IMAGINED PASTS:
ANASYLOSIS AND THE CREATION
OF THE THAI NATIONAL PAST

John Victor Crocker
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Volume 1
Thesis Chapters 1 to 7
Bibliography

This thesis is submitted in fulfilment
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Declaration

This thesis is the writer's own work, unless otherwise acknowledged

John Victor Crocker
Submitted 26 April 2006
Acknowledgements

For any research student, the development and writing of a thesis is very much a journey, a journey usually solitary, sometimes lonely, sometimes apparently without end, but always dependent on the advice and support of guides and friends. In a way the writing of a thesis is as much a journey of self-discovery as it is one of the assemblage of knowledge. Like many others, I have been the beneficiary of the influence and assistance of many individuals both before and during the period of researching and writing the thesis.

I am in no doubt that I owe most to my supervisor Dr. Craig Reynolds, who has been a source of inspiration and encouragement through the several topic and direction changes which inevitably occur, not to mention the long writing period which this thesis has undergone. His deep knowledge of the period and the terrain has been of great use in identifying and locating relevant texts and concepts. His wide experience in writing and publishing scholarly works has also been of immense benefit in the actual writing and editing of the thesis. I also gratefully acknowledge the considerable help and encouragement received from Dr. Helmut Loofs-Wissowa. His vast experience in the fields of archaeology and Southeast Asian history has been of great benefit, as has been his provision of otherwise obscure references. I also wish to acknowledge the encouragement and much appreciated assistance of Achan Maliwan Buranapatana of Khon Kaen University.

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Any Asian Studies student should become familiar with the wide-ranging holdings of both the National Library of Australia and the Menzies Library of the ANU. All of the librarians have been of great assistance, but I wish to especially acknowledge the contribution which Vacharin (Khun Lek) McFadden of the National Library has made, not least by her knowledge of the Coedes collection of the Library.

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Finally, the most important factor in my studies over the past many years has been the interest and support of my wife, Rosemary, who has been both a fellow student in earlier years and a supportive and enthusiastic fellow explorer of the delights of the highways and byways of Thailand and its prodigious Khmer heritage.

Canberra, April 2006

Note: In this thesis I have attempted to follow convention or the Royal Thai Institute rules in the romanisation of Thai words, since it is often said that various romanisation systems tells you how the word is spelled in Thai, or how it is pronounced, but not both, and only complex systems express the tone to be used. In the case of the word for the Northeastern part of Thailand, I have chosen to use the construction “Issan” as best conveying to an English-speaker how the word is pronounced in Thai, rather than the competing forms of “Isan” or “Isaan”.
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<tr>
<td>BEFEO</td>
<td>Bulletin de l’ Ecole française d’Extrême-orient</td>
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<tr>
<td>BSEI</td>
<td>Bulletin de la société des études indochinoises</td>
</tr>
<tr>
<td>EFEO</td>
<td>Ecole française d’Extrême-orient</td>
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<tr>
<td>FAD</td>
<td>Fine Arts Department, Thailand</td>
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<td>JSS</td>
<td>Journal of the Siam Society, Thailand</td>
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Chapter 1

Creating and Finding an Image of the Past

The UNESCO World Heritage list, growing by some thirty entries a year, currently contains 756 entries for locations from around the world, some natural and some man-made, and of the man-made objects probably the most famous entry from Southeast Asia is the twelfth-century Khmer city of Angkor in Cambodia. This is the only entry from Cambodia and was listed in 1992; although it is now somewhat the worse for wear in parts from Khmer Rouge bullets and shells, it still retains its imposing presence. It is joined in the Heritage list by the Indonesian monuments of the tenth century Buddhist Borobudur and the coeval Hindu Prambanan, both listed in 1991. The only other religious monument in the list from Southeast Asia is that of Wat Phu in Laos, of an earlier date than Angkor. There are no entries of any sort from Myanmar, presumably for political reasons; the ancient city of Pagan and the Shwe Dagon temple would be obvious inclusions. All of these monuments are a testament to the presence of well-developed early civilisations in Southeast Asia.

Probably the most famous of these buildings’ profiles is that of Angkor Wat, loosely a part of the Angkor complex; it may well be as recognizable as other more recent world-famous buildings such as the Taj Mahal in India, the Eiffel Tower in Paris or the Opera House in Sydney. The Cambodian Government has chosen to display some of the more famous of its heritage items on its banknotes, including Angkor Wat, the Bayon at Angkor and the temple at remote Phra Wihan. The recognisability of the profile of Angkor Wat may be seen from this Cambodian fifty riel banknote.
While Wat Phu in Laos is still in an un-restored state, the buildings of Angkor, including the Angkor Wat temple, and the monuments of Borobudur and Prambanan, have all been extensively and carefully restored to something like their original state; by the late nineteenth century they had all been near ruin, due to neglect, natural decay and faults in their construction. Now, partly as the result of their being in the World Heritage list, they are the subject of much tourist attention, both national and international.

Although these monuments are well known and feature in travel brochures as desirable destinations, there are many smaller monuments in Southeast Asia of equal interest but rather less fame. The restoration of the fabric of the Southeast Asian cities or monuments, of the scale of Angkor or the Borobudur, did not occur haphazardly, and took many years to complete. The listing of Angkor amongst the treasures and heritage of the world’s peoples took place some 85 years after the commencement of the almost continuous work involved in its clearing and restoration. Nor is the fact of the work having taken place necessarily obvious to the average visitor. Bernard Groslier, one of the French Conservators of Angkor wrote:

And for those who love Angkor, there is no finer recompense (after an initial reaction of irritation...) than to hear a visitor exclaim in front of some monument, which has just been reconstructed stone by stone at the cost of patient efforts and attentive care over a three-, or perhaps a four-year period: “... They haven’t
much of a problem here, everything is in such a good state of preservation...

(Groslier 1966)

The same comment might be made about the temples of the Borobudur and Prambanan and their smaller, now restored, companions around Southeast Asia. The aim of any restoration, to be effective, must be to look as though nothing has happened to the structure since it was first built one thousand or more years ago. In this way, the viewer of the restored structure is allowed an image of the past, an image which would be unavailable if the monument in its ruinous state were to be presented instead. Restoration allows a monument to become a vehicle for the imagination of the viewer, if only to wonder at the ancient skills which led to the creation of beauty or grandeur in mundane materials.

In his book *Imagined Communities* (1991) Benedict Anderson identifies the means whereby the members of a community or nation may perceive their joint identity, and may equally identify the external Other. Anderson selects language, census, map and museums as vehicles for identification of the group with its present and past. Flags and other symbols are also potent symbols of joint identity. He quotes Renan (b. 1823) as saying, “But the essence of a nation is that all the individuals had a lot in common, and as well that they had forgotten many things” (Anderson 1991:199). Therefore to Renan, at least, nationhood involves a collective memory of the past, even though parts of it may have been forgotten.

In a parallel way, the past, like the nation, does not exist in any tangible form. The past cannot be seen or touched. All we can do is to identify the passage of time by general disorder and decay, based upon our own experience. We assume the past because of our own experience with time; we can remember events which have to us occurred at some earlier point in our existence and we extrapolate from experience and from physical things that events occurred before our coming into being, indefinitely into an increasingly imprecise past. But we obviously cannot remember what we have not experienced; therefore to imagine the past necessitates vehicles for the imagination, be they folk tales, myths, documents or concrete objects. To an Inuit without a written language, living in a constantly changing landscape made up of snow and ice, there can be nothing
topographical with which to identify past events; his or her conception of the past must be established solely from artifacts and orally transmitted myth. To the inhabitants of more temperate areas the past is available through literature, landscape and artifacts. Literature still requires the operation of the imagination to transfer the written word to an image in the imagination; landscape, artifacts, and particularly monuments, by their size and accessibility provide the human mind with a little more to work on. They allow the possibility of imagining the lives of the people who created them, one’s own ancestors or someone else’s.

In the case of some national monuments, there is no doubt as to the relationship between the past creators of monuments and the modern inhabitants of the state where they are located. In Southeast Asia, the monuments of Pagan have a close relationship, culturally and spiritually with the modern people of Myanmar, the monuments of Angkor have a close relationship with the modern people of Cambodia. However in other cases the link is more tenuous. The Hindu and Buddhist monuments of central Java may have a relationship with the modern people of Java, but the more recent Islamic religion in Java would tend to reject any association with the structures of other religions. The Brahmanic Khmer monuments of Northeast Thailand are similarly disconnected from the modern, almost totally Buddhist peoples of Thailand, both ethnically and spiritually. Nevertheless, modern usage is such that the countries where relics reside have a responsibility to protect and conserve such monuments, whatever their provenance. Where applicable, UNESCO provides funding and expertise to assist a country to carry out such work, as was done in Indonesia for the Borobudur.

Restoration is not a trivial matter however. The responsibility for the success of the restoration of Angkor Wat and like monuments lies with teams of archaeologists, architects, art historians, engineers and workers, often working for many years on a single building. While a failure to satisfactorily restore the building in some parts may be overlooked by a lay audience, other experts would be sure to notice faults and sharply critique their efforts, as in fact has happened in certain cases. To satisfactorily restore a large stone building, overcoming faults of construction and the results of the long-term action of natural processes, requires
the adoption of a well-tried, successful and appropriate methodology, plus the availability of a well-trained professional, skilled and semi-skilled labour force. In addition, where necessary, suitably tested modern materials may have to be used in a restoration in a way which will not have deleterious effects on the fabric of the ancient building being reconstructed.

Clearly, the development of these techniques and the provision of large amounts of money for their study and implementation on small and large monuments cannot take place in a vacuum, and the scale and lack of profitability of these activities generally requires that they will be the responsibility of the central government or administration where the monuments are located. While it is possible that a team of experts may persuade an administration to commit to the expenditure of thousands of man-years and millions of dollars for the scientific exercise, and for the satisfaction of restoring a major monument, there is probably a much greater chance of getting funding for such activities if there is an audience, and possibly an income to be derived from the audience to help partially defray the cost. As Reynolds says in his foreword to Peleggi’s *The politics of ruins and the business of nostalgia*,

Governments, civic associations, and the private sector alike take part in the promotion of the nation, a project which necessarily has an economic basis. Land has to be acquired and paid for, museums and historical parks have to be built and staffed, and education programs have to be funded. The capacity to raise funds may depend on international valuation of the heritage a nation has to offer; external validation by other nations and international bodies are a part of the process. Domestic and international tourism not only pays for some of the cost but also provides an audience to savor the richness of the national heritage. (Peleggi 2002:ix)

So a nexus may be required between the method of presentation of ancient historical and cultural material and the availability of a paying audience to view and appreciate it. In relation to large stone monuments, the presentation depends upon their restoration to a viewable state, and the technique used in Southeast Asia for the restoration of stone monuments, sometimes of Khmer origin, is that of *anastylosis*. This term is a neologism, meaning the application of particular principles of restoration of a building using the building’s original materials, and sanctioning the use of new materials only under special conditions. This thesis
will trace the development and transfer of this technique in Southeast Asia, leading to its application in Thailand. As part of the study, the issues of the ownership and use of the restored monuments as national symbols and destinations for tourism will be discussed.

The development of an audience to support and appreciate the work of the exploration and restoration of ancient monuments has been a slow process and has been the result of many inter-related factors. Without a suitable "market", much of the otherwise valuable scientific work in the study of such monuments may have had to be neglected or at best done on very limited means. The market in question which would support such activities is that of cultural tourism.

The development of Cultural Tourism

By "cultural tourism" is here meant no more than leisure travel whose purpose includes the seeking out and viewing of the ancient or modern cultural artifacts, the material culture, of one's native land or of a foreign country, as opposed to leisure travel whose purpose might be for a change of climate, change of scenery, visiting friends or whatever, with no interest in cultural items. This cultural tourism is amateur in nature and precludes the professional activities of archaeologists, historians, architects and others. The objects which are the purpose of such tourism may be regarded as the cultural heritage of the country in question, where cultural heritage had been defined by Peleggi as "In common usage, cultural heritage refers to cultural artifacts, both movable and immovable, as well as intangible cultural expressions, such as music and ritual performances. Even food, a daily consumable, may be regarded as a feature of a cultural tradition handed down from one generation to the next" (Peleggi 2002:3). In this thesis I will concentrate on the use of ancient monuments as objects of interest to tourists.

The use of ancient structures as objects of tourism has a long history, and may be seen as the result of the concatenation of several factors, including scientific advance, public education, economic development and available modes of transport. Probably the development of the science of archaeology in the nineteenth century, with its unearthing of lost cities and lost species, accelerated
the quantity and rate at which such knowledge was made available to the uneducated mass of citizens. Equally probably, the development of mass education at public expense and the availability of popular newspapers allowed the dissemination of such knowledge widely. The developments in science seem to have been accompanied in the late nineteenth century by a rise in popular and widely read literature devoted to the applications of science in remarkable ways; the success of novels by Jules Verne and H.G.Wells on scientific subjects are indicators of the general interest in such issues.

An interest in the Near East, ancient and modern, seems to have developed in Europe quite early. Peleggi says, “The origins of the “cult of ruins” can be traced back to the Renaissance, when the monuments of antiquity were first valued as proof of cultural continuity with the contemporary age” (Peleggi 2002:4). Beginning in the late eighteenth, and developing in the nineteenth and early twentieth century, the scientific discoveries in Egypt, and in other parts of the East, of the artifacts of older civilisations, possibly added to the glamour associated with the past. The fact that much of the oldest material was found in Central Asia at least shifted the perceived centre of gravity of civilisation towards the East. Edward Said noted

The Orient is not only adjacent to Europe; it is also the place of Europe’s greatest and richest colonies, the source of its civilisations and languages, its cultural contestant, and one of its deepest and most recurring images of the Other. (Said 1995:1)

The invasion of Egypt by Napoleon Bonaparte in 1798 indirectly provided the means by which the first truly scientific study of a country was carried out. While the invasion had the military purpose of control of a route to India and the thwarting of British influence in the area, Napoleon also had the objective of making Egypt a colony of France and of investigating the country in detail to enable its better administration. He took a great many scientists with him and set up a branch of the Institut de France as a focus for their scientific activities (Cronin 1982:176ff). The result of years of research was the ten volumes of the Description de l’Egypte (1802, reprinted 2002), for which the 1000 pages of illustrations took 400 copper plate engravers some twenty years to complete,
documenting the ancient and modern wonders and life of Egypt, and possibly setting a standard for the scientific study of a country to be later followed in the French possessions of Indochina by more recent explorers. It is no coincidence that the setting up of a branch of the Institut de France in Egypt was mirrored in the later establishment of the Ecole Française d'Extrême-Orient (EFEO) in Hanoi. The Description de l'Égypte itself allowed suitably leisured and moneyed armchair travelers with access to its volumes to familiarize themselves with the Egyptian objects, and possibly to actually travel to Egypt to see them, as early cultural tourists.

While the development of many areas of science, together with the rise of popular, compulsory education and the availability of cheap newspapers and books may have kindled a general interest in scientific activity and in the relics of the past, access was another question. The economic position of the mass of the population, the general productivity of the working population and the then available terrestrial modes of transport meant that the opportunity for interested individuals to access the sites of the past was generally unavailable to the population at large. In Europe, it had always been possible for a moneyed, leisured class to travel to the antique world, particularly with the rise of steam-powered ships and mechanical land transport, but even proximity did not give the general population, with low incomes and limited leisure time, the opportunity to see the marvels they could only read about and imagine. Oddly enough, it was the development of modern, mass warfare that, for the first time, took large numbers of working class people, men at least, to some of the ancient sites. For example, the Australian film Gallipoli makes much of the World War I visit of Australian troops to the pyramids at Giza in Egypt. It is extremely doubtful that the same country boys from inland Australia could ever get the money or the leisure to take the long and expensive sea journey to Asia of their own volition. The exigencies of Empire provided the means in that case, but the price the volunteer troops paid for their cultural development was the risk of never actually being able to live long enough to enjoy their memories. On the positive side, a great deal of World War I military activity took place in Mesopotamia and other parts of Asia with
great historical interest, allowing the troops of many Empire countries at least a fleeting glimpse of the remains of someone else’s past.

While internal tourism within Europe was more cheaply available following the explosion of the European railway network in the 1850s, tourism tended to be limited to the Continent and some of the outlying islands. Tourist expectations would be determined by how far one could travel by steam train for the duration of one’s annual holidays and the extent of one’s savings. In the interwar period of the twentieth century, the nineteen twenties and thirties, an increasing European interest in Asian countries and in their culture and antiquities seems to have developed. This was possibly enhanced by the publicity given to certain aspects of Asian cultures and to the increased availability of access by fast steamship to the more remote parts of Asia. The publicisation by the French of the ruins of Angkor led to a great influx of tourists into Cambodia, although mainly francophones. Dagens (1989:98ff) gives some idea of the way in which Angkor was promoted by the French within France. Bali was also publicized as a tourist destination, although possibly less for its culture or historical remains than for the beauty and attenuated costuming of its women.

Following World War II, a new set of circumstances allowed the more general pursuit of travel to historical locations by the general population; these circumstances can be categorized as experience, publicisation, affordability and availability. The experience of foreign travel by millions of returned servicemen possibly developed a familiarity with previously unknown parts of the world, and a desire to see them under less strenuous and dangerous conditions. The publicisation of foreign countries and their assets came from the efforts of newspapers, magazines, films (particularly travelogues) and later television, all catering for the tastes of an emerging middle class. The perception of affordability came from a greater expectation on the part of the “working class” that they could enjoy the activities previously confined to the financially better-off, a possible result of the democratization of society in Europe and European-influenced countries following World War II. Increased productivity in economic terms allowed the expectation that some return would accrue to workers in the form of

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additional annual holiday time, and a change in the structure of the economy led to an increase in "white collar" positions vis-à-vis "blue collar" positions and to an expectation of new class benefits. Finally, the ready availability of foreign travel was assisted by the development of relatively cheap and mass-oriented air travel, made possible primarily by the post-war development of the American jet-engined airliner, particularly the Boeing 700 series of aircraft. By the 1970s intercontinental foreign travel for "ordinary people" became feasible due to the combination of greater disposable income, greater leisure time and relatively cheap travel. The real cost of air travel may have reduced by a factor of ten over the past forty years.

In addition to the emergence of factors making the development of mass overseas tourism possible, countries increasingly recognized the economic benefits of tourism and predictably expanded their attempts to attract the tourists and their money, and finally came to see the income from foreign tourism as an important component of the national economy. It did the countries no harm to have their assets seen as glamorous and "exotic", bringing a new usage of the simple old word for "foreign" into existence. It is only necessary to consider the reaction of Southeast Asian countries to the recent natural and man-made events such as SARS, the tsunami and events of terrorism to recognize the contribution of tourism to national or regional economies. Countries with tangible and recognizable cultural assets, such as the temples of Angkor or the Buddhist temples of Thailand, have been quick to publicise them as a draw-card for tourism; although an odd feature of cultural tourism may be that usually the average visitor only visits the same sight once; perhaps repeat visits are more for the serious student.

Unfortunately, for a significant part of the post-World War II period, political events and attitudes limited the degree to which tourists could exercise

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1 From personal experience, a round the world air fare in 1966 was $A2000, as it is now. In 1966 the salary of a certain middle level Australian Public Service position was $A7,000, for the same position it is now $A70,000. Hence an approximate factor of 10 is deduced
their new-found freedom. The partition of Europe into economic and ideological blocs limited travel between its West and East. The Americas and the Pacific countries were relatively accessible, but parts of Asia were affected by wars, unfashionable political colouration or civil unrest for long periods. It may be fair to say that for the period 1948 to 1990 large parts of East and Southeast Asia were unavailable for tourism, and their assets, cultural or historical, beyond reach. “In the mid-1970s, in a regional climate of communist take-overs, Thailand was arguably the safest country to visit in Southeast Asia, since guerilla warfare there remained a rural phenomenon that never spread to the urban centers” (Peleggi 2002:62)

The relics of Japan, Thailand, Java and Bali were certainly open to cultural visitors, assuming that Malaysia, the Philippines and Singapore had little of such interest. Unfortunately, for a long time the historical areas of China, Vietnam, especially Champa, Cambodia, especially Angkor, Myanmar, especially Pagan, and Laos, especially Champasak, remained closed to the interested tourist, either by internal decision, acts of war, or by travel embargo by other countries. Fortunately, this situation has resolved itself over the past ten years or so, and almost all of Asia is now available for tourism, North Korea and parts of Myanmar only excepted.

The imagined past in Thailand

In Thailand, the past is a relatively difficult thing for the tourist, cultural or otherwise, to find and recognize, particularly a past of antiquity. Bangkok, the current capital, was only established in 1782, although built on the site of an earlier settlement. It is therefore only six years older than Sydney, and its monuments, although grandiose in conception and appearance, really only date from the early to mid-nineteenth century. The Thai past exists in the remains of its earlier, although now ruined cities, Ayutthaya abandoned after its sack by the Burmese in 1767, and the earlier thirteenth century Sukhothai, displaced by Ayutthaya in the mid fourteenth century (Wyatt 1984) and its associated town of Sri Sachanalai. Probably three of the oldest extant cities in Thailand are Chiang
Mai to the north, Nakhon Phathom in the central part, and Nakhon Sri Thammarat to the south. All predate the establishment of Thai hegemony in the Chao Praya valley, yet none is particularly regarded as the site of ancient relics. The magnificent stupa at Nakhon Phathom dates only from the nineteenth century in its present form; it was built over a series of earlier structures by King Rama IV.

The oldest relics within the modern Thai state, putting aside the few remains of Dvaravati settlements in central and northeast Thailand, are the remains of Khmer temples and other sites, mostly located in Northeast Thailand. It is fair to say that these have had most attention in terms of restoration to a form of their original condition, even though they generally predate the Thai state in whatever form it took. The later ruins of the ancient cities of Ayutthaya and Sukhothai are too reduced to be able to undertake any form of restoration of the type envisaged by anastylosis. A great deal of work had been done at both sites to make them into presentable historical parks and to stabilize the remains of the old temples and chedis, but that appears to be the limit of the work possible to be done. The most earnest visitor to the ruins of Ayutthaya or Sukhothai is hard pressed to imagine either city in its prime, even though both must have housed and supported large populations; there is insufficient to support the imagination.

Thus, visitors from within or without Thailand, wishing to see a complete image of a monument of the far past, need to see the Northeast Thai Khmer temples which have been restored to something like their original form, almost complete as far as is possible given the original material available to conservators and restorers. Therefore an image of something like the Thai past is to some extent dependent on the way in which monuments predating the Thai state are presented to the visitor. This is not in itself to practice a deception on a visitor provided that the visitor is aware of the relationship between the ancient polities, sometimes a subtle concept for the one-day tourist to grasp at a particular site.

Fortunately the ancient monuments of Thailand have been readily accessible and even heavily marketed to the tourist, with the exception of those located on the border between Thailand and Cambodia during the period of
Khmer Rouge activity between about 1975 and 1995. It is thus possible to visit the monuments in Thailand and discover the way in which an image of the Thai past has been created and marketed, both for Thai and for foreign visitors.

**The writer and the study of Thai monuments**

This was the position open to the writer when he and his wife first started traveling in Southeast Asia. After some short trips in the late 1980s to the tourist areas of Bali, although leavened by tours to the Indian remains there, and on one occasion by a brief look at the Borobudur and Prambanan in Java, the only other country in Southeast Asia which appeared suitable for visitors of mature years seemed to be Thailand. The first such trip took place in 1991 and covered the usual tourist destinations of Bangkok, Chiang Mai and Phuket. The next year, 1992, took the more daring form of a self-drive tour in Thailand from Bangkok, through Northeast Thailand and on to Chiang Mai. The itinerary took us to Phimai and the celebrated stone temple there. The beauty and historical significance of the temple and its surroundings were enough to awaken a strong interest in such buildings, which seemed to offer more interest intellectually than the usual, more visually appealing perhaps, Thai Buddhist temples of more recent construction, and promoted as symbols of Thai culture. Since 1992, on almost annual holiday trips to Thailand, we have visited many of the early historical sites of Thailand, including Ayutthaya, Lopburi, Nakhon Phathom, Sukhothai and Sri Sachanalai in Central Thailand, and many of the Khmer sites in Northeast Thailand, including Phimai, several times, Phnom Rung and Muang Tam, several times, Phnom Wan, several times, Phra Wihan, Kamphaeng Yay, Kamphaeng Noi, Ta Muen, Phuay Noi and many other minor Khmer temples.

Many of the Khmer temples in Thailand are documented in English, sometimes in coffee table books, for example *Palaces of the Gods* (Smitthi & Moore 1992). This volume provides excellent photographs and descriptions of some twenty-three Khmer temples, all but one in Northeast Thailand, with temples made of either stone or brick, or both. Other guide books have also been published in English for the major temples likely to be visited by tourists. Unfortunately for foreign tourists, only Phimai, in the middle of a market town, is
readily accessible from Bangkok by public transport; the other temples are far from any modern town and need a very long taxi or hire car ride, or a self-drive car to access.

Many of the reference books about the temples speak of their restoration and some make mention of the use of the technique of “anastylosis”, but without much detail as to what is entailed. Smitthi and Moore (1992:33) provide such an outline of the process. Thai language books are similarly reticent about the technique, with one exception as noted below.

The research question, literature review and research methodology

This process led to the following research questions, What is anastylosis, what are its origins, and how has it been applied to the Khmer temples of Thailand, How has the past been recreated in Thailand, and What is the relationship between Thai and Khmer cultural remains, and how have they been exploited for economic purposes?

Library searches within Canberra on “anastylosis” revealed nothing, while an Internet search on the name yielded few and not very useful references. The only way to get any data seemed to be that of trawling through the various specialist journals in the hope of finding references to the technique, and looking for books which might have some details in their appendices of the restoration of the temple they described. The journals which seemed to be promising were: the *Bulletin de l’Ecole Française d’Extrême-Orient*, the publication of the French Far Eastern institute dating from 1901 which was responsible for much of the early restoration at Angkor and other sites in Cambodia, plus some in Thailand; the *Journal of the Siam Society*, journal of a society in Thailand devoted to the study of Thai history and culture, dating from 1904; the Thai magazine *Sinlapawatthanatham* (Art and Culture), published on these topics and focusing on aspects of the Thai past; the Thai magazine *Sinlapakon*, the journal of the Thai Sinlapakon (Fine Arts) University; and the *SPFAA digest*, devoted to archaeology and the fine arts in Asia, plus one or two other journals. In addition, a useful resource has been the Coedes collection of books and papers in the National...
Library of Australia, which includes a collection of off-prints presented to George Coedès by their authors. Because of Coedès’s position between 1920 and 1960 as the doyen of scholars of Southeast Asian history, many of his students and colleagues in the field sent him copies of their recent journal articles, which he retained.

Of the available sources on the topic of anastylosis, possibly the most useful were those of the Coedès collection. I have been fortunate in locating in the collection material written by the experts themselves responsible for the development of anastylosis in Southeast Asia, in particular Henri Marchal who transferred the technology from Java to Cambodia, and later, Pierre Pichard who assisted in the transfer of the technique to Thailand. As well, some personal reports and reminiscences by individuals involved in the application of anastylosis have been identified. The data available on anastylosis then is therefore manifold, though scattered. By the nature of the material and its authors, most of it is in French or Thai. It has been necessary to translate it to make it available for research. Because of its inaccessibility to English-speaking-only readers, I have provided as appendices translations of some of the more important French papers on the development of anastylosis in its early period.

The methodology of locating, obtaining and analyzing written sources about anastylosis resulted in gathering a reasonable degree of information on anastylosis in Southeast Asia in general, and to some extent, in Thailand, but there was a need to address in detail some of the more important restorations in Thailand and the way in which anastylosis is employed in Thailand at present. For this reason, a research visit of about one month in November 2003 was arranged through the National Research Council of Thailand to the Office of Archaeology and National Museums of the Thai Fine Arts Department, responsible for the restoration of Khmer and other monuments in Thailand. This section employs architects and draftsmen as well as field workers, to survey, plan and implement the works of restoration of Khmer and other monuments. I wished to obtain more detailed information from the office on the restorations of the major Khmer monuments of Prasat Phimai, Prasat Phnom Rung, Prasat Muang Tam and Prasat
Phnom Wan. Having arrived and settled into the office, located near the Thai National Library in Bangkok, I found that much of the information I required was available. Unfortunately, departmental records on the early restoration of Phimai and Phnom Rung had been lost or misplaced, but some data on more recent restorations was still extant, together with ample drawings showing the work required in anastylosis. Further, my contact within the department, the young Thai architect Vasu Poshyanadana, who had worked on the restoration of Muang Tam and was responsible for the Thai side of the restoration of Phnom Wan, was very forthcoming and helpful. Additionally, Vasu had studied in France at the Université Lumière at Lyon and his master’s thesis *Etude comparée d’anastylose* comparing the restoration of the Acropolis in Greece and the restoration of Prasat Muang Tam had been published, in Thai, by the Thai Fine Arts Department. This is the only book so far found with “anastylosis” in its title.

The opportunity to question Khun Vasu (pronounced Wasu in Thai) and his architect colleague Kitcha Yupho allowed me to pursue many lines of enquiry, and the opportunity to gain access to departmental reports and drawings added enormously to my understanding of the work of the Department and of anastylosis. Copies of costed and detailed departmental proposals for the restoration of Prasat Phnom Wan and Prasat Sadok Kok Thom were obtained and provided useful information for this thesis. In addition, Khun Vasu had provided papers on the restoration of Prasat Phnom Wan, and on anastylosis in Thailand in general, to the Meeting of Experts in formulating guidelines for archaeological field procedures and techniques, and copies of these useful papers were obtained. While a great many architectural general and detailed drawings of the temples before and after restoration were available, they were all in the standard A0 format, which is 16 times the area of an A4 sheet and not readily reproduced, but many reduced copies were obtained. Some copies of sample drawings of interest are given in Appendix 8 to this thesis as illustrations of the application of anastylosis.

As part of the assistance provided to me by the office of Archaeology and National Museums, access was arranged to the Department’s sixth district field
office at Phimai, which is responsible for restoration and maintenance of many Khmer structures in the lower part of Northeast Thailand. This office arranged a guided visit to the Prasat Phnom Wan site and access to the Phimai temple site. Altogether, the visit to Thailand was most fruitful in terms of personal contacts, information gathered and a personal visit to a site conducted by one of the restoration staff. In addition to the above, a relatively formal set of questions was assembled for discussion with Khun Kitcha, and the responses will be considered in the later parts of this thesis, the structure of which is defined in the following.

**Thesis structure**

I would think it unreasonable to consider the Khmer monuments in the lower part of Northeast Thailand without explaining why the Khmer kingdom, based in Cambodia, and other polities, should adopt in one form or another ideas, forms and religions from India, and to consider how the Khmers came to have provincial centres so far from the capital at Angkor even in the tenth century, leading to the construction of many Brahmanic and Buddhist temples, including the ones examined in this thesis. Therefore, Chapter 2 examines the role of buildings in acting as records or documents of past events or polities, the early history of Indian-style polities in Java and Cambodia, aspects of their history in the Colonial Period, and at some of the issues involved in the “indianisation” of Southeast Asia as well as the nature of the polities of the period. Chapter 3 looks at the development of the techniques of anastylosis by the Dutch in Java in the late nineteenth, early twentieth centuries, and its transfer by the French to Cambodia in the nineteen thirties, with its early application to some of the Khmer monuments in the Angkor area. In Chapter 4 I outline the development of interest in ancient monuments in Thailand, and then in chapter 5 examine in some detail the transfer of the techniques of anastylosis from Cambodia and their application to four major Khmer-style temples in Northeast Thailand, Phimai, Phnom Rung, Muang Tam and Phnom Wan, and looks at the later history of anastylosis in both Thailand and Cambodia and the errors which have resulted from injudicious or hubristic use of the technique, or the problems which have resulted when the work was interrupted by external factors. Chapter 6 looks at the larger issues in Thailand and neighbouring countries surrounding the restoration of the monuments of another country and culture, and the economic and cultural issues...
which result from the development of tourism based on such sites and summarises
the whole position and attempts to draw lessons from the experiences of the past
hundred years in Thailand. Chapter 7 then formally addresses the initial research
questions as a conclusion.
Chapter 2

The meaning of Indian-style Monuments in Southeast Asia

This thesis is concerned with the restoration of certain major buildings in Southeast Asia, but it may be generally said that the building is a major and lasting expression of human creativity. Even isolated, a building of durable material and significant dimensions may be taken as major evidence of the existence of a developed technology and may reasonably be used as the indicator of the existence of a "civilised" people.

The word "civilisation" carries the idea of a built environment. From the Latin, *civis* is a citizen and *civitas* is a city. The inference of the origins of the term *civilisation* is that civilisations require cities and that the existence of a city implies a civilisation. This being the case, no social organization, no matter how highly developed, could generally be said, *pace* nomadic nations, to earn the title of *civilisation* without having at least one city. If we come across by excavation, by exploration, or by accident, an abandoned and apparently ancient building or buildings, without accompanying evidence of writing, scientific thought and practice, medical knowledge, or pieces of art (Rudgley 1999:12), we may nevertheless reasonably assume the presence of a past or current civilisation. The presence of written records, in the broadest sense, or artworks, merely adds to the value of the evidence. The larger the buildings and the greater the number of them collected in a conurbation, the higher we may regard the achievements of the people who built them.

In the absence of a built environment, evidence of earlier civilisations is harder to establish. If by some accident, artworks or written records in an unknown script or language from a civilisation were to exist without relationship to built structures, for example found in a cave or some other site of preservation,
even though of a type apparently unrelated to other known cultures, little can be said about the culture or civilisation which produced them without being able to tie them to a specific city site. The Dead Sea scrolls may be an example of this problem. Similarly, the discovery of artifacts, now matter how relatively complex, for example larger statues of humans or of what appear to be deities at a site, does not of itself act as an indicator of the location of a civilisation. The artifacts may be entirely genuine and of ancient provenance, but their presence in a given location raises the question of whether they were created on the spot or instead carried to and left there by some agency, without the ability to necessarily specify the identity of the agent. For example, the discovery of a bronze "Roman" lamp at Pon Tuk, near Nakhon Phathom in Northwest Thailand (Coedès 1927:195-209; Brown & Macdonnell 1989:8-20) or of an Egyptian Ptolemaic coin in the Atherton Tablelands of Queensland (Megaw 1968:1-22) neither implies a Roman colony in what is now Thailand nor an Egyptian colony in Australia.

In relation to the Pon Tuk lamp, Coedès noted with heroic understatement (1927:198) "A Roman lamp is a thing which you don’t come across every day in Siam ...", and he set about determining its type and age. His tentative dating of the second century Common Era (CE), and Pichard’s later dating in 1955 of the lamp to some time before the birth of Christ, were eventually corrected by Brown and Macdonnell (1989), who established the true age and provenance of the quite genuine Greco-Roman oil lamp. They identified the lamp as dating from about the sixth century CE and its type as being Byzantine. All estimates of the lamp’s age and provenance, in the absence of other data, could have only be based on stylistic evidence by comparison with objects of similar type and art style, whose characteristics have already been established. Yet, none of this information specifies the process by which this or any other lamp travelled intact over many thousands of kilometers, specifies at what point in historical time it made the journey, or specifies in whose baggage it moved. Given its date, all that can be said is that it is the earliest known evidence for contacts between this part of Southeast Asia and Asia Minor, from the sixth century at the earliest.
Coedès also located a Buddha image of Indian type, together with other Indian-style objects, on the same site at Pon Tuk. Again, their discovery merely shows that they got there somehow, post hoc theorizing about how or why is unproductive without other evidence. There is also no evidence as to how many hands the objects may have passed through before coming to rest at the edge of a tiny village in the region that is now known as Thailand. The different objects could have been abandoned at quite different times. The fact of a Byzantine object and an Indian object being in the same area, in a particular place like Pon Tuk, far from their place of provenance may be due to a variety of causes. There may have been a trade route via Pon Tuk to other parts of inland Southeast Asia, presumably from the coast on the Gulf of Thailand, there may have been a trade route from Burma into what is now Thailand passing through Pon Tuk towards the Gulf of Thailand, the objects may have been abandoned by indigenous people of the area after having been obtained from traders on the Gulf of Thailand or the Peninsula; all theories are equally possible in the absence of other data.

