

ON BHUTANESE AND TIBETAN DZONGS *

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*"Seen from without, it's a rocky escarpment!
Seen from within, it's all gold and treasure!"¹*

There used to be impressive dzong complexes in Tibet and areas of the Himalayas with Tibetan influence. Today most of them are lost or in ruins, a few are restored as museums, and it is only in Bhutan that we find the dzongs still alive today as administration centers and monasteries. This paper reviews some of what is known about the historical developments of the dzong type of buildings in Tibet and Bhutan, and I shall thus discuss towers, khars (*mkhar*) and dzongs (*rdzong*). The first two are included in this context as they are important in the broad picture of understanding the historical background and typological developments of the later dzongs. The etymological background for the term dzong is also to be elaborated.

Backdrop

What we call dzongs today have a long history of development through centuries of varying religious and socio-economic conditions. Bhutanese and Tibetan histories describe periods verging on civil and religious war while others were more peaceful. The living conditions were tough, even in peaceful times. Whatever wealth one possessed had to be very well protected, whether one was a layman or a lama, since warfare and strife appear to have been endemic. Security measures

* Paper presented at the workshop "The Lhasa valley: History, Conservation and Modernisation of Tibetan Architecture" at CNRS in Paris Nov. 1997, and submitted for publication in 1999.

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were a must, and this is apparent in all building types: in camp settlements and houses, in temples and forts. People seldom lived on the ground floor of their houses, and the stairs were simply made like ladders which could be drawn up like miniature drawbridges in case of raids.

During warfare people could seek protection within local fort-complexes. Such citadels were strategically located, and in early times they were usually on hilltops. Here they were the means for expansion and control for various rulers, and contributed to the domination of territories. During the Yarlung dynasty (7th-9th C.) "the districts were subject to the authority of the local forts."² The annals of the T'ang dynasty (618-907) report of "one fortress for every 100 li (50 km) of territory."³

During King Songtsen Gampo's (*strong btsan sgam po*) reign (627-650)⁴ the Tibetans regarded the geographical area that later became Bhutan as being inhabited by "the barbarians of the border and barbarians of the area beyond."⁵ In these areas there were often threats of looting and strife as is visible in the remains of defence towers in Lhodrak (*lho brag*) and many other places. In Tibet I have been told that people in Lhodrak say their towers were needed against the Bhutanese who came across the passes on raids. On the Bhutanese side of the border, the Tibetans are accused of the same. Here several fortifications and dzongs bear witness to the necessity for defence. Rinchen Dolma Taring describes in her autobiography how the villagers in Bhutan were terrified of being looted by refugees coming across the pass of Monla Karchung in 1959: "...these villagers were not rich at all and it was pathetic to see them hiding their little treasures, like aluminium bowls and copper plates. The monk in charge of the temple was also hiding the precious religious books under rocks."⁶ It may appear as if age-old instincts lay behind these actions, and even though she assured them that there would be no looting, nobody believed her, and she comments: "I don't blame them".

Ancient Tower Structures

The obvious function of ancient towers was defence, but at the same time they may also have been means for communication with heaven. The tower structures were utilized both in fortifications and in palaces as fortified dwellings. The so-called "demon-towers" (*bdud khang*) of Kongpo which I visited in 1996⁷ are interestingly shaped as twelve cornered mandalas and clustered in groups of three. These towers are believed to have been built, not by humans, but by a *Chung*, the king of demons in the Gesar Epic.

R.A. Stein writes in *The World in Miniature* how "such dwellings and defence towers are noted by Chinese texts from the Han, Sui, and T'ang (second to eighth centuries) in connection with independent kingdoms and peoples of Tibetan stock."⁸ The towers he describes have a small, square base measuring four to five meters. At the bottom level one enters through a small door, and then climbs upwards inside. "Each story is closed off by a ..notched tree trunk ..that can be pulled up."⁹

The interiors of the tower ruins at Kongpo are bare today, but the pattern of square holes in the stone walls shows where internal wooden structures have been fixed. The craftsmanship of the walls is impressive and obviously exceptionally solid as they have stood for centuries even without the internal structure to stabilize them. I was told there had even been unsuccessful attempts to demolish them during the Cultural Revolution. In many cases, ancient stone masonry in Bhutan and Tibet appears to be of quite astounding quality, which may contribute to the common belief that some of these old structures were built by non-humans.

The fortified towers used as dwellings were more accommodating than defence towers. Some of the tower dwellings might have had a cantilevered upper floor resembling architectural traditions in Himachal Pradesh, as

visible for example in the Thakur castle in Gondhla. The drawings of the Baltit fort also show a cantilevered upper part on all towers, which may thereby have been a development characteristic of the western Himalayas.

In Bhutan the only known evidence of a similar structure is found in a wash-drawing from 1783 by Samuel Davis; "View from the Bridge at Wandepore".¹⁰ This shows a tower with a minimum of openings, and a slightly cantilevered wooden structure called rabsey (*rab gsal*)¹¹ on all four sides of the top floor. This was a bridge house by the river of Pho Chu in Wangdi, and a place for tax collection and control, and of obvious strategic importance.

It is a characteristic of Tibetan and Bhutanese architecture that the amount of openings in the massive walls gradually increases upwards. This is especially visible in the central towers - the utsé (*dbu rtse*) of the dzongs in Bhutan. Even if the upper floors were not vastly cantilevered as in the traditions of Himachal Pradesh, this was the most accommodating place with many window openings and extra space created by the cantilevered rabseys.

The typological precedent of the utsé-structures are positively the ancient towers. This is particularly visible in the utsé of Tongsa dzong called the Chorten Lhakhang, which is believed to be remains of an earlier structure at the site.¹² Stein terms the towers "the prototypes of Tibetan architecture in general."¹³

The Ideal of Nine Stories

Many of the old tower structures may originally have had nine floors, as this is an ideal, auspicious number with ancient roots in shamanistic mythology. Such symbolism is also described by Stein explaining how this ideal was applied to a vertical hierarchy revealed by the number of stories; "The king (or queen) had as many as nine, the people up to six."¹⁴

A similar numerology is also reflected in an old Bönpo (*bon po*) text from the twelfth century published by Samten Karmay which relates how palaces are to be organized.¹⁵ This text describes how various functions are to be adapted horizontally within a 3x3 pattern, according to an ideal which buildings were striving to achieve. By following "the rules of Shenrab, the radiant clarity will cause blessings to descend."¹⁶ The buildings would then please the gods and attract divine presence.

The strength of the ideal myth of nine stories also influenced Buddhist architecture. The historical precedent which is most frequently referred to, is the tower of Sekhar Gutok (*śras mkhar dgu thog*), 'the nine storied son's castle' in Lhodrak. This was the khar, which the saint Milarepa had to build over and over again for his master Marpa at the end of the 11th century.

An earlier example is the Pabonkha monastery near Lhasa, which may be older than both the Jokhang temple and Ramoche. The legend reveals that "Songtsen Gampo went to the Pabonkha rock on the advice of Palden Lhamo and erected a nine storey tower."¹⁷ This is supposed to have been built out of bricks mixed with bronze, and with iron chains attached to the four sides.¹⁸ It was here Songtsen Gampo meditated and received divine guidance on how to suppress the female demon hampering the spread of Buddhism.

