

From Living to Propelling Monument: the Monastery-Fortress (*dzong*) as Vehicle of Cultural Transfer in Contemporary Bhutan

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“I gave a dinner party in the evening, at which the Tongsa *Jongpens* and other officials were present, and seemed to enjoy themselves. They were particularly pleased with the magic lantern, and asked major Rennick to give a second display in the fort. We did so a few evenings later to a vast crowd, who, from the remarks I at times overheard, took a keen and intelligent interest in the performance. In addition to slides made from my Tibetan pictures, I had several of India and Europe, and we wetted the screen thoroughly to enable the audience on both sides to see..... After dinner I showed the Tango *Lama* a stereoscope, with views of Europe, and he so enjoyed it that I gave it to him when he called to take leave.”

Excerpt from John Claude White's diary: “My first mission to Bhutan “-1905, first published in 1909.

Introduction

The object of study concerns Bhutan's state-religious architecture, embodied by the monastery-fortress or *dzong*. Designated as Bhutan's architectural tour de force, the monastery-fortress exhibits the very best of what this particular dwelling culture can achieve at a specific time juncture. To a large extent it is the majestic and monumental character that provides the monastery-fortress with its predicate of Bhutan's architectural frontispiece. The issue at stake here, however, is not prompted by typological nor aesthetic concerns. The monastery-fortress not only exemplifies the endurance of a 'lived' medieval concept; it represents Bhutan's archetype of public, political and collective architecture. Apart from the two primary functions it is traditionally associated with in Bhutan, i.e. a political and religious one, the monastery-fortress may well be approached as a 'propelling'

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monument, a culture magnet and vehicle of cultural transfer in contemporary Bhutan. To explore the 'identity' and 'dynamics' of Bhutan's state-religious architecture over a longer period of time going back as far as 1783, the built history of some historically important monastery-fortresses will be reconstructed. By studying the practice of demolition and reconstruction associated with the monastery-fortress of Bhutan's old winter capital Punakha, the identification and interpretation of some factors that enable the Bhutanese to organize the cultural transfer they need to further their quest for national identity and cultural uniqueness will be discussed. Three potential factors that may facilitate processes of cultural transfer and architectural transformation were identified: 1. the role of the most senior master builder as a source of inspiration to every village carpenter; 2. Bhutan's nailless architecture based on proportional building; and 3. the role of the *dzong* (*rdzong*) as cultural centre. It is believed that by approaching the monastery-fortress as a process rather than a product, the culture-generating force of Bhutan's monumental architecture will surface. If the process of cultural transfer, from *dzong* to farmhouse, represents a centuries-old system of cultural renewal, the case of Tashichho dzong, Bhutan's capital *dzong* is even more revelatory about the present-day role of the *dzong* as a generating force. In Bhutan, the propelling monument interacts from a distance and operates at a more morpho-typological and notional level. However, the brief comparative study of the reconstructed *dzong* at Thimphu and its impact on the capital's urbanized and modernized settlement tissue teaches that in the act of trend setting, the propelling monument itself becomes subjected to unprecedented innovations that are drawn from Bhutan's recent process of modernization and urbanization.

Representing the Past in the Present: What Makes the *Dzong* a 'Living' Monument?

Fortresses and castles are among those form-expressions of material culture that, despite their culture-specific context, architectural definitions and manifestations, are evocative of a commonly shared past, namely feudalism or medievalism. At first glance, Bhutanese *dzong*-s share similarities with those monumental western 'medieval'

fortresses that, according to the British architectural historian George Mansell¹ embody a political and economic system of Europe between the 9th and the 15th century whereby an 'emerging sense of nationhood involved a strategy of conquering and re-conquering'. Object of veneration and conservation, fortresses usually on the one hand act as a vivid reminder of a distant heroic past; on the other they are evocative of an obscure and oppressive episode of our history. In Bhutan, however, both the term 'fortress' and the shape that is usually associated with it, are not only evocative of the nation's feudal and heroic past, but still play an active role in the country's quest for cultural uniqueness and national identity, exteriorized in material culture. In this regard, neither the term nor the form-expression are loaded with negative connotations. On the contrary, in modernizing Bhutan *dzong*-s still represent the tangible corner stones of the nation's political system of decentralized governance.

Contrary to most medieval castles in Europe that are relatively dead monuments and literally 'empty' places, Bhutanese monastery-fortresses are still in use today. The *dzong* still accommodates the same political, religious and logistic functions it was originally Designed for. Its identity and status as politico-religious stronghold relatively stands, as suggested by the same rules and protocol by which its users deal with it today. Indeed, it is the traditional-minded comportment of the Bhutanese people, reflected by patterns of traditional attire and conduct that may account for a certain degree of genuineness by which the past is represented in the present. From a praxiological point of view, a visit to any Bhutanese *dzong* may well evoke a sense of 'medieval ambience' and makes the monastery-fortress appear as a 'living' museum.

However, it is certainly not the western-like veneration of old buildings, historical monuments and even ruins, nor the demand for preservation that lies at the basis of the endurance of this peculiar concept in contemporary Bhutan². Bhutanese dwelling culture has no tradition of architectural preservation like the way it emerged and developed in Western Europe as a movement from the 19th century onwards.³ From the viewpoint of its religion (Buddhism) and its history (a continual quest for national identity and cultural

uniqueness), there were no grounds to preserve Bhutan's state-religious architecture, 'justified by the assertion that they are part of the national inheritance'.

From a religious perspective, the Buddhist doctrine of the 'impermanent' character and condition of all modes of existence has never associated buildings with eternity. Like other aspects of material culture, architecture does not escape from this same wheel of existence, the cycle of life, death and rebirth (*samsara*); architecture too is subjected to a continuous process of construction, demolition and re-erection. Thus, like various comparable Buddhist culture groups in the Himalayas, through literally deconstructing and reconstructing most of its architectural heritage, even historical monuments such as *dzongs*, Bhutanese culture celebrates a continuous process of cultural renewal as its very tradition. The underlying hypothesis is that by studying the ongoing reconstruction process of one of Bhutan's most historically important *dzongs*, Punakha Dzong, against the background of its diachronically recorded built history (1783-2000), a plurality of reasons and indications will be identified that may justify the *dzong's* predicate of 'living' monument.