Thus it is an essential fact that the discovery or knowledge of stone or brick buildings, or where wooden structures have been preserved by chance in unusual environments, can infer or verify the settled existence of earlier large or small social groupings. We expect that the larger the set of buildings, and the more elaborate their construction, the larger and more powerful will be the associated society. Further, an ancient building continuing in existence, even in isolation, may have several meanings, it may either be used either as a marker in corroboration of events of the past, recorded elsewhere, or, in the absence of other records, may itself act as a document, although a document much harder to decipher and to interpret.

An extant building may be used as a marker to corroborate historical events recorded in other media. A brief consideration of the history of Europe, even looking back to the era of the rise of the Greek and Roman civilisations, and later, empire, immediately shows that the history of the peoples and their leaders is even now very well documented, often in primary sources. With these histories...
as reference, taking as examples the contemporary *Histories* of Tacitus or the later *Decline and fall of the Roman Empire* of Gibbon based on contemporary sources, the modern reader of the history may, if he or she wishes, actually visit a living city, for example Rome, and see as corroboration the sites described as the cockpit of actions which took place more than two thousand years ago. Every schoolchild knows that Julius Caesar was assassinated in the Forum in Rome. A visit to Rome will soon show at least the remains of that structure in the middle of the extant city. In this case, the buildings may be used as a confirmation of the written record, and act as markers and witnesses to the events described, in what may otherwise be merely literary legend. The discovery of the site of Troy by Schliemann appeared to prove the existence of the previously legendary city of the Homeric record, and the possible veracity of the events recorded around it.

On the other hand, an extant building may act in itself as the totality or a major part of the documentation of a past civilisation, in the absence of separate, independent evidence. The building and its details act as the document, providing important information about itself and leading to the development of ideas about itself and its relationships with other near or distant buildings, stylistically, epigraphically or historically. For example, at Pon Tuk Coedès also noted the presence of the foundations of two small buildings. These foundations, identified as the bases of shrines or stupas, gave Coedès no direct idea of the identity of the builders, but on the basis of this and other evidence he was able to hypothesise the existence of a reasonably sized town located between Ratburi and Pra Phathom (Nahkon Pathom) (Coedès 1927:208). Later work has associated Pon Tuk with the Dvaravati kingdom located in the Menam valley of Thailand (e.g. Briggs 1945:99-101; Woodward 2003:174). Thus the remains of even simple buildings contributed to the knowledge of the Dvaravati period in Thailand. The presence of Indian-style artifacts then encouraged Coedès to infer that the designers of the buildings in Thailand may have been influenced by Indian art styles. Therefore in the Pon Tuk case, as one example, the existence of the remains of buildings was used as a record or document showing the earlier presence of a branch of a known civilisation.
Thus, the nature and style of an extant building, otherwise without historical documentation, allows the development of a hypothesis about the date, origins and influences which led to the construction of the building. If the building includes carved or incised inscriptions on the walls or on other parts, or in the case of the Bayon at Angkor or Angkor Wat in Cambodia, large mural pictorial carvings, this data adds to the value of the document. It allows greater precision to be applied to speculation about links between a particular building and others of a similar style, granting that the nature of such records is in a way self-referential and may need other data to corroborate it. Inscriptions from two widely separated monuments, written in the same language and speaking of like events or personages would tend to corroborate each other. Even the script itself in which inscriptions may have been carved provides information about the nature of the people and about the influences affecting the motivation, design and construction of a building.

The publicisation of the remains of the Borobudur in Java by Raffles in 1817, the publicisation of the remains of the generally unknown Angkor Thom and Angkor Wat in Cambodia by Mouhot in 1863 and discovery of the remains of the second century Oc-eo in Vietnam by Malleret in 1944, all provided physical evidence of centres of civilisations previously unexpected by European scholars, all with traces of what appeared to be Indian ideas, both architectural and religious. These discoveries led to the inference that there were long-established links between these areas of Southeast Asia and India, by trade or religious pilgrimage or by a possible variety of other means.

In the following I will consider the role of ancient buildings in Southeast Asia as primary documents, and the way in which they have been interpreted as evidence of earlier civilizations. I will thus initially focus on the existence of Indian-style remains, without excessive speculation at this point on details of the mechanism of agency. This issue will be considered later, together with aspects of the mandala conception of the spatial organisation of Southeast Asian polities,
coming out of an analysis of the evidence available concerning the nature of older societies on mainland Southeast Asia.

The Colonial discovery of Indian-style monuments in Java and Cambodia

By historical accident, the conservation and restoration of the purely Asian monumental remains in Southeast Asia became the business of the European colonial powers. In earlier times, particularly in the seventeenth and eighteenth centuries, for reasons of maintaining a monopoly of the rich trade in tropical commodities, Java had come increasingly under the control of the Dutch East India Company, and became an essential part of the Dutch colonial empire. However, in the early nineteenth century Java briefly became the property of the United Kingdom by armed takeover following the demise of French control of the Dutch colonial empire during the Napoleonic wars. The Englishman Stamford Raffles was appointed Lieutenant-Governor of Java in 1811, and quickly became acquainted with its territories and antiquities, including coming upon the major Buddhist monument, the Borobudur in 1813 (Grabsky 1999). The first clearing of the monument and its first documentation, verbally and pictorially, took place under his direction. Soon after, and as a result of some horse-trading between the British and Dutch, Java was returned to the Dutch, naturally without the formality of consulting the indigenous peoples, and Raffles went on to become the founder of the British colony of Singapore. The Dutch government took responsibility for the colonies in Java, Sumatra and the other islands of the archipelago from the Dutch East India Company and set about formalising its control of the territory and its cultural possessions. However, knowledge of the existence of the Borobudur and its neighbouring monuments had spread to the West by the activities and publications of Raffles and his officials. (from Grabsky 1999, Tarling 2001)

At the time of the European exploitative colonization of the archipelago, Sumatra and Java were almost entirely Islamic, and only Bali retained a firm grasp on Hindu culture and beliefs (not without animist overtones). In spite of
there being no hint of a large scale indigenous Indian presence in Java, Buddhism and Brahmanism had been both clearly well entrenched at least in Central Java (Miksic 1990:21-24). This is witnessed by the extant evidence of the Buddhist monuments of the Borobudur, Candi Mendut, Candi Sewu and Ratu Boko on the one hand and of the Brahmanic Prambanan complex on the other, all within a few kilometres of each other and of modern Jogjakarta, and apparently coexisting peacefully at the height of their religious influence. There is no evidence from the ruins that they were wilfully destroyed.

The challenge to the Europeans was to explain the evidence of ancient Indian influences in Java and to interpret them in terms of polities which were sufficiently populated and organised to raise up monuments of great size and sophistication (Grabisky 1999:68-75). It is clear from the immense scale of both the Borobudur and the Prambanan monuments that they would have required the resources of a respectably-sized state to build, and that they were far beyond the economic and physical capacity of a supposedly small number of indigenous Indian traders, if they lived in the area, to conceive and to bring into existence, were the religion brought direct from India by Indians. The Dutch task of surveying their Javanese ruins was fairly straightforward, being to some extent limited to the ruins in the Jogjakarta region, and some structures on Bali.

European involvement in Cambodia, on the other hand, is of more recent history. While control of Java was assumed by the Dutch as a result of the long-term trading interests in the seventeenth and eighteenth centuries of the Dutch East India Company in the Far East, the French interest in Indochina only arose out of the nineteenth century European exploitative colonisation of resource-rich countries in South, East and Southeast Asia. Blocked in India by British expansionism in the sub-continent, and seeking both tropical commodities as raw materials, and colonial markets for processed metropolitan products, the French parleyed a foothold in China, shared with other European countries, into a grab in the 1850s for Vietnam and Cambodia. In a series of fairly rapid and aggressive
moves against what is now Vietnam, the French obtained colonial control of both the northern and southern regions of that country (Tarling 2001:74-79).

By the mid nineteenth century, neighbouring Cambodia had become a small country hemmed in by Vietnamese expansionist pressure from the northeast and Siamese expansionist pressure from the southwest. Laos to the north was under indirect control from Siam. After a sharp conflict between Siam and Vietnam in 1845 (Wyatt 1984:174) Cambodia became a vassal of Siam. By 1850, the three western provinces of Cambodia, Battambang, Siem Reap and Khompong Thom were under the direct control of the Siamese via appointed governors. As well, the Cambodian king was a vassal of the King of Siam, who owned and exercised a direct say in the Cambodian royal succession (Mabbett and Chandler 1996:231). The French, seeing colonial benefit in the control of Cambodia as well, managed to persuade the King of Cambodia, although a vassal of Siam, to accept a protectorate from France, thereby allowing him to escape the domination of Siam. This arrangement was accepted under duress by Siam, and the King of Cambodia and the eastern provinces of the country became effectively under the control of the French colonial empire, although as a “protectorate”. In Cambodia, indirect control was exercised through “advice” to the king by the French “consul” in Phnom Penh, who reported to the French Governor-General in Hanoi. In practice of course, the king was a puppet of the French and without real power. (Mabbett and Chandler 1996:231-233)

Once established in their colonial holdings, the French like the Dutch, as good children of the Enlightenment, set about surveying their new domains and their cultural relics. The publicity surrounding the “discovery” and publication of details of Angkor by Henri Mouhot in 1863 (Pym:xviii) may have led to a European interest in specifically Indian-style ruins in both Java and Cambodia. The French on the other hand, although well served by various soldier-savants like Lunet de Lajonquière, took several years to document the plethora of Khmer monuments in their part of Cambodia. Once that task was finished, Lunet de Lajonquière set about locating and documenting all of the Khmer monuments in 26 Chapter 2

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Siam and Siamese-controlled territory as well, on behalf of the Ecole Française d'Extrême-Orient, but with the approval and support of the Siamese government, and in particular with the assistance of Prince Damrong Rachanuphap, then Minister for the Interior (Lunet de Lajonquière 1907:xlv). By the end of the nineteenth century, almost all Indian-style monuments of any significance had been found and documented. The major publications like the three volumes of de Lajonquière’s *Inventaire Descriptif des Monuments du Cambodge* provided a public record of the Khmer treasures. The title of that work may be misleading, since no record was made of any Buddhist structures, unless they were Mahayana relics from the Khmer period. The monuments which he documented ranged from the large stone edifices clustered in the Angkor area to small, obscure brick plinths and shrines in the outer provinces.

Coedès says of this period of discovery “The most urgent task at that time was, in effect, the creation of a chronological framework into which could be fitted the names of the ancient kings, the events which occurred during their reigns and the names of their monuments, *the only tangible remains of the past*” (Coedès 1964:2, my emphasis).

The results of the interpretation of the evidence in the monuments of Java and Cambodia, and their inscriptions, may be seen in the following.

**The interpretation of Indian-style monuments in Java and Cambodia**

The major monuments of the Borobudur and Prambanan in Java and the city of Angkor in Cambodia indicate a certain type of building of at least Indian derivation. It was necessary to determine the identity and history of the creators of these monuments.

Considering Java, Coedès (1975) analysed inscriptions from Sumatra and Java and established a reasonable chronology of the various kingdoms of Central
Java of the period when Prambanan and the Borobudur were constructed. This history is summarized by Dumarçay (1991) along the following lines. There were two separate kingdoms in central Java of the eighth and ninth centuries CE, the Buddhist Sailendra dynasty owing some fealty to Srivijaya in Sumatra, and the Sivaite Sanjaya dynasty, earlier tributary kings to the Sailendra dynasty. Dumarçay suggests that the original conception of the foundations of the Borobudur was Sivaite and started by the Sanjaya kings in 775. As the Sanjayas were displaced northwards by the Buddhist Sailendras, the Sailendras completed the monument after 790 as a Buddhist structure. Even later the roundabout of power turned and the Sanjayas again took over the area about 832, but did only a little work on the Borobudur and that without changing its Buddhist character (Dumarçay 1991:4). The Sanjaya dynasty is credited with the building of the nearby Hindu Prambanan ensemble, consecrated in 856, although Buddhism still flourished in the area.

Thus the twin Buddhist and Sivaite kingdoms of central Java, though artistically and architecturally very adventurous, and clearly highly motivated religiously, did not persist for more than one hundred and fifty years, according to contemporary records. Dumarçay (1991:2) places the entire period of the two kingdoms between 732 and 882 CE based upon extant inscriptions and work by de Casparis (1956 see Dumarçay (1991), although this is probably too short a time frame. Dumarçay notes the paucity of records between the first Hindu-Sanskrit inscription from south of Jakarta of the fifth century and one of 732 CE from near Borobudur, and this lack does not allow greater precision in knowledge of the development of large polities in Java using Indian forms between the fifth century and 732 CE. It seems more probable from the Dumarçay evidence that there was a slow development of the parallel Sanjaya and Sailendra dynasties in the period between the fifth century and the first recorded inscription in the early eighth century. What is more clear is that soon after the ninth century, power centers shifted to the east of Java with the rise of the Airlangga kingdom based on the Solo river to the east of Jogjakarta, and the later Majapahit “super-kingdom” (Tarling 2001:16), effectively abandoning the Borobudur and Prambanan,
although there is evidence that intermittent use of the Borobudur continued until the fourteenth century. Altogether the power of the central Javanese kingdoms did not seem to extend beyond this area, despite their apparent power and resources.

The monuments of the Borobudur and Prambanan were thus constructed over relatively short timeframes in the late ninth, early tenth centuries CE. This being the case, a large share of the financial and manpower resources of the kingdoms must have been marshalled for their construction, but for whatever reason, the Borobudur and its kindred monuments at Prambanan were abandoned. The later arrival of Islam would also ensure that competitive faiths would lack support. The Borobudur was to continue to literally gather dust, some of it volcanic, for many centuries. By the early nineteenth century, and its "discovery" by Europeans, the monument was approaching a state of collapse. Its restoration would be the first real application of restoration techniques in Java and in Southeast Asia.

Turning to Cambodia, evidence of ancient kingdoms in Cambodia is provided by a great number of extant buildings showing Indian styles, the earliest being a tiny stone structure in Oc-eo, the grandest being the constructions of Angkor Thom and Angkor Wat. The number, size and clustering of the buildings naturally leads to the view that they were the remnants of a considerable state. Early Chinese documents mention an Indianised state called Fu-nan located in the south-west of Modern Cambodia before the fifth century CE (Mabbett and Chandler 1996:69), and this was apparently confirmed by French archaeology in the 1940s with the discovery by Malleret of the remains of a port at Oc-Eo in southwest Vietnam (Malleret 1951).

The best data available on the early social and political organizations in Cambodia is that obtained from inscriptions on the extant buildings, and the buildings themselves, their location and their estimated date of construction,
Chinese documents only provide temporally scattered evidence about Southeast Asia, for example the record of the travels of the Chinese monk Fa-hien in 399-414 CE (Legge 1886/1998). The earliest inscriptions date from about the fifth and sixth centuries, although the dated inscriptions only start at 611 CE (Vickery 1998). From this limited and at times subjective data a reasonable chronology of the early Cambodian polities was first developed by Coedès and later extended by French and other scholars, as new inscriptions were found and old ones re-evaluated. Where inscriptions have not been dated, it has been possible to establish an approximate date for the buildings by reference to the comparative art style of it in relation to other, dated buildings of the same type, and the style of the script of the inscription. The inscriptions on monuments in Cambodia tend to be written in Old Khmer or Sanskrit (Vickery 1998:83), confirming a particular Indian discourse on their history and origins; the discovery of Chinese language inscriptions in the same buildings would fundamentally change the view of the influences on the old Khmer Empire in Cambodia.

At some point in its history, the royal base of what may be called the kingdom of the early Khmer people was relocated north from Fu-nan towards the Tonle Sap lake (a backwater branch of the Mekhong River), or perhaps a new power centre arose which displaced Fu-nan. The name of the kingdom located here was Chen-la, and some references relate to Chen-la Nam and Chen-la Bok, or “water Chen-la” and “land Chen-la” (Coedès 1975:85-86). Chen-la Nam may have been centred on the Tonle Sap while Chen-la Bok may have been located closer to the Dangrek mountains and what is now Northeast Thailand. The absence of firm data makes a clear picture of the early Cambodian polities, as well as their relations with other states in the area, difficult to grasp.

At this period there also may have been close relations between the kingdom of central Java and the Khmer polity based in Cambodia. Jayavarman II, an early and important Khmer king, spent an early part of his life as either a prisoner or hostage in “Java”, although thought by some to be part of the Malay
Peninsula (Mabbett and Chandler, 1995:85). They describe Jayavarman II as “asserting Khmer unity and independence and rebutting the claims to overlordship of ‘Java’”. Whatever the meaning of the “overlordship” of Java, Jayavarman II created a single unified and independent state for the Khmer people in the late eighth century, and its capital Hariharalaya was close to but not yet centred on the later site of Angkor. From that point on the Khmer state was to develop and to intermittently spread its power through a large part of mainland Southeast Asia, as determined by the relative power and ambition of its kings and the relative weakness and accessibility of neighbouring polities. The possible structure of these power arrangements will be discussed below in relation to the mandala concept proposed by Wolters (1968) and Mabbett (1978).

The city site of Angkor was established in the early tenth century by the king Yasovarman (Mabbett and Chandler 1996:97). The site was chosen because it contained a reasonably sized hill, Phnom Bakheng, in an otherwise flat alluvial plain, and presumably because it was close to a steady supply of water in the Siem Reap stream flowing into the Tonle Sap lake. This “mountain” could be used to symbolise the mythical Mount Meru (or Sumeru) at the centre of the world of Hindu cosmology. The city was named Yasodarapura (Yasovarman’s city), the current name “Angkor” is no more than the word for “city” in Khmer, and is of the same origin as “nakhon” (city) in Thai.

Although many monuments of pre-Angkor origin exist in central Cambodia, Yasodarapura, once established, became the centre for more and more elaborate religious architecture. The twelfth century Angkor Wat (Temple City) is probably the most recognisable entity in the extant Angkor complex, while the thirteenth century Angkor Thom (Great City) contains the most accessible and possibly the grandest and most ambitious, if not the most beautiful monuments of the heritage of Khmer art and architecture, particularly the Bayon and the Baphuon. It appears, as discussed below, that religious edifices were built in brick or stone, and the homes of kings, officials and common people were built in wood, which is very susceptible to decay in the tropics and to fire; only religious
buildings have survived into the modern times, and even these have not survived unscathed.

It has been argued that the observed use of stone for purely religious buildings results from a principle that stone was reserved for sacred structures (Mabbett and Chandler 1996:184), and it is generally true that only ancient stone structures of a sacred or semi-sacred nature have been found in Southeast Asia. This interpretation is open to some question. Firstly, if in the Khmer Empire the later kings saw themselves as divine, in the form of the devaraja, the god-king, then their residence would be an abode of the gods and entitled to stone like any other temple. This does not seem to have occurred, possibly because, secondly, as Mabbett and Chandler point out, it was not feasible with the architectural practice of the Khmers to create a building out of stone with sufficient internal open space to act as a dwelling and meeting place of the grand nature expected of a royal palace. The mechanics of the corbelled vault, based upon a cantilever rather than a true arch, restricted the width of any open area with a stone roof to only a few metres at the most, and Khmer architecture was limited to the use of such a vault, even though the true arch was recognized and utilised by the Greek and Roman architects for at least one thousand years before the golden age of Khmer monument building. If the god-king had insisted on having a stone palace built with large open spaces, on pain of death, his architects did not have the technology to deliver such a building, the spans and the roof structure would have to be made in wood.

Groslier (1960) records the results of archaeological excavations of royal palace sites at Angkor. Remains of several levels of wooden structures were found. Groslier says “The erection, as well as the destruction, of these various structures...”

See Appendix 1 for a discussion of the differences between corbelled arch as used by the Khmer builders, and true voussoir arches, and an analysis of the weakness of the corbelled arch.
palaces during the different sacks of Angkor throw new light on the history of this period [from the ninth to the fourteenth centuries]. At three levels, we discovered important remains of wooden constructions, with their laterite foundations, water and refuse disposal systems, wooden posts, etc.”(1960:16). This discovery confirmed that Angkor Thom contained substantial wooden structures with many advanced features, possibly bearing out the view that only wood could be used for large buildings for habitation and large-scale ceremonies.

The various Khmer kings, all with names ending in -varman (= protégé or protector), all had varying success in projecting their power into the neighbouring kingdoms. Possibly the most vigorous builder of monuments, hospitals and indeed empires was the later Jayavarman VII (1181-1218), who created the city of Angkor Thom and who extended the rule of the Khmer into large parts of modern Thailand and Laos, as well as into Champa, reversing the earlier conquest of Angkor by the Chams in 1177 (Mabbett and Chandler 1996:205).

The practical effect of this expanding control of the Khmer kings outside the Mekhong Basin was the construction of towns and cities as centres of administration and control for the surrounding territory. There are many Khmer monument sites in the lower part of the Khorat Plateau. Khmer power also reached into Laos, with the evidence of early major Khmer religious structures at Wat Phu (in modern Laos) with a road leading back from it to Angkor, and also into Central Thailand with Khmer-style temple structures at Lopburi to the East and Muang Singh to the West of the Menam Valley (Smith 1992:317). Lunet de Lajonquière’s map of Cambodia showing Khmer temples provides evidence of the road system connecting the centres of the Khmer polity (Lunet de Lajonquière 1902).

After the construction of Angkor Thom, and the eventual death of Jayavarman VII in the early thirteenth century, subsequent Khmer kings were more challenged by the growing power of the Siamese in the west and of the Vietnamese in the east (Mabbett and Chandler 1996:218). The Khmer rulers...
continued to occupy the Angkor site until the city was attacked by the Siamese for the second time in the mid fifteenth century, and a significant part of the city’s population and riches taken back to the Siamese capital. After this time the Khmer kings chose to move their royal capital from Angkor to Udong and later to Phnom Penh, further down the Mekong River and presumably further from the Siamese reach, and also somewhat closer to the sea and to regional trade, although in 1590 a Khmer king rediscovered Angkor, had it cleared, and briefly moved his court there (Mabbett and Chandler 1996:221).

The Angkor site was thus abandoned and the many monuments surrounding it ceased to be supported and maintained. With the collapse of the power of the Khmer kings, the monuments at the centre and between the centre and the periphery either were neglected or fell into other hands. The religious monuments in their distinctive Khmer style, not only in the Cambodian basin but also into North-east Thailand, Laos and Central Thailand also fell into disrepair, as religious affiliations changed and as populations shifted. By the early nineteenth century, the existence of the monuments was quite well known to the local people and to their rulers, but they appear to have been regarded as unremarkable and their origins forgotten. Possibly the prevailing Theravada Buddhist religion of Cambodia, Laos and Thailand, with its recognition of the impermanence of human arrangements, would not regard such ruins highly, beyond seeing their crumbling remains as proof of the truth of their belief in the impermanence of human affairs (Keyes 2002:213).

Thus, by the seventeenth century, the major monuments of the Borobudur, Prambanan in Java and Angkor in Cambodia, together with many other less imposing structures were abandoned and almost totally neglected by the central government of the territories in which they were located. In some cases, the monuments were used by local Buddhist clergy ensuring some respect for the structures; in many cases the monuments were used as quarries by the local people as sources of building materials.
Before considering in more detail the relations between the Cambodia of Angkor and Northeast Thailand, there are two issues in the study of early Southeast Asian history which require discussion in the context of the results of the study of the monuments of the area. These issues are, firstly, the process by which Indian-style temples with the images of Indian gods and with Sanskrit inscriptions came to be established in the area, and, secondly, the nature of the polities in which these elements existed. The process has become identified over the years as "Indianisation" and the structure of the polities seen as "mandalas". I will look at each of these issues in some detail to establish their relevance to Southeast Asia.

Issues in Southeast Asian History: Indianisation and the Mandala

As seen, the best evidence for certain early societies in Southeast Asia remains in the monuments of Indian style which continue to exist in Java, Cambodia, Laos, Thailand, and in Myanmar and parts of Central Vietnam. By their nature and iconography, they imply that their constructors were open to cultural and religious ideas from India, in whatever form they took. These monuments and whatever inscriptions they contain may be seen as being in themselves the record of Indian influence, because other documentary evidence of Indian influence is at best fragmented. Coedès quotes Parmentier as saying "The relationship between the earliest [my emphasis] of these edifices and those of India, present or past, is far from striking; without their images, their inscriptions, and various texts that have now disappeared no one at first glance would dream of relating them to Indian temples. At most one senses among them a family likeness, by no means a direct kinship" (Coedès 1967:31). However, Smith says (1979:453) "The temples of Java and Cambodia, therefore, seem to belong to a new phase of political and social developments in these areas in the eighth and ninth centuries". Early or later, whatever the form of the temples, the gods worshipped in them were uniquely Indian.
Whatever their origins and agency, on the basis of this ancient physical and cultural evidence there is no doubt that there were significant religious, administrative and cultural influences, ultimately from India, in most of the countries of modern Southeast Asia. This observation must be tempered by the fact that the old appellation of the Cambodian-Vietnamese peninsula as Indo-China, indicated the territory as the junction between Indian influences from the South and Chinese ones from the North. The fact that the Indian religions of Buddhism and Brahmanism operated in the area, together with Indian forms of kingship and the use of the administrative and religious language Sanskrit, and the use of temple forms strongly reminiscent of Indian models and with Indian religious iconography all point to a strong and continuing attraction to Indian forms and ideas (Mabbett and Chandler 1996:114-115). The more interesting aspect of these influences is that they appear to be unaccompanied by any contemporary political or military hegemony on the part of all or any of the then kingdoms of the Indian subcontinent (Coedes 1975:34). In the absence of the chronicles of a Tacitus, a Herodotus, a Xenophon or a Thucydides, the history of the development of these ideas could only be inferred.

The term “Indianisation” or its related forms, was first used by Coedès in his *The Indianised States of Southeast Asia*, first published in English in 1968. This book had gone through various forms in French, beginning with its publication in 1944 as *Histoire ancienne des états hindouisés d’extrème-orient* (Ancient history of the Hinduised states of the Far East) and later in 1948 and 1964 as *Les états hindouisés d’Indochine et d’Indonésie* (The Hinduised states of Indochina and Indonesia). In a paper written in 1964, Coedès regards “Indianisation” and “Hinduisation” as equivalent (Coedès 1964:3), and uses the terms interchangeably. In this way it must be argued that Coedès, who died soon after, established the principle of the change of adjective from “Hinduisé” to “Indianisé” without reserve. Nevertheless the change of sense is considerable, from the relatively narrow “Hinduisé” with the inference of the states taking up the belief system of the Hindu religion and its scriptures, to the broad “Indianisé” with the inference of the imposition or acceptance of all Indian usages.

Chapter 2

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The idea of “indianisation” has not remained static and without challenge and change since its first appearance, and its development is worth considering. In a view of the subject at the time, Coedès says (1964:3) “[Indianisation’s] result was not political colonization, but the implantation of Indian civilisation in countries which already possessed their own civilisations”. In the closest thing to a definition, Coedès says

Indianization must be understood essentially as the expansion of an organized culture that was founded upon the Indian conception of royalty, was characterized by Hinduist or Buddhist cults, the mythology of the Puranas, and the observance of the Dharma sastras, and expressed itself in the Sanskrit language. It is for this reason that we sometimes speak of “Sanskritization” instead of “Indianization”. (Coedès 1975:15)

This definition may be understood as the “push” of a cultural package from India to a passive, neutral, external recipient of the culture. Possibly Coedès dropped the term “Hinduisation” as, while perhaps more accurate overall in relation to the high period of Angkor in Cambodia, it nevertheless overlooks the considerable influences of Mahayana and Theravada Buddhism in much of Southeast Asia, including Java, Cambodia, Siam and Burma at least before the end of the tenth century CE. It is a pity in some ways that Coedès’ term “Sanskritization” was not taken up more, it at least avoids the associations which “Indianisation” carries; Sanskritisation merely implies the use of Sanskrit as a language of formal communication and perhaps adoption of the ideas in Sanskrit books, Indianisation implies the adoption of the forms of behaviour and thought then observed in India. Neither idea however seems to convey the reality of high level life in Southeast Asia, although this is not to underestimate the apparent power of Sanskrit as a vehicle of communication. Pollock notes that “The first Sanskrit public poems appeared in Khmer country, Champa, Java and Kalimantan all at roughly the same time, the early fifth century at the latest, and not much more than a couple or three generations after their widespread appearance in India itself” (1998:11). He comments that “The spread of political Sanskrit happened
not only with extraordinary speed over vast space, but in a way that seems quite
without parallel in world history” (ibid: 12).

Wolters, in a 1968 paper on the role of Indian ideas in the Ayutthaya
government of late sixteenth century, comments on the role of Sanskrit in shaping
the mindset of the earlier Southeast Asian people. Speaking more generally of the
influence of Sanskrit literature, he says

This literature, from the first centuries of the Christian era, was the matrix which
provided the courtly minds of South-East Asia with their windows on the
“civilized” world. As a result, several important assumptions came easily to
them.

The believed that the content of the Sanskrit books were the gift of the gods and
were therefore the possession of all civilized men, no matter whether they lived
in South-East Asia or in India. We cannot exaggerate the significance of this
sense of a common culture, for it meant that men living in small countries in
South-East Asia learnt to “think big” and to see themselves, their problems, and
their aspirations as being in no way different from what would be found at the
most distant end of the “civilized” world. (Wolters 1968: 177)

This attempt by Wolters to see into the possible mental world of Southeast
Asian rulers presents a powerful image for understanding how an elite could make
use of the manuals of administrative and other knowledge transmitted via Sanskrit
texts, and see themselves as the heirs to the knowledge base which underpinned
the success of other, nearby powers.

Mabbett (1977a,b) reviewed the prehistoric and historic evidence
concerning the dissemination of Indian ideas in Southeast Asia. In his first paper
(1997a:13) he notes that two separate stages in the process may be identified,
“first was the appearance of principalities or city states with Indian culture in the
first two or three centuries after Christ; the second was the growth of peasant
societies supporting civil, priestly and military elites in the latter half ... of the
first millenium, and then only in relatively few places”.

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In his second paper (Mabbett 1977b) he examines the possible agents for the spread of Indian ideas to Southeast Asia. He says “[It is unlikely that a prolongation of possible sources would add much to what has already been gleaned – more Indian trade goods, more inscriptions recording the activity of pious Hindu or Buddhist rulers, more unreliable Chinese second-hand accounts of Indian priests and Indianised ‘kingdoms’. … it is to make quite clear that the actual process of ‘Indianisation’ is nowhere reliably portrayed; what is portrayed by the earliest evidence is the operation of kingdoms already Indianised….” He notes the fact that “[t]here remains the view that the process was essentially a Southeast Asian initiative” and “[o]f course it is not novel to emphasize that “Indianization” is likely to have involved initiative on both sides” (1977b:157).

Mabbett summing up the issue of Indianisation says,

In a sense, then, the phrase “the Indianisation of Southeast Asia” enshrines a confusion of categories, for culturally Southeast Asia became nearly as “Indian” as parts of India, while politically there was no such thing as India (1977b:161).

Mabbett’s point is that the use of the phrase “Indianisation” has no meaning when there was no such thing as “India” at the time of the transfer of ideas, the sub-continent being a collection of larger and smaller states, operating most of the time independently, although the reign of the Buddhist King Ashoka in about 300 BCE provided a degree of cohesion over most of northern part of the sub-continent (Craven 1994:37). “Indianisation” can only be used in the sense of the sub-continent called India being the source of the material which found its way to other parts of the region.

Mabbett in a 1978 paper Kingship in Angkor looked further at the issue of Indianisation in Southeast Asia. He does not speculate further as to the agents of the process of Indianisation, but looks at the effects on Southeast Asian societies. He says in summary “[t]hus an examination of the nature and extent of Indian influence suggest that it neither drove out, nor failed to affect, local traditions in any Southeast Asian kingdom … What happened was that the two orders – Indian and local, high and low – adapted themselves to each other, not exactly by
compromising, but by arranging themselves into a series of complementary relationships so that they could become heads and tails of a single coin” (Mabbett 1978:50) The use of the words “drove out” however still carries the older hint of a “push” theory in the Indianisation process.

Wolters (1979) adds a little more to his earlier position on the issue of Indianisation (Wolters 1968). He examined the concept of Khmer Hinduism in the seventh century and came to some conclusions about the relations between the Khmers and Hindu concepts. He argued that in the Khmer context “Hinduism was not something which only attracted would-be kings; it was essentially a religious experience of individuals in a chieftain society” (1979:437) and “[by] Hindu world is meant less than the actual world of the regional polities in India, visited by or described to Khmers, than the world of the gods and heroes as it is set forth in Indian sacred literature and perhaps, above all, in the Mahabharata, known in parts of South East Asia from at least as early as the fifth century” (1979:437). He thus concludes on the basis of some evidence that the Khmers hinduised themselves. This may be seen as embodying the idea of “pull” Indianisation, the idea that the Khmers consciously adopted the ideas of Hinduism/Indianism as an act of will, once they were aware of them, possibly by exposure to travelling Indians, or equally likely perhaps, by the exposure of India to traveling Khmers.

Twenty years later, Mabbett (1997) revisited the issue of Indianisation and added to the understanding of the subject. He noted that

The clumsy word ‘Indianization’ originally met a real need by designating the result of whatever processes were responsible for the appearance outside India of Indian languages and high culture. As such, the term was not the name of a theory; it was label upon a fact. Yet in more recent times we see that ‘Indianization’ is no longer a datum to be accounted for; it has become a theory, or a cluster of theories, that must be criticized. ... Nowadays, some students of ancient Southeast Asia prefer to view the process as a much more complex interaction between various parts of both regions, and find it useful to apply the term ‘Indianization’ to the outdated assumptions.(1997:343)(emphasis added)

And

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Nevertheless, despite all the research and the improvements in knowledge, one thing has not changed: there are still no historical sources by which Indian influences were extended. (idem).

Mabbett's central point is that the ongoing debate about Indianisation has focused on the possible process, while no data is so far available on which to soundly base a theory. At the end of the argument we only have the physical evidence indicating the early presence of Indian influences and no hard knowledge as to the way in which they were spread.