With reference to the vertical hierarchy, an old Bhutanese text describes the ninth floor as being the reception room for the legendary King Sindhu Raja. He resided in Bumthang in central Bhutan in what is described as the nine-storied Iron Castle (*lcags mkhar*), and when Guru Rimpoché (*Padmasambhava*) came to visit "the King had great pleasure and he invited everybody to the ninth floor of the Iron Castle."¹⁹

In wall paintings there are many examples of towerlike structures, and many legends tell of ancient palaces having nine floors. As such, archetypes and myths are perhaps both created by and creating history.

The History of a Building Complex

The Baltit fort in the Hunza valley of the Karakoram mountain range has been found to be more than 700 years old, and at that time it was located within the area of Tibetan influence. Historical research which has been carried out during the conservation works suggests that the earliest part of this structure consisted of "one or two single-storey houses, one with an attached defensive tower."²⁰ Richard Hughes, the conservation engineer for the restoration works, has made an interesting series of diagrams depicting hypothetically the various building stages the fort may have gone through based on related details observed in the historic structure. All in all more than seventy phases of construction were identified using archaeological techniques.

Unfortunately, there are very few, if any similar building complexes within the pan-Tibetan area, which have undergone such thorough conservation and documentation processes allowing comparative studies. However, this process of growth from a small to a grand building complex will presumably apply to most of the monumental dzongs.

One determining factor for such developments was the site which had to be superbly located and auspicious in relation to geomantic divination.

The Khars

The khars were fortified palaces for ruling lords built according to the tower typology. In the Yarlung valley we find the only known surviving example in Tibet of one such khar which was once a dwelling place for the early kings: namely "*Yam-bu-bla-mkhar*".²¹ Today it is often called Yambu

Lhakhang.²² When Hugh Richardson visited this building in 1936 it was a towering castle, but it was destroyed down to its foundations during the Cultural Revolution. A Cultural History of Tibet relates that the building "may well be an authentic survival from the seventh or eighth centuries, and the name *Om-bu Tshal* occurs in the Tun-huang Annals in connection with royal residences in that area."²³

Most of what we see today is a reconstruction from the 1980s, and the authenticity of the reconstruction has been distorted by the fact that the height has been reduced by one floor. "The third floor remains unbuilt. It consisted of a front terrace and a rear chamber with a passage linking the tower to the chapels."²⁴ Today the only way to reach the tower is by an outside terrace and across the roof; an arrangement which would not have been practical in a defence situation.

Above what might have been a high guild-hall for the late kings, there is an elevated roof arranged as a huge skylight allowing light to filter through the mezzanine on the second floor. This space would otherwise have been in darkness due to the windowless walls, and the elevated roof may also have contributed to the ventilation of the large hall. This roof arrangement may be characterised as an early version of a type of roof - the yangtok (*jam thog*), ranging high in the hierarchy of roofs in Bhutan.

Most noble families (*gdung*)²⁵ in Bhutan trace their lineage back to the early Tibetan monarchs of the Yarlung dynasty. Lhasetsangma (*lha sras gtsang ma*),²⁶ the Chronicle of Prince Tsangma tells the story of Lang Darma's brother who escaped the terror which stopped the first spread of Buddhism by fleeing south from Tibet. He travelled from west to east throughout Bhutan, where he appears to have had a series of female relationships on his way. The resulting children were thus all connected to the major royal lineage, and they created what evolved as noble families. In the chronicle one reads again and again that these men took over important royal sites (*gyal sa*) and built royal castles (*gyal mkhar*).

Sometimes they only had to take over existing ones. The text also mentions district castles (*yul mkhar*) and watchtowers or turrets (*mkhar mthon*).

The many place names, which contain the term *mkhar*, describe feudal principalities named according to the fort-palaces of their lords. The feudal lords were often at war with each other, and they struggled with local resentment. Most of these local lords were overrun in the end in one way or another, and on some of the auspicious royal sites the ruins of their khars were replaced with dzongs.

Background for the term Dzong (*rdzong*)

The huge building structures today called dzongs, developed from historical precedents of towers and khars. One of the oldest known terms applied to these huge buildings are also *phodrang* (*pho brang*),²⁷ which may have been the first term applied to these structures. According to one of the informants for my research, the Bhutanese scholar Khenpo Phuntsok Tashi, the term *phodrang* may have originated in India, and it is found several places in the Kanjur.²⁸

But in Tibet and Bhutan there were and still are some simple landscape features like rocks and caves, which are also, termed dzongs. What is the explanation for these seemingly vastly different typologies, and thus the original meaning of the term dzong?

The dictionaries give limited clues as both Jäschke and Das simply translate dzong as castle or fortress. Chandra Das adds that the meaning in modern times is "headquarters of a district magistrate and revenue officer."²⁹ The meaning of related verbs does not appear relevant either for a discussion of etymological developments of the term.

Khenpo Phuntsok Tashi has given a possible clue, since according to him, there are parallels between the term dzong and the Sanskrit word *durga*. *Durga* means 'undestroyable'

and applied to a place the meaning thus becomes an 'undestroyable stronghold'.

An Indian book on the ancient canon of architecture *Vāstu-Sāstra*, gives some supporting evidence for a connection, since the words for fort and *durga* here are used as synonymous.³⁰

In an interview, Khenpo Phuntshok Tashi describes a *dzong* as a place where one is protected and the mind may flourish. He thus explains that a *dzong* refers to an undestroyable stronghold of mind power.³¹ This interpretation describes how the term *dzong* is conceived today among some Bhutanese. As will be elucidated below, the *dzongs* of Bhutan have played and still play a significant role in society, as strongholds housing both religious and political power from the 17th century onwards.

To my present knowledge, the term *dzong* in literary sources seems to emerge during the second spread of Buddhism. In these documents the word *dzong* describes specific places which were visited by Guru Rimpoché also called Padmasambhava, in the 8th century.

The factual historical role he played may have been very limited during his lifetime, but in later, mainly *terma* (*gter ma*) sources³², his importance has taken on mythical dimensions. Today he is regarded as a second Buddha for people in Bhutan and honoured for his leading role in the successful spread of Buddhism.

According to the legend, until he visited Tibet and Bhutan the spread of Buddhism was faced with several hindrances. One reason for this was believed to be that the whole geographical area was occupied by evil spirits. Guru Rimpoché who was a tantric master and exorcist, was thus called from India in order to subdue the pre-Buddhist spirits ruling the landscapes. He travelled extensively and visited many places where he performed rituals and meditated. Through his

magical skills he converted the evil-minded nature spirits and demons into protectors of Buddhism. He thus succeeded in turning the landscapes of Tibet and Bhutan into more peaceful environments. The landscape settings like caves and special rock formations he visited thus became his own strongholds inhabited by protective deities. These places were often termed dzongs to describe them as the power places they had become, and still are today.

