui fut recouverte de plâtre et d'enduit.

Si le *stupa* a souffert que dire de la sculpture du XVème siècle? C'est un bouddha allongé en posture de *nirvana*. Lorsqu'elle fut découverte en 1876 elle était en très mauvaise condition avec plusieurs morceaux qui manquaient. Les réparations furent faites en ciment et la statue peinte en jaune, noir et blanc. Elle a maintenant été peinte à la feuille d'or, ce qui est plus approprié.

Le temple lui-même fut restauré en 1876 mais le plan original n'a pas été respecté; or il s'agissait probablement d'un temple unique en son genre dans toute l'Inde et les récentes restaurations n'ont même pas tenté de retrouver la forme originale. En conclusion, à Kusinara nous nous trouvons devant une version déformée du temple original qui a subi de nombreuses transformations au cours de restaurations irréfléchies. De même le *stupa* a une forme tirée de l'imagination du restaurateur. Aucune des structures n'a conservé son caractère architectural original. Néanmoins, le site a conservé son caractère sacré et de nombreux pélerins bouddhistes du monde entier lui rendent régulièrement visite et le vénèrent. La présence de Bouddha lui confère toujours une aura certaine une signification émotionnelle. C'est pourquoi on peut dire que sa restauration est justifiée.

Resumen

La *stupa* del Nirvana, en Kasia o Kusinara, que conserva los restos mortales de Buda, se hundió en 1963. Desde entonces, ha sido restaurada a su forma anterior al hundimiento; pero, ¿por qué ocurrió así y qué significa esta restauración?

Entre las ruinas de los restos monásticos que datan desde el siglo I y II hasta la época en que el lugar estuvo sin habitar en los siglos X a XI, en 1876 se excavaron un santuario y una *stupa* en una plataforma elevada. En aquel entonces, se despejó parte de la *stupa* en ruinas antes de reedificar; pero en 1963 se hundió con gran estrépito después de seis días de lluvia incesante. Debido a su extraordinaria importancia, los budistas del mundo entero quedaron consternados, y se pidió su reconstrucción a pesar de que no es política gubernamental construir edificios religiosos de diseño arbitrario en un emplazamiento arqueológico.

El hundimiento se debió al relleno de tierra que se había saturado y aumentado de peso y volumen, lo cual produjo presión excesiva sobre las paredes circundantes, que por fin reventaron. El autor comenta las grietas que se habían notado anteriormente, pero indica que, puesto que los datos de restauraciones anteriores no se habían conservado con detalle ni habían sido facilitados, no había motivo para suponer que la construcción de la *stupa* fuese distinta de otras

de estructura sólida. No se pensó que pudiera ser únicamente una delgada pared exterior rellena de tierra. Durante la recontrucción, se vigorizaron los cimientos y se añadió una membrana impermeable. También se ha reforzado la superestructura mediante anillos de hormigón armado en el ladrillo, el cual ha sido enyesado y enjalbegado de color.

Si la *stupa* había sufrido grandes daños, no le había ido mejor a la escultura del siglo V, en piedra arenisca, del Buda reclinado en nirvana, en el interior del templo. Al excavar en 1876, se vio que estaba altamente deteriorada y que le faltaban varias partes. Se llevaron a cabo reparaciones utilizando cemento portland, y se pintó la figura de amarillo, negro y blanco. Ahora ha sio dorada de modo más adecuado, con pan de oro.

El propio templo se restauró en 1876, pero no de acuerdo con el esquema original, que probablemente era el único templo budista de su clase en la India. En la reciente restauración, no se ha tratado de volver al diseño original. En resumen, lo que se encuentra ahora en Kusinara es una versión deforme del templo del nirvana original, que ha experimentado cambios de importancia debidos a una restauración insensata. De modo semejante, la *stupa* tiene también una forma imaginaria sugerida por el restaurador inicial. Desde el punto de vista arquitectónico, ninguna de leas estructuras ha conservado su antiguo carácter, a pesar de que el lugar mantiene su condición de sagrado y es visitado y venerado con regularidad por devotos peregrinos budistas de todo el mundo. Para éstos, el lugar mantiene su aura y su atracción espiritual debida a la asociación con la presencia de Buda, y por eso se cree que su restauración está justificada.