Reconstructing Punakha Dzong: A Case in Practice

Emerging at the Confluence of Two Rivers: Punakha Dzong's Sense of Place

The valley in which Punakha Dzong stands is situated in the southernmost part of the Punakha district (*dzongkhag*) under which it administratively resorts. Compared to many other valleys in central Bhutan, Punakha represents a relatively wide and relatively flat open environment. Although its moderate climate has attracted various rural households to settle down along the gently sloping terraces of the various side valleys, Punakha Dzong has never stimulated the development of an urban centre within its vicinity. Contrary to those *dzongs* positioned on hillsides, the old capital *dzong* of Punakha is sited at the lower end of the valley at the confluence of two rivers, commonly referred to as the 'mother' river (Mo chhu) and the 'father'

river (Pho chhu). Passing the monastery-fortress the Mo chhu and Pho chhu merge to form the Puna Tsang chhu (or Punak chhu), the main river bordering the western side of the Black Mountain range. Before their merger, the two rivers embrace a hill, known as the Jilligang. It is at the foot of this hillock that the monastery-fortress emerges like a ship.

As is the case with most historical sites in Bhutan, Punakha Dzong's spirit of place (*genius loci*) can, leaving aside the more obvious strategic considerations, be drawn from many sources and interpretations: from geomantic and metaphoric considerations to legends and foundation myths. For any early traveller, the confluence of two rivers that suddenly appears from behind a bulky mountain foot, may have served as a prominent landmark, useful for geographical orientation. From the viewpoint of oriental geomancy, the *dzong* of Punakha could not have been better positioned: embraced by two merging rivers, attributed with human feminine (*mo*) and masculine (*pho*) characteristics. Considering the prevalence of a pre-Buddhist tradition of geomantic divination and animism, it is no wonder that the most prominent spatial characteristics of this place were also thought of as having the form of a deified human or animal. In the case of Punakha, the legends and myths associated with the founding of Punakha Dzong speak of the Jilligang Hill as a 'reclining elephant'. With the help of a photograph by Philip Denwood, showing the spatial setting of Punakha Dzong in 1967, an attempt is made at a theriomorphic interpretation of the Jilligang Hill as 'reclining elephant'.⁴ As applicable to many historical places in Bhutan, the 'taming' and founding of the setting of Punakha Dzong is ascribed to Guru Rinpoche in the 8th century.⁵ Reference to Guru Rinpoche's prophesy is also made in connection with the founding myth of the first building associated with this place: the *Dzongchung*, literally meaning the "little fortress".⁶

Eight years after the construction of his first *dzong* at Semtokha at the lower end of the Thimphu valley *Zhabdrung* Ngawang Namgyel built the old capital *dzong* of Punakha in 1637 in front of the *dzongchung* as the palace par excellence to keep the Ranjung Karsapani⁷, Bhutan's most sacred relic. With the construction of the summer capital *dzong*

of Thimphu (Tashichho dzong) in 1641, the *Zhabdrung* and his successors adhered to the local pattern of transhumance (e.g. seasonal migration of people and livestock between the valleys of Punakha and Thimphu) until the early 1950s when the late King Jigme Dorji Wangchuk decided to make the Tashichho dzong the permanent seat of the King and Central Government.⁸ With the fundamental reconstruction of Tashichho dzong in Thimphu in the mid 1960s and the inception of planned urbanization in the new capital valley, the status of Punakha Dzong as former winter capital seemed to have lost its political authority and turned into a mere monument commemorative of a more glorious past.

Punakha Dzong Dissolved: an Architectural Overview

Lacking a layout plan of the monastery-fortress, the main structural and architectural features of Punakha Dzong will be explained by making use of Philip Denwood's exclusive photograph, taken of the *dzong* and its setting as viewed in 1967. As indicated above, the overall layout of the building complex comprises an oblong square of around 180 metres long and 72 metres wide. The picture is viewing Punakha Dzong from the west. This implies that the building complex developed along its north-south axis, letting the entrance of the *dzong* face the entrance gate of the little fortress (*Dzongchung*). By facing each other, the little fortress faces the east, Punakha Dzong faces the north. If one looks carefully, the *dzong* seems to look upstream (of the mother river) avoiding a direct confrontation with the Jillingang Hill. Depending on the season of the year the *dzong* literally forms an island, made only accessible by two traditional cantilever bridges, built around 1720 under the reign of Bhutan's 4th temporal ruler (*desi*) Tenzin Rabgye (r.1638-96). Standing aside and halfway the track that interconnects both bridges, the little fortress (*Dzongchung*) can be identified. A steep flight of steps provides access to a fortified entrance porch (*gorikha*) in which huge prayer wheels (*dungkhor*) and representations of the Four Guardian Kings are painted on the walls. The entrance porch opens up to the first courtyard (*doshen*) around which the civil wing of the *dzong* is accommodated.⁹ A dark corridor leads to the second courtyard from which the access is possible to the six storeyed central tower (*utse*), which houses a series of temples and

the apartment of the first *Zhabdrung*¹⁰. As Pommaret¹¹ rightly points out, the second courtyard is hardly existing since a new temple was built there in 1983, bringing the total to 21 temples. As indicated on the picture, we finally enter the ecclesiastical wing of the monastery-fortress. The third courtyard provides access to the Machen Lhakhang, the temple in which the embalmed body of the first *Zhabdrung* is kept, along with the sacred relic he took along with him from Tibet. It is also here that the remains of the Buddhist Saint Pema Lingpa (1450-1521), another reincarnation of Guru Rinpoche is preserved. The monks' great assembly hall (*kunre*), credited to Bhutan's second temporal ruler, *Desi* Tenzing Drugda (1656-67) opens up to this courtyard.

Punakha Dzong (1783-1999): a Pictorial Diachrony

From various archives and collections, we were able to organize and compare two sets of pictures depicting the morpho-typological evolution of Punakha Dzong from 1783 to 1999. The first set views the *dzong* from its south/south-east elevation. The situation as depicted by Davis in 1783 shows Punakha Dzong's configuration after its reconstruction in 1750 (fire) and extensive elaborations, patronized under the reign of Bhutan's 13th temporal ruler (*desi*) Sherab Wangchuk between 1744 and 1763 (Armington, 1998:193-4). Despite four fires (1798, 1802, 1831 and 1849) and the damage caused by the severe 1897 earthquake, the configuration as viewed by Rawling in 1904 and Weir in 1931 does not seem to differ substantially from the version in 1783. In 1978, the major changes comprised the demolition of a building standing in front of the *dzong*, and the disappearance of the traditional cantilever bridges that, by then, were replaced by modern suspension bridges, built adjacent to the remains of the original structures. From the late 1980s onwards, the *dzong* was subjected to a more drastic process of demolition and renewal. The four last serial views depict the final stage of the reconstruction process which turns the *dzong* into a very complex architectural synthesis that blurs the commanding position of a single central tower (*utse*) of Buddhist temple rooms.