One possible interpretation of how the term dzong is used now, may be that since the meditation places of Guru Rimpoché, "the mind ruler" were termed dzongs, the term acquired a wider connotation. They were small in size, but strong in spiritual power. "Dzong" thus became a feasible term for other rulers to describe their impressive buildings, which were outstanding in scale, and for the efforts expended on them - especially since temporal power was always related to spiritual power. The dzongs of the rulers grew in sophistication as the societies experienced economic growth and centralisation, demonstrating physical and spiritual security.

It is commonplace that words have one meaning on the religious level, and another on the everyday level. Thus the two uses of the term dzong as 'sacred site' and as 'place of worldly protection' can coexist and partly overlap especially since the later Buddhist dzongs also had religious functions.

This use of the term dzong for Guru Rimpoché's meditation sites creates confusion at times, since today we have become accustomed to dzongs as large building complexes. The British Political Officer John Claude White, who was usually very well informed, was on his way from Bhutan to Tibet in 1906 when he reached Senge Dzong in Lhuentse (*lhun rtse*). About Senge Dzong, one of Guru Rimpoché's famous power places, he recorded: "I had a beautiful ride to Singhi-jong, a very small fort, hardly worthy of the name."³³ Presumably disappointed, he did not even stop, but just rode past what is in fact one of the most revered sites in the whole country.

Origins of the Dzong System

During the second spread of Buddhism from approximately the turn of the millennium onwards the pace of temple-building increased rapidly. In the legend referred to above describing the meeting between Guru Rimpoché and King Sindhu Raja, the Guru gives the King the following advice: "Although you have built many castles, when the time of dying comes, only the bier will be yours! Therefore, from now on, you must no more build so many houses for yourself, but you must erect temples and present holy statues, (these are actions) which are helpful for the next life too!"³⁴ Buddhism flourished after the turn of the millennium, and much due to the tradition of gaining merit, the temples and monasteries grew in size and importance. They also gained wealth, and their treasures needed protection. There was also increasing religious rivalry, and the following centuries experienced severe struggles where religious factions in Tibet were warring against each other. Initially it appears as if monasteries and forts of the pan-Tibetan area were built separately, as described in this sample from *The Cultural History of Ladakh*: "Below the fortress down in the valley just to the east there stand the bare walls of a temple of the kind that belongs to the time of Rin-chen bzang-po,³⁵ and this in itself may be taken as a sufficient indication that a Tibetan fort was built there together with a monastery, just as at Chigtan, Alchi and Nyar-ma."³⁶

However, later these two building types often merged into fortified monasteries built as defensive settlements. This implied that the outer buildings formed a perimeter, as closed-off as possible, and arrangements for its defence were applied.

The first known Bhutanese source to use the word dzong is Phajo Drugom Zhigpo's (*pha jo brug sgom zhig po*) biography.³⁷ Phajo (1208-76) was the first well-known lama of the powerful Drukpa Kagyu (*brug pa bka brgyud*) lineage, based at Ralung in Tibet, who came south to the area of

western Bhutan. It had been predicted that he would play an important role introducing the Drukpa faith in the south, which was to become the state religion of Bhutan from the seventeenth century onwards.

Phajo Drugom Zhigpo's *namthar* (*nam thar*) describes the dream he had on his first night in the new country. In this dream a white lady tells him regarding his future that he will have "four caves, four dzongs and four rocks,"³⁸ but the text reveals that the third of the four dzongs, namely Lingzhi Jagö Dzong, was already in existence close to where Phajo spent the night. This may have been one of the very first Bhutanese dzongs to be an actual building, though at least two of the other locations given in the text refer to meditation places. There are ruins of old buildings in this area,³⁹ and we know there were fortresses in Bhutan in the 12th century as the Lhapas (*lha pa bka' brgyud*) had established such buildings.

The Tibetan lama Gyalwa Lhanangpa (*rgyal ba lha nang pa*, 1164-1224) founded the Lhapa lineage, which according to Michael Aris was the first school to gain a broad measure of control in western Bhutan. They introduced a form of administration from forts, which we know was an established Tibetan tradition. According to their later rival Phajo Drugom Zhigpo, the local rulers opposed the obligations imposed by the Lhapas, and they complained of their plight: "Every year each district was made to supply huge quantities of rice, butter, cotton ..and iron, in addition to undertaking three periods of corvée. If they failed, then 'laws according to Tibetan practice' were exacted on them."⁴⁰

In the 17th century the Lhapas became the chief enemy heading the "five groups of lamas" who cooperated with the Tibetans in the battles against Drukpa supremacy. Their final surrender took place when they had to hand over their old fortress of Do Ngön Dzong (*rdo mgon rdzong*) in Thimphu in 1641. Aris relates that the "other fortresses of the Lhapa, probably defensive monasteries, appear to have been destroyed by fire during the struggles."⁴¹

Phajo Drugom Zhigpo's namthar may exemplify a stage in the process of how the term dzong may have merged from being used of meditation places to also cover fortified monasteries imposing rules and regulations on the surrounding districts according to traditions established by more secular rulers. Other buildings termed dzongs survive more or less intact today, which date back further than the seventeenth century. One sample of this is Dobji Dzong (*do bji rdzong*) in the district of Paro (*pa gro*) which was built on a sacred site presumably in the sixteenth century or earlier.

The First Tibetan Dzongs

According to some sources it was Jangchub Gyaltsen (*byang chub rgyal mtshan*, 1302-73) who pioneered the Tibetan system of dividing vast territorial holdings into districts, each administered from a fortress termed dzong.⁴² Shakabpa's *Tibet: A Political History* relates how Jangchub Gyaltsen replaced "the thirteen myriarchies (Trikor), he divided the land into numerous districts (Dzong). He appointed those men among his followers, who were of unquestioned loyalty, to be masters (Dzongpon) of the districts."⁴³

Jangchub Gyaltsen was the first abbot-prince of the Phakmo Drupa (*phag mo gru pa*) dynasty (1354 -1435), and he exercised both spiritual and secular authority, as had the Sakya rulers before him. During his reign he "urged the claim that he was restoring a real Tibetan kingship,"⁴⁴ free from foreign suzerainty. His capital was at Nedong close to the cradle of the Yarlung kings, and he reinstalled the glory of the ancient royal traditions in several ways. Officials were made to wear the dress and ornaments of the former royal court, and he revived and amended the old code of laws of king Songtsen Gampo. He revised the revenue system, built bridges and established guard-posts on the frontiers.

At the end of the 15th century, the princes of Tsang (*gtsang*) wrested political control from the Phakmo Drupa, signalling a return to secular monarchy. They ruled from 1435 to 1565

followed by the three kings of Tsang who held court at Shigatse (1566 -1642).

Gyantse dzong⁴⁵ was initially built as a palace for lay occupancy, and was founded in approximately 1365.⁴⁶ "It had secular functions and no mention exists of temples."⁴⁷ It was built on the hill where the last king of the Yarlung dynasty had built his palace. A great temple (*suglag khang*) was established near the palace in 1390, and later the walled monastic 'city' of Palkor Chöde was established in the vicinity between 1418 and 1425.⁴⁸ In Shigatse one finds the same separation between the huge monastic establishment of Tashilhunpo founded in 1447 and the palace-fort of Shigatse towering on the ridge above.

