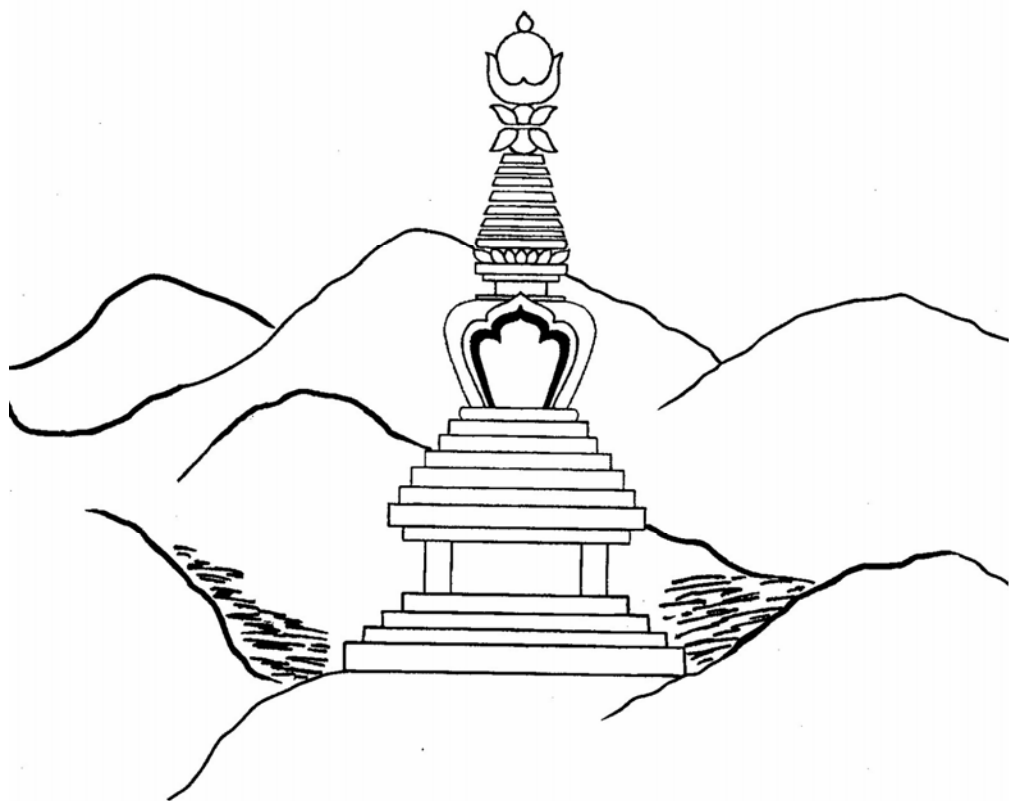


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EDITORIAL INTRODUCTION

ANNA BALIKCI-DENJONGPA
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Namgyal Institute of Tibetology

Part I: *Science and Buddhism*

In December 2010, His Holiness the 14th Dalai Lama visited Sikkim and presided over the opening of an international conference on *Science, Spirituality and Education* (20-23 December 2010). The conference, organised by the Namgyal Institute of Tibetology under the auspices of the Government of Sikkim, laid the foundations for Sikkim's efforts to formally introduce concepts of moral ethics in its school curriculum. It provided a forum for scientists, Buddhist scholars, educators and representatives from local schools and government to explore and begin to understand the brain and its plasticity, the mind and its possible transformation, the art and science of meditation together with the importance of social emotional learning and moral ethics in the field of education. The conference was followed by a workshop on how the presented findings could best be implemented in order to bring about positive changes in the modern education system.

As stated in a press release: "The inauguration of the conference by His Holiness is apt because he has always evinced a keen interest in science, and drawing from his advanced understanding of theosophical matters, often commented that science and spiritualism are not contradictory to each other and could in fact collaborate to explain things more completely. He is a leading proponent of Mind & Life Sciences and has consistently reiterated that complete education requires a sound rooting of students in spiritualism and the concepts of morality and ethics... In fact, one of the reasons which convinced His Holiness to make time to visit Sikkim for the Conference was the State Government's interest to implement the findings of the Conference to schools in Sikkim."

