

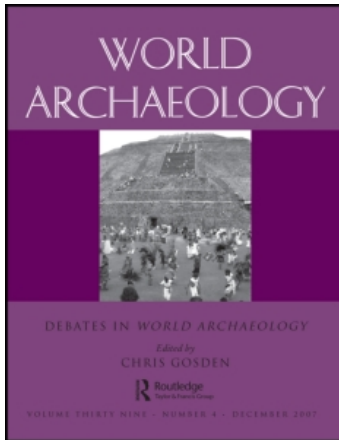
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### Restoration and reconstruction of monuments at Bagan (Pagan), Myanmar (Burma), 1995-2008

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# Restoration and reconstruction of monuments at Bagan (Pagan), Myanmar (Burma), 1995–2008

Bob Hudson

## Abstract

The reconstruction of Myanmar's eleventh- to fourteenth-century CE capital, Bagan, has been perhaps the most radical heritage management project in modern times. At least 1,299 Buddhist temples, monasteries and stupas have been speculatively rebuilt from mounds of rubble since 1995. A further 688 damaged buildings have received major repairs. This paper considers the contrasting views of donors who wish to make merit, of the Myanmar military regime which wishes to present a national palladium, of political interest groups who are critical of the regime's motives, of heritage architects who are critical of the methods of the reconstruction project and of archaeologists and historians who have received new data to analyse.

## Keywords

Bagan; Myanmar; restoration; repair; pagodas; UNESCO.

## Introduction

Never a lost city, or a buried one, Bagan has sat for a millennium by the Ayeyarwady river in the dry zone of Upper Myanmar (Fig. 1). There has been weather and earthquake damage to its brick monuments, but also continuing repair and renovation. The world has usually heard of the most recent repair efforts, which began in 1995, in highly critical terms, such as this from an official of UNESCO: 'a Disney-style fantasy version of one of the world's great religious and historical sites is being created by (the military) government. . . . They use the wrong materials to build wrongly shaped structures on top of magnificent ancient stupas' (Crampton 2005).

This paper reviews the recent history of the city, and discusses the views of the stakeholders in the controversy over reconstruction, but its main purpose is to propose