This was a flourishing period when, according to Giuseppe Tucci, one sees the palace architecture influencing the temple architecture.⁴⁹

Tension rose between the faction of the Tsang kings and the Gelugpas with their Mongol patrons, and in 1640 Tibet was invaded by the Mongols. Two years later the head of the Gelugpa order, the fifth Dalai Lama, Ngawang Lobsang Gyamtso (1617-82) was enthroned at the palace-fort of Shigatse as the ruler of the country. During the theocratic rule of the Dalai Lamas, the castles in the unified Tibet ceased to be the domain of secular kings, and became integrated parts of the administrative dzong system and the seats of officials representing the central government.

The Potala Palace

The fifth Dalai Lama greatly admired Jangchub Gyaltsen of the Phagmo Drupa, and according to Fernand Meyer his entourage stressed "the necessity for the reunified territories to have a 'navel' in the ancient Tibetan tradition of fortresses."⁵⁰ Tucci relates that the "cradle of Tibet's political power had been in the area between Yarlung and Lhasa. ...a road had run joining Yarlung, the winter capital, with Lhasa,

the summer residence."⁵¹ The 'Great Fifth' chose Lhasa as the capital, and started shortly after the construction of the Potala Palace at the sacred site of King Songtsen Gampo's nine storied palace on the Red Hill. The architecture of the Potala was inspired by the palace-fort of Shigatse according to oral Tibetan tradition, - only they wanted to make it even more impressive. Meyer also suggests a resemblance to the palace of Leh, which had been built some ten years earlier.⁵² The construction of the part of the Potala known as the White Palace took place between 1645 and 1648, and it was the regent Sangye Gyamtso who founded the Red Palace in 1690. The Dalai Lama had died in 1682, but his death was concealed for twelve years until the major parts of the Potala were completed. Meyer describes what a huge enterprise especially the construction of the Red Palace was: "It drew some 7,000 labourers - subjects who, owing to taxes and labour, had to work for the government - and more than 1,500 craftsmen, many likewise tied to the government by labour obligations. Emperor Kangxi (r.1662-1722) provided seven Chinese and ten Manchu and Mongol craftsmen, while 182 Nepali craftsmen contributed to the works."⁵³ The monumental splendour of the Potala palace contributed to establishing Lhasa as a Mecca among all the Tibetan Buddhist orders.⁵⁴

The building complex is termed the Potala Phodrang,⁵⁵ thus underlining its main function as the residence of the Dalai Lama, and also all the previous incarnations in the Dalai Lama lineage are represented with mausoleums within its premises. In the warm season the Dalai Lama shifted to Norbu Lingka 'the jewel garden' in the outskirts of Lhasa, where each had a summer residence built within this garden setting.

It was in the Potala Palace that the main religious and political events took place as the very centre for the theocratic rule, and at its feet, in Shöl, was the administrative centre of the Lhasa government. The significance of the Potala Palace thus resembles that of Punakha dzong in Bhutan, as will be elucidated later in the text. Punakha, which initially was also termed Phodrang, had been established in 1637 already, before the Potala was built. Punakha ranks highest in the hierarchy of dzongs in Bhutan as the Potala does in Tibet.

The layout of the Potala palace has parallels to imperial Chinese planning models with walls surrounding the whole complex.⁵⁶ In China the important buildings were lined up behind one another according to a strict north-south axis, while subsidiary buildings were placed on the eastern and western sides. These were planned around courtyards or series of courtyards, and the buildings had their long walls facing south. The main entrances were also from the south with the emperor placed in the centre facing south, since all evils were expected to come from the north.⁵⁷ However, the axes of the Potala are not applied in complete accordance with the Chinese model. In the rugged Tibetan terrain, several adjustments had to be made to such strict patterns. In the Potala the main entrance is from the south, but the main layout follows the ridge with an east-west axis. This is underlined with the sun- and moon-shaped turrets to the east and west.

The same east-west axis is also applied in the scheme applied to tame the demoness mentioned earlier. Michael Aris comments that Songtsen Gampo here adapted a Tibetan version of the Chinese axis system by turning the north-south into an east-west axis. It was thus adjusted into a local and Buddhist context.⁵⁸ In Tibet and Bhutan this is the pattern generally applied. However, the eastward orientation of a shrine is fairly common elsewhere in the world, and it appears rather to be the Chinese pattern that deviates in this context.

The Spread and Significance of the Tibetan Dzongs

Geoffrey Samuel states that there were approximately 120 dzongs in Tibet in recent times: "Each had one or two dzongpön⁵⁹ appointed for a period of three years. These were generally laymen but in some cases one was a monk."⁶⁰ Their rank depended on the importance of the dzong, and the most important was the Chief Commissioner of Shigatse. The dzongpöns could settle legal cases, but their primary function was the collection of revenue.

In Tibet there were many huge monastic establishments. Especially famous were the main Gelugpa centres of Sera, Drepung and Ganden around Lhasa and Tashilhunpo in Shigatse. Each had several thousand monks. In Tibet, the great monasteries continued as major religious centres while the dzongs developed mainly as administrative centres.⁶¹ This focus is one of the main differences between the dzongs in Tibet and Bhutan, since within the dzong complexes of Bhutan religious and political power were integrated.

The Bhutanese Dzongs

Large monastic establishments are merged with the secular administration in the Bhutanese dzongs. One may say that in Bhutan the dzongs are physical expressions of the well-known concept of *chos srid gzhung 'brel*; 'the harmonious blend of religion and politics'. As an administrative model it is known as *chos srid gnyis ldan*, or the 'dual system'.⁶² The importance of the dzongs in Bhutan is reflected in the fact that the national language is called *dzongkha*, which literally means the language spoken in the dzongs, and each district is called a *dzongkhag*. A total of sixteen historical dzongs have been recorded in Bhutan. Most of them were built during and shortly after the reign of the founder of Bhutan as a unified state, Ngawang Namgyel (*ngag dbang rnam rgyal*), in the early 17th century. He united the dual power in one person, and set up a code of law and the Bhutanese dzong system. The dzongs he built were instrumental in his

successful struggles against enemies both within Bhutan and from Tibet.

Ngawang Namgyel, who later took the honorific title Zhabdrung (*zhabs drung*) 'at whose feet one submits', was identified as the reincarnation of Pema Karpo (*padma dkar po*, 1527-92) who had died two years before his birth. He was installed as the 18th abbot of the powerful Drukpa monastery at Ralung in Tsang, but his recognition was challenged by a contestant supported by the Tsang ruler. As a result of the following conspiracies, he had to leave in 1616 and came to western Bhutan followed by other important scholars and followers forced to escape the strife in Tibet. The Tibetans made several attacks on the emerging Bhutanese state ruled by the Zhabdrung, but he grew in power, and with him the dzongs. The architecture of the dzongs became more and more elaborate, and with increasingly distinctive Bhutanese features.

The most important of the Zhabdrung's dzongs was as already mentioned above, the one built in Punakha (*spu na kha*) in 1636-37 named *spung thang bde chen pho brang rdzong*, 'heap of field and great bliss'.⁶³

It was the winter residence for the Zhabdrung and his court, and the Zhabdrung had his private quarters in the utsé. Here he went into retreat and probably died in 1651, but his death was concealed beyond the turn of the century. The remains of the Zhabdrung are kept in the Machen Lhakhang next to the utsé, which is revered for its outstanding importance.

