# The Buddhist Cosmos on Selected Maps in Ayutthaya: <br> What Is Not Explained to the Tourist Viewer 

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In the article about publicly displayed maps for tourists in Ayutthaya which was published last year in this journal, the last of the six examples includes an unlabeled diagram that shows the two-dimensional, topographically planar layout of the grounds of Wat Chaiwatthanaram (Map 4 in the present article). Within the diagram is a square with symmetrical components that represent not only brick structures but also the universe of Buddhist teaching, and the accompanying oblique, aerial photograph of the grounds allows the viewer to connect the abstract symbolism to the structures as well as to appreciate what the diagram does not provide, the height of the structures which contribute to an artistic rendition of the third dimension of this cosmos. Whereas it is reasonable to assume that tourists of any nationality would be able to understand that the grounds of the temple are displayed in the diagram, and work out which symbols depict what kind of structure, it is questionable that most tourists would be able to connect the diagram and photograph of the compound to how the cultural landscape reflects a spiritual cosmology. This is a shortcoming of the composition as a whole since the verbal component contains nothing to hint at, let alone explain, what is in the landscape other than the name of the temple, something which is true of other maps (diagrams and photographs) in the same series throughout the city. Hence, this article has been written to delve into the religious symbolism found in the Chaiwatthanaram composition and two others like it (Maps 2 and 3).

The Buddhist universe which is expressed in the layout of the grounds of Chaiwatthanaram has long been known by specialists in Buddhism and cognate disciplines or interests, and it received considerable treatment in the volume on East Asia and Southeast Asia in the scholarly encyclopedia The History of Cartography. In regard to Southeast Asia specifically, readers are directed to the chapter "Cosmography in Southeast Asia" by Joseph Schwartzberg (in Harley and Woodward 1994), in which
this universe is referred to as the＂Cakravâla system＂and＂Cakkavâla system，＂so called after the Sanskrit and Pali words for＂circle＂which designate the range of iron mountains that serves as the perimeter of the horizontal plane through the center of which cuts the perpendicular，massive Mount Sumeru．For readers who are not particularly inclined toward cartography as an academic discipline，a useful explana－ tion of this cosmos is in the chapters＂The Structure of Matter and the Universe＂ and＂Hells，Heavens，and Other Realms＂in Buddhist Cosmology by Akira Sadakata （1998），who refers to the perimeter mountains as＂Cakravâda，＂an alternative spelling which is used hereafter in this article，while Cyberians might be pleased to know that the English version of Wikipedia offers a good start in web－surfing with its brief article on＂Sumeru＂and a longer one－useful，yet somewhat overwhelming in regard to vocabulary and detail－on＂Buddhist cosmology．＂It must of course be noted that despite its having a history of being represented artistically，notably in picture and architecture，the Buddhist universe is metaphysical and related to ethics and human psychology，not a description of a real cosmos which would fall within the domain of natural science．

A convenient＂place＂to start when explaining the Buddhist universe is the pivotal feature at its center，the＂mountain＂which in English goes by the Sanskrit name Sumeru（Sineru in Pali）and rises from below the horizontal，sea－level plane to an enormous altitude above it．Figures given for the height of Mount Sumeru are 80，000 yojanas above the top of the surrounding sea and 80，000 yojanas below that level，and although perhaps nobody truly knows how to convert yojanas into real measurements，these are the calculations for 80，000 yojanas based on the equivalents given in the four publications mentioned in the previous paragraph：over 1，200，000 kilometers（Schwartzberg， 1 yojana $=15+$ kilometers），around 560，000 kilometers （Sadakata， 1 yojana $=$ approximately 7 kilometers），about 576，000 kilometers and possibly between 896,000 and 1，152，000 kilometers（Sumeru article， 1 yojana $=$ approximately 4.5 miles，and about 7 to 9 miles），and roughly 585，600 kilome－ ters（Buddhist cosmology article， 1 yojana $=$ approximately 4.54 miles or 7.32 kilometers）；this means that at 160,000 yojanas from base to top，Mount Sumeru could range in total height from $1,120,000$ to $2,400,000$ kilometers．The other two dimensions of Mount Sumeru are each half that of its total height－80，000 yojanas －which suggests that it would appear as a cube above the top of the surrounding sea and as an equivalent cube below it，although some descriptions suggest a shape resembling a chalice above the sea because of a quasi－symmetrical tapering which
makes the 40,000-yojana level 20,000 yojanas in breadth and depth, that is one quarter of the top and sea-level measurements, and Figure 1 for this article has two drawings (including terraces that are explained in the next paragraph) to convey what is meant.