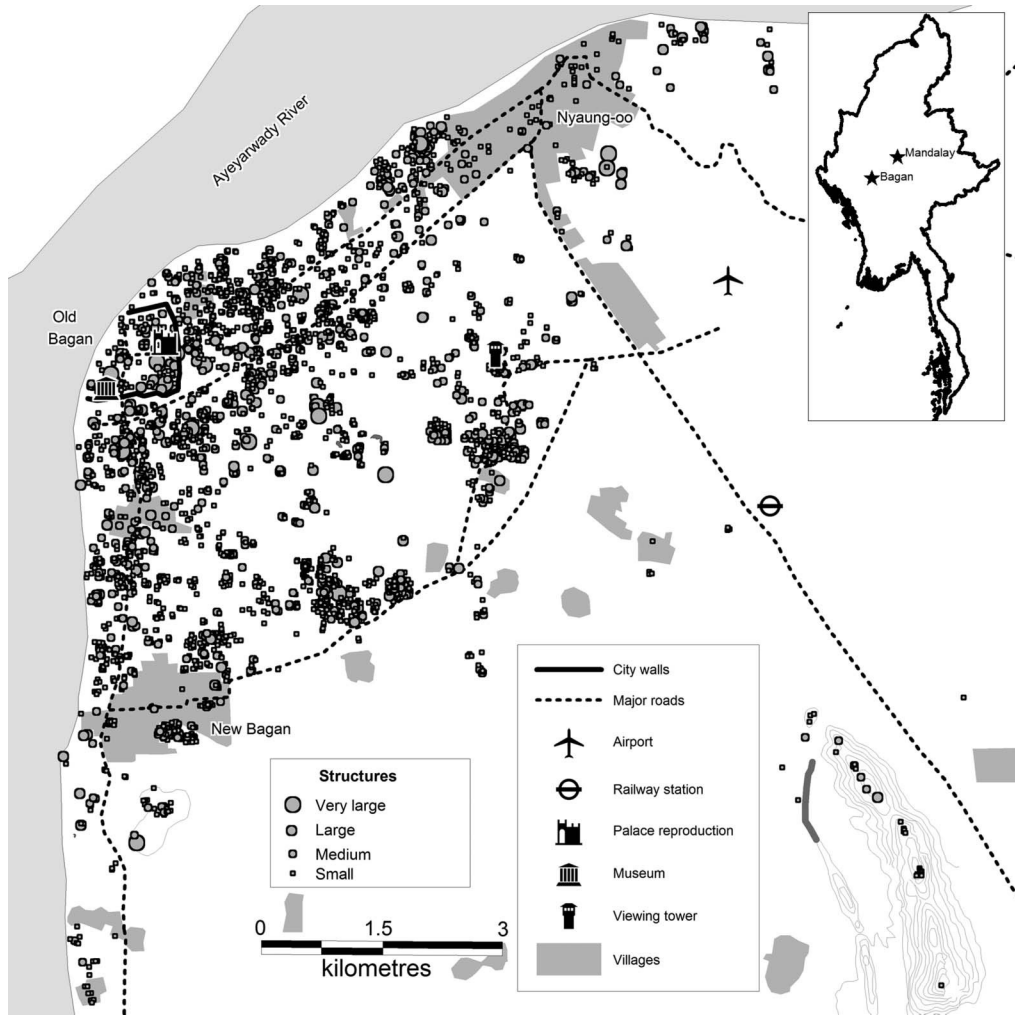


Figure 1 Bagan: location of buildings and key landmarks. Insert shows location within Myanmar.

and apply tools and methodology to extract information from Bagan as it is today. Survey data, acquired during ongoing fieldwork that has included several excavations (Hudson 2004; Hudson et al. 2001, 2002), have been recorded digitally in the *Bagan Working Database* (Hudson 2008). These data should help determine just what modifications have been made to Bagan since 1995, and to determine, in turn, whether previous research priorities need to be reconsidered or whether new research directions might be suggested.

## Background

Bagan was the power-base of eleventh-century warrior-kings whose military commanders became civil administrators, the nobility. By the thirteenth century, its control extended

pretty much to the borders of modern Myanmar (Harvey 1925: 22; Hudson 2004: 183–7). A key element of life in the kingdom was ‘the overriding desire for salvation through merit’ (Aung-Thwin 1985: 5). The physical manifestation of this desire was the construction of monuments (Aung Kyaing 2007; Luce 1969) decorated with artworks that illustrated the exemplary lives of Buddha (Bautze-Picron 2003), the creation of a literal, as well as figurative, ‘field of merit’ (Aung-Thwin 1985: 176; Spiro 1982: 410; Stadtner 2005). Around 2,800 brick buildings are recorded in the eight-volume *Inventory of Monuments at Pagan* (Pichard 1992–2002). Several hundred more have been rediscovered since the inventory was completed, as this paper will show.

Bagan ceased to be a power centre in the early fourteenth century. Forces contributing to its decline included regional geopolitical pressure and the political and economic effects of a huge programme of religious donations in the thirteenth century. Subsequent capitals including Sagaing, Ava (Inwa), Amarapura and Mandalay, all close by each other, generally dominated Upper Myanmar until the country was colonized by Britain in the nineteenth century. Bagan remained a centre for pilgrimage and religious study, but many of its buildings deteriorated due to lack of upkeep, earthquakes and general weathering (Aung-Thwin 1985; Frasch 1996). Inscriptions anticipated this deterioration. Around the middle of the twelfth century a royal lady donated cattle, rice fields and ‘slaves big and small’ to maintain a ‘holy one’, a temple with associated monastery, water supply and gardens, saying ‘whoever not conserves them but leaves them defective or in ruin, though they be my children or grandchildren, may the rice and curry they eat, the water they drink, the house they live in, become poison . . . like as they would see a snake and want to kill it, may they be killed themselves’ (Pe Maung Tin and Luce 1960: 255).

### **Damage, repair and the UNESCO inventory**

Ruin occurred, of course, despite such imprecations. There are inscriptional records of damage to buildings by flooding in 1331, by treasure hunters in the fifteenth, sixteenth and eighteenth centuries, by looting during the Ava-Hanthawaddy wars of 1742–54 and by at least sixteen earthquakes between 1174 and 1975 (Than Tun 1996a, 1996b). Repairs are just as widely recorded. The English diplomat Hiram Cox paid a visit in 1796 to the twelfth-century Ananda, a temple just east of Bagan’s walled elite centre, which had been ‘repaired and beautified by the present prince of Pagan’ (Cox 1821: 415). Than Tun (1996a) lists seventy instances of ‘making new’ at Bagan between 1212 and 1965, a practice he calls ‘a sad story of antiquities being ruined through repair’.