The second set provides a closer look at the *dzong*'s present process of architectural transformation as viewed from the south-west direction. As suggested above, one may recognize a move from a relatively simple configuration, a horizontally outlined structure dominated by one single vertical element, to a more ambiguous and differentiated complexity of clustered and juxtaposed individual buildings, densely organized within the confines of its existing external walls. Each of them, seemingly, wants to emphasize its proper (political?) importance and status.

Punakha Dzong Reconstructed (1986-1999): a Brief Outline

The fascinating thing about Bhutanese issues of architectural preservation, as demonstrated by the present wave of major reconstruction works throughout the nation, is the plurality of reasons that may justify an approach which goes much beyond what we understand by 'restoration' and 'renovation'. The need to demolish and rebuild a monastery-fortress, a temple, a house can be drawn from a variety of reasons: practical, technical, socio-political, cultural, religious, cosmological.... all and none of them at the same time identifiable as the ultimate motive. Considering Bhutan's geographical situation within an earthquake-prone and glacier-rich region, the process of demolition and renewal that characterizes the built history of the bulk of Bhutan's architectural heritage can be traced to a struggle between man and the caprices of nature. Like many other constructions, Punakha Dzong did not escape the toll of time and the extremity of the country's geographical situation. Calamities, such as fires, earthquakes and floods, that subjected Punakha Dzong to a continual process of demolition and renewal came to light in the pictorial analysis of the *dzong*. The most recent calamities that accelerated reconstruction works at the *dzong* of Punakha are: 1. the fire in 1986 that burnt down the south-west corner of the *dzong*, thereby destroying the winter quarters of Bhutan's head abbot (*Je Khenpo*); and 2. the enormous flash flood in October 1994 that seriously damaged the *Dzongchung* that literally protects the *dzong*'s entrance by its buffering position.¹²

Not all architectural transformations, however, are prompted by the caprice of nature. The present importance accorded to the old capital *dzong* of Punakha is demonstrated, not only by the scale and standard of the present reconstruction works initiated in the late 1980s, but even more by its historical and national state of affairs.¹³ Moreover, in Buddhism, the contribution to the realization of a spatial environment complying with Buddhist ideas about life and after-life is considered a deed of virtue, irrespective of one's rank, position or talent. As is the case with the commissioning of painted scrolls and other works of religious art and architecture, an elaborated system of patronage lays at the basis of many architectural handling as a cultural practice. It is a system that may make all those who are involved in the 'act of building' spiritually better. The initiator and patron for his or her enlightened idea, devotion and sponsorship; the master-carpenter (*zorik-lapon* and or *zow*) for his profound expertise of iconometric building and artisanal craftsmanship; the Buddhist monk for his wisdom, talent of mediation and astrological knowledge; the unskilled labourers for their physical involvement; and the users for being blessed with yet another earthly place that is spatially and spiritually ordered and made inhabitable. All have distinguished themselves by their own 'deed of virtue' and the structure will always commemorate this united effort of cultural belonging.

The historical importance of the Punakha Dzong has always attracted the highest level of patronage.¹⁴ The fire in the mid eighties seemingly provided the present King of Bhutan, Jigme Singye Wangchuck, with the opportunity to demonstrate his personal exemplary attitude and religious devotion by commanding the total reconstruction of the Machen Lhakhang, one of the most sacred temples within the *dzong* complex, the monk's great assembly hall or Kunre; and more recently the little fortress or *Dzongchung* following its 1994 total destruction.

The first of the three reconstructions, the new Machen Lhakhang is erected by the best qualified artisans recruited from all over the country after having proven their expertise during earlier reconstruction works of the important village temple at Ura and the construction of the new Kurje temple in Bumthang. The morpho-typological resemblance between the two temples is very conspicuous.

The ornamental refinement of the Machen Lhakhang completed in 1991, however, is even more impressive. Attracting immediate attention are the introduction of new building materials such as cement concrete and the application of new techniques such as the concrete casting method in function of a traditional architectural configuration, inherent to timber-architecture. Frescoes and sculptures, traditionally built with timber, are now being cast and sculpted out of concrete cast in situ. The most interesting aspect of this building experience, however, is the assessment of the flexibility and easiness by which this peculiar play of do-thinking all of a sudden results into unexpected and 'last-minute' alterations. A visit to the site, a brief discussion between patron, master-builder and or ritual master suffices to alter, change or all together reverse the position of prefabricated and already installed building components.

The second building concerns the monks' great assembly hall known as the Kunre is located in the southernmost section of the *dzong*. Known as the 'hundred-pillar' congregation hall three pictures taken prior to its ultimate demolition, demonstrate the exceptional architectural standard and historical value of this particular monument. Lacking a tradition of (architectural) documentation, it is obvious that a considerable amount of valuable objects of art such as mural paintings and cosmic *mandalas* were about to get lost as historical evidence. From the ruins of the old Kunre, the new one literally emerged from scratch. The construction of the new Kunre unveils how the Bhutanese, despite the involvement of foreign 'conservationist'-minded expertise, go their own way when it comes to architectural decisions.

The third major reconstruction work concerns the re-erection of the historically important "little fortress" or *Dzongchung*. After the necessary river training works, needed to consolidate its site, the *Dzongchung* was built twice its original size, incorporating all architectural features that were introduced in the *dzongs* of Thimphu and Punakha. In so doing, a major step is being achieved in the country. With the installation of the golden pinnacle (*serto*) on the rooftop of the *Dzongchung* (Sept.'96) and the Kunre (Oct.'96), followed by the consecration ceremony of the Machen Lhakhang and

its *Kudung chörten*¹⁵ in which Bhutan's three most sacred relics were installed on November 2, 1996, one of Punakha Dzong's most radical processes of demolition and re-erection seems to have reached to a temporal climax.

From a western 'conservationist' point of view and 'monumentalist' attitude towards issues of cultural and architectural preservation, the complete demolition and reconstruction of the old Machen Lhakhang and Kunre, seems nothing but the erasure of a whole historical chapter. For the Bhutanese, however, the re-erection of the new Machen Lhakhang, Kunre and *Dzongchung*, seems to confirm the 'impermanent' status of architecture on the one hand; on the other it may be viewed as a 'built' sign of protection marking a new phase in furthering the country's quest for national identity and cultural explication, expressed in material culture.

The Reconstruction of Punakha Dzong: a Paradox?