Vickery (1998) in his book on pre-Angkor Cambodia revisits the historical data used for the earlier image of influences from India and says in his introduction on the work of Coedès and others "[t]heir work shows that they unconsciously accepted the late 19th century ideas about classical, feudal, or absolutist Europe as paradigms for early Southeast Asia, assumed that the development of Cambodian civilisation was set in motion by the imposition of Indian culture by Indians, and interpreted the visible Indic elements in Cambodian culture as bearing the same meanings as in India." (Vickery 1998:5), and after a review of earlier writings on the issue of 'Indianisation" concludes

Rather than Indian brahmans invited by Southeast Asian rulers as the main bearers of the Indian elements in the Southeast Asian culture, although of course there were some, it now seems preferable to hypothesise Southeast Asians proceeding to India for study and then returning home as 'brahmans', scribes and architects. In the Buddhist realm there is proof, in the records of Funanese monks learned in Sanskrit, who went to China as translators of Buddhist scripture" (Vickery 1998:59)

Vickery thus also seems to be attracted to the idea of a "pull" from Southeast Asia rather than a "push" from India of Indian ideas, and he notes that Rawson (1967) had said in relation to early Cambodian art, germane to the topic of this thesis

Most interesting of all, there apparently existed a fairly advanced native artistic tradition in Cambodia and Cochin China, probably in perishable materials. From when the earliest versions in stone of Indian prototypes were made there, they
were far from being mere copies, or even transcriptions. The sculptures of Indian icons produced in Cambodia in the sixth to the eighth centuries AD are masterpieces, monumental, subtle, highly sophisticated, mature in style and unrivalled for sheer beauty anywhere in India. It is obvious that their style is not purely Indian; there are elements in it which were never created by Indian sculptors in India, and which must only be called local. ... It cannot have been imported fully fledged .... (Rawson 1967:18)

The idea of visitors from Southeast Asia seeing Indian prototypes in India and using them as the inspiration for local creations is an interesting one, and can be applied to architecture as well; Vickery, quoted above, specifically mentions architects among the returning Khmer travellers. In architecture, as will be seen in later chapters, the Cambodian style of building temples to the Indian gods Shiva and Vishnu (and to the Buddha), while beautiful in conception, was flawed in execution, to the point where the buildings generally failed from internal failures due to the use of inappropriate engineering techniques or inappropriate materials. But the fact that the Khmer architects did not use the true arch in their conceptions does not mean that they saw but did not understand the principles of Indian architecture, the true arch was little known and used in India before the coming of the Muhammadan religion (Coomaraswamy 1985:73 footnote)

Returning to the issue of “Indianisation”, Wolters (1982, revised 1999) again addresses the question. He concludes,

But when the Chinese were making sense of the Khmers’ territory, the Khmers and surely others in the region were making sense of their location in a wider world – the “Hindu world” – now being disclosed by expanding overseas commercial contacts and especially by Indian texts in the Sanskrit language, the written language of the “Hindu world”. ... The Khmers and others in Southeast Asia could then proceed by a process of “self-Hinduisation” to ascribe Sanskrit names to themselves and to what they saw around them, and then record these names on their inscriptions ... (Wolters 1999:110)

Thus Wolters refined his position first stated in 1968 (see above) and came to the idea that the Khmers “Indianised” themselves by selectively adopting ideas and forms from India.
Further, the essential feature of the “Indianisation” or “self-Hinduisation” of Southeast Asia depended on the adoption of Indian gods; almost all the evidence we have of Indian manners in Southeast Asia is in the form of aspects of Hindu or Buddhist (in some ways a reform Hinduism) religious art. However, Jacques says

The proliferation of sects which flourished in India does not feature in the land of the Khmers, however. As in other domains, the Khmers were the assiduous pupils of their first teachers, and do not seem to have sought to delve deeper into doctrines which perhaps remained somewhat alien to them, nor indeed to dispute them by proposing new ones. ... At the same time, the Khmers did not abandon their indigenous deities, the masters of the land and its abundance, human heroes who became guardian spirits, and, of course, the protecting ancestors of each lineage. Evil spirits also roamed the land, bringing sickness and death. All these numerous and diverse deities were worshipped, although doubtless with less complex rituals than those of the Indian gods ... (Jacques 1997:28, 29)

If this is the case, the Khmers were able to maintain two belief systems at the same time in accordance with their own needs and the needs of their rulers, and to balance local needs with the needs of the Indian ideas of relations between temporal and spiritual authority.

In summary, it may be said that Coedès set off a minor controversy with his use of the term “Indianisation”, and that this may have been a consequence of his own mindset and his position as an agent of the introduction of Francophone civilisation into Indochina towards the end of the High Colonial period. Perhaps he could no more imagine the old Khmers indianising themselves without Indian help than he could imagine the modern Cambodians Frenchifying themselves without active French involvement. If this is the case, to extend the ideas of Vickery (1998) quoted above, the attitude of Coedès, and that of the scholars who followed and interpreted his ideas, may have been one of unconsciously applying colonial norms to a situation outside their own experience, and the attitude may have been no more than a failure of the imagination; the most earnest advocate of the “push” idea of Indianisation has not suggested that India attempted to colonise Southeast Asia, all statements are to the contrary. All this said however, the
continuing evidence of material and religious culture across a major part of mainland and archipelagic Southeast Asia represents the results of a major use of Indian cultural materials by the indigenous peoples.

**The Mandala concept of relations between states**

The nature of the relationship between the Khmer polity based on Angkor and the territory north of the Dangrek Mountains needs to be considered as far as possible. In discussing the nature of the Indianised Southeast Asian polities the concept of the *mandala* type of relationships within and between polities has been suggested. *Mandala* is a Sanskrit word meaning circle or disc, and for example, is used widely to refer to the generally circular Tantric cosmological diagrams used in meditation by followers of Tibetan and other forms of Mahayana Buddhism. According to Tucci, in the Mahayana Buddhist sense “a *mandala* delineates a consecrated superficies and protects it from invasion by disintegrating forces symbolized in demoniacal cycles. ... It is above all, a map of the cosmos. It is the whole universe in its essential plan, in the process of emanation and reabsorption” (Tucci 1961:23) By extension, the idea of a circle seems to have become used to represent relations between the central elements of a polity and its outlying parts. This term cannot be used literally, but properly used can describe any administration with a centre and outlying centres of power subservient to it. In a modern Southeast Asian state, for example Thailand, the centre may be represented by the capital city Bangkok, source of political and economic power, and the edges the outlying centers, the sites of provincial government, and all contained within a defined boundary, the Thai geo-body. The word *mandala* survives in the Thai word *monthon*, meaning administrative area or circle (Haas 1964:391), whose spelling of m-n-th-l in Thai shows its Sanskrit origins.

The early polities of Southeast Asia, on the other hand, whatever their form, seem to have been expansionary or contractive, depending on circumstances, and without fixed boundaries. By contrast to nearby China, with a long tradition of a usually strong central government and administration, and with...
a clear idea of the boundaries of the Central Kingdom, given physical expression in the series of Great Walls of China, early Southeast Asia seems to have been divided into small polities of limited physical size and population, and dependent for their security on self-sufficiency, but with the possible additional insurance of mutual arrangements with adjoining power centres. In the mandala model, a very strong state would protect itself with alliances with surrounding states, who would in turn associate themselves with states to their backs (Wolters 1968:173). Given a number of centres of power of varying sizes and strengths, the image which is obtained is one of interlocking circles of alliances, with the tiny polities located between such centres having to look in both directions for security, as the power of the various centres waxed and waned. These alliances were often expressed in the sending of tribute from the weaker to the stronger polity as a symbol of suzerainty.

In much of Southeast Asia, the strongest states sent tribute to China in their turn (eg Mabbett and Chandler 1996:83), although it was outside the mandala system, to ensure recognition of the legitimacy of their rule. It was also not unknown for small polities to send tribute to more than one overlord to maintain their sense of protection. Mouhot notes speaking of the nineteenth century Cambodian memory of the old Khmer empire says “almost the only tradition preserved in the country mentions the empire as having twenty kings who paid tribute to it, as having kept up an army of five or six million soldiers, and that the buildings of the royal treasury occupied a space of more than 300 miles” (Pym 1966:82). Allowing for the exaggerations inherent in an oral tradition, the tradition preserves the idea of the elements of a mandala system with tributary kings subservient to the empire.

Wolters first used the idea of the mandala in his wide-ranging 1968 paper already mentioned above. He noted that the term had been used by the fourth century BC Indian political philosopher Kautilya in his Arthasastra to describe relations between states which were spatially separated and of varying degrees of conflict with each other, and says “Thus Kautilya and his successors thought in

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terms of an indefinitely enlarged circle of states, always unstable, for which the term was *mandala*. The *mandala* was the ideal organization of all relevant space.” (Wolters 1968:173). Wolters saw the concept as applying to the Southeast Asia of the late sixteenth century, and to the position of Siam in relation to regional conflicts involving the China and Japan of the time; he did not extrapolate it to the wider issue of the earlier organization of, for example, relations between Angkor and its neighbours.

The *mandala* concept as applied to Southeast Asia was again raised in 1978 by Mabbett in a paper on Kingship in Angkor. Mabbett says of the universal emperor, the *cakravartin*

The aspiring *cakravartin* is at the centre of a circle, *mandala*, whose constituents are *rajyas*. *Rajya* is usually misleadingly translated as ‘state’ but it seems better to adopt the more literally correct interpretation as rule or regime. Within the *mandala*, neighbouring regimes are automatically enemies, and it is the ambition of a ruler to secure, not the destruction of the other *rajyas* (which would cause the *mandala* to cease to exist), but their submission and homage to his glory — usually though not necessarily to be brought about by conquest — whereby his empire is constituted.

The idea of the *mandala* was recognized in Angkor. It was said, for example, that Rajendravarman’s *mandala* was rich and without faction. Elsewhere, it was claimed for him that he caused evil to diminish and good to increase in it. Again, there is a mention of the *mandala* along with the seven constituents (*prakrtis*) which in Indian theory make up a regime, *rajya*. (Mabbett 1978:36f).

Thus, while the idea of a polity as *mandala* came from Indian ideas of government, it is clear from Mabbett’s citation that the idea was taken up and used in local documents by the Khmers, and thus can validly be applied to the structure of the Khmer polity. Therefore it is legitimate to refer to the Khmer *mandala*, although the idea of subordinate *rajyas* requires examination in terms of its meaning in a Khmer context, they may need to be sometimes seen as governors appointed by the central authority rather than “kings” or ‘chieftains” owing fealty to the centre of the *mandala*. This will be discussed further below.
The idea of the *mandala* was again used by Wolters more specifically in 1979 when he said "the [Indian] sastras assume that all space is organised in *mandalas*, comprising warring polities sometimes brought under the influence of a 'king of kings', and the concept would have corresponded accurately with the Khmer tribal situation." (Wolters 1978:437). Wolters further expanded the notion in 1982 when he said of Southeast Asian *mandalas*

In each of these *mandalas*, one king, identified with divine and "universal" authority, claimed personal hegemony over the other rulers in his *mandala* who in theory were his obedient allies and vassals. ... In practice, the *mandala* (a Sanskrit term used in Indian manuals of government) represented a particular and often unstable political situation in a vaguely definable geographical area without fixed boundaries and where smaller centers tended to look in all directions for security. *Mandalas* would expand and contract in concertina-like fashion. (Wolters 1982 revised 1999:28)

The *mandala* concept was also discussed at length in a Southeast Asian context by Higham (Higham 1989:239-269), who managed to see all the Southeast Asian polities, large and small, Khmer, Javanese or Dvaravati as *mandalas* and referred to them as such throughout his book, even though, as noted above, only the polity of Rajendravarman referred to itself as a *mandala*. Wolters in his 1999 revision of his 1982 work (Wolters 1999) critiques the Higham use of the term *mandala* and in doing so adds his own spin to the idea. He accepts Higham's definition of a *mandala* as "a political apparatus fluid in terms of territory and therefore without fixed frontiers" (Wolters 1999:108). He also accepts Sunait Chutintaranond's view that "*mandalas* were 'continuous networks of loyalties between the rulers and the ruled'" (Wolters 1999:114). But Wolters then offers an extension to the idea by saying (of relations between ruler and ruled) "[t]his exalted rendering of the personal relationships that comprised public life within a *mandala* is not unexpected when a *mandala* is understood to be a network of personal loyalties rather than a territorial unit" (Wolters 1999:117).

Wolters however clarifies some of the confusion about the use of the term when he states, in response to Christie's critique of the *mandala* label,
I may be to blame because in 1982 [the year of Wolter’s first version of his book] I did not make it clear that the term could have two secular usages. The first usage is as a metaphor for a territorially ill-defined but nonetheless recognizable sphere of personal influence, exercised by an overlord, knit by personal relationships between the center and beyond, and within which people could gradually become aware of what they had in common. The second usage denotes a specific territory such as, according to I-ching, the royal residence and immediate environs of Srivijaya. I still regard Java’s early history as a series of intermittent overlordships, with a “concertina” or mandala-like identity. (Wolters 1999:141)

In Wolters’ view then, a mandala may be an image of a generalised Southeast Asian polity of the period, or alternatively a particular entity with mandala-like characteristics.

The mandala idea, while persuasive, cannot, however, be carried too far. It may best be used as a means of imagining the extremely fluid state of power and its projection in the mainland area of Southeast Asia. Probably, while at any given time the mandala system may be in equilibrium, tiny perturbations could cause major movements in power centres (Mabbett 1978:37). Theoretically, the death or incapacity of a ruler, or economic or military weakness could provide an opportunity for a more aggressive neighbour to sweep in and take over the weaker rival. It is also important to recognize that at most times in the history of Southeast Asia, the scarce resource was people and not land (Wyatt 1984:137). In an area which was quite large, with few natural boundaries to movement, with small populations and with relatively low technological development, the addition of extra population would lead to additional productivity and to one’s power, but, also theoretically, the rate at which power could be projected would be subject to the rate at which soldiers could be mobilised, equipped and supplied, and the speed at which they could move. This would lead to a natural limit to the degree to which one polity could expand with a limited population, and alliances with and the suzerainty over adjacent polities would help to overcome this problem. Wolters says “One thing is certain. The cultural influence of the mandalas did not
The *mandala* is not the only way in which the state relations of Southeast Asia have been described. Reynolds (2005) provides three other paradigms for state relations of the *mandala* type. These are the “segmentary state”, the “contest state” and the “network state”. Briefly, as explained by Reynolds, the segmentary state concept is used in studies of premodern India where “the Indian king was and overlord not a manager. He demanded submission to his claim of authority, rather than obedience to his orders” (Stein 1975:77 quoted in Reynolds 2005).

Further:

Territorial sovereignty was recognized but limited and essentially relative, forming a series of zones in which authority is most absolute near the centre and increasingly restricted towards the periphery, often shading into a ritual hegemony. There is no centralized government, yet there are also numerous peripheral foci of administration over which the centre exercises only limited control. There is a specialized administrative staff at the centre, but it is repeated on a reduced scale at all the peripheral foci of administration. (Stein 1977:9 quoted in Reynolds 2005)

The second, the contest state, was “drawn from early Java and Burma, seeks to decenter the state, or at least highly qualify royal absolutism” (Reynolds 2005: 77). Reynolds quotes the definition of Adas (1981:218) as “rule by a king or emperor who claims a monopoly of power and authority in a given society but whose effective control is in reality severely restricted by rival power centers among the elite”. Reynolds states “it is a conflictual model, and on this score it recognizes more explicitly the constant presence of warfare than does the *mandala* as expounded by Wolters” (Reynolds 2005:77). The third form, the network state, “has the virtue of emphasizing fluidity and the Phoenix-like survival of the state through times of chaos and violent disturbances … The network state recognizes the personalized structure of power …” (idem p. 78).

It may be that the structure of the Angkor kingdom is better described as a contest state than as a *mandala*, given the perceived history of the region and the
way in which, while power seemed to have been exercised from Angkor, the succession was not guaranteed within one dynasty; rival magnates from outside the city of Angkor could and did seize power, either on the death of the king, or by usurping power from an existing king. Mabbett and Chandler (1996:261ff) provide a chronology of the Khmer rulers of Angkor period between c.770 and 1308 CE derived from temple inscriptions and like data, and as such is a matter of some inference and speculation. An analysis of Mabbett and Chandler’s reading of the data shows that the succession in Angkor was not usually based on primogeniture and that the throne was often passed to outsiders from other parts of the country, few of the rulers can be seen as the younger relatives of the deceased ruler. In summary, perhaps the Angkor polity can be seen as a mandala in its territorial flexibility but a contest state in its inner working of power relations.

The extent of Khmer influence north of the Dangrek mountains

The Issan area of Thailand, to the northeast of the country, contains many temples and other monuments of a type strongly reminiscent of the type found in the Angkor area of Cambodia. They contain in some cases inscriptions which indicated that they were associated with the Khmer polity, by references to the rulers in Angkor, and contained images of the Hindu deities, or Mahayana Buddhist iconography. These buildings and their inscriptions act as the record, and the only record, of the Khmer presence in Issan at that time (Smitthi 1992:25, 31-32), interpreted in this way. The projection of Khmer control beyond the line of the Dongrek Mountains onto the Khorat Plateau, now the northeast part of Thailand, led to the establishment or development of various major centres equipped with significant religious structures. The modern Thai city of Phimai and the temple site of Muang Tam (Lower City) were connected by a Khmer high road to Angkor (Rooney 1994:24). Both contained important temples built by the Khmers; as well, Muang Tam is close to the temple of Phnom Rung built on a nearby extinct volcanic mountain. The size of the structures and evidence of
their being occupied and modified over several centuries indicates that the Khmer presence north of the Dangrek Mountains was relatively permanent and more than the mere short-term extension of practical limits of control.

A large part of the population of Lower Issan along the line of the Dangrek Mountains are still Khmer ethnically and in speech, but there is no information about their origins, although it could be speculated that they are the descendants of very early Khmer inhabitants (Diller 2000). As seen above, the Khmer people at some point in their early history became followers and users of Indian forms of belief, and forms of administration, although somewhat modified from those applying in mainland India. Further, the Khmer rulers adopted an expansionist policy where possible to enlarge their span of territorial control by the absorption of outlying polities. The evidence from Issan indicates that at some point centered around the tenth century, the territory was part of the Angkor mandala, although located more than two hundred kilometers from Angkor via a chain of mountains, the Dangrek mountains at the edge of the Khorat Plateau.

Jacques (1992) in a brief paper, summarised the state of knowledge of the Khmer influence in Northeast Thailand. This statement was based on temple inscriptions and like data. According to Jacques, there was no known Khmer presence in the area before the reign of Indravarman I (r. 877-889/890) at the end of the ninth century, and that before that time the area was probably divided into small competing possibly Môn kingdoms. After Indravarman I, Yasovarman I (r. 889/890-910/912) is represented in inscriptions. Yasovarman’s successors are also referred to in inscriptions of 925. Rajendravarman (r. 944-968) is named in a Phnom Rung inscription, as is Jayavarman V (r. 968-1000). Many Issan temples were built in the time of Suryavarman I (r. 1002-1050) and Udayadityavarman II (r. 1050-1066). Jacques notes the stylistic resemblance between the Northeast temples of Phimai and Phnom Rung and Angkor Wat, implying at least strong cultural ties between the area and Angkor. Jayavarman VII (r. 1181-1218) is well represented in the Northeast in many buildings; but after Jayavarman VII no record of a Khmer presence is known. Thus the Khmer relationship with

The Meaning of Indian-style Monuments in Southeast Asia
Northeast Thailand seems to be contained within the period 877 to 1218 at the most, still a reasonably long period of 340 years. Jacques summarizes the history of the Northeast between the ninth and thirteenth centuries in the following way:

... with the exception of short periods, we do not know who was (or probably better: were) the lords of this large country. There were Khmers, there were Môns, at least in the beginning, but we do not know when the last left the country, evidenced only by the fact that no more Môn remained here. We do not know to what extent the links were close between Angkor and the North-East, even when we may suppose that the Khmer kings originated actually from this region. (Jacques 1992:270)

In the opinion of Freeman (1997) the current city of Phimai was the base of the Mahidharapura dynasty, presumably local magnates, although the old name of Phimai was Vimayapura. Vimayapura means "the city of Vimaya". An inscription of part of the Bayon at Angkor devoted to ancestor kings refers to "the God of Vimaya", which Jacques links with the genius of the city of Phimai, implying a linkage as the origin of the ancestors (Jacques 1992:269). The Mahidharapura dynasty supplied several kings of Angkor, including Jayavarman VI (1080-1107), Suryavarman II (1113-1150) (builder of Angkor Wat) and Jayavarman VII (1181-1219) (Freeman 1997:7). Coedès earlier mentions that Mahidharapura was a city whose location was unidentified (Coedès 1971:152), but it is probable that Mahidharapura was the city of the Mahidharas. Mabbett and Chandler note Jayavarman VII was of the Mahidhara line, they portray him as a prince fighting the Chams at the time of the change of Khmer leadership which eventually led to his accession to the throne. (Mabbett and Chandler 1996:204 ff). Jayavaraman VII was arguably the most prolific builders if not the greatest of the Khmer rulers, and the conqueror of the Chams (Mabbett and Chandler 1996:205). Whatever the process, faraway Phimai was an important centre in the Khmer polity, at the end of a direct road from Angkor itself.

The Khmer-style temple at Phimai, one of the temples considered in this thesis, is located in a small town, once probably at the edge of the Khmer
mandala, and is a test of the validity of the Wolter's image of the mandala. The ability of a family of local magnates, far from the center of power, to provide kings to the capital of the polity indicates that the kingship was not based on primogeniture, with the deceased king's sons or other relatives not necessarily succeeding to the throne, and that the power and influence of individuals or families did not necessarily diminish towards the notional edge of the mandala. This being the case, the image of the Khmer system can be one where talent from any part of the kingdom would be recognized by the centre, and perhaps yield to the power on the edge.

Further, examples of evidence of Khmer involvement in Issan apart from Phimai, are given in the Khmer-style temples of Phnom Wan, a few kilometers from Phimai, and Phnom Rung and Muang Tam about 75 kilometres from Phimai southeast on the old road to Angkor. So it may be seen that the temples of Issan are evidence of the extent and nature of the Khmer political base of the time, and of its longevity in the area. The weakening of the Khmer polity in the area after the thirteenth century, and the rise in the power of the Thai peoples in Central Thailand meant that the Khmer relics in Issan would be neglected. By the nineteenth century, when these temples came to be located and inventoried by de Lajonquière and others, they were in a serious state of disrepair.

A new life for the ancient monuments

As may be seen, the Indian-style monuments in Java and the Khmer monuments in Cambodia and Thailand, together with their inscriptions where they exist, have formed the major sources of evidence for the recreation by historians and epigraphers of the history of the Central Javanese polities of several centuries, and of the Khmer empire over the period of at least more than 550 years, from 770 to 1308. Without such evidence, the history of the Javanese and Angkor polities would never have been able to be deciphered, and would have remained a few obscure references in Chinese documents. The buildings themselves were the
documents from which their history could be patiently deduced by scholars over many years.

Due to the lack of interest or neglect by the local people and the forces of nature mentioned earlier, most of the religious structures had fallen into decay and had often literally fallen down. Once the modern job of documentation was completed, the task facing the Dutch and the French at the start of the twentieth century was to do something about their new monumental possessions. The surveys had shown that the monuments were ruinous and that the passage of time would ensure that the ruinous state would worsen. If the monuments were to survive, they would need extensive work, both in clearing away rubbish and vegetation and in stabilising the remaining structures. The fact that many of the Khmer monuments were then located in Siamese territory added to the complications of the task.

Inevitably, with modern knowledge of the temples spreading amongst the general community, and with a greater awareness of the value of the past from modern education, interest in the temples grew and interest in seeing them in their original state also grew, if only initially among European and Asian archaeologists and historians. The next chapters will consider the development of specialist techniques for the restoration of temples of the Khmer type in Southeast Asia and their application to the temples of Northeast Thailand.
Chapter 3

The development of Anastylosis: Borobudur and Angkor

The techniques of the scientific restoration of ancient structures, known formally after 1931 as “anastylosis”, developed slowly and were put into effect in their beginnings in a serial fashion, as first one, and then another monument was successfully restored. The process was in many way heuristic, establishing its principles as it went along, and in its application in Southeast Asia, rejecting the models available and applied in nineteenth century Europe. It will be seen that scientific restoration, or anastylosis, has a history of only about one hundred years.

Attention to the preservation of ancient or historical buildings not in current use is of fairly recent origin. An early European attempt at conservation was in the efforts from 1810 onwards by the French émigré Charles Count of Graimberg to conserve the ruinous red sandstone Heidelberg castle in Germany and to set up a museum of artifacts (Stolpmann:9). Graimberg’s objective was to save the fabric of the castle from further pilfering by the local people and to protect it from further deterioration.
By contrast, the quintessentially iconic Greek temple of Athena at the Parthenon in Athens was disregarded until almost the middle of the nineteenth century and was extensively damaged in military conflicts between Turkey and Greece at that time. After the Turkish-approved removal (not quite looting) of the marbles from the pediment by Lord Elgin between 1801 and 1803, while Greece was still under the control of Turkey, nothing was done at the Parthenon until Greece obtained its independence in 1830. In 1834 the first attempts at the conservation of the temple were undertaken. In 1837 the Archaeological Society of Athens was formed, and in 1842 a series of programmes of conservation was undertaken under its auspices, with the activities of a succession of talented Greek architects; this included clearing of the site, collection of fallen building elements and, later, attempts at re-erecting the columns of the building (Vasu 1997:18-20).

In parallel with this work in Europe, and deriving from its pioneering work, the conservation and restoration of the ancient monuments in Southeast

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Asia commenced and flourished under colonial administrations, in particular in Java and Cambodia. In the following I will look at the beginnings and development of the scientific restoration of Indian-style religious monuments first in Java and the later transfer of these techniques to Cambodia. What began as an engineering problem in the preservation of the collapsing Borobudur led progressively to larger and more extensive architectural and artistic achievements in the restoration of larger and more complex buildings. In the process, an increasingly scientific approach came to be taken in the restoration of damaged or collapsed buildings. While there do not seem to have been significant constructive transfers of conservation knowledge between Europe and Asia, I will show that European influences in some cases actually retarded the possible pace of restoration of monuments in Asia, at least in the case of Cambodia. Excessively imaginative restorations in France in the late nineteenth century caused such a scandal that “restoration” became an object of rejection.

Restoration in Java: Candi Mendut, the Borobudur and Prambanan

In the early nineteenth century, the Dutch, having surveyed their newly-recovered colonial possessions, found that the temple of the Borobudur was in great need of conservation and restoration owing to the ongoing collapse of the structure, from the undermining of its foundations by rainwater and the natural effects of water and lichens on the unprotected surface of the constituent stones. This problem had been exacerbated by the earlier removal of the protective layers of dust and vegetation after its “discovery” and publicisation by Raffles (Miksic 1990:29).

In parallel with the clearing and surveying of the Borobudur monument, an early task undertaken by the Dutch administration was to restore the nearby, much smaller temple of Candi Mendut (candi = temple). Candi Mendut is a small, square temple with the feature, unusual for a Buddhist monument, of a relatively large interior housing an image of a Buddha seated in the European style, flanked by two Bodhisattvas. Classical Buddhist memorial monuments tend to be stupas,
essentially hemispherical closed mounds with a small space deep inside for the storage of a relic sacred to Buddhism (see Cummings 2001), as opposed to the larger Buddhist ordination halls. The Mendut temple interior has a small single entrance approached by a stairway. The Buddha image is in the Dhammachakra (Wheel of the Law) or teaching mudra and is said to be one of the world’s most beautiful images of the Buddha (Gorer 1986:50). The temple is of the same period as the Borobudur, that is ninth or tenth century CE, although it appears to have been built over the remains of an earlier structure.

First thoughts on the restoration of Candi Mendut occurred to the then Batavian civil service in 1862, but it lacked a centralized body of expert knowledge to carry out the work properly. An early question was whether to stabilize the building or to reconstruct it. Kempers (1976:216) says: “Thus the problem of ‘restoration’ (in the sense of purely conserving and strengthening the status quo) or ‘reconstruction’ which occupied the thoughts and emotions of a later generation, was introduced for the first time.” This issue would continue to vex the profession of archaeology for some time to come. Unlike Kempers, I prefer to use the term “conservation” for “conserving and strengthening the status quo” and “restoration” for the possible disassembly and rebuilding of the fabric of a structure.

At the time of its first photographic recording in 1897, the Mendut temple was in a semi-ruinous condition, with part of the upper levels of the building in a shapeless mass, although the plinth was in a reasonable and recognizable state (see Kempers 1976). Any solution to the problem of either stabilization or reconstruction was complicated by the fact that the stones in the upper levels were loose and prone to fall, both from the effects of rain and from occasional earthquakes; the area is still quite volcanic. As noted, the monument surrounded a large internal cella containing the three images, each too big to be moved in

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1 *Cella*: enclosed part of a Greek or Roman temple including the sacred chamber and vestibule, in fact everything within the walls (Dictionary of Architecture, 1999), and by extension the sacred chamber within Buddhist and Brahmanic temples.
through the doorway after construction and clearly placed in position before the upper structure was commenced, and the *cella* surmounted by a pyramidal ceiling.

Because of the unusual nature of the Mendut structure, any removal of the ruinous roof and upper levels of the building could result in the uncontrolled falling of stones onto the statues and their probable irreparable damage. Many strategies were considered to avoid this outcome, some involving the use of bamboo screens and scaffolds, others involving filling the *cella* with sand. Kempers points out the general problem of the time of the lack of a suitable lifting technology: “These methods give some idea of the problems facing restorers of a pre-hoisting crane age, an age of bamboo, or at the best *jati* wood, scaffoldings and ladders” (1976:217).

The restoration was undertaken between 1897 and 1904, and after 1902 by Dr. J Brandes of the Archaeological Commission of Java. The restoration involved partially disassembling and then reassembling the constituent stones of the building to return it to its original condition. At the time of its documentation in 1897, detailed drawings, photographs and descriptions were made to show the appearance of the building as designed and as a target image for restoration (Kersjes 1903).
The temple was reconstructed in accordance with the drawings, but the upper part of the roof was left incomplete because of a lack of positive information about the shape of the finial. Brandes died unexpectedly in 1904 and work was later taken up by Van Erp in parallel with his work on the Borobudur, and finally completed some years later. An early photograph of the restored candi is given below, together with a photograph of the Buddha image inside. Note that there is a degree of divergence between the sketch and the actual restored monument, particularly in the treatment of the line at the base of the roof.

Fig. 3.3 Candi Mendut after restoration (from Kempers (1976))

Fig. 3.4 Buddha image in Candi Mendut (from Soekmono (1976))

The issues which came out of the restoration of Candi Mendut have continued to be of relevance in restorations since that time, and come down to the issue of the difficulty in establishing without controversy the details of the building before its collapse and the art style in which it was conceived and built. In the case of Candi Mendut, Brandes criticised his predecessors in the restoration and he in turn was criticized, post mortem, by van Erp.

Kempers (1976:217) says in relation to Candi Mendut,
Later generations of architects and archaeologists, in fact, are not quite satisfied with what was done. The restoration bears the stamp of having been done amidst a great struggle of ideas, methods and personal grievances. It was before van Erp’s great work of saving Borobudur and much too long before the Archaeological Service developed and put into practice a successful restoration strategy.

In spite of the later disputes about the details of the restoration, it cannot be doubted that as a first attempt, the restoration of Mendut provided some important principles to be followed in later work, and with the restoration of Candi Mendut as proof of the benefits of this restoration technique, work continued on the far larger structure of the Borobudur.

Fig. 3.5 The Borobudur in its original state before clearing and restoration, a sketch from about 1850. (From Grabsky)

The Borobudur, the largest extant Buddhist monument in the world, was built over a natural hill and is a series of square, redented, receding stone terraces rising towards a level top which is covered with a larger central stupa and with concentric rings of small open-work stone stupas containing Buddha images. The stepped pyramid is about 123 metres a side and contains 55,000 cubic metres of stone gathered from nearby rivers (Wickert 1989). Each of the inner and outer terrace walls is carved with bas-relief scenes from the life of the Buddha, from the Jataka stories, or from the lives of Bodhisattvas. All four galleries total 1.2 kilometres in length (Miksic:40). It may be assumed that the terraces were intended for circumambulation of the monument by worshippers. The terraces are also decorated with seated Buddha images in niches.
The large volume and mass of the monument, coupled with poor allowance for drainage in the original design, meant that the effects of heavy tropical rainfall were to cause parts of the foundations of the massive stone building to subside. A feature of the monument is a belt of heavy stones at the base of the structure, obscuring the original design, and thought to have been added at the time of building to stop the structure from collapsing down the hill beneath it, due to its increasing weight as the building rose (Miksic 1990:46). The grandiose architectural conception may have been more demanding than the engineering resources available at the time to realise it in real and stable stonework. Further, volcanic activity shook the structure from time to time and reduced the strength of its foundations.

It is evident that the Borobudur monument in its current form was unfinished, because some areas of carving on the terraces are incomplete and only show cartoons where the carving was to have later taken place. A possible theory is that major volcanic activity at the time caused the movement of the kingdom’s base towards the coast (Grabsky quoting Miksic, 1999:122).

Work on clearing and recording the vast mass of the Borobudur temple had been going on in a fragmented way since the early nineteenth century, and the results became known to a European audience through the drawings and later the photographs of several talented individuals, including Sieburgh, Cornelius, Payen, Wilsen in sketching and painting, and van Kinsbergen and Cephas in photography up to 1900 (Kempers 1976:194-5). By this time concern was growing for the state of decay of the monument, now cleared of protective dust, debris and vegetation and exposed to the full effects of the intense tropical sun and rainfall in their turn. Heavy rains had caused the inner hill on which the monument was built to subside, allowing the monument to tilt and sag as shown in figures 3.5 and 3.6.
The Dutch authorities set about examining ways in which the monument could be conserved and protected from its environment, and in the process they set up a commission which would later become the Archaeological Service of the Netherlands Indies. At the outset, the commission had to consider an eminently practical plan put forward by the engineer Van der Kramer to cover the monument with a pyramidal roof of galvanised iron supported by “forty angle-iron styles” (Kempers:196). Given the size of the monument, it would have been a very large pyramid indeed. Unfortunately the Dutch did not seem to consider the idea appropriate to the structure to be protected from the elements, and other measures were undertaken, specifically by appointing the engineer Van Erp to restore the more threatened parts of the monument in the open air.
The decision to appoint an engineer to restore the Borobudur, as opposed to an architect or an archaeologist, implied that the problem was seen as being primarily an engineering one, without issues of design or of art style being involved. Van Erp was given the job of physical restoration of this structure, working with the architect Krom who was to record the architectural aspects of the work. As with Candi Mendut, part of the task was to record the appearance of the monument by drawings and photographs. This was done in great detail and there still exist several large volumes of drawings and photographs assembled by Krom while recording the elements of the structure (Krom 1927).

Fortunately for the task of restoration facing van Erp at the Borobudur, there was no doubt about the detailed physical structure of the building, both because of the nature of the monument and because of its condition. The design was a stepped pyramid with galleries and stairways topped by a platform covered with rings of small stupas around a larger central stupa. The monument was essentially solid, with only a small internal space for the placement of a relic. The structure had a highly repetitious design, so that missing pieces could be fairly readily imagined and identified if found elsewhere. The problem facing Van Erp was to find and return into position those pieces which had fallen off or been carried away, and to restore the levels of the areas where subsidence had occurred.
This was nevertheless in itself a major undertaking, given the size of the structure and the magnitude of its subsidence problems.