It was the Zhabdrung who established the ritual of the new year festival of Punakha, which has been described in detail by Michael Aris.⁶⁴ This celebration of one of the victories won over invading Tibetan forces, was like a manifestation of the Zhabdrung's rule. Envoys from all over Bhutan paid homage to the ruler on this occasion and donated the government's share of taxes.

The tradition of shifting the seats of the government between the dzongs of Punakha and Thimphu may have commenced in the 1640s.⁶⁵ The Lhasas had to hand over their stronghold in 1641, and it was enlarged and renamed Tashichö Dzong (*bkra shis chos rdzong*) 'dzong of the glorious religion'. The state government was permanently relocated to Tashichö Dzong in the 1950s, but the seasonal migration between the dzongs in Punakha and Thimphu is maintained by the monkbody. Punakha still remains the most sacred of all the Bhutanese dzongs.

The creation of Punakha dzong is described in a myth related to a carpenter, Zow Balip, who fell asleep at the Zhabdrung's feet and dreamt about the future dzong. When he woke up, he related that he had seen an impressive building complex with many fine details, and he explained how it should be, level by level. The Zhabdrung explained that he wanted space for many monks, and Zow Balip asked why, because at that time the Zhabdrung had only few followers. The Zhabdrung explained that very soon there would be many.⁶⁶ Michael Aris writes that "The building was designed to accommodate six hundred monks...By the end of Zhabdrung's reign the state monks who lived there numbered more than 360...The original target seems to have been reached about fifty years later and has remained fairly constant ever since."⁶⁷ However, Samuel Turner writes in the narrative of his expedition in 1783 that there were 1,500 monks in Tashichö dzong: "Fifteen hundred Gyelongs are contained within these walls, and not a female lodges under the same roof."⁶⁸ Today there are also approximately 1,500 monks shifting between these dzongs.⁶⁹

There are reasons to believe the population may have been larger in earlier times. The Jesuit Cacella, who visited Bhutan in 1627 gives a rough figure of more than 500,000 inhabitants in the Paro valley only,⁷⁰ but this figure was probably just a wild guess. Today the total population of Bhutan is about 600,000. White in his book *Sikkim and Bhutan* comments on a previous larger population: "All the

valleys I have seen to the north of the watershed - viz., from Eastern Bhutan to some distance west of Sikkim - appear to have at some remote period been much more densely populated than at present."⁷¹ Tucci in *To Lhasa and Beyond* has similar comments.⁷² Southern Tibet may have had a larger population historically, but so far we know very little about the size and developments of the Bhutanese population in a historical perspective.

Anyhow, there must have been reasons in the socio-economic basis of the society at Zhabdrung's time for the quite sudden expansion visible in the extensive dzong-building. There must have been thousands contributing labour, and many both willing and able to contribute economically - which implies a considerable surplus of wealth enabling the young and embattled government to build such substantial structures. One clue may be the expansion of territories that took place in this period, and taxes and labour requisitioned from the Duars.

The Physical layout of Bhutanese Dzongs

The first dzong constructed by the Zhabdrung was at Simtokha (*srin mo rdo kha*), 'the demoness stone' in the Thimphu valley in 1629, where it controlled the main east-west trade route. The dzong was named 'the palace of the profound meaning of the secret mantra' - *gsang snags zab don pho brang*. It has a layout which quite strictly follows the basic structure of the Tibetan and Bhutanese temples in general. This resembles that of the *mandala*, the Buddhist cosmological model which is followed in the layout of Samye and most temples. The mandala represents an ideal shape, and by shaping physical structures to this pattern buildings relate to and express the spiritual plane. Buildings are seen as meaningful, with various degrees of importance, and the dzong-complexes in particular are structured according to principles derived from the mandala and geomancy - and as such both express the meaning in the Buddhist universe and derive power thereby.

This pattern in Simtokha dzong is largely unchanged today, whilst other dzongs have been progressively enlarged and modified. The complex forms a rectangle of 70 by 60 meters, and is located on a ridge with steep slopes on three sides. It commands the Thimphu valley, and is situated above the confluence of two rivers, confluences always being 'power places'. From the only entrance, at the south, one enters the courtyard which surrounds the central tower structure. In this utsé, which is approximately square are the main shrines. At Simtokha the utsé has three stories, and the courtyard is enclosed by structures of two stories with the living quarters of the monks, all of which open on to the inner courtyard.

Most other Bhutanese dzongs are however organized with a system comprising two separate courtyards. The first to be entered is for the secular Dzongkhag administration, and the second, inner one is for the monks and the most sacred functions.

In basements below the courtyard level there are rooms for storage of the space-consuming taxes in kind. New stocks of tax in kind arrived every year, and the old stock had to be dug out and put atop of the fresh. Dasho Shingkar Lam relates in *The Hero with a Thousand Eyes*, how one of his routine jobs as a servant for the second King of Bhutan was to take inventories at Tongsa dzong. To sort out the vast quantities involved took days of work for several people down in the cool, cavernous storerooms. There were mountains of rice, buckwheat, flour, mustard oil, daphne bark paper as well as items like butter and meat. He claims that butter accumulated for over five years. "Butter remained fresh within; its rancid exterior was peeled away every year. But the meat stockpiles became susceptible to meat worms. As the neatly piled meat packs were disturbed during re-arrangement, the storeroom swarmed with black worms.."73 When the tax system changed from in kind and labour taxes to mainly cash payments, these were certainly easier to handle and needed less storage space. By the time this

process took place, mainly in the second half of the 20th century, the dzongs were already obsolete in relation to warfare, and the advantage of the huge quantities of food supplies in case of a siege were no longer relevant.

The dzongs were defended by archers through narrow loopholes in the walls of the dzongs. David Rennie describes how the British attacked the fort of 'Dalimkote' in the Himalayan foothills in 1865, and they were met with stones thrown from a catapult and with arrows, and "the men in the fort were observed making hurried preparations for defence, by removing the roofs and woodwork from the towers at the angles of the fort.."74 Many of the dzongs also had free-standing bastions nearby, and in particular the so-called Ta-dzongs (*blta rdzong*) which are located at strategic points in the surrounding landscape to support the defence, and the Chu-dzongs protecting the water supplies. At the time they were built, the dzongs were superb strongholds.

Dzongs as Architectural Trendsetters

In Europe the vertical stone fortifications of castles had been rendered obsolete by the fifteenth century due to gunpowder, but long after the castles stopped being used as fortresses, the forms were continued as an architectural fashion. Amy built palaces looking like castles, which were not truly fortified. Others rebuilt ruined castles, making them grander than they had been originally, resulting in 19th-century neo-gothic versions of medieval castles with extensively increased window openings. In Bhutan the dzongs became architectural trendsetters in the same way. Examples are the Domkhar palace in Chumé valley and Kunga Rabten in Trongsa.