Since most of Bhutan's monumental monastery-fortresses (*dzongs*) represent the administrative centre of a certain district (*dzongkhag*) it might be interesting to put into perspective the obvious link between the political importance of an administrative *dzong* and the territory that is referred to by the same term. Until 1992, Punakha Dzong represented one of Bhutan's largest and northernmost administrative entities. It shared a strategic alpine borderline with Tibet which, before its closure following the Chinese invasion of Tibet in 1952, was a major transit area for trade and international communication. Coinciding with these internationally souring relationship, Punakha Dzong lost its status as winter capital *dzong* in favour of the more southern situated Tashichho dzong at Thimphu, which was ultimately transformed into Bhutan's permanent seat of government. In the last quarter of the 20th century, Punakha Dzong all of a sudden resurged from an alleged state of politico-cultural and architectural dormancy, the latter being demonstrated by the morpho-typological history of the monument.

The paradox concerns the following: just as Punakha Dzong is being restored to full political and architectural glory, the territory it was

governing until 1992 shrank to almost a single valley. Indeed, furthering Bhutan's gradual but firm engagement to decentralize institutional responsibilities, Bhutan's administrative map was retraced. One of the major implications was the upgrading of former sub-districts into districts: Gasa in Northwest Bhutan and Tashiyangtse in Northeast Bhutan. For Punakha Dzong it implied a territorial shrinking from the largest to the smallest district; from an internationally important borderzone to an internally landlocked enclave. However, by reducing Punakha Dzong's territorial concerns to a strict minimum, the *dzong* itself is provided with an unprecedented opportunity: to become Bhutan's politico-religious and cultural (heart) centre. There are indications that, in the light of Bhutan's present stage of political transition and search for national identity and cultural integration, the major reconstruction of Punakha Dzong may well be regarded as an act of spatial and ritual protection and consolidation. To unravel other more culture-specific and inarticulate considerations that may have prompted Punakha Dzong to resurge is more difficult to evaluate. From the viewpoint of material culture as a built medium of intercommunication, however, there is evidence that Punakha Dzong is provided with a particular challenge to serve as locus and vehicle of cultural transfer in which architectural trendsetting plays an important role.

The *Dzong* as 'Propelling' Monument: Architecture as Vehicle of Cultural Renewal and Change

So far, we have looked at some factors that may justify the *dzong*'s title of 'living' monument. The fact that *dzongs* still fulfil more or less unchanged historical tasks was one argument to support this idea. The *dzong* in use is evocative of a stage of development and as such provides it its title of 'living' museum. The *dzong* in Bhutan commemorates the construction of a spatio-cultural identity, expressed in material culture. However, the factor that may provide the *dzong* with its ultimate status of 'living' monument concerns the Buddhist cultural idea of the impermanent state of being of all form-expressions of material culture. Historically important monuments too, as exemplified by the case of Punakha Dzong, do not escape from this peculiar cultural practice of architectural demolition and re-

erection. Two questions arise here: 1. If Bhutanese *dzongs* are still in use, what kind of role do they in shaping and actualizing Bhutan's spatio-cultural identity; and 2. what are the potential factors and agents of change that may provide Bhutan's state-religious architecture with the predicate of 'propelling' monument?

Propelling Versus Pathetic Monuments: Terms and Categories

If the *dzong* may be approached as medium or agent of change (ranging from adjustment to transformation), it has to integrate more 'dynamic' characteristics than those needed to renew itself. The terms 'propelling' versus 'pathetic' elements, borrowed from the work of the Italian architectural theoretician Aldo Rossi may provide a useful concept. In his work *The Architecture of the City*, Aldo Rossi approaches monuments as physical signs of the past that: 1. persist virtually unchanged, endowed with a continuous vitality; or 2. on the contrary exhaust themselves, and as Rossi argues, then only the permanence of their form, their physical sign and *locus* remains'. As permanence's, monuments may represent one of these two aspects which can be viewed as a pair of opposites: 'propelling' versus 'pathological' elements. According to Rossi¹⁶ propelling elements 'continue to function; condition the urban area in which they stand and continue to constitute an important urban focus'; pathological elements, on the contrary, stand virtually isolated in the city; nothing can be added; and they constitute an experience so essential that they cannot be modified'.

If this line of thinking is applied to Bhutan's monumental state-religious architecture, as exemplified by the *dzong*, we encounter a problem that relates to Bhutan's culture-specific context and its traditional definition of space. Bhutan is a predominantly rural dwelling culture in a discontinued alpine landscape. From a geo-topographical perspective, Bhutanese *dzongs* tend more towards seclusion than integration. As Bhutan's traditional settlement tissue adheres more to a system of radiation versus enclosure, we have to look for other clues to understand what influence the *dzong* may exercise upon the entirety of Bhutan's contemporary dwelling culture.

From Dzong to Farmhouse: What Makes the Dzong a ‘Propelling’ Monument?

Architectural uniformity and coherence between *dzongs* and traditional village settlements have been a constant throughout Bhutan's built history. The built configuration in general, and the architectural expression of its elaborate timber architecture in particular is, however, very different from the configuration, observed by Davis in 1783. By comparing both water colours, one may observe that as far back as 1783, the timber oriels (*rabsal*) were nothing more than a grouping of individual (larger) windows or small individual *loggia*'s. Considering the reconstructions of the built history of several monuments, one may recognize a three-fold evolution: 1. from more Tibetan-like form-expressions to more explicit Bhutanized space-definitions; 2. from relatively simple to more differentiated built configurations; and 3. from introvert to more assertive manifestations of architecture.

Considering the extreme character of Bhutan's Himalayan landscape and the mosaic of peoples that inhabit it, how can we explain the fact that the architectural configuration of *dzongs* and villages have continuously changed hand in hand throughout the country? If the geo-topographical condition of Bhutan and the multi-cultural constellation of its society may be considered diverging factors, how is it possible that architectural innovations are so rapidly disseminated and adopted throughout all of Bhutan. The underlying hypothesis here is that the *dzong*, embodying the highest Buddhist ideas and values, functions as a *locus* and vehicle of cultural transfer and change. By studying aspects of cultural transfer from a praxiological point, we have identified three potential factors that may unveil the role of the *dzong* as key to the understanding of what may well be understood by the ‘dynamics’ of Bhutan's ‘living’ architecture: 1. The cultural role and authority of the master-builder; 2. Bhutan's application of ‘naillless’ architecture; and 3. The *dzong* as cultural centre.