Van Erp’s restoration was immediately hampered by the scale of the structure in the then absence of large scale mechanical aids and sophisticated materials. His only advantages over the original builders was the availability of a stronger cement mortar for bonding the stones, and access to some limited mechanical equipment. His disadvantage was the lack of a large labour force to carry out his instructions, and presumably an equally modest budget. Van Erp had started the task with the limited objective of clearing the base and stabilizing the structure, but as work progressed he found he was able to do more, and obtained additional funding for a form of restoration of the upper stupa levels of the monument. This activity comprised the complete disassembly and reassembly of the upper circular terraces of the monument and the perforated stupas, each containing a Buddha image (Kempers:196-8).

A first task was to clear away the accumulated debris at the base of the monument, some metres thick in parts, and this allowed the discovery of much of the missing material which had fallen from the structure to be lost amongst the dirt. The division of the surrounding ground into baulks of 10 by 10 metres to control and identify the location of the fallen material (Kempers:197) recalls the techniques of archaeological excavations. As well, the Javanese workmen were found to have a very good eye for detecting patterns among separate fallen pieces and reassembling them into “a three dimensional jig-saw puzzle” (Kempers:ibid).

In an early example of the applications of the principles of scientific restoration, Van Erp avoided the error of decorating new elements brought in to complete the structure, which had been made in the prior restoration of Candi Mendut. Van Erp replaced nine missing gargoyles with straight channels, but they were unornamented. In taking this approach to the use of replacement material van Erp avoided the problems which had beset restorations in Holland where architects had a very free hand in their approach to an old building, a practice which allowed architects to restore old buildings in styles other than that
specific to that of the building itself, or to replace elements with new pieces. This process continued until the 1940s (Kempers:200). In this particular, an important principle of anastylosis was established, namely, that any necessary new elements would be recognizable and unornamented, to avoid any suggestion of fake or fraud. We should be grateful for Van Erp’s restraint.

Fig. 3.7. View of part of the Borobudur after the van Erp restoration of 1907. (From Wickert 1989)

Soekmono (p.44) says:

Van Erp completed his work in 1911, and what had now emerged from the ruins compelled general admiration. But not everyone was satisfied. Some thought that he had gone too far when he made bold to dismantle and rebuilt [sic] certain parts of the monument, others that he had not gone far enough and should not have left walls leaning and sagging. However he had done his utmost, given the most serious consideration to both the technical and the aesthetic aspects, and resisted all temptation to produce fakes.

The position in relation to Van Erp’s restoration is also summed up by N. J. Krom, the architect and art historian. Krom says of the restoration:

... we shall merely formulate the benefits resulting to the monument by this restoration. When we say it was rejuvenated thereby, it expresses both what it gained and - unavoidably - has lost. The charm of the untouched ruin, image of an extinct civilisation and an inanimate creed, has in great measure disappeared. Let us not forget that the building was

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doomed to decay: the choice had to be made between sacrificing the monument to ruin, or saving it at the cost of some of its antique charm. (Krom 1927:46)

Krom thus makes the central point of the tension between the romantic approach to a ruin and the need to conserve or restore it. A picturesque ruin, which may touch off all sorts of romantic feelings and imaginings, is still doomed to decay further and to eventually disappear unless the process is halted or reversed. To selfishly insist that a ruin remain untouched is to condemn the structure to eventual death and to the denial of its enjoyment to future generations. The process of decay may be slow but it is inevitable. The trick is to ensure that the process of conservation and restoration respects the structure, and does not see it as a vehicle for the ambitions of the restorer.

The Dutch Archaeological Service went on in later years to commence the restoration of the Brahmanic monuments and temples at Prambanan, about forty kilometers from the Borobudur. Because of the dilapidated state of these monuments compared with the relatively intact condition of the Borobudur, this restoration was very difficult because of the lack of a model, but the result was very effective, as may be seen from the following image of the Shiva temple at Prambanan.
It may be seen from Figure 3.8 that the Javanese temples, in this case Candi Siva, have their own style, which is quite different in detail from the Khmer temples in Cambodia and Thailand to be discussed below, although there is a sort of family resemblance.

The Van Erp reconstruction of the Borobudur was accepted as satisfactory at the time. However that restoration solved only part of the structural and foundation problems and as time went by further work was required (Miksic 1990:30). After much delay, in part due to external factors, a more extensive reconstruction was undertaken in the 1960s to 1980s and its current form is the result of that work, carried out with more modern technology and materials, but still using the principles laid down by Van Erp.
In summary, the application in Java of the new procedures of anastylosis at Mendut, the Borobudur and Prambanan, was successful. This technique pioneered by Van Erp was eventually adopted and taken into other parts of Southeast Asia, particularly Cambodia and parts of Thailand. This process of technological transfer, which did not take place without problems, will now be examined.

**Conservation and Restoration in Cambodia**

Maternal France, forced by the rapid expansion of Europe towards the furthest extremes of Oriental Asia, you have there, in the space of one human life, accomplished a gigantic task.

Angkor, of the now glorious name, is an exact symbol of it: in 1860 the forgotten had recovered its memory, as the forest had recovered the monuments. You came, you brought that which you love above all other, order and clarity; you have cleared, you have questioned the long-mute stones: you have drawn out from them the secret of their history and of their architecture; you have returned to the monuments the beauty of their lines and to the Khmer people the knowledge of their thousand-year-old greatness.

(Sylvain Levi, *L’Indochine*, 1931, quoted in Marchal 1953)

In spite of Sylvain Levi’s encomium, Maternal France approached her “gigantic task” in Oriental Asia with her hands somewhat shackled by the legacy
of architecture in France. More specifically, the activities of a nineteenth century French architect of wide influence and renown, following his own controversial approach to the restoration of ancient buildings, complicated the activities of the French in Cambodia in addressing the task of conserving and restoring the Khmer heritage at Angkor, and other sites. The French at Angkor were forbidden to attempt restoration because of its bad reputation at a time when van Erp, with much greater freedom, had successfully avoided the anticipated errors.

Malleret says

As a reaction to the innovations of Viollet-le-Duc in Europe, the doctrine which was imposed from the first was that of absolute respect for the ruin, which limited the role of the archaeologist to supporting the shaky stones with [a variety of supports and props]. (1956:277)

The influence of the eminent French architect Emmanuel Viollet-le-Duc (1814-1879) in Europe is worth considering briefly, in the light of his effect on far-away Cambodian archaeological restoration.

Viollet-le-Duc famously restored the Notre Dame cathedral in Paris, as well as other prominent religious monuments in France, but became infamous for some of the liberties he is said to have taken in his work and the changes made to the revered structures. While he is still regarded as a leader in the development of architectural theory (Summerson 1980:7), some of his restoration work led to the founding in Great Britain of the Society for the Protection of Ancient Buildings (Oxford Dictionary of Architecture 1997:712), possibly to protect British buildings from similar perceived outrages. Thus the term “restoration” apparently fell into bad repute in Europe in the late nineteenth century, at least in part due to the activities of Viollet-le-Duc.

It should be noted that Viollet-le-Duc’s somewhat tarnished reputation is based upon his work on “live” as opposed to “dead” buildings, where he found it necessary to modify the structures to improve their stability or longevity, calling down professional and artistic criticism for interfering with national monuments. A study of Viollet-le-Duc’s designs for new buildings on the other hand show a great deal of common sense, although in his use of cast iron he anticipated a great deal of what is now called “brutalist” architecture (for example, see Summerson
1980). On the other hand and in fairness to his memory, Viollet-le-Duc clearly states the principles which would be later applied in the scientific restoration process, that is, in relation to a broken building to "brace, consolidate and replace", but without decorating the replaced elements. These arguments apply to "curious ruins" as opposed to currently functional buildings (Viollet-le-Duc 1992:280).

Whatever the merits of this more than one hundred year old argument, Viollet-le-Duc and his architectural principles are seen as the reason for the complete embargo imposed by the Institut de France on the restoration, as opposed to the conservation, of the monuments in French Indochina, and resulting in a thirty year delay in restorations at Angkor. The French embargo on restoration as such was first announced by Auguste Barth in a letter on the establishment of the Ecole française d'Extrême-orient (EFEO) (The French School in the Far East) in 1900.

M. Auguste Barth, of the Institut de France, in an open letter to the EFEO founding director, Louis Finot, said in relation to the duties of the new School regarding antiquities,

And your collecting which, concerning original objects, will only gather together that which otherwise is fated to perish, and will not be obtained at the cost of pillage or the devastation of monuments: not only will you not demolish, you will preserve and conserve. But you will not restore, that which of all the forms of vandalism is usually the worst. ... May I be permitted to hope that your vigilance, under this advice, could extend to monuments located in a territory which does not belong to us [including Angkor at the time], but where, if I am not mistaken, we have police rights, and that the temples of Angkor will not be exploited as a quarry by so-called archaeologists, as they have been recently, it is said, to the great scandal of the inhabitants." (Barth 1901:2, my emphasis).

Barth's imprecation is unambiguous and clearly aimed at both the current and the future activities of the EFEO. His advice on the maintenance of the balance between the value of objects, statuary and the like, and of their housing monuments, is sensible and was also often overlooked at the time. Also his use of the word "pillage" carries the idea of the removal of objects from their provenance. Unfortunately this will be seen to have become too much of a habit in all conservations and restorations; for whatever reason, interesting objects
mostly find their way into museums, and the informed visitor to a religious monument sees an empty shell, not a living entity for worship; a skeleton, not a living body.

At the time of M. Barth’s 1901 advice to the fledgling EFEO, the three western provinces of Cambodia, referred to in his letter as “where we have police rights”, were then under Siamese control as a sort of buffer between Siam and Cambodia, and Cambodia was then a French protectorate. France was putting heavy diplomatic and military pressure on Siam for the return of the provinces to Cambodia. Of the three provinces, the most important from an archaeological point of view was that of Siem Reap, on the banks of the Tonle Sap lake, a backwater branch of the Mekong River, and the location of a great many of the Khmer monuments in Cambodia. These centered on the old capital of Angkor, abandoned by the Khmers in the fifteenth century in favour of Phnom Penh.

The Franco-Siamese treaty of 1907 finally ceded the three provinces to Cambodia (Mabbett and Chandler 1996:233) and the French colonial administration placed the Angkor complex under the control of the EFEO. However, under the rules laid down by M. Barth in 1901, the French were not allowed to do other than preserve and conserve what must be seen as one of the most valuable collections of monuments in all of Southeast Asia. As seen above, it was left to the Dutch to pioneer the use of restoration techniques in archipelagic Southeast Asia.

Thus the EFEO at its founding was constrained by a complete ban on restoration of the monuments under its control, as opposed to their clearing, stabilization and conservation. This ukase seems to have been the policy followed between 1901 and 1929, the period of the intermittent directorship of Louis Finot. While Finot had been initially appointed in 1901 for five years, a series of events resulting in him occupying the post on three separate occasions, as well as working in Indochina at other times. He was directly involved with the EFEO in the periods 1901 to 1904, 1914 to 1918 and 1920 to 1928. In all these episodes, he maintained the prohibition on restoration, although the clearing of monuments
in the main Angkor group may well have kept the EFEO busy for the whole period anyway. A photographic record of the then unrestored state of Angkor Wat and other parts of Angkor was published in 1909, together with some contemporary images of Phnom Penh. (Dieulefils 1909).

A permanent conservator of Angkor, Commaille, was appointed after the 1907 treaty gave France control over the Angkor area as part of the newly transferred Siem Reap province. But following the untimely death of Commaille in 1916, Henri Marchal was appointed conservator in his place. Marchal carried out a programme of clearance and conservation at Angkor and, by the end of Finot’s period of service, Goloubew says “At Angkor the works of Conservation, thanks to M. Marchal were progressing without cease, in a most satisfactory fashion. Among the recently cleared monuments was the eastern gate of Prah Khan with its causeway of giants and its great stone slab avenue, marked out by boundary stones. They were now going to attack Pre Rup. As for the tourists who hurried from all corners of the world, attracted by the renown of Angkor, their number was counted in the thousands.” (1935:17)

On the retirement of Finot from the EFEO, his position as Director was taken in 1929 by George Coedès, an earlier member of the EFEO but at that time working at the Siamese National Library and as Director of the Siamese Archaeological Service. It also appears that at about this time Dr. van Stein Callenfels of the Archaeological Service of the Netherlands Indies visited Angkor and probably invited members of the EFEO to go to Java to see what had been achieved in the restoration of the Borobudur, and of other monuments in Java and Bali. Coedès noted in 1943 that “[b]eforehand, as the result of a too literal interpretation of the directives of the Institute [de France], the Ecole Française forbade itself all attempts at reconstruction” (1943:79). It may be surmised from this passage that Coedès felt that his predecessor Finot had gone too far, and that the EFEO was now less constrained by the strictures of Auguste Barth, so Henri Marchal, Conservator of Angkor, was sent off to Java in 1930 to see and to report on the work of the Netherlands Indies Archaeological Service.
Marchal spent two months in Java and Bali with the Dutch Archaeological Service, examining their work at the Borobudur, Prambanan, Bali and at other sites. He also took part in the restoration of the South Temple of the Prambanan complex (Marchal 1934:11). On his return, he wrote a comprehensive report on his findings which was published in the Bulletin de l’Ecole Française d’Extrême-orient (BEFEO) in late 1930. It covered forty-three pages of small type in that journal and included photographs and diagrams relating to the work of the Dutch.\(^2\)

In the final part of his report, Marchal discusses the techniques used in Java for the restoration of ancient monuments and their applicability to Cambodia. The immediately relevant parts of his report are given below (from Marchal 1930, 625-627)\(^3\).

... Further, the Khmer monuments are very different from the old monuments in Java: this difference turns on the following three essential points:

1. The composition of the ground plan of the Khmer monuments is more complicated, more encumbered with enclosures, basins, cloisters, galleries, causeways etc. than the equally important temples in Java which one could compare them to. ...

2. The sandstone which comprises the essential part of the monuments is much more crumbly, weak and more given to attack by humidity and vegetation than the andesite of the Javanese temples, which makes its handling more delicate. ...

3. The Javanese monuments do not present the numerous imperfections, blunders or faults which one encounters in the Khmer monuments (above all those of the last era): in Cambodia, it is rare for the courses to be of constant height, the stones are often treated like pieces of a wooden framework and the result is that they are broken, cracked or fissured. ...

These three differences, added to the lack of competent and skilled personnel in the Angkor Conservation, suffice to show that right now one could not generally apply these methods in the Angkor group.

However, there is not room in my opinion to reject them completely, and one can even now profit from them by making the transpositions and modifications required. ...

Finally, the great lesson to be learnt from the methods put into practice in Java is to use cement with the greatest discretion. ... an ideal more difficult to realise in Cambodia, with the stones so roughened by vegetation and the imperfections of construction, but which one must nevertheless approach. ...

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\(^2\) My translation of selected relevant parts of the Marchal report is provided at Appendix 2 to this thesis.

\(^3\) The complete section may be seen at pages 17 to 19 of Appendix 2.
The most important part of this section of the Marchal report, in my opinion, is the almost automatic assumption that the procedures of restoration will be applied in Cambodia, allowing for the differences noted by Marchal. The central issue which followed from this was the way in which the Dutch techniques developed in Java required modification to cope with the quite different structures and materials encountered in the Khmer monuments. One could also say that there is an almost wistful comparison of the difference in design and workmanship between Javanese and Khmer monuments, to the detriment of the Khmer product, the differences making the potential restoration of Khmer monuments that much harder.

Whatever the causes, Marchal recognized that he had a set of challenges to face if he were to apply the Dutch techniques in Cambodia; nevertheless he seems to have been sanguine about the possibility of success, particularly if it was initially applied to some smaller temples which he identified, namely Banteay Srei, Banteay Samre, Cau Say or Thommanon. He said "These temples, by their quite restricted dimensions, lend themselves to a trial of the methods used in Java. ... Certain lintels could be raised, certain masses of string walls or of foundations completed with the fallen stones at the foot of the structure, certain tops of towers rearranged." (Marchal 1930:626).

Malleret (1956:277) summarises the then position:

For the first period, the actions of the conservators tried hard to free the monuments from the invading forest, to consolidate them and record their plans. ... In 1928 [sic] M. Henri Marchal was sent to Java for a study of the procedures used by the Archaeological Service of the Dutch Indies and he received the task in 1931 of restoring the group of Banteay Srei. Since then, the anastylosis method has taken a particular breadth in the programmes of the Ecole.

Marchal's recommendation on the application of the Dutch restoration techniques to certain specific temples was taken up by Coedès, and Marchal was instructed to initially work on the small temple of Banteay Srei, some 25 kilometres to the north of Angkor Wat and then connected with it by a very poor track through the rice fields. The road is not much better sixty years later. A great
deal may be seen to have been riding on Marchal’s report and recommendations. Clearly it was in everyone’s interest to start with a manageable and relatively easy restoration which would win critical and technical acclaim, and neutralize critics who preferred romantic ruins, so the choice of Banteay Srei among Marchal’s shortlist was sensible. Without doubt the archaeologists and art historians of Angkor must have been restless under the dead hand of M. Barth, and the French may have for nationalistic reasons been somewhat peeved at the glory attached to the Dutch in their work at the Borobudur and at Prambanan. It would seem that the reputation of everyone in the EFEO would be affected by the results of the application of the new techniques.

Boisselier says (1972:20), “In spite of the lack of enthusiasm displayed by H. Parmentier [French Archaeologist] for the new methods (‘If they had asked me to apply them, I would refuse, but you are free...’), H. Marchal undertook the reconstruction of Banteay Srei which opened a new era for the Conservation of Angkor. He worked there from 1931 to 1936 ...”. Boisselier goes on to quote Maurice Glaize in Glaize’s Les Monuments du Groupe d’Angkor “If the task at Banteay Srei was made easy by the small volume of the buildings and the blocks of stone, the hardness of the sandstone used leaving to the profiles all their clarity, and the abundance of a décor remarkably conserved and everywhere readable, the merit of M. Marchal is not the less, because he had to bring his experience to a far-away and difficult-to-access site with particularly reduced means and with a workforce as inexpert as it was unspecialised which he had to assemble.”

Marchal himself wrote several early papers on aspects of his restoration of Banteay Srei (1934, 1935 and 1937). Marchal said of Banteay Srei

The charming little monument known to the people and the public under the name Banteay Srei, and to experts as Isvarapura, merits attention by the richness of the carved decoration and the good state of conservation of the decoration...

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4 Translations of these papers are provided at Appendices 3 and 4 to this thesis.
[Banteay Srei] belongs to a transition period which carried on the art of the opening of the classical period up to the end of the tenth century A.D., and was making ready for the fine art of the eleventh and twelfth centuries, of which the most representative types are, to begin with, the Baphuon and then Angkor Vat ...

The temple of Banteay Srei of which all the central part has just been completely rebuilt by procedures similar to those currently in use in the Archaeological Service of the Dutch Indies, offers today, with an exquisite decoration, almost intact, a complete architectural silhouette unique to Cambodia of an ancient Khmer temple which had triumphed over the depredations of vandals and the injuries of time ...

The reconstruction of this temple, which starts a new way of conservation at Angkor, has enabled us to form a very exact idea of the constituent parts of a prasat.

A general view of part of the temple is given in the following photograph taken from Marchal (1937). This gives some idea of the shape, level of decoration, and the smallness of the structure. Part of the building's problem was the subsidence of the foundation plinth, leading to the partial collapse of the top of the tower. In the background to the right may be seen an un-restored structure with a fissure in the wall.
The steps in the restoration of the Banteay Srei southern sanctuary carried out by Marchal and his team comprised what was to become the classic approach to scientific restoration. Marchal established the procedural and operational methods which were to be followed in the restoration of a stone building, and which are at the core of anastylosis. The steps in reconstruction were as follows:

- Clear the monument of vegetation and other foreign matter if not yet done,
- Gather and classify all fallen stones and other parts of the structure lying on the ground; clear any debris from the area,
• Make careful notes, photographs, drawings and other records of all aspects of the extant building. Prepare elevations and plans of each face of the building,

• Disassemble the building above the foundation plinth, marking each stone with a unique identification mark where it will not show, and noting the stone’s location on the drawings,

• Disassemble the foundation plinth, again identifying each stone on drawings,

• On the ground, integrate fallen stones with disassembled stones to see the overall structure,

• Provide a strong sub-foundation to support the structure, using a cement mortar,

• Reassemble the foundation plinth using new material where required on the inside and bond inner material with cement mortar.

• Reassemble the upper structure as integrated on the ground, adding new material where elements are missing but leaving new material plain. Use hidden metal clamps where necessary to strengthen the structure.

The work on the southern sanctuary took a total of five and a half months from start to finish. The nature of the track between the site and Angkor meant that work could only be carried out in the dry season when the track was passable. The total reconstruction of Banteay Srei took six years, slowed down by the site’s isolation and difficult access. However the success of the work and the beauty of the restored building allowed the EFEO to demonstrate to itself, to France and to the world that French archaeology had shaken off the fear of the heritage of Viollet-le-Duc.
The Introduction of the Term “Anastylosis” and its Meaning

While the pioneering restoration at Banteay Srei was going on, a new term was introduced to the scientific world to describe the restoration of fallen monuments using methods such as those followed and developed by the Dutch in Java. The term “anastylosis” was first introduced in the October 1931 at a First International Congress of Architects and Technicians of Historic Monuments in Athens. It was proposed by the Greek engineer, Nicolas Balanos, Engineer-Conservator for the Acropolis in Athens. Balanos defined anastylosis in the following way:

Anastylosis consists in the reestablishing or re-erecting of a monument with its own material and according to the method of construction proper to each monument. Anastylosis allows the discreet and justified use of new materials replacing missing stones, without which one could not reposition the antique elements. (Marchal 1934:11)

The word “anastylosis” was a neologism derived from the Greek words ανα (ana = renew) and στήλα (stelo = column), and was adopted in the Athens Charter in Article 6 (Vasu 1997:1). The literal meaning carries the idea of re-erecting columns in a post and beam structure of the Greek or Roman type, and does not appear to relate to the more complex stone or brick coursed structures of Indian-style architecture. Nevertheless it has been adopted generally as a
technical term which avoids the earlier negative overtones of “restoration” or “conservation”. The application of the Balanos-defined principles allowed the avoidance of the earlier problems of unrestrained restoration.

The Athens Charter stated in part “In the case of ruins, scrupulous conservation is necessary, and steps should be taken to reinstate any original fragments that may be recovered (anastylosis), whenever this is possible; the new materials used for this purpose should in all cases be recognisable. When the preservation of ruins brought to light in the course of excavations is found to be impossible, the Conference recommends that they be buried, accurate records being of course taken before filling-in operations are undertaken.” (ICOMOS 2005) The Charter also sanctioned the “judicious” use of modern materials, especially reinforced concrete.

After Banteay Srei, in 1935 anastylosis was successfully applied to the small early Khmer temple of Asram Maha Rosei. This small temple on the side of a hill, and far from Angkor, is a fine example of an architectural style owing a great deal to woodworking concepts in its construction, including the locking of adjacent blocks with free tenons or cogs. Some of its construction can be related loosely to the tiny Edifice K at Oc-eo mentioned above and described by Malleret (1951). Mauger (1936) published an excellent description of the Asram Maha Rosei temple and its construction.

Another early application of anastylosis in Cambodia took place at Neak Pean after the collapse due to a hurricane of a tree growing over the tiny temple. Neak Pean is relatively unusual in its design. It is a small temple built on a tiered stone platform in the middle of a large square baray (pond) surrounded by a stone parapet, with miniature gopuras on the banks of the baray at each of the cardinal points. Up until 1933 the small central temple was crowned and engulfed by a huge tree, probably a banyan, *ficus religiosa*, of the type.

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5 A translation of relevant parts of the report are provided at Appendix 5 to this thesis, including a very detailed description of the anastylosis technique used on an early, slab-built monument of quite different style from the later pre-Angkor and Angkor monuments.
associated with the Buddha, apparently grown down from a seed lodged in the upper structure of the temple. The tree had grown up and put down roots to the ground around the temple, enclosing it, and forming a very romantic image. At the time it was decided to leave the tree intact if the temple were to be unrestored. Between its clearing in 1922 and its damage in 1935 visitors were fascinated by the whole ensemble. The following photograph gives some idea of the appearance of the tree temple in its prime.

![Temple at Neak Paen and banyan tree before its damage by high winds](image)

Fig. 3.12. Temple at Neak Paen and banyan tree before its damage by high winds. Illustration from Rooney (1994)

Unfortunately on 1 November 1935 the romantic image was destroyed by a hurricane, after the tree had been previously damaged by high winds in 1933. All that was left of the sacred tree were the roots and a straggly branch. The romantic object became something to be restored to a more original state (Glaize 1940). Encouraged by Coedès, Glaize undertook the restoration by anastylosis between 1937 and 1939 "with all the confidence of a neophyte". The small size and relatively intact nature of the stones allowed a straightforward application of the now-accepted anastylosis technique. The success of the technique led to further efforts by the EFEO.
Between 1939 and up to 1950, once the effects of World War II had subsided, the EFEO set about an ambitious programme of restoration work in Angkor Thom, the Angkor area and at Angkor Wat proper. The techniques of anastylosis were being applied to bigger and bigger, and more and more complex projects with marked success. This was timely, since the programme of clearing the old sites of vegetation had led to a deterioration of some monuments, particularly the Baphuon, and a form of restoration was becoming a necessity. Malleret (1959) wrote a report on the problems of restoration at Angkor, including a discussion of faults in the Khmer building techniques.\(^6\)

While the Khmer heritage in Cambodia, both within and outside Angkor, was well in hand in a programme of restoration using the techniques of anastylosis, the next largest body of Khmer monuments in Asia, in Northeast Thailand, was still in a state of neglect, with little done in the way of conservation, let alone restoration. These monuments, some of them gems of the Khmer style, required a great deal of work to achieve a satisfactory result. Fortunately, government action in the 1950s started a programme of restoration work, as will be seen in the next chapter.

**Anastylosis as a maturing technology**

The scientific restoration, or anastylosis, of ancient monuments, like much similar activity, did not follow a pre-ordained or anticipated path. It is simple in hindsight to see a logical progression from the restoration of the tiny Candi Mendut to the initial work on the huge Borobudur, to Prambanan in Java and then on to Banteay Srei, and to later monuments in Cambodia. Each step, however, had to be taken in isolation and unconsciously prepared the way for the next, with each step moreover providing lessons for good or bad for the future. Such a process is not without its risks either, and not without its leaps of faith. There is a saying “Doctors bury their mistakes, an architect can only advise his client to plant vines” (Frank Lloyd Wright 1869-1959). Once a building had been restored,

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\(^6\) A translation of the relevant parts of the Malleret report is provided at Appendix 6.
the evidence was there for all to see, and to praise or criticize; no architect can avoid his public, particularly in relation to what may be seen as a national palladium.

When a building is restored, particularly if it had been in an advanced state of ruin originally, it becomes possible for the visitor to apply their imagination to the ensemble in a way which most people cannot apply to a jumble of unrelated pieces of stone scattered over the ground. Patterns of decoration and images emerge when the blocks are reassembled, and the very shape of the building calls up impressions, and all allow the observer to attempt to imagine the minds of the creators and the religious or secular environment which called them into being. It is hard to be confronted with restored buildings without the imagination being affected at the historical as well as the aesthetic level.

Further, the task of the engineer/architect in the context of the restoration of a now functionally useless structure, no matter how beautiful or historically significant, is to winkle out of a bureaucratic system, with its many distractions and limited resources, sufficient funds to carry out the necessary works without excessive cheese-paring. The achievements of the Dutch, and later the French, in the colonial period, before the availability of mass, cheap tourist transport and a mass tourist audience, can only be applauded. Perhaps the relative isolation of the Dutch administration in Java from its parents in the Netherlands allowed them a greater degree of artistic or financial freedom, in spite of the generally enervating effects of the tropical environment on Europeans. Whatever the reasons, the Dutch in a relative backwater of the colonial world made great achievements in a relatively short period, while the French, usually seen as scientifically adventurous, were unwilling to undertake such work on their own part until a clear path had been beaten, eventually with quite tangible and admirable results.

By the end of the 1930s, the techniques of anastylosis were well rehearsed and effective, and ready to be applied to other Indian-style monuments in Southeast Asia. Unfortunately the outbreak of the Pacific War in 1941 and the rapid occupation of Cambodia, Thailand and Indonesia by the Japanese forces
provided distractions from normal life, and the end of the War in 1945 was followed by a long period of reconstruction in Southeast Asia as well as Europe. Attention to the monuments of Thailand only took place in the early fifties.
Chapter 4

Khmer-style monuments in Northeast Thailand

Having considered the way in which early attempts were made in the restoration of Khmer monuments in Cambodia, it is now necessary to turn to Thailand and the Khmer remains located within its borders, both in their nature and the way in which their Thai hosts investigated and nurtured them. Four Khmer monuments are worthy of examination in greater detail, these are the major sites of Prasat Phimai and Prasat Phnom Rung and the nearby but lesser Prasat Muang Tam, and Prasat Phnom Wan.

In spite of the current, and possibly transient, political arrangements and national boundaries in Southeast Asia, there can be no doubt from the evidence of Khmer-style monuments that the so-called Khmer Empire, of the tenth to twelfth centuries at least, extended well into what is now the southern part of Northeast Thailand (Issan), as well as to some extent into the Menam valley of central Thailand. Apart from the large number of Khmer-style monuments which may still be seen in many of the Issan provinces, the modern inhabitants of the Thai provinces bordering the Dangrek mountains which separate modern Thailand from Cambodia are still Khmer- as well as Thai-speakers, as seen from personal observation. One may see the five border provinces of Nakhon Rachasima, Buriram, Surin, Sri Saket and Ubon Rachathani as the main repositories of Khmer influence, with the provinces to the north rather less affected, though still with some structural relics of the Khmer past. From an historical point of view, almost the whole of modern Northeast Thailand may be seen as comprising remnants of the older Lao kingdom to the north, and, to the south, the older Khmer kingdom, but all incorporated into the political geo-body of Thailand in the relatively recent past.
Much effort was expended in the late nineteenth and early twentieth centuries by the French authorities in Cambodia and other parts of Indochina in making an inventory of the physical and cultural resources of their newly gained colonies and protectorates. Part of this activity comprised the very detailed survey of Khmer-style monuments in Cambodia performed by Lunet de Lajonquière for the EFEO. De Lajonquière carried out his work with great attention to detail, and the results of his efforts were published in the early twentieth century in the three volumes of his *Inventaire Descriptif des Monuments du Cambodge*, actually covering Cambodia, Thailand and Laos. Therefore it may be seen that scientific knowledge of the Khmer monuments of Northeast Thailand is a little less than one hundred years old. Volume 2, published in 1907, covered Cambodian provinces returned from Thailand (excluding Siem Reap and Battambang) with about forty sites, together with Laos (“French Laos”) with about twenty sites, and Northeast Thailand (“Eastern Siamese Laos”) with about 110 sites, plus the Menam Valley of Thailand with ten sites. In the *Inventaire*, each site or monument was given a unique inventory number, as well as its name, a detailed description, ground plans and location details being recorded.

While the Khmer monumental remains in the older and newer parts of the Cambodia eventually came under the care of the EFEO after 1907, and were conserved and later restored as described above, those Khmer monuments in territorial Thailand remained the property and the responsibility of the Thai government.

To an extent, the Khmer monuments extant in Thailand were a cuckoo in the nest of the Thai government and its successors in the sense that they were an unsought possession which would require significant resources to nurture. The monuments fell into their care, custody and control by the chance of political expansion and had little or no relationship to the artistic and religious heritage of the Thai people in Central Thailand, which was essentially Buddhist (although with Brahmanic and animist elements) and based upon the *wat* as being the unit of architecture, built with associated *chedis* of various types, either stupa, *phrang* or *that* depending on local influence and usage.

87 Chapter 4

Khmer-style monuments in Northeast Thailand
The Khmer-style prasats of the type found in large numbers in Northeast Thailand were then not in any way a production of the Central Thai people, who only found their way into the Northeast as a political force in the last quarter of the eighteenth century (Wyatt 2003:143), and in the case of many Brahmanic temples were unrelated to the Theravada Buddhist beliefs of the Central Thai people. Even though the population of the southern part of Northeast Thailand may have still had a large proportion of people who were ethnically and linguistically Khmer, their belief system was by recent times predominately Buddhist and probably retained nothing of the Hindu-Brahmanic beliefs which prompted the temples’ construction. In this way, the Khmer monuments in Issan were somebody else’s heritage foisted upon the Thai by the chances of geopolitics; in every respect they were a part of another people’s patrimony. Once in the territory, they developed to be part of the Thai cultural property as will be seen below, but there must have been a tendency in the Central Thai Buddhist hegemony to see them as irrelevant to Central Thai culture. This may be reflected in the early Thai approach to its adopted heritage.

“Siamese Laos” and the early period of Thai archaeology and conservation

In spite of the pioneering archaeological activities of their new French neighbours in Cambodia, the Thais overall seemed content to largely ignore their own monumental heritage at the end of the nineteenth century, not only in Northeast Thailand but also in the Menam valley, at least at the level of official action. In discussing the early attitude of the Thai to their own and other’s heritage, Charles Keyes says “Ruins of older capitals, even those with Buddhist remains, held no interest, however, other than providing evidence of the Buddhist truth that all is change” (Keyes 2002:213)

Prince Damrong Rachanuphap, while Thai Minister for the Interior in the late nineteenth and early twentieth centuries, encouraged provincial administrators to conserve ruins in their areas of responsibility, but there existed no official structure equivalent to the EFEO, with a brief to seek out and conserve aspects of Thai culture. However, Claeys (1931) notes the early activities of French explorers and scientists in Thailand in addition to the work of de Lajonquière.
These include Fournereau (1895), Pavie (1898) and Aymonier (1901), investigating and documenting for a Francophone audience the history, art and culture of the then Siam.

In a speech to the just-formed Antiquarian Society of Thailand in 1907, the King of Thailand, Chulalongkorn (Rama V), encouraged his audience, presumably scholars and historians, to work on the fullest possible documentation of the history of Thailand for the preceding one thousand years, using all available sources (Chulalongkorn 1907). The sack of Ayutthaya by the Burmese in 1767 had led to the destruction of the palace records. However, his speech, probably written for him by his half-brother Prince Damrong Rachanuphap on the evidence of its clear erudition and its technical knowledge of Thai historical resources, did not make any mention of the concept of the investigation or conservation of material assets from the Thai past. This aspect of Thai history was left to be taken up by his successor.

The first official Thai action on recording and conserving the material past took place soon after the accession of King Vajiravudh (Rama VI), with the establishment in 1911 of the Department of Fine Arts to look after the repair and improvement of religious buildings, and also to establish on a formal basis a national museum in Bangkok to house important antiquities, then scattered about in royal palaces and in Prince Damrong’s Departmental offices. Prince Baromwong was the first head of the Department (FAD 1982).

In 1917, following the World War I internment of the German Chief Librarian of the National Library (founded 1904), Prince Damrong arranged the appointment of George Coedès, then with the EFEO in Saigon, as the new Chief Librarian (Baffie 1999:5). Coedès, an epigrapher, was given the task of gathering and translating important ancient inscriptions in various languages found in the kingdom, as well as other more administrative duties. In this role, Coedès made a considerable contribution to the knowledge of early Thai and Southeast Asian history by his translations of Thai inscriptions from Sukhothai and Ayutthaya, and Peninsular Southeast Asia, as well as those from Champa and Cambodia.