The most disastrous instance of damage came when an earthquake hit Bagan in 1975. International readings of the shock ranged from 5.9 to 6.5 on the Richter scale (Min Wun 1989: 114). Many *sikhara*, towers on top of temples, collapsed. Arches, terraces and domes of buildings cracked. Murals and external stucco flaked off, leaving the walls underneath vulnerable to rain damage (*Pagan Newsletter* 1982–9; Pichard 1992–2002). By 1988, 150 monuments had been repaired by the Burmese government and United Nations agencies. Almost one million US dollars was supplied through the United Nations Development Programme. Funding for repairs for a further two dozen structures was provided by trustee committees, who maintain some of the buildings at Bagan as active worship sites.

France, Japan and Yugoslavia contributed training, equipment and expertise. Italian experts worked on the preservation of mural paintings (Nyunt Han 1989). Conservation methods including the application of reinforced concrete belts and jacketing, strengthening with steel-tied bars, and repair and strengthening by injection of concrete were introduced (Gavrilovic and Pichard 2000).

The architect Pierre Pichard was tasked by UNESCO with creating an inventory in which every known structure was mapped, measured, photographed and characterized. Size was categorized as small (maximum dimension of the ground plan 12m or less), medium (12–25m), large (25–50m) and very large (50m or more). The key types according to their architectural qualities were defined as temples (buildings with an accessible interior space), stupas (solid, pyramidal reliquaries) and monasteries, brick residences which may bear evidence of having had wooden-pillared halls attached. (The term ‘pagoda’ is also used collectively for temples and stupas.) The condition of structures was ranked on a nine-point scale that ranged from buildings that had been re-plastered or whitewashed and were maintained by trustees, and buildings regularly maintained or restored by the Department of Archaeology, through to ruins that were partly buried under debris and unexcavated mounds whose ground plans were untraceable (Pichard 1992–2002). Tabular information from the Pichard survey was later made available online (EFEO n.d.).

The *Inventory* includes eight statues, six glazing kilns (a seventh was discovered more recently), ten ordination halls and a few assorted items such as bell towers, image or inscription houses and buildings that were reported in old records but have now disappeared. It attributes forty-five structures to the eleventh century, 211 to the twelfth, 2,077 to the thirteenth and 277 to the fourteenth. The numbers drop below twenty in the fifteenth to sixteenth centuries, while close to 100 structures are attributed to the eighteenth and nineteenth centuries. The *Inventory* lists 1,326 buildings with stucco, which suggests that plastering the outside of a new pagoda was standard in the Bagan period, as it is across Myanmar today. Murals survive in 483 buildings. There were 185 buildings with stone or painted epigraphs, which in some cases identify the donors or provide dates. A total of 1,919 structures were categorized as half-ruined, completely ruined or mounds. The *Inventory* provides a vital record of the monuments in their post-earthquake state: a state that did not last long.

### **The 1988 regime and international opinion**

On 3 August 1988, an international symposium opened in Bagan to discuss the study, preservation and development of the site (Ishizawa and Kono 1989). On the same day, martial law was declared in Yangon, part of a process of reaction to civil unrest that saw the Ne Win regime replaced by a new military government the following month. One of the side-effects of the unrest of 1988 was an expansion of the traditional occupation of ‘treasure hunting’, effectively the looting of archaeological sites. Participants at Bagan have told me that they were able to pan for residual gold that had fallen off decaying buildings because government officials had left historic sites unpoliced (villager interview, pers. comm., Feb. 2004). At the symposium, the Department of Archaeology indicated

that treasure hunting was a long-standing issue, suggesting that ‘digging and sieving in search of gold throughout Pagan area should be effectively prohibited because such activities could endanger the stability of the ancient monuments’ as well as proposing that ‘expansion of urban settlement ... detrimental to the existence of ancient sites and monuments ... should be controlled by legal enforcement’ (Nyunt Han 1989: 99).

In July 1990 the government ordered the population living within the city walls of ‘Old Bagan’ to move to New Bagan, four kilometres to the south. This was partly in response to treasure hunting, according to anecdotal evidence. In policy terms, it was comparable to steps taken to reduce the impact of tourist service providers at the Valley of the Kings in Egypt (Mitchell 2000) and at Petra, in Jordan, where UNESCO proposed a no-building zone to restrain urban development (World Heritage Centre 1993), although some of the experts at the 1988 Bagan symposium (Pichard 1989), and indeed the government’s own tourism authorities (Hotel and Tourist Corporation 1989), had proposed integration of the ‘Old Bagan’ villagers, some of whom were traditional caretakers of religious buildings, into the heritage site. The Western media did not canvass policy issues, but reported the move as politically motivated population control (for a characteristic response, see Wudunn 1990). Since then, the management of Bagan has generally been discussed within a broader context of political critique of the military regime (Htein Linn 2002; Joshi 2003; Paddock 2006; Reuters 2006; South 2007: 96; Wheeler 2003). The political scientist David Steinberg recently described the state of international discourse on Burma as involving ‘an almost absolute polarization of views ... rigidity on both sides between the state and the opposition together with its supporters’ (Farrelly 2007). Heritage policy has proved no exception.