The Cultural Role and Authority of the Master-Builder

The responsibility for the conceptualization of and materialization of Buddhist stock of ideas in the form of a distinct architectural practice can be traced to a trinity of key actors, referred to as the patron, the ritual master and the master-builder. The higher the political and religious rank of the trinity, the more advanced the level is at which this peculiar play of architectural 'do-thinking' takes place; and more importantly the more impact it may have on the architectural actualization in all of Bhutan. To ensure the continuity of Bhutan's architectural tradition in keeping with ideological values, the structuring of the spatial environment is not left over to one's individual architectural creativity. From an spatio-cultural perspective, the master-builder, referred to by varied terms according to rank, grade, craftsmanship and field of specialization, not only acts as the architect and contractor, but equally as an authority in 'material culture'. The specific terms that differentiate between the various traditional crafts are equally reflected in the title and rank by which master-builders are addressed to. The country's most senior master-builder entrusted with the honourable task to architecturally interpret whatever changes might be proposed by the highest level of patronship, i.e. the king and the head abbot, is traditionally referred to as the '*zorig-lapon*' or exceptionally the '*zorig-chichop*'.¹⁷

Dating back to the period of the first *Zhabdrung* and the founding of Punakha Dzong in 1637, there is a revealing story about the status and authority associated with the cultural role of *Trulbi Zow Balingpa* (Balip), the *Zhabdrung*'s most senior master-builder. The Tibetologist Yoshiro Imaeda in his catalogue on portable shrines (*tashigomang*), not only unveils how the dream was conceptualized and materialized in the form of a scale model, but also provides us with an idea about the 'divine' faculty that is traditionally associated with craftsmanship. He writes:

"It is believed that the great architect *Trulbi-zow* Baleb, incarnation of the divine craftsman Vishwakarma, invented the *tashigomang* under the guidance of the *Zhabdrung* Ngawang Namgyel. The legends tells that once with the benediction of the supernatural power of the *Zhabdrung*, *Trulbi-zow* Baleb visited in a dream the heavenly Palace of Guru Rinpoche. The next morning, *Zhabdrung* inquired of *Trulbi-zow* about his

dream and asked whether he could give form to what he had seen in the dream. *Trulbi-zow* agreed and made out of a radish the prototype of the Tashigomang. As *Zhabdrung* was satisfied with his skill he told him to carve it of wood.”¹⁸

The character of Vishwakarma with whom all Bhutanese master-builders and craftsmen feel associated through lineage, is no other than the prime and heavenly architect, venerated in both Hinduism and Buddhism. The idea of belonging to the important lineage associated with the mythical figure of Vishwakarma provides ritual meaning to the praxiology of cultural transfer from the most senior master-builder of the King to the local village carpenter. According to the Tibetologist Michael Aris, the legend and the reference to the ritual hierarchy associated with traditional craftsmanship appears in a local source¹⁹. His translation of the passage goes as this:

“The craft of building construction: As for woodworking and the construction of buildings, in addition to what existed in previous times (the story can be told of how) an expert in carpentry called “The Emanational Craftsman Balingpa” came forth at the time when *Zhabdrung* Rinpoche was building the *dzong* of Punakha. He constructed fortresses, houses and the other buildings by adding as appropriate a multiplicity of beautifying elements to the ancient Designs still being used in building constructions. And so there (later) arose the expert woodworkers of Bhutan who are renowned to belong to the lineage of the master craftsman Balingpa.”²⁰

In the ‘History of Bhutan Handbook for teachers’,²¹ however, the picture of the exceptional status that is seemingly associated with the rank of *zorig lapon* or *zorig chichop* today, is nuanced. Despite his status as incarnation of Vishwakarma, the master-builder of the *Zhabdrung* seemed not capable of conceptualizing the new Punakha Dzong by his own mind and craftsmanship:

“He (the *Zhabdrung*) sent somebody to call him (Balip) to build the *dzong*. Although this man was intelligent, his mind could not grasp what the *Zhabdrung* exactly wanted. He could

not conceive this great project so the *Zhabdrung* guided him magically to the paradise of Guru Rinpoche, the *Zangdopelri* and showed him this place.”²²

Interesting about this passage is the suggestion of a more ‘challenging’ relationship between patron and master-builder (in the sense of who is guiding whom in the process of architectural design and construction).²³ The master-builder’s primary role is to merge his profound knowledge of Buddhist iconography (couched in the canon of his own anthropometric measurements), with the practical and spiritual objectives of the patron in the form of an architectural synthesis. What may well facilitate the cultural transfer of stock of ideas from the nation’s most senior master-builder to the carpenter apprentice in a remote village is an ingenious architectural concept and artisanal building technology.

Bhutan’s Application of Nailless Architecture

Considered as one of the most ingenious aspects of traditional building construction in general and carpentry in particular, the method of ‘nailless’ timber jointing is not authentic to Bhutan. However, by studying the Bhutanese approach to the concept and practice of ‘nailless’ architecture in relation to socio-economic and cultural parameters, three characteristics were identified that may shed some light on the contribution of this peculiar building system to a dynamics of a nation-wide process of cultural transfer and actualization, expressed in material culture: 1. a proportional Design and construction system by which graphics and building plans play a secondary role as didactic tool and means of instruction; 2. the rationality and high standard of the building method of artisanal prefabrication making use of elementary hand tools only; and 3. the minimum requirement of skilled labour for the maximum usability of unskilled labour for all aspects and phases of building construction.

Firstly, by tradition, the preparation and reference to drawn building plans is secondary if not redundant. To ensure a truthful materialization of such iconographic programmes, reference is made to ‘proportional’ schemes. In the case of state-religious (and domestic) architecture, no such schemes could hitherto be traced. As far as

carpentry works are concerned, one may come across very few drawn memo's (mostly carved onto a wooden plank) and wooden stencils that provide some elementary information about the compository principles of some of the more complex timber jointing and profiling. Craftsmanship in 'nailless' forms of architecture (and furniture making), however, is a kind of ready knowledge that is traditionally transferred from mentor to disciple by means of oral instruction and through extensive on-the-job training. As far as intercommunication between the most senior master-builder and his many assistants is concerned, the use of elementary sketches and wooden stencils may well be considered an effective instrument to overcome problems of language, cultural background and level of craftsmanship that may find its origin in Bhutan's geo- and multi-ethnic situation. In practice, the master-builder provides the artisans with small sticks (e.g. bamboo) on which the elementary units of measurement of his own canon are marked as a measure of standardization. In addition to this aspect of scaling, full-scale samples of the most important, innovative and complex timber components to be reproduced are being prepared by himself or under his immediate guidance. The master-builder not only provides his guidance to the carpenters (*shingzow*) and woodcarvers but even so to all other skilled craftsmen and to the unskilled labour force. It is this peculiar practice of 'scaling', i.e. making usage of the anthropometric scale of the master-builder and not the patron or owner, that ritually interrelates all craftsmen from Bhutan's most senior master-builder (*zorig lapon* or *zorig chichop*) to the historical Banglingpa and mythical Vishwakarma in one direction and from the master-builder to the lowest apprentice to the other. It is this ritualized relationship that may explain why in each village, the head-carpenter is treated with such dignity and respect.