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Archaeology as such in Thailand maintained its unofficial position until 1924, and any earlier research was carried on by the several gifted amateurs who used the columns of the *Journal of the Siam Society* (founded 1904) or the *Bulletin de l’Ecole Française d’Extrême-Orient* in which to announce their findings. In the field of archaeology, a major contributor was Eric Seidenfaden, a Dane, and for many years Chief of Police in the Nakhon Rachasima province. In 1922, after much detailed private research, Seidenfaden published in the BEFEO his *Complement à l’Inventaire Descriptif des Monuments du Cambodge pour les quatre provinces du Siam Oriental* (*Complement to the Descriptive Inventory of the Monuments of Cambodia for the four provinces of Eastern Siam*) (Seidenfaden 1922). In this document Seidenfaden recorded almost 150 locations of archaeological interest in Northeast Thailand additional to those identified by de Lajonquière, reaching east from Nakhon Rachasima to Ubon Rachathani and north to Khon Kaen and Nakhon Phanom.

In a paper published in the *Journal of the Siam Society*, speaking of the state of the temple at Phimai in 1918, Seidenfaden says “The ruins of Phimai are of such beauty and importance that it is sincerely to be hoped the government will soon take steps to have them effectively protected against any acts of vandalism, though it must be said, to the honour of the different Nai Ampho’s [district heads] who have resided there, that they have all taken some interest in the protection of the ruins, and the population itself has still much veneration left for the great achievements of their ancestors” (Seidenfaden 1923).

The steps identified as necessary by Seidenfaden came closer to realization in 1924 with the establishment of the Siamese Archaeological Service under the control of the National Library and George Coedès. The proclamation of King Rama VI dated 17 January 1924 states in part that

> His Majesty the King ... considering that Siam possesses numerous remains of monuments and objects created by the kings and artists of the past, and that the archaeological remains have a great historical value and may contribute to increase our knowledge of history, for the profit and the glory of the country;
> That in other civilized countries the search for and conservation of antiquities falls to the state;

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That if, in the Kingdom of Siam, a certain number of these remains are sufficiently well conserved thanks to the initiative of some officials, there are some which are completely abandoned, and many others which merit study for the advancement of our knowledge, but which have not yet been seen for the lack of a competent service, charged with the discovery and conservation of antiquities; ...

orders

That the Committee of the National Library be charged with the archaeological service from today, and in particular
1. to make an inventory of monuments and objects having an archaeological interest, that it is suitable to study and conserve for the nation,
2. to prescribe effective measures to ensure the conservation of the said archaeological monuments and objects,
3. to supervise and advise officials and other persons charged with the conservation of antiquities,
4. to correspond directly with Ministers, Governors and other officials on any matter involving the functions of the Archaeologist Service, ...

(Coedès 1925:29-30).

The new Service promptly set about its duties, as Coedès reported in the first Annual Report of the body. Its first task, apart from winking out funds from the Treasury, was to set about the clearing and conservation of two important monuments, the Wat Sri Sarbejna [sic] at Ayutthaya and the Wat Mahatat at Lopburi. The Wat Sri Sarbejna at Ayutthaya is clearly a Buddhist temple of the past, with many stupas, while the Wat Mahatat at Lopburi, also known as the Prang Sam Yot, is equally clearly of Khmer inspiration, if not construction. It is to be expected that the many financial problems of the Thai kingdom of the time under Rama VI may have limited the amount of work the Service could carry out (Wyatt 2003:220 ff).

The Northeast Thailand monuments received further notice with a grand tour of the major Khmer sites by Prince Damrong Rachanuphap and a large party in 1930. He visited the sites of Phimai, Phnom Rung, Muang Tam and Khao Phra Wihan (then and now in Cambodian territory), together with other monuments, and presented Coedès with a photographic record of the event, the document is now held by the National Library of Australia. The many photographs are an excellent record of the dilapidated and neglected state of the monuments at the time.

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The position of archaeology in Thailand at the time may be illuminated by a letter from Prince Damrong to Luang Boriban Buriphat of the Archaeological Service of early 1932. The tensions between archaeology and the state's demands for income are revealed in relation to the ancient Central Thai city site of U Thong. The Royal Institute wished to have the ancient city site preserved, but the Thai Treasury wished to lease the land to farmers for grazing, which would have caused the ancient ramparts and other remains to be destroyed. (Damrong 1986). Thus at the time, not only were the ancient sites neglected, but the Treasury saw the areas as a source of income from the farmers who could turn over the land and destroy the old remains; Treasury had no responsibility for antiquities. Boriban was advised by Damrong to visit the site and then to complain to Treasury about the problem.

The early documentation of the Khmer monuments of Phimai, Phnom Rung, Muang Tam and Phnom Wan

Having considered the development of an official interest in the Khmer monuments in Thailand and the establishment of official organisations for their conservation, it is necessary to look in more detail at the Khmer temples of Phimai, Phnom Rung, Muang Tam and Phnom Wan whose restoration will be considered in detail in the next chapter. These were well documented in the early twentieth century by de Lajonquière and others.

Phimai is a small town located some sixty or so kilometers to the northeast of the provincial capital of Nakhon Rachasima or Khorat. While it is at present just one more little market town in Northeast Thailand, in the time of its heyday in the Khmer Empire in the late eleventh/early twelfth century it was probably a regional centre of the far-flung Khmer Empire, and was certainly once linked by a main road to the capital city of Angkor via the sites of Prasat Phnom Rung and Muang Tam (Rooney 1994:24).

The Angkor empire period temple at Phimai and its environs were first documented by Aymonier (1901) and de Lajonquière (1907) with text, drawings and photographs. The Aymonier report provided possibly the first publicly

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available photograph of the Phimai sanctuary tower in its dilapidated, though reasonably recognisable form, as reproduced at figure 4.1

Plate 20. The main sanctuary of Phimai.

Fig 4.1. Possibly the first publicly available photograph of the Phimai sanctuary tower. The sanctuary tower of the Phimai temple complex before 1901. From Aymonier (1901)

De Lajonquière later visited the site and provided a good description of the temple together with a detailed site drawing, reproduced at Figure 4.2 below.
As may be seen from the above plan in Figure 4.2, the temple complex of Prasat Phimai is located in the geographic centre of the town itself. The two curved areas to the south (to the right) of the temple complex have since been incorporated into the temple precincts.

The main sanctuary of the temple is surrounded by a rectangular enclosure of once-covered galleries with a gopura or gateway in the centre of each wall on the same axis as the sanctuary. The gallery complex is in turn surrounded by a rectangular wall, some distance from it, and again with gopuras in each wall, as may be seen from Figure 4.2.

The structures are of laterite and sandstone and are built in the style recognisable as being related to the Angkor style in Cambodia. The central tower of the sanctuary is in the same general form as one of the central towers of Angkor Wat, built in the late eleventh, early twelfth century (Mabbett and Chandler 1996:267). "The archaeological and artistic features of Prasat Phimai differ from those found in other stone sanctuaries. While most of them face east.
Phimai faces southeast, the direction of Angkor capital of the ancient Khmer Empire.” (FAD 1999:81). Inscriptions on the structures date the temple to the late eleventh, early twelfth century. The inscriptions are still able to be seen faintly behind Perspex screens. It was already built by 1108 CE (Seidenfaden 1923:10), and may have been coeval with Angkor Wat. Figure 4.3 (below), a later photograph, gives an idea of the general layout of the temple complex after the restoration of the central tower.

Fortunately, Phimai was quite well documented photographically in the nineteen-twenties, possibly due to being fairly readily accessed from Bangkok by the recent railway. Both Seidenfaden (1923) and Prince Damrong Rachanuphap (1930) photographed the site extensively and published some of the results, allowing us to get a view of the temple and its precincts long before restoration. Three photographs from Damrong’s visit will allow some idea of the state of the temple at that time.
Fig 4.4 Phimai, the central sanctuary in 1930 after some clearance work, with the gallery and side towers in the foreground. From Damrong (1930). Photograph reproduced by permission of the National Library of Australia.

Fig. 4.5 Phimai, close-up view of central tower in 1930 showing fallen stones. From Damrong (1930) Photograph reproduced by permission of the National Library of Australia.
The Phnom Rung temple is as remote from centres of population as the Phimai temple is in the middle of one. It is located on the top of an extinct volcano, and is reasonably close to the Dangrek mountains which form the border between Thailand and Cambodia in this region. The volcanic mountain is about 250 metres high and projects as a fairly symmetrical mound from the generally flat plain surrounding it. It is many kilometers from the provincial capital of Buriram, and from the main east-west highway between Khorat and Ubon Rachathani. On the other hand, it is located on the old Khmer road mentioned above, running between Phimai and Angkor Thom.

In spite of its remoteness, Phnom Rung was also well documented both by Aymonier (1901) and De Lajonquière (1907) in their surveys of the Khmer heritage in Thailand. No photographs seem to have been published from this period. Figure 4.7 shows the ground plan of the temple as given by Aymonier, although it seems to contain errors of detail in relation to the position of the mondop and sanctuary tower and the ceremonial causeway and staircase.
From the Aymonier ground plan, the temple complex may be seen to be spread along the area formed by the flattened peaks of two hillocks projecting from the top of the mountain. The temple is thus at the highest point of the mountain, although there is a twin peak a few hundred metres away of a slightly lower elevation. The approach is via the causeway A in the plan, past the “elephant stables” on the right hand hillock, over a set of steps separating the two hillocks and then along the rest of causeway A which is bordered with sandstone pillars. From the causeway a steep set of steps leads up to the sanctuary itself. The main sanctuary complex is enclosed within a rectangular gallery, with four small buildings in the same space, including a flat-topped mondop, as may be seen in the plan in figure 4.7. The use of the natural site on top of the mountain leads to a very dramatic setting of the temple, which is only really first seen by the visitor climbing the steps between the two parts of the causeway, and it is a sudden and very striking view. With its flat setting, the sanctuary at Phimai cannot achieve the same element of surprise as the visitor approaches it, because all of its secrets are revealed at a distance.

Seidenfaden provided a guide to Phnom Rung (and to Muang Tam) in 1928, as he had done for Phimai. He also presented a paper on the temple to the Siam Society in 1929.
Photographs in Seidenfaden’s paper show the state of the temple complex at the time, these are reproduced below. It is difficult to determine the shape of the building from its ruinous state.

Fig. 4.8 Ruins of the Phnom Rung sanctuary. Sanctuary to the left, hall to the right. From Seidenfaden (1929)

According to Seidenfaden, the Phnom Rung temple has inscriptions dating back to about 1100 CE, putting it into the same timeframe as the Phimai temple and Angkor Wat. Seidenfaden says

A minute examination of the sanctuary would no doubt reveal more art treasures than the few enumerated [above], and it would certainly be worth the

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trouble and the expense to restore this splendid sanctuary, as that would give us back one of the finest examples of this kind of building. It would, moreover, be not very difficult – especially for an architect trained under such past masters in the art of temple restoration as M. Parmentier or M. Marchal of the French Indo-Chinese archaeological Service – to rebuild this old superb fanes, as all the necessary materials are still there. (Seidenfaden 1929:100)

Siedenfaden’s perceptive comment implies an up-to-date knowledge of the work of Marchal, although only in that year was Marchal to go to Java to study the work of the Dutch at Borobudur, Prambaban and other sites, as discussed above. Unfortunately, it would take another forty years before Seidenfaden’s suggestion came to fruition, several years after his death.

Phnom Rung was also visited by Prince Damrong Rachanuphap in the same year, as part of his tour of the Khmer temples of Issan. As with Phimai, he recorded the state of the ruinous temple. His image of the sanctuary tower (figure 4.10) conveys more of an idea of its shape, while he gives a good view of the almost intact mondop with its anachronous tin roof (figure 4.11).

Fig. 4.10 Prince Damrong’s photograph of the sanctuary at Phnom Rung. From Damrong 1930. Photograph reproduced by permission of the National Library of Australia.
Fig. 4.11. The mondop at Phnom Rung photographed by Prince Damrong. From Damrong 1930. Photograph reproduced by permission of the National Library of Australia.

The Thai Fine Arts Department later established that the temple complex had been built over a long period of time, starting with two brick towers from the tenth century, the small tower in the eleventh century and the main tower in the twelfth century. However, Pichard (1972:61) quotes Groslier’s opinion of there being four stages of construction between the second half of the tenth century to the start of the thirteenth.

The Khmer temple of Muang Tam is completely unlike the lofty and elegant structures of the sanctuaries of Phimai and Phnom Rung, but by a compact design and a clever use of water has its own special beauty and appeal. It is located at the foot of the mountain which houses the Phnom Rung temple and is a few kilometers by road away from it; the name Muang Tam means “lower city” in Thai. Like Phnom Rung, it is also located on the old royal road between Phimai and Angkor. From its position and the very large baray located nearby, it may be assumed that it was once an important centre and probably used as a way station for the journey between Angkor and Phimai for officials, soldiers and travellers. Nowadays Prasat Muang Tam is close to a small but busy village.

As may be seen from figure 4.12, the temple of Muang Tam is distinguished by four large L-shaped ponds around the inner enclosure and the presence of five brick towers in a cluster to the west of the inner enclosure.
The temple was documented by both Aymonier (1901) and de Lajonquière (1907). Aymonier notes that the baray to the north of the temple is of the order of twelve hundred by five hundred metres, with a levee forty metres wide, and with a lock to control the water level. Such a large structure of itself implies that there was once a large population to create, draw on and to manage it.

Seidenfaden (1928) also documented the temple and its environment, and provided some contemporary photographs of the structure. According to Seidenfaden the levees of the baray were four metres high and lined with stone on the inside. This being the case, the enclosed volume of the baray when full would be 2.4 million cubic metres, or 2.4 billion litres, enough water to supply a large town.
The temple of Muang Tam was also visited and documented photographically by Prince Damrong Rachanuphap during his 1930 visit to the Northeast.

The Khmer temple of Prasat Phnom Wan in some respects resembles the temple of Prasat Muang Tam, although without brick towers, but it is smaller and does not involve the decorative use of water as at Prasat Muang Tam, although it
is located near a large baray. It is one or two kilometers away from a modern village; but unlike Phimai, which is in a large town, or Phnom Rung and Muang Tam, which are on or near a mountain, it does not seem to be associated with any social or other organization to support it. It is located a few kilometers from the modern Friendship Road between Nakhon Rachasima and Khon Kaen in Issan and is about fifteen kilometers north of Nakhon Rachasima. It must be assumed that at the time of its building in the eleventh century it was associated with a settlement sufficiently large to justify the construction and support of such a relatively large temple.

Like its fellows described above, the temple of Prasat Phnom Wan was documented by both Aymonier (1901) and de Lajonquière (1907). Seidenfaden also documented some aspects of the temple in 1928. According to Seidenfaden (1928) the temple contains several inscriptions, including those of the kings Suriyavarman (1002-1049), Udayadityavarman (1049-1065) and Jayavarman VII (1080-c. 1107). The inscription of Jayavarman VII charges the general in charge of the army to take good care of the temple, implying that the district was under military rule and direct control from Angkor at that time, rather than through local magnates. Seidenfaden provides a copy of the de Lajonquière plan of the temple and its surroundings. This is shown at figure 4.15. There is now no obvious trace of the moat surrounding the temple, although the baray to the east of the temple still exists.
Seifenfaden notes that parts of the temple were apparently unfinished, including the tower of the sanctuary, and the ornamentation on some lintels. He surmises that "some unforeseen event may have stopped the work in one way or another. Maybe it was a war or a rebellion" (Seidenfaden 1928:103).

As described by Vasu Poshyanandana,

These buildings date from the 11th century AD, although an inscription from the end of the 9th century confirms that more ancient structures were previously built on the same site, some of them still evident in the courtyard (bases of several brick shrines), moreover, some traces of former buildings were found during excavation inside the base of South Gateway. The central shrine and the gallery were built with sandstone of at least two different qualities. Laterite was mainly used in foundations, and bricks are occasionally found in the gallery. (Vasu 1995:15)

The site was examined by Pierre Pichard, one of the EFEO experts involved in the restoration of Phnom Rung. Pichard provides a good site plan of Prasat Phnom Wan shown in figure 4.16

![Site plan of Prasat Phnom Wan](image)

**Fig 4.16.** Site plan of Prasat Phnom Wan. The numbered and hatched areas represent older brick buildings, while the solid or dotted perimeter outside the main gallery represents the outer gallery or wall of an older structure. From Pichard (1995)

Post-World War II interest in the Khmer temples of Northeast Thailand
The next major attention to the Khmer monuments in Issan took place after World War II in 1959 with the commencement of the first major modern survey of the monuments. The work was carried out on the initiative of the then Director-General of the Fine Arts Department (FAD), Danit Yupho, who had an interest in the antiquities of Issan. The FAD obtained initial funding of 1.1 million baht for the five year project of surveying the monuments of Issan, and noted "These expenses do not include any expenditure on restoration. If any monument should be restored, the cost will then be separately submitted to the Thai government" (FAD 1959). This survey provided the main basis for all future work of conservation and restoration of Khmer sites in Issan, and the results of the survey were published in two volumes in 1959 and 1961. The introductory section of the first report of the work by the FAD notes that aerial surveys of the area during World War II by the American and British air forces identified more than 200 historic sites and says, in relation to the importance of its survey

The Phimai Temple in Korat [sic], and the stone sanctuary on Phanom Rung Hill, Buriram, are not second in quality to monuments in Cambodia. If they were restored, and were made easily accessible they would be visited by many people.

The local citizens of north-eastern Thailand would also prosper financially from the tourist trade. Moreover the knowledge of their ancient and civilized heritage would make them more conscious in defending their country and its traditions. The result would be, thus, an improvement in economy, education and culture (FAD 1959, my emphasis).

This passage carries the implication that the reasons for restoration of the Issan monuments were primarily economic or political in nature. There is no apparent mention of the scientific value of such restoration work, but the issues of tourism, economic benefit and national defence are seen as justifications for work on the monuments. The question of the economic benefits to be obtained from tourism is a standard argument used for providing access to ancient sites, and is a valid one, the FAD at the time would be aware of the importance of the Angkor complex to Cambodian tourism from its first popularisation in the 1920s, and their report notes, in my view somewhat optimistically, "that [Thai sites] are not second in quality to monuments in Cambodia". On the other hand, the issue of the effect on the local population in making them "more conscious in defending their
country” is more telling, and is possibly an unusual argument for something as inherently esoteric as conserving thousand-year-old buildings or their ruins.

It is possible that at the time, when the Thai Government was concerned with the fact of a Communist government in Laos and considerable disaffection in Issan, that the defence and stabilization of Issan had become an important political issue. Issan had always been a very poor area agriculturally and had no industry to speak of (Fineman 1997:180 ff). The Thai Sarit Government of the time saw the development of Issan as a priority, particularly in the context of Cold War thinking and the aftermath of the First Indochina War, which saw the defeat of the French forces in Vietnam and the establishment of a Communist government in North Vietnam. With Prince Norodom Sihanouk of Cambodia also apparently flirting with socialism at the same time (Mabbett and Chandler 1995:241), there was a general fear of a Communist threat from the north, and the successive communisation of Southeast Asian states in turn, staring with South Vietnam.

Wyatt says in relation to the support of the Thai Government by the United States in the period “Moreover, both [US] economic aid and planning were redirected to accommodate security concerns, sparked by an upsurge of antigovernment insurgency, initially in Issan. Militarily, American aid supported a military buildup in Thailand that was oriented towards Laos and then, increasingly, towards the Vietnam War” (1984:274). The United States assisted the Thai Government in the matter of communications with Issan in the late 1950s by constructing the Thanon Mithraphap (Friendship Highway) from Saraburi via Khorat to Nong Kai to the north of Issan, on the Mekong River and opposite Vientiane in Laos (Fineman 1997:181).

In raising the issue of defence in 1959, the FAD may have been tickling the Thai Government with its own breast feathers, that is, using a national security argument which might appeal to the Government and to Treasury officers, in order to increase the chance of funding in the future for the relatively expensive, time-consuming and unglamorous activity of temple restoration.
More to the point, in both reports, the important matter of the conservation of the national heritage was raised. The FAD warned about the problem of vandalism, misuse or theft of objects or inscriptions and advised that it would be best to protect them by transfer to local museums or to the National Museum in Bangkok. The FAD also noted that the improved transport communications in Issan carried with them increased tourist and other traffic and the risk of increased vandalism and the theft of objects of national heritage. (FAD 1961:43)

About this time, the principles of the conservation and restoration of monuments and sites were codified by the Second International Congress of Architects and Technicians of Historic Monuments in Venice in May 1964 under the auspices of UNESCO. This follows the first conference of 1931 which produced the Athens Charter. Articles 9 to 13 of the International Charter laid out the principles to be followed in restoration, and restated and formalized much of the concepts already established by earlier workers. This short quotation gives the flavour of the document

The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument. (UNESCO 1973)

The structure of Khmer-style temples

Before considering the actual restoration of the temples of Phimai, Phnom Rung, Muang Tam and Phnom Wan, it will be useful to consider the architectural principles of the structures which are the subject of restoration.

The excellent book *Le Cambodge* by Jean Boisselier (1966) provides a wealth of detail of the construction methods of these buildings. By way of background he says the following in relation to the temples and their sanctuaries, particularly applying to the temples of Phimai and Phnom Rung.
The Khmer temple [of the Angkor period] is characterized by a disposition of walls and a development of plinths which allows in general seeing the principal sanctuary or at least its top crown, of the whole part ... the "temple mountain" is characterized by the development on the plinth of a single sanctuary ... or, more generally, a set of five sanctuaries ...

Outside, the body of the sanctuary is linked to the plinth by means of a moulded base, and an important cornice marks the start of the levels of the roof. The composition of these levels, always false, varies greatly from the pre- to the Angkor period but, always of decreasing height and progressively set back, they reproduce most often the essential shape of the body of the sanctuary. (Boisselier 1966:55)

Therefore, the Khmer Angkor-style temple will be recognized by its being set on a plinth to enhance its height and will be a form of temple mountain with a small internal space and considerable height. At a distance the temple top may be seen to almost resemble the top of a pine tree. See figure 4.7 for the cross-section of a typical Angkor style temple.

![Fig. 4.17 Elevation and cross-section of typical Angkorean sanctuary. From Boisselier (1966:56)](image)

All the Khmer monuments in Northeast Thailand are quite small compared with the major architectural achievements of the Bayon or Angkor Wat in the Angkor complex in Cambodia. Generally, their central element is a sanctuary of
fairly small footprint and of varying height, containing a single *cella* for the sacred image, either Brahmanic or Buddhist. The sanctuary is often surrounded at some distance by a rectangular or square gallery, with doorways in the centre of each side. This gallery may also be surrounded by an external wall. The gallery may be surrounded by pools, or there may be small pools near the main gallery entrance.

Geoffrey Gorer, a cultural anthropologist, who travelled extensively in Southeast Asia and to Angkor in the nineteen-thirties, while regarding Angkor Wat as one of the finest buildings in the world because of its use of space, said of Khmer architecture:

The ruins of Angkor, though extremely large, and occasionally beautiful, show no signs at all of any technical architectural ability whatsoever; they are essentially solid stepped pyramids, decorated cairns, topped with towers. The Khmer never discovered how to span an arch; their roofs are formed by a series of stones each one slightly over-jutting the one below, till the walls gradually meet in the middle. ... The Khmer are technically the most incompetent builders in stone whose work has survived. (Gorer 1986:173)

As well, in discussing the Khmer monumental heritage in Thailand, and in particular Phimai, Phnom Rung, Muang Tam and Phnom Wan, Jacques Gaucher says:

The major part of these sites are striking by the exceptional quality of their architecture... A great architectural unity associates these buildings, which may be linked, in spite of current political limits, with the monumental architectural family of Angkor. The main sanctuaries of Ta Muen, Muang Tam, Phanom [sic] Rung, were located on the on the same north-west road, which left Angkor, traversed the pass of Ta Muen in the Dong Rek mountains and ended at the town of Phimai, marking the limits of the territory. ... This unity is found particularly reinforced by the quite limited typology of architectural elements that one can summarise as the terrace, the tower on a square plan and the longitudinal gallery accompanied by external developments, enclosure walls, monumental staircases, raised cruciform terraces, causeways and ponds. (Gaucher 1992:250)

However Gaucher goes on to point out:

It is clear that the unity of the construction of these buildings brings with it a pathology which is relatively easy to define. The monuments, in their current state, appear partially broken down, the walls and their foundations have abandoned their verticality and horizontality, the superstructures of the galleries and towers are thrown to the ground, stones broken and crushed, the bricks are cleared out on the surface, the outer coating [of plaster or stucco] worn away etc.
But the fragile balance of the construction is above all here underlined by the weakness of the system of foundation and the variety of the supports for the load: walls resting at the same time on sand and on stone, a solution theoretically correct but extremely weak in practice, any alteration, even slight, of the arrangement inevitably leads to a destructive sequence of actions. (Gaucher 1992:250)

Gorer and Gaucher may be a bit severe in their judgements on the competence of Khmer builders, but it may be seen that the inherent beauty of the Khmer temples comes together with a set of problems, brought about by the use of materials and structural methods which will in time cause their failure and collapse. The main focus of the task of restoration of the Khmer-style monuments in northeast Thailand would be towards the overcoming or bypassing these faults of construction.

Considering the faults identified by Gaucher in the Khmer engineering implementation of the Khmer architects’ conceptions, it must be recognized that there may have been errors of conception or lack of experience for such faults in construction to be allowed to occur. By their nature, pace Gorer, the Khmer conceptions were perfectly practical and called for no special technology or materials, the implementation failed them. In some respects, one could almost imagine that the builders were given a set of elevation drawings and told to get on with constructing the edifice, without explanation or prior experience.

This issue comes to the heart of architecture, which turns on the problem and challenge of using what are usually mundane engineering materials and processes to create pleasing structures, and to enclose spaces in an effective and satisfying way, depending on the use to which the building is to be put. Architecture, like politics, is very much the art of the possible.

In a similar way the restorer of an old Khmer monument has to honour the original impulse of the Khmer architects while overcoming the problems interposed by the builders, and at the same time providing the visitor with a view of the structure which meets their aesthetic expectations, as well as the more mundane ones of structural stability and durability. If the original design and construction is inherently flawed, as pointed out by Gaucher above, and prone to...
eventual failure, the challenge is to provide what is essentially an engineering solution using appropriate modern materials, if necessary, to represent and re-create an aesthetic experience.

However in meeting the visitor's expectations, it is possible that the original impulse of the Khmer architect and his religious clients will go unrecognized. If the purpose of the Brahmanic or Mahayanist sponsors of the temples was to honour their deities, and to create in the worshipper a sense of awe at the power and divinity of the gods and, in the Khmer version, of the devaraja, the god-king, then these associations will not generally be obvious to Thai visitors, probably Buddhist, or foreign visitors, and most likely without the least knowledge of Khmer culture.

**Early prospects for anastylosis in Thailand**

By the early nineteen sixties then, Thailand and the FAD were ready to set about actively addressing the restoration of its Khmer heritage in Issan. The techniques and experience were available with the increasing use of anastylosis in Cambodia and elsewhere, and the will existed within Thailand to benefit from the application of such techniques. As seen in Chapter 3 in relation to the introduction of anastylosis into Cambodia from Java, the agent of that transfer could be identified uniquely as Henri Marchal. Similarly the agent of the technological transfer of anastylosis from Cambodia to Thailand can be equally readily identified as Bernard P Groslier of the EFEO. The first of the Khmer temples to be addressed was that at Phimai. Many Khmer-style monuments in Northeast Thailand have been restored since. As noted, this thesis will focus on those at Phimai, Phnom Rung, Muang Tam, and Phnom Wan.

In considering the restoration of the four selected Khmer temples in Thailand, it will be inevitable that the engineering aspects of the process will be stressed, as essential to the application of modern restoration techniques. It must not be forgotten, however, that the overall purpose of the process of anastylosis is the creation of an aesthetic response in the viewer; hopefully the photographs of...
the restored temples will go some way to conveying the effect which a visitor would see.
Rebuilding the Khmer Heritage: Anastylosis in Thailand

On 12 April 1989 Her Royal Highness Princess Maha Chakri Sirindhorn opened the Historical Park at Phimai, Northeast Thailand, centred on the eleventh century Khmer temple of Phimai. The consecration of the Phimai Historical Park was the culmination of activities of restoration and development in Phimai which had been in train since 1961, with the first restoration of the temple structure between 1963 and 1969, and the further restoration of the environs and the development of the Historical Park by the Thai Fine Arts Department between 1976 and 1989 (FAD 1999).

The ancient Khmer temple in the Northeast Thai town of Phimai was the first monument where the developing technique of anastylosis had its application in Thailand. The restoration of Phimai was judged to be successful and in turn led to the restoration of many such structures in Issan, in particular the temples of Phnom Rung, Muang Tam and Phnom Wan, discussed below. In the process of successive restorations, the techniques were themselves developed, as weaknesses were discovered, as public taste matured and as new materials became available and were adopted, or abandoned, after trial. Even so, the successive restorations were not without their critics, and the process called "anastylosis" is still a work in progress.

The Restoration of Prasat Phimai, Nakhon Rachasima Province

Following first reports of the FAD survey of 1959 and 1961, the decision was taken by the FAD to restore the sanctuary and surrounding buildings using the technique of anastylosis, and funding was obtained for a seven year programme. In 1963 a joint Thai-French team was assembled to carry out the work. The team was led by M.C. Yachai Chitraphong of the Thai FAD, advised by Bernard P Groslier, archaeologist, and Pierre Pichard, architect, both of the EFEO. Groslier and Pichard were the means by which the techniques of...
anastylosis, learned in Java and developed by the EFEO in Cambodia, were first introduced into Thailand.

Little documentation of the activities of the restoration team unfortunately now remains. However, by chance, one of the Thai draftsmen/photographers of the team, Sombun Bunyawet, kept personal copies of some drawings and much later wrote a brief, illustrated article of his experiences as part of the team restoring both Phimai and later Phnom Rung. His report was published in Sinlapakon in 1998 some thirty years after the completion of the main restoration of Phimai (Sombun 1998).

In his introduction to the Phimai restoration Sombun says “The restoration work of the Phimai temple ancient site took place from 2506 [1963] to 2512 [1969]. Monsieur B.P. Groslier advised Than [M.C.] Yachai. He [Yachai] relayed the instructions to the tradesmen and workers. Sometimes there were blueprints, sometimes there were sketches. When the work was completed, dirty and brittle [drawings] were torn up and lost. So no documentary evidence was saved.” (Sombun 1998:21)

Sombun provides in his article a year-by-year timetable of the work at Phimai between 1963 and 1969. The first year of work entailed primarily setting up the base of operations at the site, buying equipment including a mobile crane, and taking detailed photographs of the temple and other buildings as a record, together with preparations to clear the site of other objects, including Buddha images of later provenance. The closeness of the town of Phimai simplified access to the site and to the local administration; the FAD office was, and still is, no more than one-and-a-half kilometers away from the temple. On the other hand, the work was of great interest to the people of Phimai and the site had eventually to be closed by the FAD to avoid injury to sightseers.
The middle of the second year, work began on actually dismantling the sanctuary tower, while making detailed records and drawings of the stones as they were removed. Each stone had to be identified by position, direction and course. An example below of the drawings made as work progressed is one of the ninth course (from the top) of a tower.
Figure 5.2 is a very powerful drawing in the level of detail it conveys. The stones are anything but regular, and it may be seen that no two stones are alike. This is a record of the ninth course from the top, hence the legend “9° assise” (ninth course). The cardinal directions are indicated and each stone has its identification marked on the drawing, and on the stone. The identification of each stone indicates direction eg N for North, the stone number preceded by course number eg 9-2, and markings to show the relationship with other, adjacent stones. The I-shaped marks in the corners of the building show the position of iron tie-pieces used by the Khmer builders to strengthen the structure by locking the stones together.
Pichard made a drawing of the central temple in its reconstructed original form. It is reproduced in figure 5.3. Sanctuary tower to the right, mondop to the left.

Fig 5.3. Pichard made a drawing of the central temple in its reconstructed original form. From Thida (1997)

In the following year (1965) the disassembly of the sanctuary tower continued and was completed, together with the dismantling of the porticos and doorways around the tower. This was a difficult task, since the doorways, like all such Khmer doorways were made of four large and heavy slabs of stone with mitred joints at the corners. The foundations of the tower and the porticos were then strengthened with steel-reinforced concrete and the reassembly commenced. Sombun states that the sanctuary tower was reassembled by “replac[ing] stones to their specific places in the inner and outer rows only. The central part was made with steel-reinforced concrete to hold all the stones in place”. This use of reinforced concrete is a major departure from the previously agreed and used techniques of anastylosis, and will be discussed further below. In relation to the reassembly of the porticos Sombun states that the work was slow because they “had to pour steel-reinforced concrete with all levels of the stones” (1998). The restoration seems to have made a lot of use of steel-reinforced concrete.
The next year (1966) the mondop on the southern side of the sanctuary tower was disassembled and its foundations reinforced before reassembly. The reassembly of the mondop and the sanctuary tower took place using stones which had been removed, together with stones which had previously fallen down. In 1967 and 1968 the reassembly of the sanctuary tower was continued and completed and the topmost stones put into place. In 1969 the mondop was completed as well. Work on the temple finished in this year with the exhaustion of the available funding. Survey work also took place with a view to enlarging the area devoted to the temple precincts. This has since been done and the temple surrounding galleries and walls have since been restored as far as possible, together with the buildings within the area (Sombun 1998). In its current form, the main entrance view of the temple recalls similar views of Angkor Wat, with the vista of three towers, as in figure 5.5, which may be compared with the original state as recorded by Damrong in 1930 in figure 5.4.

Fig 5.4 Phimai, the central sanctuary in 1930 after some clearance work, with the gallery and side towers in the foreground. From Damrong (1930). Photograph reproduced by permission of the National Library of Australia.
Fig 5.5 The two flanking towers of Phimai have been partially restored. Photo by J Crocker taken 2003.

It may be said that from a general view of the temple and its galleries, the Phimai temple, in the Angkor Wat style, presents all of the best features of that style while presenting them in a very small compass and being more accessible than Angkor, both in size and location.
Sombun says that in the restoration of Phimai, the tradesmen and the archaeologists at the Phimai branch of the FAD obtained invaluable experience and skills in the restoration of ancient sites with the new methods, and they were in great demand. Sombun claims that the draftsmen were the most important people on the site, because they had to carefully record all identification and positional data about the individual stones to ensure their eventual restoration to their original position. He also identifies as important the tradesmen who sorted and selected the stones, and the carpenters.

Before leaving the question of the initial restoration of the Phimai sanctuary, it is important to revisit the restoration technique outlined by Sombun and mentioned above, where the outer and inner courses of stones were returned to their original position with a core of steel-reinforced concrete. As mentioned in Chapter 3, the classic technique of anastylosis involved the disassembly of the standing remains of the monument, the recovery and matching of previously fallen material, the strengthening of foundations and the reassembly of the structure with the original material, using new elements only where pieces were clearly lacking and the new elements to be without ornamentation. The restoration activity was to be based on drawings, code marks on the stones and photographs at all points of the process. The process relied upon the concept of “respect for the monument”, while allowing for the hidden strengthening of weak areas and the replacement of failed inner timber elements with more durable materials.