### **UNESCO in the 1990s**

International financial and heritage management involvement in Bagan diminished in the 1990s, although in 1994–6, US\$283,400 was provided by the UNESCO-Japan Trust Fund project to ‘propose guidelines for cultural heritage protection in harmony with development activities’ (UNESCO 2002). Bagan was placed on the World Heritage Tentative List in 1996 (UNESCO 2008). An allocation of US\$30,000 was approved in 1999 for the ‘preparation of a management plan for the Bagan archaeological area and monuments’ (UNESCO 2000).

The UNESCO Documents and Publications website contains over thirty technical reports on the repair programme, mostly submitted between 1987 and 1995. The most recent public discussion of policy in this archive appears in a UNESCO magazine in 2000, after officials visited Bagan and recommended that the Bagan golf course be declared an area reserved for tourists (and so not used for agriculture, a move to preserve old buildings within the golf course) and that a road be built from the local airport to New Bagan, to bypass the monument zone (Fig. 1). The road was built. The UNESCO officials acknowledged that to the Burmese Buddhists

restoring a temple doesn’t mean so much restoring it to how it originally looked as enabling it to become a place of worship again. And in the Buddhist tradition, a

building doesn't become a temple unless a holy object is placed on top of it. Without this, the remains of a temple, even if they're 1,000 years old, are only a heap of stones of no religious significance.

(Wolf 2000: 23)

They noted that restoration work which had been under way for several years before their visit was shoddy, that industrial bricks and cement had been used in places and that the Myanmar authorities had admitted that the work had been done too hastily and had requested help with training (*ibid.*).

### **Repair, restoration and reconstruction since 1995**

In 1995, the Archaeology Department at Bagan was in search of funds to repair buildings that were suffering from rain damage and general deterioration, which had been exacerbated by the 1975 earthquake. Khin Nyunt, 'Secretary One' of the regime, then known as SLORC, the State Law and Order Restoration Council, approved a television, radio and press campaign calling for public donations. A constant economic flow from the public to the religion, by which merit is believed to be gained by the donor for future existences, is a key process of Burmese Theravada Buddhism (Spiro 1982: chs 4, 19). The volume of donations quickly allowed the programme to extend beyond repairs, to the reconstruction of marginally identifiable ruins, and to the excavation and speculative reconstruction of structures beneath brick mounds. A list was established from which donors could select individual structures to sponsor. The money was collected and administered by the Ministry of Culture (henceforth MOC) and the Archaeology Department (*New Light of Myanmar* 1998).

By 1998 the Archaeology Department was able to tell a World Heritage Convention mission that private companies had contributed over US\$1,000,000 (UNESCO n.d.). As well as corporate sponsors, donors, named on marble plaques set up in front of the repaired buildings, include military and police officers, government departments, international religious groups (temple 801, repaired by the Yoe Lay Buddhist Sect from Korea), individuals and families, service organizations (temple 2320, the Takamatsu North Rotary Club from Japan), expatriate Burmese (the US and Canada are well represented) and Westerners. Modest donations are acknowledged along with more substantial ones: a plaque in the Hsin-byu-shin monastic complex includes the names of thirteen individuals who had each given 500 kyat, about 50 US cents, to repair an in-ground water tank. Some buildings are dedicated to the memory of deceased relatives. A frequently stated motive of donors is that they wish to make a contribution to the perpetuation of Buddhism, and that the merit is to be shared with all sentient beings.