Secondly, if we acknowledge the advantage of 'proportional' building which involves a minimum of scaling for a maximum of applications, the high standard of Bhutan's artisanal building technology by itself may lay at the basis of a smooth cultural transfer of innovative architectural ideas on the one hand, and of a building industry that facilitates or encourages processes of cultural transfer through the practice of demolition and renewal on the other. Not belittling the craftsmanship of Bhutan's stone dressers and *pisé*-builders, it is the

high standard of Bhutan's prefabricated timber architecture that plays an important role to express in material culture Bhutan's sense of national identity and quest for cultural uniqueness. As illustrated in the diachronic reconstruction of the built history of Punakha Dzong, the elaboration of the projecting timber oriels (*rabsal*) to the proportion of entire facades forms a key factor in this process of politico-cultural differentiation and explicitation.

Thirdly, this ingenious system of nailless timber architecture not only allows the carpenters to process, prefabricate and test virtually every building component at ground level but provides room for the construction of very high quality buildings, with the help of only a few skilled experts and a maximum deployment of unskilled labour. The fact that each building component can be dis-assembled into numbered timber profiles, virtually everyone, from women to children, can be involved to transport various sets to their final position.²⁴ Until recently, the unskilled labour for the reconstruction's of *dzong*'s was recruited under the *gungda ula* system (*gung* means family), a form of taxation that requires the participation of one person per family per year for a period of two weeks in works of national importance. In the specific case of *dzong*'s, this labour service is called *dzongsey ula*. It is a labour contribution, with pay, by each household for the seasonal maintenance of *dzong*'s and the periodic maintenance of important temples (*lhakhangs*). In order to reduce dependency of imported labour, the general system of *gungda ula* was introduced in 1988 to meet the increasing demand for labour to implement development projects.²⁵ At present, this labour system of taxation is discontinued from 1996 onwards.²⁶ Since such forms of labour service may well contribute to a sense of national identity and cultural belonging, it is an open question whether such considerations have been taken into account when it was decided to discontinue this system.

The Dzong as Cultural Centre

Considering the extreme physical conditions of Bhutan, we can ask ourselves how it is possible that remarkable architectural innovations are so rapidly disseminated and adopted throughout the country. So

far, we have dealt with the *dzong* as permanent construction site and vocational training centre for village artisans. After the completion of the reconstruction works on *dzong*'s or other important historical buildings and monuments, the professionally enriched and spiritually enlightened village artisans stand for the introduction and dissemination of these challenging new concepts and expressions at village and house level. If we know that the wood work of a traditional farmhouse is renewed approximately every twenty years or at least once per generation, it is acceptable to believe that new architectural trends, pre-set by the *dzongs*, are relatively quickly adopted by the villagers, even for those dwelling at remote places.

By bringing the aspect of unskilled labour service onto the foreground, it is suggested that the villagers themselves are relatively update with the new architectural trends. This is demonstrated by the fact that until recently, they literally participated in this process on a voluntary or rotative basis (*dzongsey ula*). However, the underlying hypothesis here is that the architectural synthesis of the concept of the *dzong*, embodying the highest Buddhist ideas and values, functions as a cultural magnet and a didactic source for spatio-cultural inspiration and architectural fine-tuning. As a governmental institution, the *dzong* can be considered as the socio-political and cultural heart of a district (*dzongkhag*). Indeed, everyone depends for his/her personal and public matters on the *dzong* of his/her district, and is therefore familiar with its actualized architectural configuration. At the annual festivals of *tshechu* and *dromchoe*, the *dzong* provides the perfect scenery to evoke a strong sense of cultural belonging. Virtually everybody gathers at the *dzong* to commemorate the 'Great Deeds' of Guru Rinpoche and to honour the main protective deities.²⁷ It is at such collectively staged rituals that the *dzong* unveils its role as cultural centre in the true sense of the word: a locus and vehicle of cultural exchange, renewal and change. By incorporating the innovations to the private house, each individual hereby endorses the cultural change, promoted by the authorities and materialised by the renovated *dzong*.

From Dzong to Urban Villa: the Dzong as Spatial Mediator Between Tradition and Modernization

So far, we have geared all attention to the role of the *dzong* as setter of trends in a relatively untainted traditional spatio-cultural constellation. With Bhutan's increasing exposure to external and modernized concepts of ordered space and built form, it might be of relevance to investigate whether in modernizing Bhutan, there is still a role left for the *dzong* as propelling monument. For this purpose, a close look will be taken at the re-erected capital *dzong* at Thimphu. Coinciding with 1. the opening of the first section of Bhutan's arterial motor road (Phuntsholing - Thimphu) in the mid 1960s; 2. the import of new building materials; and 3. the introduction hitherto unpractised definitions of space and built form, the reconstruction of Tashichho dzong can be designated as one of the first substantial built signs to mark Bhutan's move towards planned development, modernization and urbanization.

Although many of the *dzong*'s morpho-typological innovations and elaboration's can be ascribed to innumerable smaller interventions covering several generations of patronship, the major reconstruction of Tashichho dzong in the 1960s, represents a more radical act of demolition and re-erection. Rather than operating at a more structural level of the urban settlement tissue, the interrelation between the innovated *dzong* and the city should be situated at a more morpho-typological level. As potential propelling monument, the valley-based Tashichho dzong does not physically take part in the structuring of the urban tissue. Although the main linear shopping line of the city centre (Norzin Lam) may function as an occasional ceremonial axis towards the *dzong*, the monument manifests itself as a solitary landmark and self-contained architectural concept. From this perspective, there may well be some ground to believe that the *dzong* may be viewed as pathological monument rather than one that challenges, mediates or operates as a mediating and generating force from within the capital's urban settlement tissue.²⁸

However, despite its physical exclusion from the city, the Tashichho dzong seems to exercise substantial influence upon the morpho-

typological development of the urban settlement tissue. Considering Bhutan's patterns of clustered settlement on the one hand, and the absence of an urban tradition until the 1960s on the other, the new Tashichho dzong, for the Bhutanese, undoubtedly not only represented the best what this dwelling culture could achieve at this particular time juncture (1960s), the term Tashichho dzong literally stood for 'national identity' and 'tradition' itself. In this regard there is every reason to believe that for the Bhutanese the most effective way to cope with the rapid and conflicting import of westernized urban concepts of ordered space and built form was to impose an emphasized facade control, in the form of a design and building code, upon the city's settlement tissue. Although some typical characteristics of Bhutan's traditional architecture such as the rammed earth technology and the abundant use of timber were increasingly discouraged within the boundaries of the township for various reasons²⁹, the new capital *dzong* of Thimphu played its role as 'the' setter of trends, more than ever before.