The obvious objection to this process is that it destroys that which it is intended to protect, the record of Khmer building techniques. Starting with an artefact which was originally built by the Khmer people or their subjects, using Khmer techniques and Khmer skills, it is pulled it apart, losing any evidence of the methods used for the building’s original construction, for example, the possible use of vegetable resin or other binders for bedding the stones. After this the original sand and rubble foundations are replaced with steel-reinforced concrete.
concrete, losing the original Khmer base, because it cannot handle the load above it. If there are broken stone elements, they are repaired by inserting steel dowels into holes drilled into the broken ends of the stones and cementing them in. Then, during reassembly, using steel-reinforced concrete to stabilize and maybe core the structure. In essence, what has been achieved is a structure which has the external appearance of a Khmer temple, but which is however merely a simulacrum, a structure composed of Khmer materials but with nothing else remaining of the original Khmer effort, an artifice at best. Unfortunately, the rather aggressive nineteen-sixties technology used for the restoration of the Phimai temple was probably the best available proven technique at that time; later restorations would show a more cautious approach to the scatter-gun use of steel-reinforced concrete and cement mortar in restoring Khmer structures.

The next Northeast Thailand Khmer temple to be restored was Phnom Rung, in Buriram province.

**The restoration of Prasat Phnom Rung, Buriram Province**

The Fine Arts Department set about the restoration of Phnom Rung in 1971 following the completion of the main restoration of Phimai. Fortunately, more documentation is available about the Phnom Rung restoration; in chronological order, from the FAD magazine *Sinlapakon*, from Pierre Pichard, the French architect advising the Thai government, and from Sombun Bunyawet, who gave details of the Phimai restoration as well. The FAD and Pichard’s articles appeared in 1972 and gave information about the then planned restoration, already commenced in 1971. Sombun’s paper appeared in 1998, well after the 1975 completion of the work.

The FAD article (FAD 1972) laid out the proposed work program based upon the then dilapidated state of the sanctuary tower, far worse than that at Phimai. They proposed three stages-
• Analyse and sort the stones which had already fallen, analysing their shape and characteristics in relation to the still-standing building, at the same time excavating the area around the temple to locate other building elements.

• Dismantle the currently-standing building, reinforce the foundation with a framework to strengthen it, and then start to reassemble the building.

• Restore the temple to its original state, as well as other parts of the area.

From the illustrations above at figures 4.8 and 4.9, it may be seen that the major task would have been to analyse the fallen stones around the site and work out the possible shape of the original monument and thus the location of each of the constituent elements. The Phnom Rung site was in a far worse state than that at Phimai and consequently required far greater skill in the restoration, although dismantling the remaining building would be relatively simple. Difficulties were also foreseen because of the height of the sanctuary tower, and the fact that the base was mostly laterite, which had become very deteriorated.

The task was expected to take four years, between 1971 and 1974. The team was to be advised by the French experts from the U.N., Pierre Pichard and Bernard Groslier, as at Phimai. Pichard, whose evaluation of the project adds some detail to the FAD account, says of the value of the ensemble of buildings after restoration

It will be possible, when the reconstruction is completed, to have a panorama of Khmer architecture and sculpture over two centuries, to see united very different buildings, as much for their period as for their material, their function and their placement. ... It would appear that the complete clearing has confirmed that the historical, artistic and architectural importance of Phnom Rung fully justifies the restoration works undertaken this year (1972:61).

Of the actual planned restoration Pichard says

The stepwise technique used for the restoration of Phimai will be repeated at Phnom Rung in principle: anastylosis of the buildings, rebuild with their own stones on foundations secured with steel-reinforced concrete. Local reinforcements in reinforced concrete (props, pillars etc) will be hidden in the interior of the walls to guarantee the stability of weak points.

Same as at Phimai it will be possible to not disassemble the base of the sanctuary tower, which has not shifted in eight hundred years and which will be
perfectly kept in place by a belt of steel-reinforced concrete set under the fore-part. The nature of the materials used for the construction of all the buildings allows the practice of anastylosis on the overall site. Also we will avoid the view we currently get at Phimai: a restored sanctuary to its original state, surrounded by ruined and un-repairable buildings (we know that no restoration is possible on the galleries and entry pavilions of Phimai, built in a red claystone of very poor quality (1972:61)

In relation to the workers, Pichard reports that the experience gained at Phimai may be directly employed at Phnom Rung. Pichard notes that they will use machinery from Phimai. Pichard concludes “Finally it will thus be possible to commence the restoration of Muang Tam without waiting for the end of the works at Phnom Rung. The closeness of the two sites will allow running the two sites in parallel” (1972:63).

Because the restoration of Phimai took place in the centre of a small but important and busy town, with all modern amenities, and the restoration of Phnom Rung was planned to be undertaken on a site on top of a hill many kilometers from any village, the blithe planning assumptions of the FAD and Pierre Pichard, and the reality of the early work at the site were in many ways quite different. Sombun, draftsman and photographer at both sites says of this period

[M.C.] Yachai ordered that the powered and wheeled equipment be transported from Phimai to Phnom Rung. Transporting them took place with great difficulty because they had to climb the mountain, and the road was not too good. Myself and three or four other officers from the sixth FAD office at Phimai had to normally live on top of the mountain; living in the first year or two was very difficult, because the road was still bad, and there were few vehicles. Sometimes we had to climb the mountain on foot for many kilometers because we had no car. We had little water to use, we had no drinking water, electricity or telephone, we had to ask for them from the Air Force staff (at the radar station [on the other peak of the mountain]). As for food, we had to buy it from the market in the Nang Rong district [may kilometers away], usually dried food. [M.C.] Yachai had a residence built on the hillside with a rainwater tank for drinking water all year round, for our use.

The restoration of Phnom Rung between 1971 and 1975 took the pattern established for the Phimai restoration, however it was made more complex and difficult by the remoteness of the site, the degree of collapse of the sanctuary and associated buildings and the amount of clearing of vegetation, together with the
need to provide buildings and services required for the workers and the later visitors. The restoration of the sanctuary followed the process used at Phimai, with complete disassembly of the building and the sorting of removed and fallen stones, before reassembly of the sanctuary and the entry building.

In its final form, the restoration of the Phnom Rung complex was very successful, as the following images show. It is useful to compare the finished product with the 1929 state of the monument between in figures 5.7 and 5.8 below.

![Fig. 5.7 Ruins of the Phnom Rung sanctuary. Sanctuary to the left, hall to the right. From Seidenfaden (1929)](image-url)
Fig 5.8 The sanctuary tower and mondop seen from the west. Compare this image with figure 5.7. Photo by J. Crocker.

Fig. 5.9. A general view of the restored sanctuary, mondop, gopura and gallery at a final stage of the restoration. Note in the right background the self-propelled crane used at Phimai and now resting at Phnom Wan. Photo from Suriyawut 1988a.
The Phnom Rung temple has become a very popular site for tourism, although from personal observation, more by Thai people than by other nationalities.

Phnom Rung again became the centre of attention in Thailand in 1988 when a national campaign took place for the return of an important lintel stolen from the monument. An article in the Thai culture magazine *Sinlapawatthanatham* (Megh 1988) gave a version of the story. During the establishment of a Thai-US electronic surveillance station on the twin peak of Phnom Rung in the early nineteen-sixties (mentioned by Sombun as a source of water, power and telephone during the restoration) the lintel disappeared, although the loss may have not been noticed by the responsible authorities at the time. In 1967 Prince Subhadris Diskul, son of Prince Damrong Rachanuphap, saw the larger part of the lintel in the Art Institute of Chicago, and at the same time the other part was found in a Bangkok antique shop. See figure 5.10 for an image of both parts of the lintel.

![Fig. 5.10 The two parts of the lintel “purloined” from Phnom Rung. Already broken when photographed by Prince Damrong Rachanuphap in 1930, and removed from the temple in the early 1960s. Photograph reproduced by permission of the National Library of Australia.](image)

Repeated attempts by the Thai Fine Arts Department and the Thai government over many years to recover the lintel were unsuccessful, not helped by the Thais being required by the United States authorities to prove ownership of the artefact. Luckily the Prince Damrong Rachanuphap photographs of 1930 (Figure 5.10) were proof of the ownership and provenance of the lintel. The Thai view of the affair as at May 1988 was published in the art Magazine *Sinlapawatthanatham* (1988). The issue of the theft and attempts at obtaining the
return of the lintel were also covered in great detail by Keyes (2002), and as he notes, the Phnom Rung National Park was opened in May 1988 by Princess Sirindorn sans lintel (Keyes 2002:222). Eventually, after much further argument between the Thai and US governments, and pressure at various levels, in November 1988 the lintel was returned to Thailand (Suriyawut 1993:393), although probably only after the provision to the Art Institute of some *quid pro quo* as a consolation. The lintel has now been returned to its place above the doorway of the mondop leading to the sanctuary tower as seen in Figure 5.11 below.

![Fig5.11. The image of the temple is now somehow being used to sell paint. From an advertisement in Sinlapawatthanatham vol.13.7, 1992](image)
The restoration of Prasat Muang Tam, Buriram Province

As seen above, Pichard proposed in 1972 that Muang Tam be restored in parallel with Phnom Rung, because of the closeness of the two sites, but the restoration was eventually delayed until the late nineteen-eighties. In 1990 the Institute of Asian Cultures published a wide-ranging report on the economic, social and cultural effects of the restoration of ancient monuments in Northeast Thailand (Ishizawa et al 1990). In this document, the then-proposed restoration of the Muang Tam monument was used as case study of the economic and other benefits of such restorations. The report was a detailed consideration of the state of the temple and of many of the issues involved in restoration. In essence it anticipates some of the points made by Gaucher (1992) referenced above in relation to the causes of failure of Khmer structures.

Another problem with any restoration of Muang Tam was that the temple itself was made in its various parts of brick, sandstone and laterite. Sandstone and laterite structures are relatively easy to reassemble if the parts are found on the ground, because of their size and usually unique shape, but with fallen brick structures it is very difficult to determine the original form, and the five towers at Muang Tam are in brick. Restoration of the monument, as far as the material available permitted it, was to take place using the anastylosis techniques developed at Phimai and Phnom Rung. In considering the options for restoration, the report’s authors examined various techniques which themselves represented a different approach to some previously used. Where the subsoil is too weak to support the load above it, instead of automatically removing the building and installing a steel-reinforced concrete base before reassembling the structure, the report suggested the concept of hardening the earth in situ by chemical means, without disturbing the structure at all (Ishizawa et al.:92). They also suggested the use of computer and photogrammetry techniques to simplify and expedite the matching of loose elements of the structure and the recording of the structure in situ (p.95). The results of such work may be seen in figures 5.12 and 5.13 below.
Fig. 5.12. Result of the use of photogrammetry in recording the original state of a Muang Tam gopura. From Ishizawa et al: 112.

Fig. 5.13. Use of the results of photogrammetry to allow reconstruction of the original Muang Tam gopura and gallery. From Ishizawa et al: 113.
Where the use of original material is involved in the restoration, and the "authenticity" of the material used is considered, Ishizawa et al. observe

When a monument is dismantled, the original materials should be reused, but, in practice, some materials must be replaced by new materials or be reused after repair or reinforcement. ...

In recent times, the development of organic chemistry is remarkable and various kinds of synthetic resin have been invented. Some of them are quite useful for restoration. They are good adhesive agents, fillers and reinforcements. It is even possible to make artificial stones, bricks or timbers by mixing synthetic resin with powder of proper materials and other stuff. The achievement was so astonishing that at one time synthetic resin was praised as a cure - all for all kinds of cultural properties.

Soon afterwards, however, various shortcomings were found. It changes the tint of reinforced material. Its surface deteriorates far more quickly than even wood, if exposed to the sun. It does not breathe like natural organic materials. And, of all things, it is merely a fake.

It would be necessary to conduct further study concerning the use of resin, but, for the moment, it would be safe to say that synthetic resin should be used only in order to prolong the duration of proper materials which have lasted since the construction of the monuments. (pp. 100-101)

These are acceptable methods in the application of the techniques of anastylosis, particularly in sanctioning the use of new materials where necessary to supply missing elements to complete a structure. However the comments on the use of synthetic resins is very pertinent to the use of artificial materials in restoration. This issue will be pursued in more detail in later sections dealing with the problems resulting from the enthusiastic use of anastylosis, suffice for the present to point out that the use of modern technological solutions does not necessarily lead to a result better, more reliable, or longer lasting than that chosen by the Khmer architects more than one thousand years ago.

The Institute of Asian Cultures report was prepared in advance of the actual restoration of Muang Tam, so the results were to be seen at a later time. Fortunately, a report was prepared by the Thai architect Vasu Poshyanandana as part of a Master’s thesis while studying at the Université Lumière at Lyon in France, comparing the application of anastylosis to monuments in Europe and Southeast Asia; the case studies in his 1994 thesis looked specifically at the restorations of the Acropolis in Athens and Muang Tam in Thailand. His thesis

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was later published by the FAD (Vasu 1997). Vasu provided a reasonably well documented and illustrated, if brief, account of the restoration work at Prasat Muang Tam.

Vasu states that the restoration of Prasat Muang Tam began under the supervision of Dr. Sanchai Mayaman, who had worked for four years on the restoration at Phnom Rung, and who was an expert in the restoration of Khmer stone monuments. Sanchai faced some difficulties in the restoration of Prasat Muang Tam, because as noted the monument departed from the form of Phimai and Phnom Rung by comprising five brick towers on laterite bases, within galleries of sandstone and laterite. Vasu quotes Glaize as saying “As for brick
buildings, the technique of anastylosis is almost unable to be used. Because of this we are unable to attempt to build into their original state all the bricks which had fallen to the ground, and we do not wish to introduce new bricks which look new. Conservation is likely to be merely repairing by plugging up holes, and hollow gaps, and detailed stabilization in some parts.” (Vasu 1997:93).

The first part of the program was concerned with the restoration, as far as possible, of the brick towers, within the constraints noted by Glaize. The laterite foundations of the towers had to be stabilized with steel-reinforced concrete, so this was done after clearing away the fallen bricks, to be restored as far as possible later. New bricks were brought into the structure but only to connect old parts of the building. Apparently there were originally large sandstone blocks as crowns on the tops of the towers, but these were not replaced to their former position, presumably because of fears about the stability of the final result. These blocks were instead left on the ground near the towers, and the open tower tops sealed against water ingress with a slab of steel-reinforced concrete, and this then covered in bricks.

The sandstone galleries around the brick towers were restored using the more usual techniques of anastylosis. In relation to the principles involved in such restorations Vasu says “Please note that the object of restoration of this monument does not differ from other anastylosis in Thailand, that is that the most complete work we can do on a monument depends on what we can get from the stones … Making as far as possible an image of the building in its past condition is the success of the operation, which is only an improvement. This is in agreement with the popular taste and the needs of the Thai visitors” (Vasu 1997:94). It should be noted that the object of the restoration, as stated by Vasu, is as much directed at the expectations of the Thai visitor audience as directed at a "proper" scientific study and restoration of a monument, whatever that may involve.

The laterite foundations of the galleries were removed and the subsoil reinforced with steel-reinforced concrete, as at Phimai and Phnom Rung, then
coated with an asphalt layer to stop water rising into the structure through capillary action. The laterite blocks were replaced on the slab and joined with lime mortar, which is more flexible than cement mortar and less corrosive.

Fig. 5.15. Preparing steel-reinforcing before pouring concrete for the base of a gopura. From Vasu 1997.

In discussing the relative merits of lime and cement mortars, Chompunut says “Nowadays, the restoration of ancient monuments witnesses the use of Portland cement in place of lime. This restoration method does more harm than good to the ancient monuments, for cement has high density, so that it will not easily allow humidity to get in or out. So the salty humidity left inside usually encourages the erosion of stones or bricks that are binded [sic] or coated by cement. The restoration of ancient monuments, therefore, should be done with respect and sensitivity to traditional methods and construction techniques” (Chompunut 1997:64). Further, the high strength of cement mortar means that with stones or bricks bound by cement mortar, if a slippage of the foundation occurs, the stone or brick will rupture along the fault line rather than the mortar line. With lime mortar the structure will slip along the mortar line, as may be seen in contemporary domestic buildings in Australia.

As well as the replacement of the outer laterite blocks, a steel-reinforced concrete wall was placed on the inside of the outer wall to provide stability.
Once the base had been rebuilt, the original stones of the gopura were replaced, incorporating fallen stones as were found to fit into their original position. Where the original structure had used wooden beams to cross large spans, steel-reinforced concrete beams were inserted instead. The original stones had been cut with grooves to accommodate the wood, and these grooves were exploited to house the concrete beams.
Where stones important to the restoration of the structure were missing and could not be found, roughly shaped new elements were put into the appropriate place, in accordance with the rules of anastylosis. Where elements were broken but reparable, holes were drilled up the centre of each of the broken parts and stainless steel rods were held in place with a mixture of epoxy resin and stone dust (Vasu 1997:96).

![Diagram of stainless steel rods and epoxy resin to connect broken pieces of original stonework.](image)

**Fig. 5.18.** Use of stainless steel rods and epoxy resin to connect broken pieces of original stonework. From Vasu 1997.

The use of stainless as opposed to ordinary mild (soft, low carbon) steel was reasonable in that with the stone back in one piece, there was still a chance of the ingress of water along the old crack line. If ordinary steel were used, this would eventually rust in combination with the water and the hot environment, and the rusted steel, in converting chemically into an oxide of iron, would expand and cause the stone to fracture. Note that the strictures against the use of epoxy-stone dust mixtures made by the Japanese experts (see above) may not apply to epoxy fully enclosed and not exposed to the elements or sunlight.

Zambas (1988) discusses the use of metal links to connect members of structures previously joined by iron, and the use of metal rods to join broken elements. The Acropolis restorations of the recent past used titanium, recommended by Prof. Th. Skoulikidis, as being very similar to iron in its physical characteristics, but with superior corrosion resistance. The key point of the Zambas procedure is that the titanium bars are dimensioned to be about the
same or less strength as the surrounding stone, so that in a situation of excessive stress, the failure will occur at the original joint line, protecting the stone in its original state, rather than introducing new points of failure.

Where a lintel had to be replaced over a door frame at Muang Tam, L-shaped steel brackets were used to lock the two elements together (Vasu 1997:97). Vasu also notes that lintels are an important agent is establishing the age of Khmer monuments, and their return to their original position is essential to the completion of the structure.

![Fig. 5.19. The use of L-shaped steel brackets to lock vertical lintels to horizontal door frames. From Vasu 1997.](image)

As noted above in the discussion about the restoration of the Phimai temple, each step in the restoration which uses modern materials or techniques, while possibly adding to the longevity of the monument if the durability of the material is satisfactory, nevertheless takes the structure one further step away from the way in which the Khmer builders solved their construction problems, finally and inevitably leaving only the image of a Khmer structure, not the reality. It seems that the use of steel-reinforced concrete to replace rotted wooden beams may be sanctioned, as may the connection of broken stones by inserting linking reinforcing rods in an inert cement, these leave the structure in its original form. Even the use of steel-reinforced concrete to stabilize the foundations of the structure may be accepted, although the cost of disassembly of the existing building may be seen as a high price to pay for stability. The Japanese concept...
mentioned above of pumping materials into the ground may be a better way, if the materials are environmentally inert. However the use of steel brackets to attach elements together in a way unknown to the Khmers, or the insertion of steel-reinforced concrete walls behind stone walls seems to extend the principles of anastylosis beyond reasonable bounds, and may demonstrate the ultimate limits or weaknesses of the current applications of the technique.

Vasu says in relation to the restoration technique “We hold the principle that we used in the outside gopura in replacing stones to rebuild, we will stop [restoration] when all the stones we know of are used up, and have the intention to rebuild in the original way until there is no more material, and we do not have sufficient confidence that we could complete the building, for example, part of the gallery and gopura was left in a state without a roof, even though there had been a search for evidence of a covering with bricks, or traces of a wooden structure for the roof” (Vasu 1997:97). This may be seen in the restored state of a gopura in Figure 5.20 which may be compared with the state recorded by Seidenfaden in 1928 in Figure 5.19. The gables in Figure 5.20 seem to imply that there was once a roof, probably of timber covered in tiles, but this feature has not been restored for lack of direct evidence.

Fig. 5.19 The front of the Muang Tam temple with a naga pond in the foreground. From Seidenfaden 1928
The final part of the restoration was that of the four naga pools surrounding the inner galleries. Vasu says that the use of the pools in Prasat Muang Tam is unique in this type of architecture, and that the temple has a high value as a work of art. (Vasu 1997:97). Some restoration of smaller pools had taken place at the Phnom Rung site, but the four Prasat Muang Tam pools were far bigger and more complex, so new techniques of anastylosis were used. The laterite paving at the base of the pools was removed and a slab of steel-reinforced concrete was set into each of the four bases. This was covered with plastic sheeting before the return of the laterite lining. After that the laterite sides and the water stages and naga images were returned to their original position. When the

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1 Naga: mythical multi-headed snake, appearing in both Brahmanic and Buddhist mythology. Said to be kings of the underworld world of water. Feature prominently in Lao and Issan folk mythology, often as being in conflict with the humans of the natural world, possibly a symbol for the periodic flooding of the Mekong river. Buddhist iconography makes much use of the image of the meditating Buddha seated on the coils of and sheltered by the hood of the naga Mucalinda.
pools were again filled with water and lotus plants, the effect of the pools and the temple ensemble was, and is, very pleasing.

The restored Prasat Muang Tam temple complex was opened on 10 November 1997, again by Her Royal Highness Princess Maha Chakri Sirindhorn. Since its official opening, the temple has become a popular tourist site, if only for Thai visitors. It should be pointed out that it was never really closed, and was always accessible to visitors in whatever state it happened to be in. Now a small fee is payable for entry. There is also a small market nearby, offering refreshments and the usual tourist gift items.

The Restoration of Prasat Phnom Wan, Nakhon Rachasima Province

Prasat Phnom Wan is the last of the four major Issan Khmer temples to be considered as a restoration object.

Pichard stated that
If the works of anastylosis aim in the first place to allow the reconstruction of collapsed buildings and to assure them a better conservation, one of its justifications, and not the least, is also to allow the complete study of a monument, down to its foundations, and to define the history of the site and in particular its transformations though the ages. The ongoing works since 1991 on the temple of Phnom Wan have already in part met this expectation. (Pichard 1995:24)

Pichard notes that the temples, old and new, were built on a slight mound which, in the monsoon season, is barely one metre above the level of the water in the surrounding rice-fields, explaining the choice of the particular site. While the main monument dates from the eleventh century, the brick structures, of which only the foundations remain, can be dated to the early ninth century. An analysis of the disassembled galleries has allowed the discovery that part was built over the earlier structure and incorporated in it. Pichard found that the eastern part of the gallery in particular was built over the outer wall of the brick temple, as shown in Figure 5.22.

![Figure 5.22](image)

Figure 5.22. Cross section of Phnom Wan southern entry of the gallery showing an older wall built into the later gallery foundation. (From Pichard 1995)

Pichard also demonstrated that parts of the older building had been incorporated into the newer temple, without great regard to their previous use or to their ornamentation, in a way not seen in other Khmer structures.

Therefore, some of the construction techniques at Prasat Phnom Wan differ from those of other related Khmer sites, and this may have had an effect on the application of anastylosis in this case. Before considering the restoration by
anastylosis of the temple of Prasat Phnom Wan, it is necessary to consider the state of anastylosis at that time in Thailand, in both its successes and also in its perceived failures, to see what developments had occurred. It will be useful to also consider the reasons for any change from the earlier standards of anastylosis used in Thailand.

**Theoretical Issues in the Current Application of Anastylosis**

In his Country Report of 1995, Vasu provides an analysis of the techniques of anastylosis and its shortcomings. Vasu points out the salient features of the technique used at Phimai, Phnom Rung and Muang Tam as

Mr. Groslier had applied Henri Marshal's technique by adding modern structure to bear the load of the original structure for stability and damp-proofing. This was done by hiding reinforced concrete structure in load-bearing parts of the monument and adding a reinforced concrete spread foundation underneath the whole monument. Successful result at Pimai Main Prang made this technique well accepted and was applied to Prasat Phnom Rung and Prasat Muang Tam consecutively. The principle is to dismantle the whole monument and reassemble the stones in their original positions as pre-planned over the new reinforced concrete spread foundation, with additional supporting reinforced concrete structure hidden in parts of the superstructure. (Vasu 1995:7)

The application of these principles may be seen in this photograph of the interior of the ceiling of the Sanctuary at Phimai before the addition of a wooden false ceiling (Figure 5.23). The use of wood-formed steel-reinforced concrete may be clearly seen and demonstrates that the Khmer building methods have been completely subverted; the concrete frame carries the load and the stones become decoration.

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2 See Appendix 7 for the text of the Vasu report
Vasu (1995) discusses the advantages and disadvantages of anastylosis as seen from the vantage point of some sixty years since the pioneering application of the technique by Henri Marchal in mainland Southeast Asia at Banteay Srei in the early 1930s, as described earlier. He states

Anastylosis is an effective method of restoration ... Unfortunately, anastylosis cannot be applied to every case, ... Anastylosis is most suitable for enhancing the potential of the information perceivable from the monument by clarifying the monument's original space characteristic... In every case of anastylosis which has been done exaggeratedly or without sufficient information from research or studies, there is a risk in transforming an archaeological site into a drama scene. (Vasu 1995:9)

Then, in discussing the then current state of anastylosis in Thailand, Vasu says

As we have seen in the original definition of anastylosis mentioned previously, what we are carrying out at many Khmer influenced monuments in Thailand could not be called anastylosis, but applied ... Aspects of consideration can be categorized as follows

1. Authenticity of the monument in materials, position, form, and construction techniques must be retained as much as possible. ... Any intervention must be legible and removable, it must also keep the effect produced by the outline of the monument. ...

1.4 Ancient construction technique is also an important historical evidence. Addition of new structure such as reinforced concrete foundations or other hidden structure is not in the original principle of anastylosis as generally understood. (Vasu 1995:10 ff)
It may be inferred from the above passages that there had been a complete rethink of the techniques originally put into place in Thailand by the work of Groslier and others in the restorations of Phimai, Phnom Rung and Prasat Muang Tam. As noted by Vasu, the techniques used in Thailand were always an "application" of the idea of anastylosis. The practice of disassembly of a monument, replacement of the foundations by a steel-reinforced concrete base and reassembly, adding concrete structures where thought necessary, goes far beyond the mere re-erection of the columns inherent in the name of the technique. It is clear from his comments that the work of his predecessors had not been seen as entirely successful in all respects.

The new approach he identifies shows a far greater sympathy for the original structure and a desire to do no more than is essential to obtain a satisfactory result, always following the principles of respect for the monument, least interference and "removability", that is, the ability to undo the work of restoration if a better technique is made available in the future. Vasu recognizes (his item 1.4) that the result would not have the strength and durability of the Groslier technique, but the revised methods would be more in sympathy with the original building methods.

Further, it is clear from Vasu's comments on side effects from the unconsidered use of cement and steel that these materials have been found to be unsatisfactory in the long term, presumably cement because of its chemically active and corrosive state and artificial appearance, and steel because of its propensity to rust readily and deteriorate rapidly if exposed to moisture. The comments on the use of cement reflect the views later stated by Chompunut (1997) and quoted above in the discussion on Prasat Muang Tam. The use of titanium in place of steel, as noted above in the report by Zambas (1988) avoids the problem of oxidation (rust), but increases the cost of the reinforcing metal, as would the use of stainless steel as well, although it is significantly less expensive than titanium. Further, Vasu's reservations on the use of epoxy resins echo the
comments from the Japanese team quoted above in relation to the restoration of Prasat Muang Tam.

In his report, in specific relation to the restoration of Prasat Phnom Wan, Vasu states that

The [Phnom Wan] project is intended to be a pioneer project in practicing anastylosis in a new approach by refusing [sic] the use of reinforced concrete and reduce the use of cement and structural steel by replacing it with lime concrete and stainless steel. Dismantling is necessary. In fact, the word 'anastylosis' only implies the restoration of the fallen original stones back to their original positions by [the] original technique. We, therefore, may take Phnom Wan as an experimental project in anastylosis to be observed and evaluated further. (Vasu 1995:7)

Therefore, the Prasat Phnom Wan restoration was to be carried out with the objective of using revised techniques with least interference with the structure and least change to it, in particular, by not involving the automatic disassembly of the entire structure. Nevertheless, because of known problems in the building of Khmer-style monuments, for example in the use of timber lintels as load-bearing elements, it would be necessary to use some more durable method of bridging large horizontal spaces.

Boisselier (1966:115) notes the use of wooden beams in Khmer structures and provides a sketch of examples (Figure 5.24). He states that Prasat Phnom Wan specifically used double beams, so the issue of the suitable replacement of wooden load-bearing beams is a real one in this particular restoration.
The 2000 Restoration of Prasat Phnom Wan, Nakhon Rachasima Province

The Sanctuary of Phnom Wan is shown in figure 5.25 below.

Fig. 5.25 Side view of the restored Sanctuary at Prasat Phnom Wan. The small Prang is to the right of the Sanctuary, linked by a small corridor. From FAD (2001).

Having considered the theoretical basis on which the restoration of Prasat Phnom Wan was to proceed, it will be instructive to determine the actual steps which were taken at Prasat Phnom Wan as it was being restored.
In Thai Budget Year 1999, work had been completed to the stages of: dismantling the stones of the Sanctuary, dismantling the stones of the small Prang (joined to the Sanctuary by a short corridor), dismantling the southern half of the western gallery and dismantling and reassembling the southeast gallery.

The work programme for 2000 comprised the reassembly of the Sanctuary and the small Prang, and the reassembly of the southern half of the eastern gallery. This was essentially the completion of the earlier work, although as will be noted, there is more work yet to be done.

The restoration of the Sanctuary and the small Prang began with the site completely cleared of all stones and foundation structure, leaving holes in the ground where the structures had been. The undersurface of the monument was excavated to a depth of 30cm and a substantial foundation of steel-reinforced concrete, asphalt and mortar was installed.

The laterite blocks forming the outside of the foundation were then returned to their original positions. The inside, originally filled with sand, was filled with new laterite blocks of lesser height than the outside blocks by ten centimetres. The gaps between the blocks, and the upper surface of the new blocks, were then filled with the weak mortar mixture to the level of the outer blocks, as shown in figure 5.26. The overall effect of this work was to provided a level, well-bonded, strong and stable structure on which to assemble the considerable mass of the Sanctuary and the small Prang.

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3 See Appendix 8 for some details of the proposed work for 2000, together with representative drawings of the work involved.
The restoration of the main structures took place in accordance with the above-discussed principles of anastylosis. Using drawings, photographs and the codes marked on the original stones, the stones of the lowest course were re-laid carefully in relation to their previous position using wooden stakes to allow alignment in line and level, using weak mortar to fill any gaps. Once the first level was established, the upper levels were reassembled one by one, inserting new stones of the right size and shape where the original stones were missing or too damaged to be repaired; in the process, stones which had fallen earlier and were separated from the disassembled stones, were matched with their fellows into their original locations. The final stages of the restoration of the Sanctuary of Prasat Phnom Wan are shown in Figure 5.27.
The degree of the restoration may be seen by comparing the drawings of the Mondop (left) and Sanctuary (right) before restoration in Figure 5.28 and after restoration in Figure 5.29. Following the principles of anastylosis, it has been only possible to disassemble and reassemble those stones which exist, in the original building or on the ground. For this reason the restored building, while in an orderly and stable state, with good foundations and all stones courses fairly horizontal, is incomplete, either because elements are missing and unrecovered, or because the building was not completed at the time of construction.
As part of the restoration process, a new drainage system was installed to carry rainwater away from the area of the temple so that it would not affect the stability of the restored structure. As noted by Ishizawa *et al* the enemy of stone structures is water, which, if not drained, causes long term damage to the stones by chemical action and by the growth of vegetation which can grow and cause splits in the structure.
Currently planned work at Prasat Phnom Wan is now complete, although many unreturned stones still remain in the area around the temple site. Some work is continuing to match the stones into sub-structures in an attempt to determine their place in the original temple. Part of the results of this activity is shown in Figure 5.30.

![Fig. 5.30. Reassembly of some as yet unreturned stones from Prasat Phnom Wan. Photo by J.Crocker.](image)

An idea of the problem facing the stone restorers may be seen in the photograph of stones lying around the Phnom Wan temple in Figure 5.31. When all the available stones had been returned to their original positions in accordance with the shape of the building, as long as the upper part of the structure was stable, the process was essentially complete. It is not unusual for other stones to be unmatched and thus left out of the structure. The Sanctuary at Phnom Wan is still incomplete as are the galleries, while stones still remain in the surrounding areas awaiting the time and opportunity to perhaps add them to the temple.
The ongoing work of completion of Prasat Phnom Wan as far as is possible is in the hands of local office of the Fine Arts Department, under the supervision of Khun Wichian (family name unknown). Khun Wichian is the main local officer with experience in restoration, having worked in various roles in the restorations of Phimai, Phnom Rung, Muang Tam and now Prasat Phnom Wan. Khun Wichian stated that the reassembly of broken stones was being carried out with reinforcing rods in a mixture of epoxy resin and stone dust. He also stated the preference for the use of lime mortar in place of concrete based on Portland cement, as lime mortar does not produce corrosive salts when setting.
Fig. 5.32. Khun Wichian of the Phimai Office of the FAD, in front of the doorway of the restored Sanctuary of Prasat Phnom Wan. Note the new material in the doorframe and the new material in the lintel structure, distinguished by colour and lack of ornamentation. Photo by J. Crocker

Unlike the temple sites of Phimai, Phnom Rung and Muang Tam, no attempt has been made so far to make the Phnom Wan site a tourist venue. There is no work on the improvement of the grounds and no facilities for the tourist at all. A visit to the site may trigger the welcome arrival of a bicycle-mounted ice cream vendor; no other refreshments are available apart from those in the nearby village. It may be that the site will become at some future time the focus of tourist development.

It is now pertinent to review the application of anastylosis and its development in Thailand and Cambodia.

Anastylosis in Thailand and Cambodia as practiced so far

There is sufficient diversity of opinion and history in the restoration of Khmer monuments to merit a discussion of some of the current issues and recent areas of contention in restorations in Thailand and Cambodia. Not all has been
plain sailing. The important issue of the nexus between the restoration of monuments of ancient origin, and national identity, tourism and other related matters, will be considered in the succeeding chapter.

In 1991 the Thai art and culture magazine *Sinlapawatthanatham* published an article “Fine Arts Department: conservator or destroyer?” (Pricha 1991). The title is somewhat alarmist in tone, and the article is enlivened with much use of text bolding to achieve a striking visual effect. On analysis however, the charges made against the Thai Fine Arts Department do not amount to much: a couple of chedis at Ayutthaya and Sukothai whose restoration exceeded the available material; a couple of gopuras improperly assembled at the Khmer site of Muang Sing; and some problems with careless assembly of the gallery at Phimai appear to be the extent of the sins of the Fine Arts Department. This seems to be a minor list given the range of restorations carried out by the Department in the last forty years. The article also accuses conservators of riding roughshod over local committees set up as consultative bodies in the development of historical parks, where the vision of the conservator and the exigencies of budget and plans override local objections. All in all, the article is a lot of polemic and little substance.

Nevertheless, the way in which the restoration of Khmer monuments in Thailand has been carried out over the years has not been without problems and objections. It is worth seeing first what has occurred in restorations using anastylosis in Cambodia, and then examine the way in which the techniques have caused problems, and how solutions may develop in Thailand.