A quite recent book on traditional Bhutanese architecture wrongly includes the palace of Wangdichöling in Jakar among the dzong buildings.⁷⁵ Wangdichöling was never a part of the dzong system, but a palace for the royal family, founded in 1856. It is built according to a general dzong layout, but with large window openings in the exterior walls, and interestingly,

its utsé was not provided with a kemar (*ske dmar*), the red band symbolizing a religious building. As the symbol of power, the dzong features gave those who were permitted to use them and could afford it, the image of being powerful.

The Dzongs Today

In Tibet the administrative rule from the dzongs collapsed in the wake of the Chinese take-over. During the Cultural Revolution the rage against the institutions of the old theocratic society resulted in the demolition of several thousand temples as well as many dzongs. The only remaining dzongs today are the Potala and the ruins of the dzong at Gyantse, which has been converted into a museum. Gyantse dzong was shelled by British artillery and captured during the Younghusband expedition in 1904, but it was never fully reconstructed again. At the museum, the visitors are informed of the Tibetans' heroic fight to defend "a part of the great motherland" against imperialist aggression. The dzong ruins are thus actively used as a propaganda case. None of the many other dzongs ruined during the Cultural Revolution, however, have so far to my knowledge been put in focus as museums.

The Potala has been restored and is enlisted as a world heritage site, but this impressive building complex has lost some of its authentic aura in this process. Today even the Tibetans have to pay an entrance fee, and the approximately fifty monks still there are dressed in grey overcoats, looking more like museum guards than monks.⁷⁶

In Bhutan the largest monastic establishments were always integrated into the dzongs as a part of the government system. The dual system is maintained to this day and each dzong has its monk body. The post of Je Khenpo (*rje mkhan po*), the head abbot of the state monks, equals in rank with the King. The dzong system is vibrantly alive. New dzongs are being constructed, and the old building complexes are slowly adapting to changing needs. Punakha dzong for example, has

been undergoing extensive rebuilding during the past twelve years, and as has usually been the case through history, during the rebuilding process it is evolving and being made more impressive.⁷⁷ Its fortress appearance is changing, and it is partly taking on a more residential appearance.

Tashichö dzong in Thimphu was extensively rebuilt in the 1960s. The rebuilding included large, new office wings for the modern, central government and this is clearly visible in its new look, with extensive use of windows in the outer walls. These works are carried out within the context of a traditional society which still has the knowledge and craftsmanship of traditional building intact.⁷⁸ It is important to keep the dzongs alive, and avoid the creation of museums. Even so, the changes taking place today are now becoming so extensive that it is time steps were taken in order to enhance awareness of restoration and conservation issues and techniques. It is important not to undermine a living tradition, but perhaps one could agree that certain ancient examples be preserved for historical interest. I am here thinking in particular of Simtokha dzong, described above, and the Gasa dzong close to the Tibetan border. Gasa dzong was built in the 1650s and is named according to its auspicious outlook (*bkra shis mthong smon rdzong*). Since this dzong has had relatively little attention in recent years, it has to a large degree been maintained with its old fortress characteristics intact. It would be valuable for Bhutan and the international community, if it were preserved at least to some degree for its great historical interest. Archaeological excavations in the surrounding area may also uncover the supporting system of bastions, walls and underground passages which made up the strongholds of old.

It is often assumed that traditional building is rather static, but the typological changes highlighted in this paper show how the traditional architecture in Tibet and Bhutan has undergone continuous changes through the centuries. However, it is important to note that these changes have been gradual, small changes taking place during long periods of

time, and that the overall impression is therefore that of a strong continuity in the typological pattern.

Towers, fortified manors, castles and other structures in the Buddhist Himalayas all present particular typologies, having naturally their historical and regional variations.

Such variations also apply to the dzongs, but as a typology, the case of the "dzong" is different. In this paper I have summarized my research on the etymological background of the term *dzong*, which indicates how it began with a very limited and entirely religious meaning, implying hardly anything in terms of buildings - it was often just a rock or a cave for meditation purposes. The term was then later utilized politically for power places both religious and secular, and especially in Bhutan the dzongs developed into magnificent building structures which are still vibrantly alive as the fulcrum of both religious and political power.

However, it is fair to say that all these shades of meaning still survive. There are sites and buildings in Tibet and Bhutan today which are still termed dzongs, which range from simple landscape features which are spiritual power places to the huge architectural complexes of the dzongs.

Notes

¹ The verse continues: "But as for me and my opinion, I wonder, is it good to live in? How sad I am and lonely!" From an early song preserved in the Tun-huang documents, being the lament of a Tibetan princess who was married to the King of Zhang-zhung and living in the 'Silver Castle' (*dngul mkhar*) of Khyung-lung. Snellgrove and Richardson 1968:60.

² Snellgrove and Richardson 1968:32. They also render that ancient Tibetan forts have been excavated in the Taklamakan area, which were like frontier outposts.

³ Chan 1994:540. Parallel information is given by Tucci in *Transhimalaya*, but he gives a distance of 10 li (576 meters) between these towers (p.74), and the same is repeated by P.M.Vergara in

Demeures des Hommes, Sanctuaires des Dieux, (p.254). I have not been able to check the original source, but a tower by every 576 meters as specified by Tucci and Vergara appears too much and may be due to lacking a decimal. One tower for every 50 or 57,6 km. is still a lot.

⁴ Chan 1994:26

⁵ Aris 1979:18. From his description of King Songtsen Gampo's scheme to tame the demoness hampering the spread of Buddhism in Tibet by pinning her down with temples on all major parts of her body - of which two presumably were in the area of today's Bhutan.

⁶ Taring (1970)1994:288. This occurred when she was waiting in the village of Shabje Thang in Bhutan just below the Monla Karchung pass during her flight in 1959.

⁷ These towers were studied when I was a visiting research scholar at the Academy of Social Sciences in Lhasa in 1996.

⁸ Stein (1987)1990:165

⁹ Ibid, p.166

¹⁰ Aris 1982:110, Plate 47. Wandepore refers to today's Wangdi Phodrang.

¹¹ *rab gsal* literally means clear light or best light.

¹² DWHR/RGOB, An Introduction to Traditional Architecture of Bhutan, 1993:67

¹³ Stein 1972:29

¹⁴ Stein (1987)1990:167

¹⁵ Karmay 1987:96-97. This text was published in Tibetan and translated into French and Italian in *Demeures des Hommes, Sanctuaires des Dieux*.

¹⁶ According to the text referred to above as translated from the Tibetan by Sarah Harding.

¹⁷ Chan 1994:129-130. According to Chan the building has undergone several devastations and rebuildings, but never again since its legendary beginning has it had nine stories. Most recently it was severely damaged during the cultural revolution, and then extensively repaired again in the 1980s.

¹⁸ Information from *Chronicle of the Fifth Dalai Lama* (of 1643), fol.25B, referred to by R.A. Stein in *The World in Miniature*, p.322 n.55.

¹⁹ From a translation of the Sindhu Raja text called "The clear mirror of mysticism". A vertical hierarchy is even displayed in the seating arrangement, as the Guru was seated on the top of three cushions, while the King sat on two. Ref. Olschak 1979:78.