Within the context of the small urban centres that are emerging in all of the nation's 20 administrative districts, distinct features of the *dzong*'s 'introvert' courtyard architecture, exemplified by the elaborate timber galleries, were reversed and rethought of as a local version of 'arcade' shopping lines, particularly to give shape to the newly introduced concept of the public square or 'plaza'. Another attempt to Bhutanize all sorts of imported concepts of built form concerns the urban villa, bungalow, duplex and apartment estates and all other public building types.

Making extensive use of new building materials and technologies to 'copy' typical features and fragments of Tashichho dzong's elaborate timber architecture, a building industry emerged that, however, no longer organized the cultural transfer following the traditional channels of authority and expertise, exemplified by the trinity of patron, ritual master and master-builder. Following the massive deployment of an imported skilled and unskilled labour force to build the city, the traditional cultural transfer from *dzong* to farmhouse, and from master-builder to carpenter was literally being excluded from Bhutan's urban context. Just like in India, 'the rise and dominance of

the Bhutanese version of India's Public Works Department (PWD) as premier agency undertaking public works (and in Bhutan the private urban sector as well), the marginalization of the indigenous building practices was inevitable' to paraphrase the Indian heritage conservation expert A.G. Krishna Menon³⁰. He explains:

“This process of marginalization was primarily because the PWD construction specification and schedule of construction costs became the building ‘bible’ for all works in the formal sector of society. The ‘bible’ ignored traditional building practices altogether, and they were relegated to the informal or unofficial sector of society.”

It should be mentioned here that Bhutan's Public Works Department is entirely structured in accordance with its Indian counterpart which not only provided the know-how but equally the staff to draw and set out the first lines for Bhutan's first urban planning and urban architecture. Merely acquainted with the identity and dynamics of Bhutan's uncharted dwelling culture, it is not surprising that the cultural transfer from *dzong* to city was starting to take place at a more superficial and aesthetic level. However, notwithstanding the fragmented and superficial way the cultural transfer from *dzong* to city was taking place, it does not belittle the role of the new Tashichho dzong as frame of reference to mediate conflicting forces that came along with the nation's accelerating process of modernization and urbanization.

It is important to note here that the process of cultural transfer is never a one-way communication. By exercising some influence on the urban tissue, the *dzong* by itself became object of adjustment and modernization. From modern building materials such as corrugated iron roofing to modern infrastructures, the *dzong* is gradually adopting some of the imported architectural and technological know-how. This is not only applicable to Tashichho dzong alone but to all of Bhutan's monumental *dzong*'s and historically important religious buildings. Thus, how traditional and untainted the cultural transfer between the *dzong* and the rural hinterland might have been in the recent past, the *dzong*'s role as setter of trends is of a different order than it used to be

before Bhutan's exposure to new ideas of modernized space and built form.

Conclusion

The cultural matrix investigated in this essay is Bhutan, one of the world's most secluded, hitherto well-preserved and uncharted 'living' architectural traditions. Bhutan is a small independent Himalayan Buddhist kingdom where one can still observe a blend of centuries-old (rural) architectural traditions, and the first attempts to introduce and structure urban space as the materialization of a 'modern' (urban) condition. Bhutan is at present confronted with the consequences of a modernization process that is, slowly but rather effectively, affecting its built environment. This modernization is a recent phenomenon, resulting from the opening up of the country that started in the sixties and seventies. Up till now its effects are most of all visible in the urban area of the capital Thimphu. This urban valley is urbanizing at a rather fast pace, giving rise to all kinds of interactions between modernity and tradition. Throughout these interactions, however, Bhutanese people are very concerned about preserving their cultural identity. Tradition for them is a living entity, which they do not wish to give up in favour of imported values or goods. They thus seek for a negotiation between tradition and modernity that would allow them to preserve their identity while at the same time taking advantage of some selected aspects of modernization. This process of negotiation is facilitated by the fact that Bhutanese tradition is not a fossilized body of habits and conventions, but is rather based on an outlook that permits and even stimulates change. This dynamic feature of Bhutanese tradition is particularly obvious in its building and dwelling culture in general and the way its monumental state-religious architecture is dealt with in particular. It, presents us with remarkable evidence of the intimate relation between culture and architecture.

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Notes

¹ Mansell 1990:93.

² I owe this line of thinking to Edward Shills (1981:63-71) when he deals with the 'endurance of past objects' in the light of his exploration of the concept of tradition.

³ Shills 1981:69.

⁴ The term 'theriomorphic' means: Thought of as having the form of a beast. Used of a deity, (Greek: *thêrion*, diminutive of *thêr*, wild beast). Source: *The American Heritage Dictionary of the English Language*, 1992. According to the Oxford Dictionary, the term means: "having an animal form".

⁵ As foretold by Guru Rinpoche, the prediction is formulated as follows: "On the top of a mountain which looks like the nose of a lying elephant, a boy named Namgyel will come. His meditation will be stable and as firm as a thunderbolt. His supernatural powers will appear all the time. He will always be talking with me and whoever meets him will be reborn in the paradise of *Dewachen*" (RGOB 1988:116).

⁶ The story says that in the 14th century an Indian saint called Ngagi Rinchen came to Bhutan to search for the spirit of his deceased mother. It was believed that her spirit was reborn in the hell which was symbolised as a rock at a place called Jamling valley. In short, through visions he found the very place and used his supranational power to free his mother's spirit. He had a dream in

which he heard the prophecy of Guru Rinpoche. He then went down the valley to look for the prophesied tip of a mountain which looks like the 'trunk of a lying elephant'. He blessed and pacified the land and in 1328 or 1374, - depending on the sources-, he built a small temple which is referred to as *Dzongchung*.

⁷ The Rangjung Karsapani is the self-created image of Avalokiteshvara (*Cehnrezig*) from the first vertebra of Tsangpa Gyare, the founder of the Drukpa School in Tibet at the time of his cremation. See Pommaret (1990:176); *Dasho* Rigzin Dorji in Kuensel, dtd.26.02.94; and Aris (1994c:27). This bone relic (*rus*) was the issue of multiple Tibetan threats and military attacks.

⁸ At present, the *Je Khenpo* or the Head Abbot of Bhutan and his state clergy still hold to this tradition of seasonal migration.

⁹ In 1981, a Tibetan style *chörten* was built, patronized by the Queen mother, H.R.H. Ashi Kesang.