The clearing or excavation of ruined buildings or unidentifiable mounds preparatory to reconstruction, and the monitoring and recording of the work, is the responsibility of the Archaeology Department. Elevation and plan are drawn to scale by departmental staff on the basis of the excavated foundations, a budget is drafted, a donor is offered the site, and the work is allocated to a contractor (Fig. 2). Most of the reconstruction work since 1995

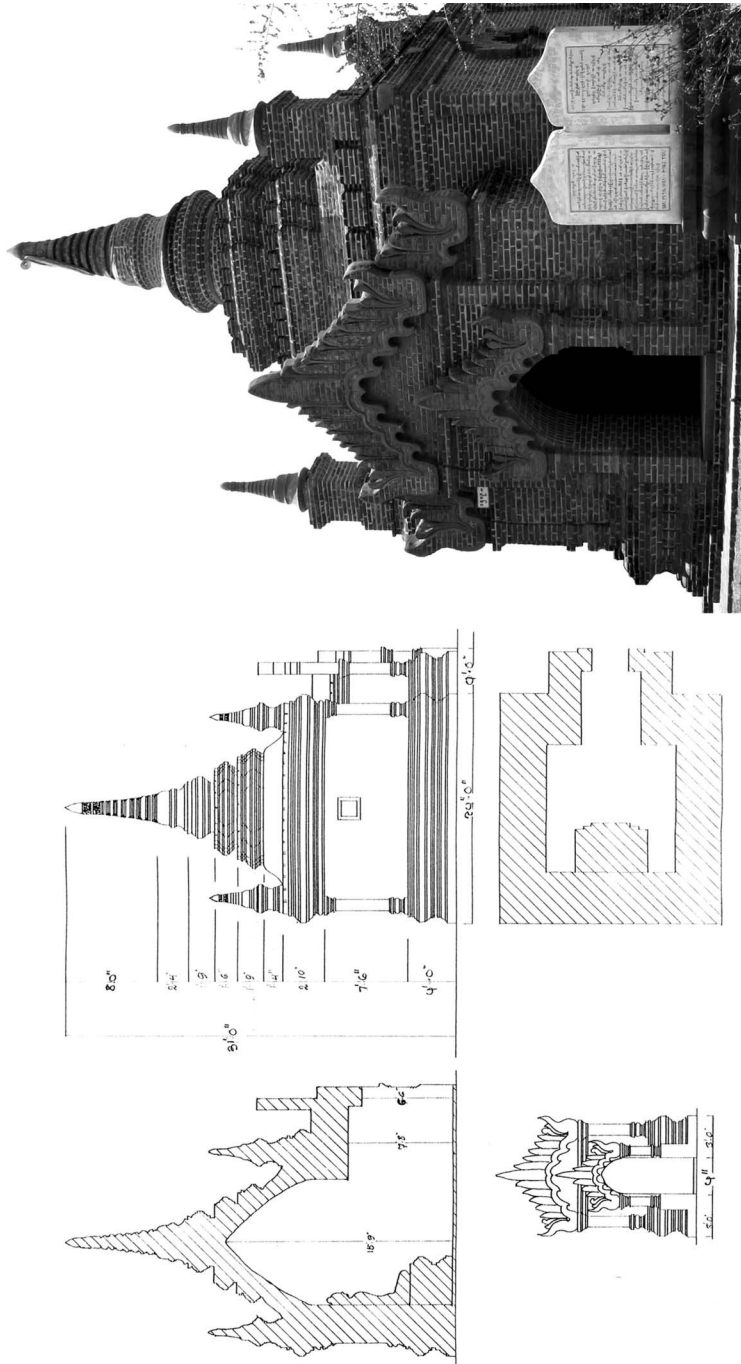


Figure 2 Archaeology Department plans for temple 1589A (measurements in feet and inches), and the completed building, with donor plaques. Construction, completed in 2005, cost the equivalent of US\$ 2,500. (Photo 2008.)

has been done by around eight contractors, some of whom are former Archaeology Department engineers. The work is recorded in five MOC publications, in Burmese, which include ‘before and after’ photos, ground plans, names of the donors and the cost of the repairs (Department of Archaeology 1999, 2000, 2001, 2002, 2003). Officials say a sixth volume is in preparation.

### **The Bagan Working Database: a tool for reviewing the repair programme**

A key tool for surveying the post-1995 repairs and providing answers to new research questions is the *Bagan Working Database* (henceforth the *Database*), a cumulative digital resource (Hudson 2008). This was developed independently of the EFEO online version. It initially took tabular data directly from the *Inventory of Monuments* (Pichard 1992–2002), but the location of each structure, which in the *Inventory* is on an arbitrary metric grid, was placed in its real position on the surface of the earth by using geo-referenced satellite imagery of Bagan. When opened in a desktop mapping programme, these data can be viewed as an on-screen map or as a table of variables. Previously unrecorded structures located in the satellite imagery or in the field were then added to the *Database*.