Mount Sumeru above water comprises two heavens within the Kâmadhâtu or "Realm of Desire" (Kâmaloka in Pali), above which are the Rûpadhâtu ("Realm of Form," Rûpaloka in Pali) and Ârûpyadhâtu ("Realm of Non-Form," Arûpaloka in Pali) that do not require explanation for the purposes at hand, as neither do the four heavens within the Kâmadhâtu above the mountain. At the very top of Mount Sumeru is the heaven known as Trâyastrimsha ("Of the Thirty Three," Tâvatimsa in Pali), a name which refers to the thirty three deities who reside there, the most important being Indra, and after that the mountain is generally considered to taper until it expands in a pyramidal form with four terraces down to the top of the surrounding sea, each terrace being 10,000 yojanas above the other and, in the case of the bottom one, the sea. This lower half of Mount Sumeru above the water is the other heaven, known as Câturmahârâjika ("Of the Four Great Kings," Câtummahârâjika in Pali), and its top terrace serves as the abode of the Four Great Kings who guard the cardinal directions - Vaishravana (Vessavana in Pali) for the north, Dhritarâshtra (Dhatarattha) the east, Virûdhaka (Virûlhaka) the south, and Virûpâksha (Virûpakkha) the west - and the remaining three terraces are for their subordinates; together the Four Great Kings and their subordinates are entrusted with defending Trâyastrimsha from attack by the Asuras (same in Pali), demons which live in the sea around Mount Sumeru.

Whether shown in square or circular form, the horizontal structure of the Buddhist universe entails concentric seas and mountain ranges which can be divided into two groups. The first set involves a sequence of seven seas and perimeter mountains which are each half the width of its predecessor closer to Mount Sumeru, beginning with the 80,000-yojana sea around Mount Sumeru out to the seventh perimeter range of 625 yojanas in width, and the heights and depths of the mountains above and below the top of the sea match their widths. Beyond the seventh mountain range is a wider sea which covers 322,000 yojanas, contains four continents and adjacent islands, and is bounded by the circular Cakravâda mountains that are 312.5 yojanas wide (half that of the previous mountain range) but as tall as the first concentric range (40,000 yojanas). The four continents have distinct shapes which are also those of their adjacent islands - a circle for Aparagodânîya (Aparagoyâna in Pali)
in the western quadrant，a square for Uttarakuru（same in Pali）in the northern， a semicircle for Pûrvavideha（Pubbavideha in Pali）in the eastern，and a triangle with the outer tip flattened into a short straight line for Jambudvîpa（Jambudîpa in Pali）in the southern－and their positioning in the sea corresponds with the lines， not corners，of Mount Sumeru．Jambudvîpa（literally＂Rose－Apple Continent，＂the rose－apple being a tropical fruit）is considered to be the domain of human beings， not coincidentally resembles the shape of the Indian subcontinent，and has its own cartographic traditions（for which see Harley and Woodward 1994 for starters）． Although there are completely circular and－as with the four maps here－completely square or squarish variants of the horizontal structure just described，the drawing on the left in Figure 2 shows a version according to the verbal and pictorial explanations in Sadakata（1998）．

The most important parts of this horizontal structure－the layout of Mount Sumeru， the four continents，and the Cakravâda mountains－can be seen among the temples of Ayutthaya that belong to an architectural style known as Khmer，the best known example being the compound of Angkor Wat，devoted to the Hindu deity Vishnu， in present－day Cambodia（see Harley and Woodward 1994： 695 for an oblique aerial photograph from a French book dating to 1931）．Since the foundation of the city of Ayutthaya in 1350 until its destruction in 1767，the rulers of its namesake， mainly Theravada Buddhist kingdom（or Siam）traced their authority to ideas within Brahmanism and Buddhism and had temples and statues of the Buddha built．Brick being a favored material，the Cakravâda system was horizontally manifested in the symbolic layout of such large temple compounds as those of Wats Ratchaburana， Mahathat，Phra Ram，and Chaiwatthanaram which are discussed here，while the vertical relativity of the structures symbolizing Mount Sumeru，the continents，and mountains along the perimeter captured the hierarchical sense of size．Maps 1－4 all have diagrams which show the horizontal layout of the four temples just mentioned， and Maps 2－4 also have a photograph of their subject compounds．

Map 1 was photographed at Wat Suwandararam in the southeast corner of the island that forms historical Ayutthaya，shows the island and its immediately adjacent areas，and seems to have been drawn and labeled by hand．In the close－up are many structures with labels beginning with the word＂wat＂（temple），the two most outstanding being in the center．These are Wats Ratchaburana（top）and Mahathat （bottom），both of which are essentially＂must－sees＂for tourists in Ayutthaya，and the three photographs following the close－up provide examples of interesting sights．

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Within both rectangular compounds on the map can be seen a cross with four arms of more or less equal length, and around each cross is a double-lined rectangle with small protrusions to the left and right; the cross symbolizes the structure for Mount Sumeru and the rectangle shows the perimeter wall which symbolizes the Cakravâda mountains.