¹⁰ According to Pommaret (1990:176) the central tower (*utse*) was rebuilt at the time of Minjur Tenpa (r.1667-80).

¹¹ Pommaret 1990:178.

¹² In its 600-year history, the *Dzongchung* withstood its own series of calamities. In 1994, however, the Punakha *Jhou*, a sacred statue of Lord Buddha, -installed by the *Dzongchung*'s founder Ngagi Rinchen to protect the *dzong* that would be constructed following Guru Rinpoche's prophecy-, miraculously survived the fatal destruction of the temple structure in which it was accommodated. Source: Kuensel, dtd. 31.12.94; dtd.28.09.96 and 2.11.96.

¹³ The following facts illustrate this: 1. the *dzong*, and more precisely the Machen *Lhakhang*, a temple located in the third courtyard, contains the three most sacred relics of the nation, namely the *Rangjung Kharsapani*; the *machen* (preserved body) of the *Zhabdrung* Ngawang Namgyel (1594-1651); and the *kudung* (catafalque) of the great treasure discoverer Tertön Pema Lingpa; 2. The *dzong* is 'the place' where on 17 December 1907, the former Tongsa *Penlop* Ugyen Wangchuck was enthroned as the first hereditary king

of Bhutan. It is here that the Royal Wedding of the present King, Jigme Singye Wangchuck and Their Majesties the Queens was celebrated on October 31, 1988, a historical event that brought the lineage of the ruling monarch closer to the lineage of the *Zhabdrung*; 3. Punakha Dzong is also the ritual place where the retirement ceremony and investiture ritual of Bhutan's succeeding head-abbots (*Je Khenpo*) are performed; and 4. Since the 2nd of March, 1993, the *dzong* of Punakha moreover accommodates the largest religious banner (*Thongdroel*) of the nation, depicting the *Zhabdrung* Ngawang Namgyel (25mx28m).

¹⁴ It is difficult to assess in how many works of reconstruction the King and members of the royal family were or are involved. Advised by high *lama*-s such as the Late Dilgo Khyentse Rinpoche and the highest skilled master-builders (*Zorig Lapon*) such as *Dasho* Khandu, members of the royal family sponsor multiple renovation and reconstruction works at *dzong*-s, *lhakhang*-s,...These acts of merit are not restricted to the geographical borders of Bhutan (Bodhgaya in India, Gangtok in Sikkim-India,...) and transcend the devotion to one religion. (e.g. commissioning of Hindu statues, taking part in 'Tikka' ceremonies,...)

¹⁵ The *Kudung chörten* of enlightenment is a five metre high structure made of 'sandal' wood accommodating Bhutan's three most sacred relics, i.e. the *Rangjung Karsapani*, the mortal remains of the *Zhabdrung* Ngawang Namgyal and those of the great treasure discoverer *Terton* Pema Lingpa.

¹⁶ Rossi 1985:59-60.

¹⁷ The term *zorig* literally means art/artist; *lapon* means master. The title *chichop* means 'the one who directs, masters'. The *Zorig Lapon* (by now retired) of the present king who has initiated me in the skill of traditional architecture, is *Dasho* Kandro, who was involved in the reconstruction works at Tashichoedzong (as an apprentice of the *zorig-chichop*), Kurje, Punakha Dzong and at a later stage in the modernized construction of the SAARC Conference Centre, opposite the Tashichoedzong. The title of *zorig chichop drep* (*Drep* means retired) is the highest rank ever given to a certain character, Parpa Oeser, who is commended for the reconstruction of the Tashichoedzong in the mid 1960s.

¹⁸ Imaeda 1982:12.

¹⁹ Lacking the reference in Das (1974), Michael Aris was kind to copy it for me and complement it with a local source, available to him, which for the occasion of this dissertation was transliterated and translated: 'Slob-dpon Nagmdog, '*Brug dkar-po/brugrgyal-khab-kyi chos-srid ngas-stangs* (Tharpaling, 1986:239-40). Source: Personal communication with Aris by fax, dtd. 12.10.98.

²⁰ As for the concepts of "emanational beings", in this case an "emanational craftsman" pronounced *trülpe zowo*, Aris recommends further fieldwork. The application of this epithet to Balingpa (pronounced in *Dzongkha* "Balip", literally "The Man of Baling"), Aris argues that it is to taken more as high eulogy rather than as an assertion that he was really an 'emanation' of the Buddha.

²¹ RGOB 1988:117-8.

²² From then onwards the story matches with the one, accounted by Imaeda, except that here it is specifically mentioned that the model of the portable shrine equally served as model for the construction of Punakha Dzong.

²³ This may provide us with some indication of this presumably advanced play of 'do-thinking' that might explain some of the 'last-minute' alterations that were made in the course of rebuilding the Machen Lhakhang and *Kunre* at Punakha Dzong. That this interactive play of 'do-thinking' did not always take place at such peaceful level demonstrates the heavy price the master-builder of the Palace at Leh in Ladakh had to pay for his unequalled mastership.

²⁴ Organized as a system of mutual exchange of labour in village communities, this construction method substantially brings down the cost factor since a minimum of cash flow is required.

²⁵ Kuensel dtd. 23.12.95.

²⁶ According to an article in Bhutan's National weekly (23.12.95), the system was first organized in 1962 called *Druk Dom*. each *Druk Dom* was a grouping of six 'able-bodied' persons who contributed a month of labour each on rotation basis. This worked out to two months of labour contribution a year by one person. Therefore, in a family of six persons, one member would be

working throughout the year according to the same article. To double the labour force for increasing development works in 1963, the system was replaced by *Sum Dom* (*sum* means three). Other similar systems concerned the *Chuni Dom* (12 member grouping) in 1968, the *Zhabto Lemi* which aimed at promoting voluntary labour at village level and finally the *gungda ula* in 1988.

²⁷ For an introduction to Bhutanese festivals, refer to Pommaret (1990:102-3).

²⁸ Indeed, Rossi's examples of 'propelling' monuments concern amphitheatres that form an integral part of the historical urban centres of Arles and Nîmes in France. In the course of their built history, their specific layout, form generated peculiar definitions of space by which functions were reversed and 'a theater became a city' to say it with Rossi (1985:88).

²⁹ It is worth noting that, within the town centre, the abundant use of timber is mainly discouraged in order to minimize the danger of fire hazard and the economizing out of ecological concerns. For reasons of space use (wall thickness of approx. 70cm) and the reluctance of insurance agencies (e.g. Royal Insurance corporation of Bhutan -RICB) to grant mortgage loans to builders of rammed earth constructions within the township, the 'pisé' building practice became a practice associated with Bhutan's rural dwelling culture only.

³⁰ Menon 1994:40.