²⁰ *Karimabad and Baltit Project Development*, 1996:10. One of the Baltit's earliest phases was dated by Carbon-14 tests.

²¹ Aris 1979:92. In Snellgrove and Richardson, *A Cultural History of Tibet*, they write the name; *Yum-bu-bla-sgang* , p.51. And there are other variant spellings.

²² Here, as so often in the Tibetan sources, one finds how similar sounding words such as *khang*, *mkhar* and *sgang* - all of which can refer to places - become confused and corrupted in the course of time.

²³ Snellgrove and Richardson 1968:51. The origin of this building is hidden in myths, and it may be that construction at this site dates back as far as 2100 years. For more information see the article "Le Tibet à l'époque de la Monarchie du VIIème au IXème Siècle" by P. M. Vergara in *Demeures des Hommes, Sanctuaries des Dieux*, p.258.

²⁴ Chan 1994:542

²⁵ *gdung* is honorific for 'bone'. The term itself functions as a kind of title of the head of the family. Ref. Aris 1979:116

²⁶ Prince Tsangma was a son of King Trisong Detsen who ruled approx. 800-815. The manuscript of Lhasetsangma also shortly called *rgyal rigs* was written in the early 18th century, approx. 1728 by Wagindra. Translated by Khenpo Phuntshok Tashi and Chris Butters, 1992. Previously translated by Aris 1980:12-85, but some parts were missing.

²⁷ Literally meaning *pho* - male hero, and *brang* - centre, place, residence.

²⁸ Interview 07.02.1998

²⁹ Das (1902)1987:1060, and Jäschke (1881)1998:469

³⁰ Shukla 1995:52

³¹ Interview 24.01.98

³² Termas are spiritual treasures mainly said to have been hidden in the eight century by Guru Rimpoché, which began to be rediscovered from about the eleventh century onwards. Termas may be religious texts etc. connected to "the terma tradition" with its sophisticated set of doctrines. "The text-scrolls or objects found serve only by way of keys which awaken a message in the mind of the discoverers.." P.Tshewang et al 1995:7

³³ White (1909)1992:197

³⁴ Olschak 1979:79

³⁵ Rinchen Zangpo (958-1055) was a distinguished personality who promoted widespread construction of temples and the necessity of making them attractive. He brought artists and craftsmen to Ladakh from Kashmir who contributed to this beautification process.

³⁶ Snellgrove and Skorupski 1977:93

³⁷ The type of biography termed *namthar* is a religious biography, and I am referring to Phajo Drugom Zhigpo's *Namthar* published by The National Library of Bhutan, Thimphu - undated, but approx. 1995.

Thanks to Khenpo Phuntshok Tashi (then a senior researcher at The National Library) for going through and translating this *namthar* for me. The colophon states that the *namthar* was dictated by Phajo Drugom Zhigpo himself to his son Dampa in the 12th century. Still if this is disputed information, Michael Aris writes regarding this *namthar* that "it must be based in part on historical facts," 1979:174. The equivalent *namthar* then in Aris' possession was rediscovered by Drukpa Kunleg's son in approx. 1580, op.cit., p.169.

³⁸ According to the text of folio 33.3, these dzongs were: Taktsang Senge Samdrup Dzong (the famous meditation place of Guru Rimpoché in Paro valley which was severely damaged in a fire in the spring of 1998) and Tango Chöying Dzong (one of Phajo Drugom Zhigpo's meditation places about two hours walk above the well known Tango monastery in the Thimphu valley). The last two: Lingzhi Jagö Dzong and Yar-tse Thu-wo Dzong do not appear to be known today.

³⁹ A photo by A.Gansser of one ruin is printed in Olschak 1979:21. The caption suggests this was a small frontier fortress.

⁴⁰ Aris 1979:169. Corvée was forced labour contributions.

⁴¹ Aris 1979:170

⁴² Meyer 1987:15, Chan 1994:98 and Shakabpa see below. Unfortunately neither provides the source for this information.

⁴³ Shakabpa 1984:81

⁴⁴ Snellgrove and Richardson 1968:153

⁴⁵ "Gyantse (Rgyal-rtse) which the local tradition considers as having been the seat of the Chos-rgyal Dpal-hkhor-btsan (grandson of Glandar-ma). It seems that originally it was called Sel-dkar-rgyal-rtse." Tucci (1941)1993:61. It is written *rGyal-mkhar-rtse* 'peak of the royal fortress' in Ricco and Lo Bue 1993:11.

⁴⁶ Ref. Tucci op.cit. p.80.

⁴⁷ Chan 1994:417

⁴⁸ Ibid, p.419

⁴⁹ Tucci (1941)1989:38

⁵⁰ Meyer 1987:15

⁵¹ Tucci 1983:164

⁵² Meyer 1987:16

⁵³ Ibid, p.17. On the Potala see also Meyer's article "Le Tibet a l'Epoque des Dalailamas du XVeme au XXeme Siecle" in *Demeures des Hommes, Sanctuaries des Dieux*, pp. 395-399.

⁵⁴ But most important for all orders is the "heart" - the Jokhang temple in Lhasa dating back to the 7th century.

⁵⁵ Ref. note 27. The name Potala is linked to Thönmi Sambhota, the first Tibetan to be sent to India for advanced Buddhist studies by King Songsten Gampo. In one of his translations from Sanskrit, he mentions the mystical abode of Chenrezig in South India named Riwo Potala. Songsten Gampo was later regarded as the reincarnation of Chenrezig, as are the Dalai Lamas, and thus the connection to Chenrezig's Potala. Chan 1994:98 Chenrezig or Avalokiteshvara in Sanskrit is the Bodhisattva of Compassion.

⁵⁶ In Chinese there is the same word - *ch'eng* - for both 'city' and 'wall'. Boyd 1962:49

⁵⁷ Boyd op.cit. pp. 49-50

⁵⁸ Aris 1979:15-22

⁵⁹ A *dzongpön* is the term for the fort governor or head official.

⁶⁰ Samuel 1995:54

⁶¹ This is as referred by Chandra Das, ref. note 29.

⁶² Ardussi 1977:212

⁶³ Today the dzongs are usually named according to the place where they are situated i.e. Punakha dzong, Gasa dzong etc. I have included their original names in this context as it reveals the intentions and hopes of those who created them.

⁶⁴ Aris 1976

⁶⁵ Ardussi 1977:228

⁶⁶ The myth as told by Dr. Corneille Jest 1.12.1997, to whom it had been related by Lyonpo Sonam Tobgye.

⁶⁷ Aris 1979:221

⁶⁸ Turner (1800)1991:83. 'Gylongs' or gelongs is a term for monks. Due to rules of the monastic order, females have never been allowed to spend the nights inside the dzongs. Those who were married among the secular, administrative staff thus lived outside the dzongs.

⁶⁹ Ministry of Home Affairs, Dzongs in Bhutan, p.14.

⁷⁰ From the part of the *Relação* of Estevao Cacella (1627) translated by Aris 1986:170.

⁷¹ White (1909)1992:209

⁷² Tucci (1956)1987:191 and 225

⁷³ Ura 1995:89. This historical novel authored by Karma Ura is mainly based on information related by Dasho Shingkar Lam. His

knowledge is very special as he worked his way up through the court hierarchy and served three kings during his long tenure in government service.