The development of restoration techniques in Cambodia, and particularly at Angkor after World War II has not been be conducted in a calm scientific environment, and has suffered interference and interruption due to political and related military events in Indochina. These events were to result in a fifteen-year hiatus during which little or no restoration or conservation work was undertaken in Cambodia, by the French or anyone else. While the delays led to some deterioration of the monuments, some of the outcomes were beneficial, in that the

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Rebuilding the Thai heritage: Anastylosis in Thailand
interruption was followed by an international review of the results of earlier anastylosis in Cambodia. The centenary volume of the EFEO, *Un siècle pour l'Asie*, lays out the first part of the story, summarized below.

Immediately after World War II, and the defeat of the occupying Japanese, the French resumed control of its Indochina colonies in Vietnam, Cambodia and Laos. The EFEO resumed its partially curtailed work at Angkor and the future seemed assured. Unfortunately, internal political events in Vietnam, base of the EFEO, soon resulted in a complete rearrangement of the relationship between the French and the Vietnamese and Cambodians, and the way in which the EFEO operated.

From 1945 to 1947, in a period of post-war difficulty, the EFEO continued to operate from its base in Hanoi, slowly expanding its operations with the work of Vietnamese and French scholars. Increasing unrest, however, caused it to move some operations to Saigon. Between 1950 and 1951 the EFEO lost its colonial responsibility for the care of monuments to new national conservation services in each of the newly independent countries, although in 1952, the EFEO resumed access to the sites under new agreements, and in 1954 its base was moved to Saigon (now Ho Chi Minh City). At the end of the First Indochina War, and with the partition of Vietnam under the Geneva Accords, this office became the only part of the EFEO in Vietnam. The EFEO headquarters moved to Paris in 1956 and in 1960, the Saigon centre was handed over to the South Vietnamese government, although work continued in all the Indochina countries.

In 1964 the IIInd International Congress of Architects and Technicians of Historic Monuments published its International Charter for the conservation and restoration of monuments and sites. This was an extensive review of the principles enunciated in the Athens Charter of 1931. Relevant parts are quoted

Article 9. ... [restoration] must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp ...

Article 10. Where traditional techniques prove inadequate, the consolidation of a monument can be achieved by the use of any modern
technique for conservation and construction, the efficacy of which has been shown by scientific data and proved by experience.

Article 15. ... All reconstruction must be ruled out a priori. Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted ...  
(Sinkelapkon 1973:64)

These principles became binding on all international efforts at restoration of monuments and applied to the future efforts of the EFEO in Cambodia and other sites. A significant shift from the Athens Charter, discussed in Chapter 3 is the removal of the specific reference to allowing the “judicious” use of reinforced concrete.

The EFEO opened a centre in Cambodia at Siem Reap near Angkor in 1958 and work continued on the Angkor monuments for some time unaffected by events in other parts of Indochina, in particular the escalation of the conflict that led to the Second Indochina War. By 1970 however, the situation in Cambodia, which bordered on civil war, had rendered the activities of the EFEO in faraway Siem Reap more dangerous. Eventually, in January 1972, the EFEO was forced to abandon the Angkor site, although some work continued for a while in Battambang in the west of Cambodia. Finally the takeover of Cambodia by the Khmer Rouge in 1975, and the ensuing period of instability and the later Vietnamese occupation, caused the closure of all EFEO activities in that country for fifteen years. (Clémentin-Ojha 2001)

The EFEO had had to leave the Angkor site on short notice and with little time to stabilise works in progress. Some work was safeguarded, but one of the mural galleries at Angkor Wat had just had its roof removed as part of the restoration process, and the justly famous carvings were open to the elements, causing them to be exposed in turn to the intense tropical sun and rain for many years (Bandari:1995:111). EFEO records of the building were lost as well.

In 1979 the new Vietnam-backed Khmer government in Phnom Penh appealed to the world for assistance in preserving the abandoned Angkor monuments. India and Poland responded. After an earlier survey and some negotiation, the Archaeological Survey of India undertook restoration work at
Angkor Wat in 1986, under an agreement with the King of Cambodia, Norodom Sihanouk. This work went on for several years with multiple objectives, to make good some collapsed parts of the central sanctuary, to clean some of the lichen-encrusted carvings, and to reassemble the removed gallery roof and clean and protect the exposed murals (Bandhari 1995). The work took place between 1986 and 1991 and was not without controversy, owing to the way stone-work was cleaned and protected in what was said by some to be an aggressive and destructive manner, and the way in which the floor of the gallery was restored. (Chihara 1989, Shenon 1992). As well, the Polish Ateliers for Conservation of Cultural Property carried out some work in 1990 on the restoration of the Bayon at Angkor. (Krzyzanowski 1994)

In 1990 and 1991 an international committee of experts surveyed the state of the Angkor monuments to establish their condition and to determine the work required to resume the process of conservation and restoration. This was a useful opportunity to review the results of previous attempts at restoration at Angkor with anastylosis, and to detect faults in the technique which would appear with the effects of time and the environment. Papers were prepared by Japanese and French experts on the history and state of the restoration of the Angkor monuments, noting faults which had been observed from earlier restorations. For the first conference in June 1990, a paper on an overview of the Conservation in Angkor by Pierre Pichard pointed out that the original conception of anastylosis had had to be modified because of the effect of rain water on sandstone due to bad drainage. This led to more invasive procedures where the restoration of a site required that adequate drainage was provided to quickly remove water from the foundations of a monument. (Pichard 1990:8).

A paper delivered to the same conference by the World Monuments Fund (WMF) restated the criteria to be observed in the conservation and repair of monuments. These are:

- The condition of the building must be fully documented prior to any intervention.
- Historic evidence should not be destroyed or falsified. In exceptional circumstances previous interventions can be removed for the well-being of the structure.
- Any intervention must be the minimum necessary and should be governed by unswerving respect for the aesthetic and physical integrity of the structure.
- All methods used during the conservation and repair must be fully documented.
- All procedures adopted for conservation should be reversible.

(World Monuments Fund 1990:14)

The key points of these criteria are: full documentation, minimum intervention and the reversibility of the actions taken in the restoration of the monument. It is unfortunate that the probably immaculate documentation by the EFEO of its activities at Angkor over seventy years, carefully preserved, was destroyed by the Khmer Rouge during its occupation of Siem Reap. The issue of reversibility is however the central one and means that whatever is done, must be able to be undone without damage to the original fabric of the structure. This aspect of restoration is not compatible with the use of steel-reinforced concrete as the core of a building, as at Phimai, or the use of cement mortar to bind the original stones together.

Further, the WMF commented on the technique of anastylosis in this way. "As many of the structures have collapsed scattering their stone blocks to the ground, it is possible to deduce by anastylosis how to reconstruct these structures. It is a hit-and-miss system but it is the only way of reconstructing some of the more remarkable structures of the Angkor period. Restoration by anastylosis using the original material is justifiable when supported by firm archaeological evidence and when it makes a ruin more comprehensible. ... Accurate anastylosis is often surprisingly difficult as can be seen in some of the work already undertaken by the French" (World Monuments Fund 1990:15).

It is clear that the WMF is equivocal about the benefits of anastylosis but accepts it as a practical way to recreate a collapsed building if it is necessary "when it makes a ruin more comprehensible".
Papers to a later 1991 conference on Angkor provided the results of further surveys of the state of the monuments there. The architect Jacques Dumarçay of the EFEO prepared a report in 1991 on the results of their survey of the state of the Angkor restorations (Dumarçay 1991). Speaking of the early attempts at restoration, Dumarçay notes that the use of steel-reinforced concrete was badly done and that rust on the internal steel bars had caused structures to burst. Dumarçay notes the introduction of “ameliorated” anastylosis by B P Groslier to overcome the effects of rising damp on the sandstone structures, and the need to adopt replacement foundations of steel-reinforced concrete with suitable waterproof membranes to keep groundwater under control. A survey of each of the Angkor and related monuments showed that generally they had survived quite well a long period of neglect and war-related destructive activities.

A related report by the engineer Launay of the EFEO of January 1991 comments that restoration work at Angkor Wat had been made more difficult by the earlier use of cement in reassembly, and that “it was practically impossible to dismantle the stones again”. As well, he discussed the concept of stabilizing the foundations of buildings with injections of cement or other strengthening materials as opposed to laying a steel-reinforced concrete slab (Launay 1991). This idea would at least remove the necessity of dismantling the building if it was necessary to improve the stability of the foundations. Pierre Pichard of the EFEO, in a parallel report of similar date, came to the same sort of conclusions about the state and value of the work on the monuments at Angkor (Pichard 1991).

Overall, the EFEO consensus was that the restorations at Angkor had been successful and that the monuments were in good condition, with the reservations made by Launay. Unfortunately, a Japanese architect took a contrary view. A paper by Yoshiaki Fujiki pointed out some of the problems with the earlier work done by the EFEO. These problems included: new breaks in stones bound by iron clamps; limitations in joining stones by inserting reinforcing bars; extensive modification in shape by using reinforcing materials and rust development on the
iron bars in steel-reinforced concrete. Following chemical tests on some steel-reinforced concrete used at Angkor, Fujiki concluded

Judging from the result of the above-mentioned chemical inspection, the concrete used at Banteay Kdei, will hardly be, it must be admitted, a proper reinforcing material which could preserve the monument for several centuries. This must be true of the reinforced concrete which were [sic] used in various monuments at Angkor. It is very much regrettable that the past restoration works done specifically with reinforced concrete are required to be reviewed, going back to the starting point. (Fujiki 1991a:199)

Fujiki’s criticism of the use of reinforced concrete is very telling and challenges the way in which the restoration of all Khmer monuments in Southeast Asia, using the techniques of the EFEO, were developed in Angkor and transferred to Thailand. The idea of a restoration preserving the monument for several centuries begs the question of the precise life expectancy of a restoration. The prospect of actually having to review all of the work done at Angkor with reinforced concrete would be a daunting one, particularly since the restoration of the major stepped pyramid monument, the Baphuon, was dependent on the extensive use of concrete to build internal retaining walls.

In a later report in the same year, Fujiki, who accompanied the EFEO team in its study of Angkor, claimed that the monuments of Angkor were “on the verge of collapse” and recommended urgent action to overcome these perceived problems. When looked at more closely, his report was mainly concerned with some aspects of the Angkor Wat structure and its exposed sandstone reliefs. He again refers to the problem of rust in steel-reinforced concrete and the source of long term problems which this material represents. His paper, while acclaiming the work done by the EFEO since 1908, proposed an international team solution to ensure that difficulties are properly overcome, possibly by a peer review process (Fujiki 1991b:5).

In summary, the review of the Angkor restorations showed that the technique of anastylosis was still capable of modification in order to avoid some errors in methods and materials from the past, and these would be able to be transferred to restorations in Thailand. Thus, having considered the later position...
at Angkor, it is relevant to review possible developments in anastylosis in
Thailand.

**Future Anastylosis in Thailand**

As well as the *Sinlapawatthanatham* article mentioned above, the Thai magazine devoted to popular archaeology, *Muang Boran*, has published several articles where the restoration of religious monuments in Thailand is seen as having been less than successful and less than popular as a consequence, in particular the Buddhist monuments of Phra Chedi Luang in Chiang Mai, and Wat Maha That in Lopburi. The cases cited involved a lack of suitable study of the history of the monuments and a consequent restoration without consideration of the architectural issues involved. *Muang Boran* states “previous failures in renovation occurred in Thailand mainly because of the insufficient cooperation among the scholars and technicians of the related fields” (Anuvit 1985:97). It is to be expected that the criticisms of a reputable journal of this type would have an effect on the subsequent activities of the Thai Fine Arts Department in its restoration works.

It should be made clear that the discussion here centers on the restoration of Khmer stone monuments in Thailand. The Thai Fine Arts Department is also responsible for the maintenance and restoration of Buddhist temples in Thailand. These structures are of quite different construction from Khmer monuments and require their own techniques, while being usually far less old.

In discussions with Kitcha Yupho, architect, of the Division of Museums and Archeology of the Thai Fine Arts Department, several issues were addressed which are relevant to an understanding of the way in which the restoration of Khmer monuments in Thailand is undertaken. The issues ranged from matters of policy to details of restoration methods and materials. The following points summarise information obtained from Khun Kitcha in several discussions.

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Rebuilding the Thai heritage: Anastylosis in Thailand
Surprisingly, there appear to be no published procedures or guidelines for the restoration of Khmer-style monuments in Thailand. Practitioners obtain experience on the job after lectures at Sinlapakorn University and with some Fine Arts Department training (Kitcha 2003). In this way about thirty Khmer style stone monuments have so far been restored in Thailand. All restorations are seen as successful, although there have been cycles in the method of application of anastylosis techniques. It is possible that all the Khmer monuments in Thailand may be eventually restored, although this will be a function of budget availability in the future. The Thai national government is the primary source of funding for the restorations, but funding may also be obtained from private sources and local government authorities; this policy is seen as changing.

In relation to the proposed restoration of a monument, there may be consultation between the Fine Arts Department and local people, local authorities and other government departments, but even though the monuments are usually Brahmanic in inspiration and design, no consultation with Hindu authorities is undertaken (Kitcha 2003). The buildings may therefore be seen a secular relics. Sometimes the local population has an affinity for a monument and will require consultation; the concept of phumpanya (local wisdom) may inform the planning of a restoration. The Tourist Authority of Thailand may be involved in planning for and funding a restoration, particularly in the development of tourist facilities associated with the site.

As noted earlier, the techniques of anastylosis were introduced from Cambodia, but these had to be modified because of the relative weakness of the sandstones in Northeast Thailand. This recalls the fact that the techniques in use in Java had to be modified to handle the sandstones of Cambodia. When commencing a new restoration, the sequence of investigations of first, archaeology, then art history, and finally architecture is still to be followed. Fine Arts Department conventions allow the addition of up to ten percent new material to an old building to avoid "over-restoration". Further, the restoration must always be "retreatable", that is, the work must always be able to be undone without damage to the original fabric of the building. The use of computer
programs to assist in the analysis and reassembly of buildings is developing, with work being done by UNESCO, but it is not yet widely applied, and depends on the type of Khmer construction techniques used. But while the anastylosis of a building is an expensive and time-consuming activity, it is expected that the work will need to be reviewed after ten to twenty years in order to ensure that the restoration was successful and that there are no long term problems with the structure (Kitcha 2003)

Considering the detailed aspects of the application of anastylosis, there has been a shift in the technique away from the use of reinforced concrete and steel because of the corrosive effects of cement and the rusting of steel. Thailand looks to work at Angkor in Cambodia, India and Europe as well as to local sources for new techniques and materials, although the use of new and exotic materials is mediated by the cost factor; lime mortar, stainless steel and tempered epoxy have their place if it is possible, but there may be lifetime considerations. For example, epoxy tempered with aluminium powder to reduce its strength, silicon compounds and PVC (used in drainage piping) all have finite lifetimes, of not much more than ten to twenty years. However, the use of materials like carbon fibre, and plastic as opposed to steel-reinforcing bars is likely in the future. A technique of hardening the ground under a monument would overcome the need to disassemble a monument to reinforce its foundations, and thus preserve the old Khmer craftsmanship undisturbed as far as practicable. Finally, while there are many brick monuments of Khmer origins in Thailand, as well as those of Dvaravati or Thai origins, a restoration methodology is still very difficult to establish, depending on the state of the monument and the knowledge of its design; if the structure is built with mortar, it is possible to do more than if it is made with dry bricks. (Kitcha 2003).

All things considered, the anastylosis process is still developing and perhaps is some distance away from the ideal of least interference with the original structure. Perhaps by the time this ideal is possible, there will be no untouched monuments in Thailand to restore.
Anastylosis analysed

It has been seen from the history of anastylosis to this point that anastylosis is a set of principles rather than a specific method to be followed on all occasions. The original definition of Balanos quoted earlier is still relevant.

Anastylosis consists in the reestablishing or re-erecting of a monument with its own material and according to the method of construction proper to each monument. Anastylosis allows the discreet and justified use of new materials replacing missing stones, without which one could not reposition the antique elements. (Marchal 1934:11)

The development and application of a technique such as anastylosis does not progress smoothly, and is accompanied by a great deal of trial and error. Each step is hailed as a triumph at the moment of its unveiling; the effects of nature and criticism often take some time to operate and to modify the euphoria first felt by the artist, architect or engineer, let alone provide a corrective to the problems which eventually appear. Anastylosis in Thailand seems to have had its share of such changes, although the regular use of skills from the French in Cambodia in the earlier phases of development may have had a leavening effect. Certainly in Thailand, architects practicing on Khmer stone buildings have modified their techniques into something less intrusive and something more sustainable. This is not to say that the very impressive achievements of the restorations of Phimai and Phnom Rung were not good, rather to say that had they been done later they may have been done differently and less aggressively.

The architect is always the victim of the now and the possible. A technique or material that may emerge in ten or twenty years time cannot have the slightest use in restoring a building today. An example is the suggestion by the Japanese quoted above of a technique for chemically hardening the earth below a monument to allow it to support the load above, such a way of hardening the ground does not yet seem to exist. One could also sanction the use of “petrified” wood or exotic timbers in place of the wooden beams used by the Khmers to carry loads over spaces such as doorways. The need is there for a natural-appearing
wood with superior strength and durability. The modern expedient of using steel-reinforced concrete beams prejudices authenticity and appearance.

It would be tempting to put forward the suggestion that no further restorations take place until they can be carried out without disrupting the existing building. Such a suggestion may be attractive to a thoughtful engineer or architect but may be less beguiling to a tourist authority, whose job is to use old objects, of whatever provenance, to attract local or foreign visitors to more or less remote parts of the country. It must not be forgotten that a great deal of Thai treasure and talent has been expended in the conservation and restoration of the monuments left over from another country’s culture, even though the rebuilding of the Thai heritage is in fact the rebuilding of the Khmer heritage left in the care of the Thais. A marketing slogan of “Amazing Thailand- Even More Amazing in Twenty Years Time” may lack the cachet and immediacy often associated with marketing activities of this type, where next year’s tourist target numbers and estimated expenditure are the be-all and end-all.

The World Monuments Fund principles quoted above, of prior documentation of the monument, historic evidence not to be destroyed or falsified, minimum intervention, documentation of methods of restoration, and reversibility, are all extensions to the principles defined by Balanos. Vasu however makes the point that what is practiced in Thailand (and Cambodia) is “applied anastylosis” because “stone monuments all over the world may not have the same physical conditions, construction techniques, and environmental factors, so there must be some difference in details of implementation” (Vasu 1995). Therefore the techniques applied in Thailand result from the application of the principles of anastylosis, and this application has varied over time and place.

The earliest experiments in Java were fortunate in dealing with monuments of relatively simple construction, and made of very durable materials; later restorations were more demanding, but the material and its retention of carved detail allowed relatively easy matching of related blocks by skilled workers with an eye for pattern. The concept was transferred to Cambodia from
Java with modifications, forced by the difference of material and differences in the design and workmanship of the Khmer monuments. These were overcome successfully. The transfer of the techniques to the Khmer monuments in Northeast Thailand led to further modifications to deal with weaker materials. Recognition that water was the enemy of sandstone led to the development of isolating the foundations of a monument from the wet ground, with the laying of waterproof membranes after the monument had been dismantled, and suitable drainage provided. All the while, the World Monuments Fund concepts of respect for the structure, minimum intervention, lack of falsification and reversibility were often being compromised. While the use of newer materials and new techniques have allowed or will allow less intrusive restoration procedures, the ideals of restoration seem to be still to be achieved. Anastylosis seems to be an ever-developing process.

With this in mind, it is worth recalling the instructions of M. Auguste Barth to the new EFEO in 1901, quoted above in chapter 2, where he said, in part,

And your collecting which, concerning original objects, will only gather together that which otherwise is fated to perish, and will not be obtained at the cost of pillage or the devastation of monuments: not only will you not demolish, you will preserve and conserve. But you will not restore, that which of all the forms of vandalism is usually the worst... (Barth 1901:2, my emphasis).

Perhaps M. Barth was more prescient than his successors knew. To have left the buildings of Angkor or Northeast Thailand unrestored would have been to avoid a lot of problems, but would also have deprived thousands of visitors of the pleasure of seeing the buildings in something like the form the Khmers envisaged. As well, the buildings would have continued to deteriorate to the point that they would eventually disappear into a heap of rubble.

In any event, the process of the restoration of ancient monuments does not and cannot take place in a vacuum. It is a work undertaken by the national government as one of many competing priorities for access to the national purse and must justify itself on economic as well as cultural grounds (Peleggi 2002:63) The process of generating a demand from national and international tourism is not a simple one and is fraught with complex issues of nationalism, tourism, and...
competition with other sites and countries, respect for the ruins, and other issues. These will be considered in the following chapter.
There is perhaps one thing, which the most Polite part of Mankind have more universally agreed in; than the Value they have ever set upon the Remains of distant Times. Nor amongst the Several kinds of these Antiquities, are there any so much regarded, as those of Buildings; Some for their Magnificence, or curious workmanship; and others; as they move more lively and pleasing Reflections (than History without their Aid can do) on the Persons who have Inhabited them; on the Remarkable things which have been transacted in them, Or the extraordinary Occasions in Erecting them. (Sir John Vanbrugh, architect, 1709, in Delafons 1997:10 (spelling as in original))

Three hundred or so years after the writings of Sir John Vanbrugh, architect, on the reasons for an interest in buildings and Antiquities, the same sorts of appeal still apply, and the interest in such buildings has been often harnessed in the service of the economy and the development of nations. The way in which such an interest is fostered and marketed to attract tourists and their money is itself a topic of interest, particularly in relation to the Antiquities of Thailand.

Visitors to the ancient monument of Prasat Phnom Rung in the Phnom Rung Historical Park, having visited the monument itself and marveled at the beauty and grandeur of the work of the Khmer architects and builders, are able to purchase at the many souvenir stall mementos of their visit in the form of refrigerator magnets or mantelpiece objects of the types illustrated below.

![Figure 6.1 Resin refrigerator magnet and plaster plinth version of the Naray Lintel from Prasat Phnom Rung, Thailand](image-url)
Presumably these are designed to allow the visitor, who is most likely a Thai and thus probably a Buddhist, to recall happy memories of their visit to the essentially Brahmanic Khmer shrine. It is possible that these objects are the latest items in a tradition which caused small votive copies of Indian Buddhist stupas to be carried across Asia one thousand or more years ago, possibly by traders but also possibly by pilgrim tourists of the period\(^1\). It is possible that many thousands of similar clay objects for the lower end of the market did not survive but were treasured household objects in their time.

A parallel interesting use of an image of the past is the way in which the central sanctuary of Prasat Phimai is used to sell motor car tyres.

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\(^1\) For example see Plate 53 in Piriya (1980) for a bronze votive stupa found at Yala Province Thailand, but though to originate in Northeast India in the ninth century CE; this item in bronze has survived to the present and at 16 centimetres height is of a size for domestic or temple use.
Fig 6.3 Advertisement from Sinlapawatthanatham magazine for the Siam Tyre Company.
15 July 1994

The headline and body text read:

"Love Thailand with Siam Tyres
We study life in the past to know how things are today ...
With travelling in a worthwhile way, study ancient prosperity to admire being Thai
Benefit from it as a really good life experience"
Both sets of illustrations can be seen as ways in which ancient objects can assist in the support of tourism and commerce, either as a means of recall of a past experience or as a prompt to future travel to the distant location.

The way in which Phnom Rung, Phimai and other monuments of the past in Thailand have been used as vehicles for the encouragement of cultural tourism is the result of deliberate high level decisions to use them as attractions for tourists, in particular foreign tourists. In Chapter Four, reference was made to the economic benefits of the restoration of monuments in the Northeast, specifically the argument that “The Phimai Temple in Korat [sic], and the stone sanctuary on Phanom Rung Hill, Buriram, are not second in quality to monuments in Cambodia. If they were restored, and were made easily accessible they would be visited by many people. The local citizens of north-eastern Thailand would also prosper financially from the tourist trade.”(FAD 1959, my emphasis).

The nature of cultural tourism is such that the cultural tourist usually makes a one-off visit to a particular location, chosen from the many competing sites vying for the tourist dollar, yen, euro or pound. But once the site is chosen and visited, it will probably not be chosen again, and the cultural tourist is open on the next travel occasion to be tempted elsewhere. The “Land of Smiles” and “Amazing Thailand” campaigns by the Tourist Authority of Thailand are good examples of selling the country, not a specific location or object. Once the international visitor is hooked, repeat visits are more likely; nevertheless, the beginning of each year requires that as much effort as last year, or more, will be needed to attract returning or new customers. See for example, in relation to Thailand, Peleggi 2002:63-65.

The development of cultural as opposed to other forms of tourism requires the development and marketing of cultural material for the attraction of the motivated tourist. The nature of cultural heritage is such that it may be fitted into the national development project. I will thus look at the way in which the conservation and restoration of ancient monuments meets the needs of a component of the larger tourist attraction programme. In some way such activities
are in conflict with the scientific needs of the archaeology and the art history on which the restoration of such monuments is founded. As well, the nature of the provenance of such monuments may become an issue.

The nature of heritage and its creation as a target for cultural tourism

The 1928 Madrolle guide to Angkor in Cambodia says of the monuments in general,

Tourists, artists and poets having several days at their disposal will visit these medieval [sic] edifices in a leisurely fashion, taking them in order of date and seeking to understand an architecture and civilisation so different from those with which we are acquainted. In order to avoid the heat and fatigue of long runs by car, the best plan is to set out from the hotel at dawn and start the afternoon after 3pm at the earliest. (Hachette 1928:29)

Clearly in 1928 there seemed to be a differentiation between common tourists and “artists and poets” in the categorisation of the visitors to Angkor. It is probable that in modern times the most conscientious cultural tourist would be unlikely to refer to him or herself as an artist or poet.

The concept of cultural tourism requires that there is cultural material for its satisfaction, however the benefits of cultural tourism are seen as

The creation of jobs, and increase in the income of the local people living near tourist sites through a variety of businesses ...  
The generation of better cultural understanding between societies with cultural differences, and  
Revival, preservation and protection of cultural heritage, activities and art forms. (SPAFA 1995)

Patently if countries wish to exploit such a market and obtain the benefits claimed, they must locate, develop, conserve and present such material to the tourism market. Of necessity, cultural material may take many forms, abstract as well as concrete. The range of activities which may be presented as suitable material to the cultural tourist (or the “culturally sensitive visitor” to avoid the negative connotations of the word “tourist”) may range all the way from the transient or intangible pleasures of food, music, dance, drama and ritual, through
the more lasting elements of costume and artefacts, to the solid and lasting material of the built environment, ancient or modern (Peleggi 2002:3).

The marketing of items of the national heritage as vehicles for the attraction of visitors is not a happenchance or an intermittent activity. The importance of both domestic and international tourism to the national economy of many countries, including Thailand, requires that a great deal of high level and highly talented effort continually goes into the presentation of what may be called the nation’s cultural resources to the tourism market. Savitri points out that the Thai tourism authorities, having complacently sold Thailand in the colder countries since the late 1960s as the source of the “three ‘S’, Sun, Sand and etc.” recognized that their image was not culturally positive and decided that “cultural tourism” made sense as an alternative source of attraction. So in the 1970s, when monument preservation was not yet of a high priority, a decision was made to restore the monuments and create tourist facilities as a way of providing a base for the development of international tourism (Savitri 1989:214). Presumably Savitri’s third S was “sex” or “sin”; there is no doubt that sexual tourism is a modern fact of life and may possibly sell as many aeroplane seats to Thailand as cultural tourism.

Tourism in general in Thailand has become an important part of the national economy, and by 1982, tourism had become “the top earner of foreign revenue for Thailand and assumed a vital role in national development” (Surin 1995:24). It may be assumed that cultural tourism has represented a part of the overall importance of tourism to Thailand, together with Savitri’s 3 Ss.

Cultural tourism directed at national “heritage”, where the heritage takes the concrete form of monuments or archaeological material, faces the interesting issue of what constitutes heritage, how it is created and equally important, whose heritage it really is. The establishment in 1924 of the Siamese Archaeological Service as noted in Chapter 4 was as much as anything in response to the international recognition that the ancient material within a nation’s borders was the responsibility of that nation, whatever its provenance. The Royal Proclamation

Chapter 6
setting up the service stated in part "... in other civilized countries the search for and conservation of antiquities falls to the state." (Coedes 1925:29-30). In equating Siam with other civilized countries this responsibility for the conservation of antiquities automatically followed.

Pressure on the Siamese by the French at the time resulted in the Franco-Siamese treaty of 1907 which forced the legal delineation of the borders of Siam (Wyatt 2003:189 ff). Under this treaty, some Khmer antiquities fell into the hands of the Thais but others did not. The 1907 treaty definition of the borders between Siam and Cambodia along the line of the Dangrek mountains ensured that the temple of Phra Wihan (Smitthi 1992:117) fell outside Thai control (later unsuccessfully contested by Thailand), while the nearby temple of Ta Muen Thom (Smitthi 1992:135) fell just inside the defined borders and became Thai. In this way Ta Muen Thom became as surely the "heritage" of the Thai people as Phra Wihan stayed as the heritage of Cambodia.

Clearly the idea of heritage has become misused in the context of the longer history of a people, and of the objects and artifacts which happen to be located within the borders of the current nation state. Keyes points out

A national heritage is an abstraction, but it is made concrete by being linked with physical objects which can be pointed to as national treasures because they represent some significant aspect of the past which has been accorded national significance. Handler (1985:194) refers to the 'fetishism of material culture that animates governments, citizens and museum curators [and, I would add, conservators and art historians] alike in their zeal to preserve their "heritage"'. 'Whose heritage', Handler continues, 'a particular collection [or monument or other national treasure] represents is often open to question; but the idea that objects, or material culture, can epitomize collective identity – and epitomizing it, be considered as the property of the collectivity – is rarely disputed' (Handler 1985:194 emphasis in the original). (Keyes 2002:212, parenthetical interpolations in the original)

Keyes says that the 1960s conflict between Thailand and Cambodia over the ownership of Phra Wihan “stimulated the Thai government to make a place for the Angkorean legacy in the Thai national heritage ... In the early 1970s when the war in Cambodia brought tourist visits to Angkor to a halt, the Tourist Authority of Thailand began to promote Phimai and Phnom Rung as alternatives
to Angkor and an increasing number of cultural tourists began to make their way to the ruins” (Keyes 2002:228). Clearly, national heritage is a concept within the gift of a government and its agencies.

He also states “There is a seeming paradox involved in the recognition of Phanom Rung as a shrine of national significance, for it was built not by Thai but by Khmer at a time when much of what is today northeastern and east central Thailand was under the control of the rulers of Angkor” (Keyes 2002:221) Keyes’ observation applies equally to Phimai or the other major Khmer structures in Thailand.

Attempts by the Thai authorities to conflate the ancient artifacts found at Ban Chiang in Northeast Thailand with the early Thai peoples have led to some probably deliberate confusion. Byrne says in relation to the analysis of the finds of pottery and bronze remains from about 2000 to 1500 BCE,

In their writing, the Western archaeologists neglected to point out that it could not be assumed that the prehistoric occupants of Ban Chiang were in any way related to the Thai of modern Thailand. In most of their reports in scientific journals they made only indirect reference to the prehistoric peoples whose remains they were excavating. ... If modern Thais appropriated the remains and accomplishments of the prehistoric people as Thai ... the archaeologists could not be held responsible except that they failed to anticipate or refute such an interpretation. (Byrne 1993:117)

In this way, it became possible for the Ban Chiang site to be represented to tourists, if only indirectly, as a part of the Thai past. In a similar way, the prehistoric cliff paintings along the Mekhong river at Pha Taem Historic Park, and the Khmer temples of Northeast Thailand are publicized in Thai tourist material as somehow part of the Thai cultural heritage. A study of a recent Thai Airways Royal Orchid publication of tours around Thailand (Thai Airways 2005) shows that tourists are offered a set of tours which appear to mix Thai, pre-Thai, Khmer and prehistoric relics without differentiation. Tourist offerings include the Thai (Tai) people’s cities of Sukhothai and Ayutthaya, the pre-Thai Khmer temples of Phimai, Phnom Rung, Muang Tam and Prasat Sikhoraphum (Ubon Province), the pre-Thai 1500-year-old temple of Tat Phnom (possibly of the Dvaravati period)
on the banks of the Mekhong, and the maybe 5000 year old prehistoric Pha Taem cliff paintings, presented in an undifferentiated way.

The development of the Thai physical cultural heritage has been linked with the establishment of the sites as “historical parks”. A proposal to develop the former capital of Siam, Ayutthaya, as an historical park was first put forward in the mid 1960s by Jumsai Na Ayutya as a way to stop the sale of parts of the city site, and to stop the erection of modern buildings on the island (Jumsai 1966). This proposal did not then succeed however, and the first historical park to be established in Thailand was that incorporating the early Thai city of Sukhothai, in some ways seen historically as the forerunner of Ayutthaya, and possibly most famous for King Ramkhamhaeng and his description in the new Thai writing system of the good life in Siam (Peleggi 2002:42). In the early 1970s the Thai Fine Arts Department, together with associated government departments and university faculties, specifically set about obtaining national approval for the Sukhothai Historical Park project even though “some of those people had never paid any serious attention to historical monuments and sites before, and probably believed monuments were ‘economic burdens’ that could never be turned into assets” (Savitri 1989:215). The Sukhothai project was presented to the UNESCO 1974 General Conference for endorsement. According to Savitri (1989) a great deal of lobbying and publicisation was required to obtain endorsement (and possibly some international funding). In turn the Sukhothai project went ahead. Its effects are considered later.

In 1986, in response to the then proposed Thai government tourism initiative of the “Year of Thai Tourism”, a group of eminent Thai archaeologists prepared proposals for the development of ancient monuments as cultural resources for tourism. The scholars included Professor M.C. Subhadradas Diskul, son of Prince Damrong, and Thawisak Senanrong, Director of the Fine Arts Department. Their proposals were published in the Thai art and culture magazine Sinlapawathhanatham.
Nikhom Musikhakhama, of unspecified affiliation, opened his article with the statement:

America says this way
Japan says that way
Unesco says another way
But what will Thailand say
To using cultural resources for the economy and society (Nikhom 1986:23)

Nikhom implied that Thailand will set its own direction in the use of cultural resources. He says that of all the developing countries, Thailand is not only rich in natural resources, but is also rich in cultural resources. He argued that many countries already use their cultural heritage as a resource for increasing the national income with the income from tourists, and that ancient monuments have an important role in the development of the tourist industry, in parallel with beaches, mountains and other natural resources. He stated that ancient monuments are not only the property of the State but are able to supplement the national income and reduce the level of poverty in the rural areas. He further said that the ancient monuments of a State are resources which administrators must develop for the benefit of the future, and that it is the duty of the State to administer the assets of ancient monuments to make them socially and economically useful. He noted that since 1965, the traces of past human civilizations have gained a role in social and economic development. (Nikhom 1986:23)

Professor M.C. Subhadradas Diskul equally had no doubts as to the use to which ancient objects may be put. As a very respected archaeologist and academic, and professor at Sinlapakon (Fine Arts) University, he would be expected to put the integrity of the objects ahead of commercialism. But, in a paper entitled “Encouraging tourists to go to the provinces, especially the Northeast”, he pointed out that tourism and its promotion are an important factor in increasing the national income. Compared with its Southeast Asian neighbours, he stated that Thailand has a wealth of natural and man-made resources to attract tourists, including ancient monuments. He said “... our advertisements must mention our natural things, sea, mountains, beaches, rivers and whatever, but we must advertise ancient objects and places as well” (Diskul 1986:34). He said that tourists only knew three locations, Bangkok, Pattaya and Chiang Mai, and that...
they should be encouraged to travel to Issan (Northeast Thailand) as well where there is a large but poor population.