The one-metre resolution IKONOS satellite imagery at times directly helped to determine which structures had been rebuilt. One feature that became apparent was the presence of patches of lime, which is mixed with sand to make mortar (see Plate 3.4 below). A patch of lime is a good indicator that a nearby building not clearly detectable in the imagery has been repaired. This was confirmed in many cases by the data from the MOC publications, which identify 1,030 rebuilt structures, as well as by my examination of the sites in person, a process more formally known as ground-truthing. The data from the MOC publications, from satellite observation and from ground-truthing are included in the *Database*, linking the current condition, including extent of reconstruction, of each building to its other variables.

#### *Defining reconstruction*

The *Database* currently has 3,388 entries. Of these, 3,345 are structures. As outlined earlier, the *Inventory of Monuments* characterized the condition of structures on a nine-point scale, from fully maintained (which for the Ananda is the result of ongoing work such as the repairs Cox reported in 1796) to unidentifiable mounds, although the *Inventory* did not directly score each structure on this scale. The *Database* divides the repaired buildings into two broad groups, buildings that have had major reconstruction, and buildings that have had a complete rebuild (Table 1). ‘Major reconstruction’ is defined as the repair of a building that was previously identifiable, perhaps with spires or window facings missing, or with collapsed roofs but at least half its walls remaining. On the current count, 688 buildings have had major reconstruction. This may include repairs or conservation over the past hundred years by the Archaeology Department, post-1975 repairs by the Burmese government’s public works agency and repairs by contractors funded by post-1995 donors. ‘Complete rebuild’ is defined as reconstruction of a building

Table 1 Extract from the *Bagan Working Database*. 'Total items' is not a total of the columns: a small thirteenth-century temple may also count as being maintained by trustees, for example. More than 300 mounds remain unexcavated, while more than 250 rebuilt pagodas recorded via satellite imagery await ground-truthing and characterization as temples or stupas.

<i>Bagan Working Database 2008: structures by century.</i>											
<i>Split cells show total number (left), completely rebuilt (above right, bold), major reconstruction (below right, italics)</i>											
Century	11th	12th	13th	14th	15th	16th	17th	18th	19th		
Temple – small	5	$\frac{2}{2}$	$\frac{22}{25}$	$\frac{448}{218}$	$\frac{17}{14}$	$\frac{3}{7}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{5}$	$\frac{1}{2}$	$\frac{1}{2}$
Temple – medium	4	$\frac{2}{2}$	$\frac{6}{24}$	$\frac{44}{96}$	$\frac{3}{4}$			1	1		
Temple – large	8	$\frac{5}{5}$	$\frac{19}{16}$	$\frac{3}{23}$	$\frac{3}{2}$						
Temple – very large											
Stupa – small	14	$\frac{3}{3}$	$\frac{21}{23}$	$\frac{383}{129}$	$\frac{15}{3}$	$\frac{2}{4}$	$\frac{1}{7}$	$\frac{3}{7}$	$\frac{3}{33}$	$\frac{4}{30}$	$\frac{1}{6}$
Stupa – medium	4	$\frac{2}{2}$	$\frac{3}{6}$	$\frac{10}{24}$	$\frac{2}{3}$						
Stupa – large	4	$\frac{2}{2}$	$\frac{2}{6}$	$\frac{5}{5}$		1					
Stupa – very large	2	—	1	$\frac{2}{7}$							

(continued)

Table 1 (Continued)

		<i>Bagan Working Database 2008: structures by century.</i>									
		<i>Spit cells show total number (left), completely rebuilt (above right, bold), major reconstruction (below right, italics)</i>									
Century		11th	12th	13th	14th	15th	16th	17th	18th	19th	
Monastery – small			2	279	<b><math>\frac{27}{7}</math></b>	85	$\frac{5}{7}$		1		
Monastery – medium			4	$\overline{7}$	<b><math>\frac{3}{6}</math></b>	22	$\frac{1}{7}$	3	1		
Monastery – large			3	$\underline{1}$	16	9			1		
Monastery – very large				3							
Mound – small	1	1	1	204	43						
Mound – medium	1	2	88	2	2				1		
Mound – large				13	2						
Rebuilt pagoda, type not yet identified			2	255	13						
Maintained by trustees	14	13	56	7	2	2	4	6	76	63	
Departmental repair or conservation, post-earthquake repairs	26	77	257	31	2	2	2	2	13	9	
Total items	46	214	2599	279	12	11	15	99	80		

that had less than half of its walls apparent, including mounds that have been excavated to expose their surviving foundations. There are 1,299 buildings in this category.