The second map, photographed at Wat Mahathat, has a much more detailed diagram to show the structures in that compound, while Maps 3 and 4 do the same respectively for Wats Phra Ram and Chaiwatthanaram, where they were photographed. All three belong to the "Clean Ayutthaya" or (from the Thai) "Ayutthaya: A Clean City" series which can be found at various sites, have the same unexplained abstract symbolism which can be reasoned out from the accompanying oblique aerial photographs, and make it relatively easy for visitors to understand the layout of the temple grounds which is far from obvious at ground level. In Map 2 Mount Sumeru again appears as a cross-shaped symbol, Map 3 shows it with elongated left and right arms, and Map 4 has it more or less as a square; all three maps have squares or squarish to circular shapes outside the indentations or sides of Mount Sumeru to symbolize the four continents; and the Cakravâda mountains can be seen as a square or, in Map 3, rectangle with different symbolism to show mountains at the four corners and two (Maps 2 and 3) or four (Map 4) others. In the actual grounds of the temples, Mount Sumeru, the continents, and the six or eight perimeter mountains are, or were, architecturally expressed through towers (prangs) of different shapes and sizes, as can be seen in the photographs in Maps 2-4 and in those which were taken while doing the fieldwork and here follow their respective map.

That such cosmology can be found in the cultural landscape might easily be lost on a casual viewer of these four maps, for whom the symmetry in the diagrams need not register anything of symbolic value. As Maps 2-4 specifically stand, they each provide two informative visuals - a diagram and a photograph - which can be matched up by a viewer who cares to take the time to do so, their common denominator being to shift the diagrams $45 \%$ counterclockwise to get a correlation with their photographs, and because it is not difficult to figure out which symbols designate walls and towers, regardless of their condition (i.e. intact or in ruin), a legend would not necessarily enhance an understanding of the diagrams. Still, there is room to argue that a verbal reference, however brief, about the cosmological significance of the layout of the temples would be informative for tourists, some of whom might be interested to know that there is more than just a temple compound within view,
and might even be inspired to seek more information about the Buddhist cosmology on display and its relationship to Buddhist teachings in general．

Diagrams，Maps，and Photographs


Figure 1：Two visual interpretations of the terraced profile of Mount Sumeru from any of its four sides above the surface of the surrounding sea．


Figure 2：On the left is the horizontal distribution of Mount Sumeru，the seventh or outermost square mountain range，the four continents（shown larger than they should be according to the scale of the diagram），and the perimeter Cakravâda mountains；on the right is a proportional representation of Mount Sumeru and the seven surrounding seas and mountain ranges（the sixth and seventh appearing to blend together in this reduction）．


Map 1: A map of the historical part of Ayutthaya and two pictures showing King Rama IX at Wat Suwandararam; north is at the top of the map.


A close-up from the map at Wat Suwandararam showing the adjacent temple grounds of Wats Ratchaburana and Mahathat, respectively above and below each other at the center.


Something for which Ayutthaya is famous：headless statues，here at Wat Ratchaburana．


Two other famous sights in Ayutthaya：the head from a statue of the Buddha lodged in a banyan tree and a statue of the Buddha meditating，both at Wat Mahathat．

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Map 2: A photograph and plan of the grounds of Wat Mahathat, north to the top.


A view of three towers at Wat Mahathat.


Map 3：A photograph and plan of the grounds of Wat Phra Ram，north to the top．


A closer view of the plan of Wat Phra Ram．

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A closer, brightened view of the photograph of Wat Phra Ram on Map 3; Mount Sumeru, the central tower, clearly looms over everything else.


A ground-level view of the tower which symbolizes Mount Sumeru at Wat Phra Ram.


Map 4：A plan and photograph of the grounds of Wat Chaiwatthanaram， north to the top．


A view of the central part of the compound at Wat Chaiwatthanaram；
the 35 －meter tall tower that symbolizes Mount Sumeru is just left of center．

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From left to right, towers of different sizes and shapes at Wat Chaiwatthanaram symbolizing one of the four continents (most likely Jambudvîpa) in the outermost sea, Mount Sumeru, and a mountain along the Cakravâda perimeter of the universe. The lower half of the central tower corresponds with Câturmahârâjakâyika, the heaven "of the Four Great Kings," and the stairs in this view from the southsouthwest most likely lead to the abode of Virûdhaka.

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