Finally, and a telling point, he stated that when training guides, “I always say of anything in our country, even though it is not a thing that Thai people built, we have a duty to believe that it is part of our culture, because it is the result of the culture of some of us” (Diskul 1986:34). He concluded by saying “There are Khom [Khmer] prasats there, we want you to go and see them yourselves”. Diskul therefore has no difficulty with the exploitation of ancient artifacts for national benefit, even suggesting ways to increase tourist access to them, and suggesting ways to national tourism guides to fudge the issue of the provenance of the mainly Khmer material in Issan.

Thawisak Senanrong, then Director of the Thai Fine Arts Department, while the official protector of all monuments within the borders of Thailand, nevertheless embraces with equal enthusiasm the idea of using Thai cultural resources as a way of attracting tourists. His paper is entitled “We must see whether we have any resources to ‘sell to’ or ‘attract’ tourists”. He pointed out that his Department had the job of following government policy in supporting the year of Thai tourism on the art and culture side. He claimed that it is the FAD’s task to identify resources of a cultural type to attract more tourists to Thailand. It would appear that at the time the Director of the FAD saw no conflict between the protection of the monuments on the one hand and tourist boosterism on the other.

By 1987, it seems that the historical garden movement had become a little out of hand. In an article “History and the ‘historical garden’ epidemic” in the Thai magazine Muang Boran, devoted to the study of the past and its monuments, Srisakara Vallibhotama complains of the results of the creation of historical parks on the sites of old cities or ancient monuments. He says

Starting with Sukhothai, “the historical garden’ epidemic spread to ancient ruins (archaeological sites) and historical cities in other places covering nearly every region in the country. ... There are two main features of the “historical garden” process. One is the destruction of the historical environment. ... The other is the
renovation of the ancient ruins instead of leaving them in the condition in which they were found. ...

Ancient ruins such as stupas, chedis, large and small, ... have deteriorated until they are now just piles of bricks. If we do not have the money, staff, understanding and knowledge required, it would be better to leave the ruins as they are, that is, buried underground. The "historical garden" projects have another serious drawback. They require a lot of staff as well as a large budget. ... This means there is no [government] money left for the conservation of a large number of ancient ruins of no less importance. (Srisakara 1987:33)

Srisakara’s points are well made and summarise the tension between dressing up the sites for the attraction of tourists (including improving the safety and convenience of the sites as proposed by Thawisak above), and the conservation of the sites in their original state. It could be argued that any interference with the original topography of the site, by levelling and other activities, would destroy importance evidence of the shape of the original city or site.

In an editorial of 1987, Muang Boran again bemoaned the state of conservation of cultural relics and their being spruced up for display to tourists. Srisakara Vallibothama points out

As the present year, 1987, is Visit Thailand Year, the government is hoping to gain foreign income to carry out its programs. This necessitates the promotion of Thailand’s natural and cultural resources for the purposes of tourism. The Government’s aims and requirements greatly contradict the policy of the conservation of our natural and cultural environments with the effect that administrators of the government agencies that have a duty to conserve and protect the natural environment and cultural heritage have changed their plans and policies by developing or altering what was originally intended to be conserved. ... Inevitably, the true experts are becoming a minority group in the society and are often accused of saying things that are far too difficult for people to understand. (Srisakara 1987:13)

Again, the tension between conservation and presentation is apparent. The Visit Thailand Year seems to have been seen as a threat to ancient relics rather than a chance to get funds for necessary and considered conservation and restoration.

The SPAFA Journal of 1988 noted a new proposal for the further development of the Sukhothai site to overcome the effects of excessive business activity on the site and to protect the more culturally sensitive areas of the site.
from damage. The article notes “while Sukhothai Park benefits from being listed by Unesco as a world heritage site, he [Sayan Prishanchit, Park Director] cautioned that such a status could be withdrawn if a world heritage agency informed Unesco that the site is deteriorating and neglected” (SPAPA 8.3, 1988:26). Sayan is clearly postulating a direct link between Unesco listing as a heritage site and income from tourism. At that time he reported that it attracted 500,000 visitors a year.

Looking at the results of the Sukhothai project ten years after its establishment, Savitri notes that while the number of local and international tourists had risen markedly, “many people of the project have questioned whether the presentation aspect has been overplayed in order to attract tourism” (Savitri 1989:216) Further “many people have wondered aloud if the Loy Kratong festival, revived at Sukhothai, was not doing harm to the monuments, particularly in attracting hundred thousands [sic] of tourists to visit the monuments at the same time and displaying, noisy and vibrating fireworks for hours during the festive nights” (ibid)(my emphasis). The “revival” of the celebration of the Loy Kratong festival at Sukhothai seems to be an example of activities done for the sake of tourism, not for the sake of the people. From personal observation Loy Kratong is observed in a perfectly natural way by ordinary Thais in locations as far apart as Songkhla in the South and Phimai in the Northeast, without apparently needing the encouragement and support of the Thai Tourist Authority.

In the same paper Savitri, on the basis of the Sukhothai experience, advised the Burmese cultural authorities to be cautious in their proposals for the development of Pagan as an historical park, because of the problems experienced. Savitri sums up his view thus

... the presentation aspect of a preservation project is a very important one. It enables the cultural heritage to link and communicate directly with the present-day people and the generations to come. The problem is: it is very easy to present the wrong message or the wrong image internationally. (Savitri 1989:218)
Considering the Northeast Thailand monuments, Peleggi says of the period,

The much-advertised restoration of Khmer stone sanctuaries was arguably prompted by hopes of a sizeable tourist influx; tourism, in fact, was assigned a pivotal function in the Green Northeast Government Project (launched in 1988) to spearhead the economic takeoff of Isan [sic], Thailand’s poorest region ... The historical parks of Phanom Rung and Phimai were opened to the public a few years before it was possible to visit Angkor Wat again as a result of the peace treaty signed by the four parties involved in the Cambodian civil war in October 1991. In fact, the slowness and uncertainty of the peace process in Cambodia allowed the promotion of Prasat Hin Phimai and Prasat Phanom Rung as substitute sights for Angkor Wat. (Peleggi 2002:63)

There was thus a causal link in the minds of the authorities between restoration of monuments and economic progress in Issan. It may be that the renaissance of Issan, dependent it seems on the anticipated benefits of anastylosis, is yet to materialize. By the early 2000s at least, the tourist patronage of most sites was minimal.

In a 1990 report on the conservation of monuments and sites and socio-cultural development, considering the issues arising from the proposed conservation and restoration activities at Prasat Muang Tam in Buriram province, Ishizawa et al. consider the Thai national policy on tourism and its requirements.

As part of a new tourism policy, a regional “cultural heritage route” will have to be planned to protect monuments and enhance their education and tourism values. ... Zoning plans for investment will have to be clearly identified. Modern facilities for tourists, such as good hotels and restaurants, and new types of investments, like car rentals and local tour guides, as well as other large scale industrial investments, will need to be encouraged at the nearest towns, where all the activity will not disturb the monumental zones. Low profile industries such as weaving, basketry, and other crafts will have to be developed near the monument. (Ishizawa et al. 1990, 59-60)

This is seen in the context of the Thai 1986 National Cultural Policy, whose objectives are stated as

1. To promote the preservation of Thai culture in all aspects ...
2. To publicize to [sic] the application of all facets of Thai culture to the Thai people ...
3. To promote folk culture and culture of the indigenous community ...

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4. To promote and support the exchange of culture with other nations ...
5. To encourage close cooperation among government and private offices working on cultural matters ... (Ishizawa et al. 1990:70)

Thus the particular development of the Muang Tam site was intended in part to have the result that "the quality of life, economic situation and state of mind of the villagers would be developed not only by the application of physical facilities, but also by the cultural supports such as craft promotion, tourism, and the organization of ceremonial events" (Ishizawa et al 1990:71), and "With good public relations and tourism policies, the restored monuments would become major tourist attractions in the south Issan region. Cash flow is expected from the tourist business. A new standard will be set for better income, and the seasonal unemployment rate will be reduced" (Isizawa et al 1990:73).

The Ishizawa report has been quoted at length to show the level of official thinking in relation to the use of cultural material for tourism purposes. Clearly there was a great deal of big thinking about the way in which restored monuments could become the catalyst for a surge in national income based on cultural tourism. It does however seem to be creating an artificial environment if local crafts are imported for the amusement of and sale to tourists, such as weaving or basketry, where they did not exist before; however it may be supported if the local people obtain a benefit and are not seen as exhibits. The actual results of the tourist drive will be considered below.

Western values may also have had an influence on heritage management. In discussing the outcomes of the 1986 World Archaeology Congress at Southampton (U.K.), Byrne noted

There does seem to have been a general understanding among archaeologists and heritage managers at Southampton as to what heritage management is. It is based on what has been termed the 'conservation ethic' by which archaeologists are enjoined to minimize the impact of their own research on the non-renewable 'archaeological resources' while at the same time championing its conservation in government and public spheres. (Byrne 1991:271)
Byrne however points out that the effects of conservation are not all one-sided and beneficial. The effects on resident populations of the practice of conservation may mean that

For such people the relentlessness of invasion [of archaeology and conservation] has gone beyond the loss of land and livelihood; often the bones of their ancestors are on museum shelves, their religious sites are being grazed by cattle behind fences on private land, and they must pay an entry fee to visit former settlements turned into historical parks; the grabbing hands have appropriated their past. ... This applies not only to the post-colonial states but also to countries like Thailand which also have heritage agencies modelled on those of Europe and America. (Byrne 1991:273)

For the resident population it would seem that having items of historical and cultural significance on their land or in their neighbourhood may be a mixed blessing. While the conservation and development of the site as a focus for tourism may lead to some economic benefits for the local population, the alienation of the people from their traditionally used land and the possible imposition of alien or unfamiliar ceremonies and festivals would be definite negatives. From personal observation, all Khmer temples visited, of whatever religions origins, have been used by the local people for Buddhist worship, and the evidence is in the form of large or small Buddha images, usually with votive gold leaf on them, together with the stubs of candles and incense sticks and the remains of flowers. The conversion of the temple sites to historical parks would close off this avenue of spiritual exercise for the local people. Further, the potential impact of numbers of foreign tourists would threaten to subvert local cultural practices.

In an article in *Muang Boran* Srisakara stressed the role of the Thai FAD and its responsibility in identifying and conserving ancient relics of importance to the local residents, instead of using them as material for tourist activities and for the benefit to the national economy. He concluded his article by saying

In the past, the preservation of archaeological sites and artefacts was just to be a memorial of the nation's civilisation and past prosperity, and to serve the nation's tourism industry. Many archaeological sites were blindly and hastily restored without doing a thorough study or having adequate information about what they really were like. This has devalued them. Besides, historical legends were written
to be related to archaeological sites, some of which are entirely against the history e.g., the Loy Kratong Festival at the Ancient City of Sukhothai. (Srisakara 1992:22)

The main issue for Srisakara is the accidental or deliberate falsification of ancient sites and traditions to feed the tourist demands for novelty and experience. Accidental falsification by the use of hasty restoration without adequate research and knowledge. Deliberate falsification by imposing on ancient sites ceremonies which were not performed there in historical times, like Loy Kratong at Sukhothai.

Re-evaluating the Sukhothai project in 1993, and noting that in many of the restorations the work went far beyond the availability of the original material, Byrne says that

By 1987, the FAD was prepared to concede that the Sukhothai Project could be considered a mistake as well as a success (Musigakama 1988a:13). Yet it seems clear that the ‘mistake’ – what was perceived by the critics to be over-restoration – flowed directly from the main aim of the project, the revival of a certain conception of Sukhothai. Given the official equivalence of Sukhothai and Ramkhamhaeng it was natural that when the FAD set out to ‘refurbish’ Sukhothai ‘it was Ram Khamhaeng’s Sukhothai they wanted to reproduce’ (Gosling 1990:29). (Byrne 1993:189)

Notwithstanding Savitri’s and Byrne’s reservations about the Sukhothai Project and its methods, the Historical Park phenomenon has developed a life of its own in Thailand, so that there are historical parks at Phimai, Phnom Rung, Ayutthaya, Sri Satchanali (near Sukhothai), Kampaengpet; even the cliff paintings at Pha Taem are not exempt from the apparent epidemic.

Thongchai, in considering revisions to the approach to Thai history since the first overthrow of military rule in Thailand in 1973, says of the revival of local identity

The revival of local identity may be important, but as part of the communal nostalgia rather than as a reassertion of a separate identity. Local history has the potential to nurture the power of the local community ... but basically it is part of the nostalgia production currently overwhelming Thailand.

Given the different kinds of demands, the result is the commodification of nostalgia. Now the mode of acquisition of the past is consumption. The past is
itemized, objectified and processed in various forms for sale: as packaged stories for media consumption, as festivals or historical parks for tourist consumption. The trends in local studies have lately become more concerned with selected ritual, art works, buildings or cultural artifacts such as textiles. These studies would never be a threat to the state; on the contrary, they only fulfill the nostalgic longing for roots, and make profits. (Thongchai 1995:117)

Thongchai’s point is concerned with the uses to which history may be put in the service of the state and its economy. It seems that his main objective is the commodification of the past as a vehicle for the satisfaction of nostalgia for an unknown and unknowable past. However, the focus on local history allows a differentiation between the various regions of the country, and thereby the creation of points of uniqueness and thus competition for the attraction of tourists.

The marketing of cultural tourism requires the identification of cultural assets, or “resources” using a word from economics. Surin, an employee of the Tourism Authority of Thailand, sees the essential assets in this context as “archaeological sites, religious structures, human habitats and their surroundings, dramatic arts, music, museums, festivals, and other forms of cultural expression” (Surin 1995:24). Further, Surin says,

...only tangible assets play a role in tourism industry development. Therefore, promotion of tourism is mainly centered around the development of tangible assets. Up to now this strategy has worked well, and continues to be used extensively. In the last decade of this century, however, evidence of the negative impact of tourism on society has become more apparent. ... Tourist development or tourist industry management not only ignores intangible cultural resources, but its development process has devalued these resources. ... As a result, those tourists [to temples] may not be conscious that those exquisite structures they have witnessed are the products of intangible culture. (Surin 1995:25)

Surin has a valid point in that the average foreign tourist, probably non-Buddhist, faced with a Buddhist temple would have no conception of the mindset which conceived, built or decorated it, and would walk away with no more than an image of a glittery building housing at one end a large usually gilded statue of a seated sage, together with a host of smaller statues surrounding it. Surin’s comments may be taken as applying to tourist visits to Thai Buddhist temples, but the comment is equally valid when applied to Khmer temples within Thailand.
Nevertheless, Surin suggests that cultural tourism may be developed for the benefit of society by several means, including

3. Local administration and related agencies should promote select aspects of culture by reviving traditional practices [my emphasis].
4. The mass media should publicise activities that support cultural promotion to increase appreciation of local culture among local inhabitants.
6. Promoters and organisers of cultural events must act with responsibilities toward the local populations by ensuring that the priorities of their tasks are to increase knowledge and understanding of local and indigenous culture. (Surin 1995:27)

While some distance from the use of ancient monuments as tokens of cultural tourism, the conception of taking lapsed practices and reviving them for the knowledge and understanding of tourists has a strong element of artificiality or artifice about it. If cultural practices have fallen into disuse, it seems the height of presumption to revive them merely to amuse tourists.

Pongsathorn points out that while tourism has become a major factor in the Thai economy and has had significant benefits for the national economy, negative effects such as pollution, impairment of the scenery, increased cost of living and changes in attitudes and values, have also taken place. Pongsathorn notes that visitors are likely to only stay a short time and are unlikely to appreciate the “abstract” values of the culture they are seeing. However, while accepting that tourism has negative effects and the tourism may be of a superficial nature, he nevertheless regards it as a necessary part of the Thai scene and thus enumerates the cultural assets as suitable for display to tourists as including archaeological sites, historical sources, religious sanctuaries, architecture, plus more folk-related activities (Pongsathorn 1995:33-34).

The present position of the Khmer heritage in Thailand

Peleggi summarises the activities of monument restoration thus

Even though random restorations of major monuments had been accomplished in the 1950s and 1960s, the Thai government made the conservation of ancient monuments and archaeological sites a major focus of intervention only starting
with the Fourth National Development Plan (1977-81) … Throughout the 1970s, the sanctuaries of Prasat Phimai and Prasat Phnom Rung, and even the ruined temples of Sukhothai, attracted only a few scholars and amateur archaeologists besides local villagers who came to place flowers around the neck of extant Buddha images. Today, these sites are the cultural icons whereby the Thai nation represents itself to the rest of the world as well as to itself. (Peleggi 2002:81)

At present, the benefits of tourist development seem to be still quite limited in Northeast Thailand, despite the cultural icon status deservedly bestowed upon Phimai and Phnom Rung by Peleggi. For better or for worse, recent observation at the Muang Tam site shows that the earlier expectation of a throng of hotel-staying, restaurant-frequenting and car-hiring tourists has yet to be realized. As noted earlier, Muang Tam and its neighbour site Phnom Rung are far from the town of Buriram, a typical small Thai provincial capital with few if any amenities for foreign tourists, a few restaurants and a couple of small hotels. While the strikingly beautiful site of Phnom Rung is quite well patronized by visitors, mostly Thai, and there are many stalls for souvenirs and refreshments, together with a reasonable restaurant, the site of Muang Tam does not seem to have become a Mecca for tourists in the same way. It is graced with a small market with souvenirs and refreshments, but the number of tourists is quite limited. While the temple at Muang Tam is beautiful in its own way, and the setting with the pools is very elegant, there is little intrinsic appeal in the temple itself. The five low, crumbling brick towers cannot compete visually with the (relatively) soaring sanctuary at Phnom Rung. By contrast, Phimai has a beautiful temple and is in the middle of a busy and well-supplied town; from observation it is very popular with foreign tourists, especially students. Again the Phnom Wan temple is only about ten kilometers from the large provincial capital of Nakhon Rachasima (Khorat), and close to the Friendship Highway on the way to Phimai, but seems to attract few if any visitors, doubtless because it lacks the visual appeal of the Angkor style sanctuaries of Phimai or Phnom Rung and their publicity.

In a certain way, it is a pity that the tourist influx did not seem to occur in the numbers hoped for in the late 1980s. There is no doubt that the income of the agricultural- and resource-poor Northeast needed to be supplemented by whatever means possible, and tourism may have seemed to have this yet unrealized
potential. It may be in the end that the greatest benefit to the region was the injection of government funds for the restoration of the monuments and the construction of national historical parks; with the exceptions noted of Phimai and Phnom Rung, the other Khmer monuments in the Northeast are much neglected by tourists.

In summary, it may be said that the project of anastylosis, the restoration of monuments, has been the primary beneficiary from the tourist visions of successive Thai governments and successive plans for the development of tourism. With a large influx of government funds to restore the Khmer monuments, they were probably restored in a far more elaborate way, in spite of errors that may have been made, than would have been the case with a more parsimonious and drawn out approach. If the well-restored monuments are now not well patronized, there is far less pressure on the sites and far less chance of deliberate or accidental damage from visitors. While the development of historical parks at some sites has meant that some topographical information may be lost, the result is very pleasant and well-cared-for places to visit and relax in.

Barring a future campaign to again whip up tourist interest in the Khmer monuments, the current position of the monuments seems to be conducive to their optimal conservation with the least threat to their fabric.
Chapter 7

Conclusion: History or Mystery?

The past is a foreign country: they do things differently there.
(The Go-Between, L.P. Hartley)

This thesis started out by posing three questions to do with the topic of anastylosis. These questions were “What is anastylosis, what are its origins, and how has it been applied to the Khmer temples in Thailand?”, “How has the past been recreated in Thailand?” and “What is the relationship between Thai and Khmer cultural remains, and how have they been exploited for economic purposes?”. A parallel but unasked question might have been “Has the application of anastylosis overall been beneficial, or should the direction of M. Barth on the avoidance of restoration been given more heed?”.

Anastylosis is the set of principles by which a ruined and probably ancient structure may be reassembled using only extant materials, and only after careful scientific enquiry as to the probable original form of the structure. Anastylosis ceases where the original material is used up. If the structure is partly collapsed, it is permissible to further disassemble the structure to permit strengthening of the foundations. In reassembly, a small amount of new material of the same type may be used where the original material is missing or too decayed to use, but there must be no doubt as to the origin of the new material, and it must not to be decorated in any way. Any restoration must be able to be reversed and the original material may not be modified by cutting or other activity.

The term “anastylosis” came into use in the early nineteen-thirties among those responsible for the reassembly of fallen monuments because of the negative connotations associated with the earlier term “restoration”. The semantics of the term “restoration” are such that it would generally mean the complete return of a structure to its original form, without regard to whether the material used is new or old. This broad concept of restoration can be extended to allow the architect to recreate the missing parts of a structure to his own fancy and without respect for
the original design, if known. This is what was done in the nineteenth century by architects in France, such as Viollet-le-duc, leading to a complete ban on the restoration of the Angkor monuments by the EFEO, although to be fair to Viollet-le-duc, he distinguished in his writings between live and dead buildings, and he saw his task as restoring to service live buildings which had failed in some way.

The ban by the Institut de France, through M. Auguste Barth, was in the terms “... non seulement vous ne démolirez pas, vous préserverez et conserverez. Mais vous ne restuerez pas ...” (Barth 1901:2). His instructions were, not to demolish, but to preserve and conserve, but also not to restore, which he said was usually the worst form of vandalism. It is a pity that the ambiguity of the word “restoration” allowed such polemics. In reality the word is so broad in its possible interpretations as to lose meaning in a particular context. It is as reasonable to use the word to cover the reassembly of fallen pieces as it is to cover the complete reconstruction of the re-conceptualized structure. It seems that the creation of the pseudo-scientific Greek-based term “anastylosis” at least allowed a precise formulation of what was allowed and what was not in the rebuilding of the fallen pieces of an ancient monument.

Professor Bruno Dagens wrote a survey of the development of anastylosis in a more general book on the history of Angkor. He points out that the early application of anastylosis in Cambodia before WWII was not greatly successful and that the techniques had to be rethought. In a review of anastylosis at the time, Maurice Glaize had concluded in 1942 that “[Anastylosis] has for us the ineluctable character of really adequate solutions, and cannot deceive, accepted that the motto remains that of all self-respecting archaeologists: time, patience and reflection” (Glaize quoted in Dagens 1989: 176), however the reality was somewhat different with the passage of time. Dagens said that visible cement had made stains, that the original stones which were in bad condition had not been able to support their reassembled loading, and that foundations had subsided. Groslier had seen the need for a new approach which provided internal strengthening and insulation of the sandstones from moisture. Dagens refers to this process as “anastylosis in depth” but notes that it is only to be used as a last
resort (Dagens 1989:177). Groslier stated in 1976 “In a word, this style of restoration is like surgery; that is that it must only be applied in the last resort, and without ignoring that it will leave scars, despite everything” (Groslier 1976, quoted in Dagens 1989:177).

Considering again the history of the transfer of the principles and techniques of anastylosis from Java to Cambodia to Thailand, the EFEO art historians and architects were in a difficult position because of the nature of the Cambodian monuments. As noted by Marchal (1930), the Dutch techniques sharpened on the Borobudur and Prambanan restorations were excellent when applied to the hard stones, good original workmanship and relatively simple designs of the Javanese monuments. Their transfer to the Cambodian structures of Angkor and elsewhere was more problematic because of the poorer sandstone material, poorer original workmanship and more complex designs of the Khmer structures, as noted by Marechal (1930). But at the time of the long shadow of M. A. Barth, the monuments were merely being conserved and were deteriorating after being stripped of the protective mantle of foliage. What made them mysterious to the romantically inclined visitor of the twenties also often protected them from the elements. In somewhat colourful language Glaize says of such a visitor “Imbued with an outdated individualism, nothing counts for him but the gross romanticism symbolized by the passionate clutch of a panel of a wall crumbling under the tentacles of greedy trees. The conservator is only the stage manager of this vegetal orgy” (Glaize 1942 quoted in Dagens 1989:176).

Dagens makes the clear distinction between the desire of the romantics to retain the mystery of the ruins and the desire of the archaeologists and art historians to show the historical image of the collapsed or fissured monuments; the mystery contrasted with the history. He quotes Glaize as further saying “The true romanticism is that which shows itself capable of putting between the old stones of a devastated sanctuary the leaven of that which is no longer there” (Glaize quoted in Dagens 1989:176).
If the French had left the Cambodian monuments in their discovered and unclesed state, the buildings would eventually have been destroyed by the strangler figs which, while protecting the structures from the heavy rains, invaded the joints of the stonework tearing them apart, if keeping them in their original location. If they cleared away the major vegetation, secondary growth would and soon did swamp the cleared monuments, an endless task, and the attempts at conservation, with stays and braces, were neither beautiful nor durable (Dagens 1989:173). So once the lead had been set by the Dutch in Java, and the strictures of A. Barth ignored, a better solution could be attempted, but if carried too far could lead to its own conflicts and problems.

However, assuming that after World War II the French thus had little choice but to attempt to use new a system of restoration to stop further deterioration of the monuments on the banks of the Tale Sap, there was no need for equal haste in the case of the monuments on Northeast Thailand.

Northeast Thailand is located on an eminence, the Khorat Plateau, some 500 metres above sea level, which is almost the drop from the site of the Phra Wihan temple to the Cambodian plain below, and has a very poor rainfall compared with the more usual tropical areas. The land is sandy and does not retain moisture well. In this situation, the threat to the old Khmer ruins from the environment is far less. The photos by Seidenfaden and Damrong of the state of Phnom Rung in the 20s and 30s (reproduced earlier) show a tumble of ruins, but with no overgrowing vegetation to threaten the blocks. After WWII the Thais had less to fear from the forces of nature destroying Phnom Rung than from the armed forces of their American allies in the Second Indochina War, who had been involved in the removal of an important lintel from Phnom Rung and shipped part of it to the United States (Keyes 2002:220). As well of course there was always the risk of a general drift of the material away as the local people made use of the stones for their own building purposes, but the monuments were generally revered by the populace.

In Northeast Thailand, although the rules of anastylosis seemed to be well defined, nevertheless the early work done by Groslier at the flagship sites of

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Phimai and Phnom Rung meant that they were so dependent on a concrete-based technology that the doctrine of retreatability, the ability to retreat from a process by later disassembly of the monument, cannot apply there. There is too much that has been done in a permanent way that cannot be undone without destruction of the old material itself. In this way, the early application of anastylosis contained an element of hubris which was inappropriate to the subject; hubris in the sense that the architects of the time felt that they had the complete answer to the problems of the restoration of Khmer buildings. In retrospect it is far better to say in a particular case that the existing technology is not yet able to allow restoration according to the principles of anastylosis, rather than to plunge ahead into the unknown and prejudice the chance of a future and possibly better application.

Thus, the Groslier style of surgery has been found to have too many scars and a gentler approach has more recently been taken, at least in Thailand. However, as it is now the case that a great many of the Khmer monuments of any significance have already been restored, a radical rethink of anastylosis would have little future material to work on. Apart from the current work on the site of the middle rank temple of Sdok Kok Thom\(^1\), famous for an important Khmer inscription (Mabbett and Chandler 1996:89), only minor monuments seem yet to be addressed, and from observation, many of them are brick structures whose restoration, as has been seen, is problematic at best.

It was within the power of the Fine Arts Department of Thailand, having surveyed the monuments of Northeast Thailand in the 1960s, to leave the monuments unrestored until more results could be seen from the “new” anastylosis, or “anastylosis in depth” developed by Groslier. While this may have theoretically been the case, in the event the FAD invited Groslier to use his techniques at Phimai and later at Phnom Rung, with the now known results, they were visually appealing but at a cost. Probably the concept of competing with Angkor while the Cambodians were otherwise occupied overrode the inherent

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\(^1\) See Appendix 8 for details and representative drawings of the Sdok Kok Thom restoration proposed for 2000.
conservatism of archaeologists. The Thais needed their own M. Barth to show them a proper respect for their (Khmer) heritage.

The second research question is more easily answered. "How has the past been recreated in Thailand" leads to the general answer that an appearance of a physical past, of the Thais or some other people, has been produced by the application of anastylosis and other techniques to the ancient monuments which abound in Thailand. Further, the re-created past has been made more digestible by the creation of historical parks as a setting for many of the major ruins. The motivation for the re-creation of the past has been seen to be unfortunately more about a reverence for tourists and their money, than it has been from a sense of nostalgia for the palmy days of the earlier kingdoms which flourished in the Chao Praya basin in Central Thailand and the Mun-Chi basin in Northeast Thailand. Fortunately for the Northeast monuments at least, the number of tourists is generally not such as to endanger the monuments by sheer numbers.

The question being begged in the case of Northeast Thailand is "exactly whose past?" While the structures in the Northeast have been generally referred to as Khmer or Khmer-style monuments, and while their dates of construction are fairly well-established, not a great deal is known about them in detail. Jacques, quoted above, said in summary in 1992,

We know many temples of "Khmer type" we may read many inscriptions more or less rich in indications regarding history: the fact is here, tenacious: with the exception of short periods, we do not know who was (or probably better: were) the lords of this large country. There were Khmers, there were Môns, at least in the beginning, but we do not know when the last left the country, evidenced only by the fact that no more Môn remained there. We do not know to what extent the links were close between Angkor and the Northeast, even when we may suppose that the Khmer kings originated actually from this region. (Jacques 1992:270)

In essence, Jacques is saying there are a lot of temples, inscriptions and learned surmises but little if any knowledge to link the physical relics with a people or peoples. To this general set of high level unanswered questions comes the lower level questions concerning the monuments themselves. Who actually commissioned them? Who actually designed them? Where did the designs come
from? Was Phimai influenced by Angkor Wat, or vice versa, or were they both influenced by a third unidentified building style? Who actually built them? Who decorated them? Who trained the carvers and chose the motifs for particular lintels and panels? Etc, etc. Professor Jacques’ summary reveals the lack of real knowledge after more than one hundred years of scientific investigation of the Northeast. It may be that the total story will never be known, and the owners of the re-created past will never be identified. Nevertheless much research remains to be done.

The third research question is also readily answered. The question “What is the relationship between Thai and Khmer cultural remains, and how have they been exploited for economic purposes” has the answer that there is essentially no direct connection between the two sets of remains. The Khmer monuments in Northeast Thailand, subject to Professor Jacques’s uncertainties, were the product of an interaction with Khmer influences centered on Angkor in Cambodia and were produced primarily before the end of the thirteenth century CE, before there was any recognizable independent Thai presence in Central Thailand. The area which is now Northeast Thailand did not come under the sway of the Thai kings until the late eighteenth century, after the transfer of the Thai capital to Bangkok from Ayutthaya (Wyatt 2003:143). There is thus no apparent direct cultural connection between the Khmer monuments and the Thai people, or as Jacques concludes, with any other group identified so far. However, as Keyes points out, the demise of the Angkor-based kingdom led to Thai claims upon it. “The heritage of Angkor does not, however, belong unequivocally to the Khmer; it has also been claimed [post mortem] by the Thai. The legacy of Angkor is especially closely linked with the Thai monarchy. ... But despite a long period of warfare between Ayutthaya and Angkor, ... the rulers of Ayutthaya looked to Angkor for their principles of statecraft” (Keyes 2002:215, my interpolation). It would appear that the Thais of the time, at least the rulers, deliberately Khmerised themselves, with parallels with the Khmer indianising themselves in an earlier era.

The modern Thai state seems equally to have had no compunction about claiming the heritage of the Khmers, and earlier peoples, for modern economic
purposes. As has been seen, proto-historic and pre-historic relics of human activity now located within the modern borders of the Thai state, of whatever provenance, are seen as and are presented as, in some way, part of the Thai heritage as a vehicle for tourism. One exception which must be noted is that of the Dvaravati heritage. Although apparently predating both the Khmer and Thai presences in the Chao Praya and Mekhong valleys, reaching at least from Nakhon Phathom to Maha Sarakam (Wyatt 2003:17-18), with some relics to prove it; it has not apparently been marketed for tourism up until now, possibly because there is so little to show off. A few stupa bases, some ramparts and some temple boundary stones seem to be the limit of the remains of a long-enduring religious and cultural influence in the area.

Imagined pasts – Anastylosis and the creation of the Thai national past

Anastylosis has been used with general success in Thailand for the restoration of stone monuments of Khmer-style for the past forty years, resulting in the return of the monuments to a form as close to their original state as possible with the original useable material available. With the monuments as images of the past, it has been possible for visitors, Thai or international, to imagine the past, as far as is within the grasp of any non-specialist viewer.

To be accurate, anastylosis has only been useful in the restoration of stone monuments, almost always of Khmer style. Brick monuments of whatever provenance are a far more difficult matter to restore, and many well-meaning restorations of brick structures in Central and Northeast Thailand have been controversial. Wooden temples and other such structures are not likely to last long in a tropical environment due to bacterial or insect attack, even in the drier Northeast of Thailand, and will have to have been regularly maintained to overcome the effects of the environment. Within the Buddhist tradition it is an act of merit to add to or restore a temple, so if temples have an active congregation there will be ongoing effort to keep them in good order, removing the evidence of age. An exception is where there are old murals on temple walls which are
affected by rising damp; as the moisture slowly rises, the painted surface deteriorates and the images are lost.

Anastylosis has not apparently been used in the “restorations” of the ancient Thai cities of Sukhothai and Ayutthaya. From observation, much of the activity at these sites has been more concerned with the stabilization of the remains and with presentation and the convenience for visitors. The structures are primarily brick and stucco buildings, or their ruins, and anastylosis cannot address these structures effectively.

It has been seen that anastylosis has been marshaled as part of the Thai tourist drive to support the economic and social development of the country in the nineteen-seventies and nineteen-eighties, as a means of presentation of the Khmer monuments in the country. It is fair to ask whether the restored monuments may eventually play a part in the development of the national narrative, and in doing so extend the history of Thailand and its inhabitants beyond the standard Sukhothai-Ayutthaya-Ratanakosin (Bangkok) chronology. The Khmer monumental remains in Central Thailand are testimony that the indigenous peoples of the Chao Praya valley of the time were under the sway of the Khmer kingdoms in some way, before the Thai, the Tai-speaking, peoples became sufficiently strong to begin to challenge the weakening Khmer power-base (Wyatt 2003:30ff). If one stands back a little from an essentially Thai viewpoint and start to see the issue as being one of the long term narrative of the inhabitants of the Chao Praya valley in central Thailand and the inhabitants of the Mun-Chi basin in Northeast Thailand, the original supposed lands of the Dvaravati-Mon peoples, an image of continuity emerges. It can then be seen as the slow and possibly peaceful absorption of the Tais from the north into a pre-existing and Buddhist society, changing not necessarily the ethnic balance all that much, but slowly changing the language which people spoke as Tai political power spread southwards, and the political balance changed to the point where Sukhothai became the focus of the emerging Tai state.
In such a narrative, any and every relic of the past, Mon. Khmer or Tai becomes a part of the larger picture of the political, social and ethnic development of this part of Southeast Asia. The restoration of any monument which allows a clearer image of the achievements of the past by the peoples of the time is important in assisting an understanding of how early societies operated. The Khmer-style monuments in Central or Northeast Thailand are the oldest and most intact memorials to the societies in which they were created. Once it is seen that, although ordered and possibly financed by the polity, they were most likely built and decorated by the local people then they are as much as much as anything a memorial to the work of the common people who are a constant in all societies. This may be the major contribution of anastylosis to an understanding of Thai society.
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