*Degrees of authenticity*

Buildings maintained by trustees (241) or repaired by the Archaeology Department (236 recorded in the *Inventory*) or UNESCO might generally be taken as structurally authentic. Additions or modifications such as interior whitewashing or the addition of the *hti* or metal umbrella, a standard feature of modern pagodas which is not seen in the wall art or surviving interior stucco pagoda shapes from the Bagan period, are perhaps the most common non-original features.

With major reconstruction, original surviving parts of the structures tend to be evident in the rebuild. The complete rebuilds present problems relevant to the parts of the structure that survive. Where only the central pillar of a temple or the core of a stupa may have survived, the available data on the type and style of the structure are literally up in the air. Stupa 770, for example, was rebuilt on the basis of a small original section of stuccoed dome that had survived on top of a disintegrating pillar (Plate 1). Temple 1130C, rebuilt from a previously unrecorded mound, has been reconstructed on the basis of a fairly complete ground plan, where original foundations, including the shape of a porch, exist up to 60cm above ground level (Plate 2). The dimensions of the building give a clue to the volume of economic resources used in its construction, its type cannot be doubted, but the valid data end 60cm above the ground.



*Plate 1* Stupa 770 before (left) and after (right) reconstruction in 1997.



*Plate 2* Temple 1130C. Interior rebuilt in 1998 above original walls (arrowed). The brick pedestal with a reproduction of a Bagan-style brick and plaster Buddha image have been rebuilt over the core of the original pedestal. (Photo 2008.)

At the bottom end of the scale of authenticity are structures which show little or no evidence of original brickwork, either in the reconstructed walls or as debris in the surrounding area. It is easy to suggest that some of these may be fanciful reconstructions, but they might also be built above original foundations. In April 2008, I was shown a series of underground brick lines 170m east of the Ananda Temple. They had been exposed during digging by an archaeologist who was searching for old wells, and were under a metre of topsoil, with no indication on the surface that they were there. Beyond being a strong indication that there may be still more structures at Bagan to be discovered, they support the argument that reconstructed buildings showing no original material may be based on at least *some* original foundations.

The contractors do not always make it easy for those who would wish to give them the benefit of the doubt. Building 2779, for example, a former unidentifiable mound under reconstruction in April 2008 (Plate 3) was set to be rebuilt as a temple. A section of wall with a staggered return, characteristic of a temple doorway, on one end had been exposed (1), but the new foundation (3) ignored a second section of wall (2). This piece of wall may have been part of an enclosure round the original building, but the rest of the structure is gone, perhaps from re-use of bricks some time in the past. The most, really, that this rebuild can tell us is that a small structure, possibly a temple, existed on this spot, and may have been part of the construction programme of the complex in which it sits.



Plate 3 Mound 2779, with excavated foundation (1) and new brick footings (3), set to be rebuilt as a temple. A separate brick line (2) may be remnants of an enclosure wall. The heap of lime (4) used for mortar for a nearby reconstruction was visible in satellite imagery. (Photo 2008.)

*Periodizing the original construction*

The *Inventory* estimated the age of buildings by century. Buildings that came with dated inscriptions formed the core of the information. Structures with the same architectural style and decoration, or structures within the same compound or cluster, were dated by association. Inscription stones found so far during the renovation programme confirm the *Inventory* estimates (Than Tun 2005).

Of the 1,030 structures listed in the MOC volumes, 481 were already in the *Inventory*, with estimated periods attributed to them. The remaining 549 have been attributed by the Archaeology Department to the thirteenth century. Many of these cluster with known thirteenth-century buildings. For the *Database* I have tentatively assigned the 481 as yet unpublished rebuilds, excavated bases or mounds that have been located either from the satellite imagery or my fieldwork to the thirteenth century as well, based on association with structures already periodized.

*Research potential of the Database: some implications for historical studies*

Even before the newly discovered structures were added to the *Database*, the *Inventory* showed a building boom in the thirteenth century (Hudson 2004: 238–59). Taking the new data on their merits, it can be suggested that between 1200 and 1280, a period in which inscriptions indicate the most intensive construction, which slowed following incursions by the Mongols in the 1280s (Hudson 2004: 251; Than Tun 2005), construction began on a small or medium-sized monument every fourteen days according to the *Inventory* figures, or every eleven days according to the *Database*.