⁷⁴ Rennie (1866)1970:169-170

⁷⁵ DWHR/RGOB, *An Introduction to Traditional Architecture of Bhutan*, 1993:76-78. Wangdichöling served as the summer residence for the second king, and in this limited period also as government quarters. The life at Wangdichöling during this period is described in Ura 1995: chapters 2,3 and 4.

⁷⁶ The article "Bhutan and Tibet. On tradition and modernity in conflict and harmony " discuss this and similar issues more in depth. It also compare the cultural and architectural developments in Tibet with those of Bhutan. Ref. Amundsen 1997.

⁷⁷ The 'living' architectural traditions of Bhutan and among these the rebuilding-processes and their religious significance related to the concept of 'impermanence,' were further elucidated in Amundsen 1994/1995 "Bhutan: Living Culture and Cultural Preservation."

⁷⁸ Regarding traditional building skills see Amundsen 95 pp. 89-90. The article "A sustainable society? Impressions from Bhutan" by Amundsen and Butters 1995, discusses a holistic approach to sustainability involving the whole culture not only "material sustainability" in relation to the increasing pace of change taking place in Bhutan.

Bibliography

Bhutanese sources:

Department of Works, Housing and Roads (1993). *An Introduction to Traditional Architecture of Bhutan*, Thimphu: Royal Government of Bhutan

Lhasetsangma; *bod rje mnga' bdag khri ral pa can gyi sku mched lha sras gtsang ma'i gdung brgyud 'phel rabs dang 'bangs kyi mi rabs mched khungs lo rgyus gsal ba'i sgron me*, The Chronicle of Prince Tsangma, translated by Khenpo Phuntshok Tashi and Chris Butters, National Library of Bhutan, unpublished typescript 1992

Ministry of Home Affairs (1991). *Dzongs in Bhutan. Vol.1*. Thimphu, report by the Royal Government of Bhutan

Phajo (rdo rje gdan pa) Mi-pham Tshe-dbang-bstan-'dzin (1547-1643), *Pha 'brug sgom zhig po'i rnam par thar pa thugs rje'i chu rgyun*. The National Library of Bhutan, Thimphu - undated, but approx. 1995

Ura, Karma (1995). *The Hero with a Thousand Eyes-A Historical Novel*, Thimphu

Other Sources

Amundsen, Ingun B (1994). *Bhutan: Living Culture and Cultural Preservation*

In *Traditional Dwellings and Settlements Working Paper Series Vol.67/IASTE 67-94*, pp.9-34, CEDR, Berkeley, University of California. An elaboration of this paper was published in I.B.Amundsen and H.Dunin-Woyseth (eds.) 1995. *Research Magazine no.2*. pp.80-93, Oslo School of Architecture

_____(1997). "Bhutan og Tibet: Om tradisjon og modernitet i konflikt og harmoni" in *Nordic Journal of Architectural Research*, No. 1997:4, pp. 21-37. Gothenburg: Nordic Association for Architectural Research

Amundsen, Ingun B. and Butters, Chris (1995). "Et bærekraftig samfunn? Inntrykk fra Bhutan" in *Byggekunst. The Norwegian Review of Architecture*, no.6, pp. 348-353, Oslo: National Association of Norwegian Architects

Ardussi, John A (1977). *Bhutan before the British. A Historical Study*, Australian National University. Unpublished Ph.D. dissertation

Aris, Michael (1976). "The Admonition of the Thunderbolt Cannon-Ball" and its Place in the Bhutanese New Year Festival in *Bulletin of the School of Oriental and African Studies* 39, pp.601-35, London

_____(1979). *Bhutan. The Early History of a Himalayan Kingdom*, London: Aris & Philips

_____(1982). *Views of Medieval Bhutan: The Diary and Drawings of Samuel Davis, 1783*, London: Serindia

_____(1986). *Sources for the History of Bhutan*. Wien, Arbeitskreis für Tibetische und Buddhistische Studien Universität Wien

Beguin, G. and Vergara, P. M (eds.) (1987). *Demeures des Hommes, Sanctuaires des Dieux*. Paris, Musée Guimet, and Rome, University of Roma, Dept. of Oriental Studies, Il Bagatto

Boyd, Andrew (1962). *Chinese Architecture and Town Planning*, London: Alec Tiranti

Das, S.C. (1902) (1987). *A Tibetan-English Dictionary*. Reprint Kathmandu: Ratna Pustak Bhandar

Historic Cities Support Programme (1996). *Karimabad and Baltit Project Development*, Geneva: The Aga Khan Trust for Culture

Jäschke, H.A (1881) (1998). *A Tibetan-English Dictionary*, Reprint Delhi: Montilal Banarsiddas

Karmay, Samten G (1987). L'organisation de l'espace selon un texte Tibétain du XIIème siècle. In Beguin & Vergara (eds.) *Demeures des Hommes, Sanctuaires des Dieux*, pp.92-98

Meyer, Fernand (1987). The Potala Palace of the Dalai Lamas in Lhasa, Hongkong: In *Orientations*, July 1987, pp. 14-32

Olschak, Blanche C (1979). *Ancient Bhutan. A Study of Early Buddhism in the Himalayas*, Zürich: Swiss Foundation for Alpine Research

Pichard, Pierre (1990). *Bhutan. Conservation of Simtokha Dzong*, Paris: UNESCO

Rennie, David Field (1866) (1970). *Bhotan and the story of the Doar war*, London, Reprint New Delhi: Manjusri Publ. House

Ricco, Franco and Lo Bue, Erberto (1993). *The Great Stupa of Gyantse*, London: Serindia Publications

Samuel, Geoffrey (1995). *Civilized Shamans. Buddhism in Tibetan Societies*, Kathmandu: Mandala Book Point

Shukla, D.N (1995). *Vāstu-Sāstra Vol.1 Hindu Science of Architecture*, New Delhi: Munshiram Manoharlal Publishers

Snellgrove, David and Richardson, H.E (1968). *A Cultural History of Tibet*, Boston & London: Shambala

Snellgrove, David and Skorupski, Tadeusz (1977). *The Cultural Heritage of Ladakh*. Vol.1. New Delhi: Vikas Publ. House

Tshewang, Padma, Tashi, Phuntsok, Butters, Chris and Sætreng, Sigmund (1995). *The Treasure Revealer of Bhutan*, Kathmandu: Bibliothecha Himalayica

Tucci, Giuseppe (1941) (1993). *Gyantse and its monasteries*, Part 1, Indo-Tibetica IV.1. Roma 1941, English edition, New Delhi: Aditya Prakashan

_____(1956) (1987). *To Lhasa and Beyond. Diary of the Expedition to Tibet in the Year 1948*, Reprint, New York: Snow Lion Publications

_____(1973). *Transhimalaya*. London: Barrie & Jenkins

Turner, Samuel (1800) (1991). *An Account of an Embassy*. London, Reprint, New Delhi: Asian Educational Series

White, J.C (1909)(1992). *Sikkim and Bhutan*, London, Reprint, Delhi: A.Sagar Book House