The king's meritorious deeds, as Frasch (1996) puts it, were almost always related to real estate. The proliferation of small and medium-sized buildings attributed to the thirteenth century suggests that the donor base may have broadened during this period. For example, the cluster of thirteenth-century buildings around the Otein Taung pottery mounds, the city's major production site for domestic and architectural earthenware, may have been the donations of the potters (Hudson et al. 2001). The newly unearthed inscriptions and the spatial and volumetric information from the excavated structures have the potential to improve both historical and archaeological knowledge of the site. Architecture-based studies, however, can no longer rely on the exterior of the buildings, not, at least, without constant reference to the *Inventory of Monuments* or monographs such as Luce's (1969) *Old Burma, Early Pagan*.

**Heritage**

Most of the ruined buildings that could be seen at Bagan before the 1975 earthquake (and seen in an even more ruined state after the earthquake) have been repaired. Of the buildings identified in the *Inventory* or the *Database* as temples or stupas, 89 per cent have had major reconstruction or complete rebuilds. However, enclosure walls and gates in those walls are often still in a ruined state, and only 10 per cent of the monasteries have been rebuilt. Some monasteries have been conserved by the

Archaeology Department, either as excavated foundations, protected by brick buttresses and two or three courses of new brick laid over the original walls, or as roofless ruins stabilized after the earthquake. Donor reconstruction of monasteries is a recent phenomenon, with inscription stones characteristically bearing 2007 or 2008 dates. In Burmese, temples and stupas are collectively called *hpaya*, the 'holy one' mentioned earlier. A monastery is a *hpongyi kyaung*, a residence for a monk. The greater donor enthusiasm for restoring *hpaya* might reflect relative value in terms of acquisition of merit.

Apart from the buildings maintained by trustees, who usually whitewash them, the structures looked after or rebuilt by the Archaeology Department or the contractors are left with plain brick exteriors. This deliberate creation of bare brick 'archaeological' structures is in keeping with Pichard's view that 'the architectural authenticity of the monuments is reflected in the exposed brickwork' (*Pagan Newsletter* 1986), but in a way it also leaves them historically inauthentic. From the archaeological evidence, the exteriors of buildings were originally plastered, sometimes with reliefs including ogres, garlands of pearls and mythical creatures. They were whitewashed, and at times decorated with gilding, glazed plaques or glazed panels (Bautze-Picron 2003; Pichard 1992–2002).

I have observed contractors coating the new parts of a building with a brick-coloured wash, while leaving the original exposed foundations, or even a section of new brick located where original foundations might be expected, with the white mortar showing, emphasizing this 'archaeological' look. So the *spatial* landscape of Bagan, discounting the relatively small number of later buildings, is now as it might have been in the late thirteenth century. But *visually* and, in the case of the speculative rebuilds, *structurally*, it seems as much an idealized, pre-earthquake architectural impression as a reproduction, or a reconstruction, of thirteenth-century Bagan.

## **Conclusion**

International participants in the post-earthquake repairs remain concerned about the direction the donor programme has taken and the quality of the work. An International Committee for Documentation of Cultural Heritage (CIPA) conference was told in 2007 that:

the utilisation of new materials and the indiscriminate use of concrete have contributed to falsifying to a considerable extent the existing monuments. . . . The recommendations of UNESCO for the conservation of the masonry works and the paintings with the drawing up of a master plan went unheeded, since in actual fact the convictions of the government authorities, even if with certain dissentient voices, timidly raised, on the part of the local authorities and experts, found other systems for the safeguarding of the place, favouring above all the economic exploitation deriving from a site of such interest.

(Messeri 2007)

In defence of the repair programme, Culture Minister Win Sein said in 2001 that the objectives had been to satisfy the donors, to retain the original workmanship and design, and to make the buildings last longer.

A few people criticised us that ancient monuments should not be restored [he said] they also criticised that foreign tourists dislike such restoration works. We don't know whether tourists like or dislike our work . . . these are living religious monuments highly venerated and worshipped by Myanmar people. . . . it is our national duty to preserve, strengthen and restore all the cultural heritage monuments of Bagan to last and exist forever.

(New Light of Myanmar 2001)

Questions remain at Bagan, questions of cultural relativism with relation to donors who consider that they have obtained spiritual merit (Hudson 2000): how, for example, does corporate sponsorship fit the tradition of meritorious donation? There are questions of best engineering practice, of the politics of heritage management and of how we might revisit the early history of the city and polity. But these questions must be asked of a site that is no longer a jumble of picturesque ruins. Its reconstruction is well on the way to completion.

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