Following the conference, the Department of Human Resource Development, Govt of Sikkim, took steps to start training teachers in order to begin implementation with a pilot project in selected schools.

Here at the Institute, through the publication of two issues of the *Bulletin of Tibetology*, we are making some of the presentations

available, with this present issue focusing on science and Buddhism and an upcoming issue more specifically on education.

Prof. Richard J. Davidson and Dr B. Alan Wallace provided the conference's two keynote addresses, the first from a scientific perspective and the second from a spiritual one. This present issue opens with Prof. Davidson's contribution: 'Education, Contemplative Practice and Neuroscience: Towards a Synthesis'. Prof. Davidson very clearly presents how the brain is plastic and can change in response to experience and in response to training; how it has been empirically verified that social emotional learning and contemplative training can produce beneficial changes in the brain, improving skills of attention, emotion regulation, and social adaptation; and how these alterations lay the foundation for all future learning, emotion regulation and social functioning, skills which are recognised by research to be more important for life success than traditional academic and cognitive ones.

In the second article, Prof. Jay Garfield offers a critical view of the collaborative effort between Buddhist practitioners and scientists, or what Cognitive Science and Buddhist theory of mind can each offer to further our understanding of deep phenomenology. He argues that while Buddhism has a great deal to offer, Cognitive Science with its scientific methods of enquiry may have more to contribute than what is often presumed, stressing the importance of maintaining careful empirical investigating methods in order to achieve intellectual honesty. While Buddhist meditators can provide careful phenomenological reflection and introspection, such reflection according to Garfield is insufficient to yield deep results. Relying solely on the mind as an investigating tool may not be sufficient to unravel its deepest mysteries: "introspective awareness of our cognitive processes, no matter how sophisticated, is as constructed, and hence as fallible as any other perception". On the other hand, the author argues that Buddhism has a great deal to offer Cognitive Science in the field of moral psychology, stating that "there is little either in ethical theory or in the psychology of ethical thought and action that approaches Buddhist ideas, particularly as articulated by such philosophers as Śāntideva, in sophistication".

Finally, Dr Laurent Nottale offers a refreshing article on some possible analogies between science and Buddhism from the perspective of an astrophysicist. Dr Nottale first draws a parallel and elaborates on science's fundamental principle of relativity, which states that no physical properties have any absolute existence, and Buddhism's fundamental principle of emptiness, or the absence of all things'

intrinsic existence. The second analogy concerns Buddhism's and science's methods, which are both presented as being intuitive. While it is well known that Buddhist methods involve mind training and meditation (*shamata*: calm abiding through concentration without distraction, balancing attention and relaxation; and *vipasyana*: penetrating vision), it is not so well known that great scientific discoveries are generally made intuitively, the truth appearing as a sudden realisation which then requires to be demonstrated scientifically.

Part II: Reports from the Field: The Earthquake, the Monasteries and the Conservation of our Heritage

On 18 September 2011, Sikkim was shaken by a damaging earthquake measuring 6.8 on the Richter scale. Once the dust had settled and the immediate relief operation was over, it appeared that the monasteries were among the structures that had been the most severely affected.

Some time before the earthquake struck, Dr André Alexander had been invited to Sikkim by Princess Hope Leezum in order to initiate a conservation project at the Tsuglakhang, which was carried out in 2011. André's presence and activities in Sikkim created awareness about conservation, and together with his new Sikkimese friends, he was planning to start work in the spring of 2012 on a number of structures in need of restoration, some of which were more than three centuries old. But fate had it otherwise and André passed away in his native Berlin in January this year. However brief his stay in Sikkim had been, André's presence acted as a catalyst for the emergence of a new conservation movement. In honour of his contribution and with the hope that the inspiration he provided will help save what remains of Sikkim's architectural heritage, we put together this section on the monasteries followed by André's obituary, contributed by his friend and colleague Prof. Per Sørensen, and a message by Princess Hope Leezum.

In the opening report, Chetan Raj Shrestha, a Sikkimese architect specialising in heritage conservation, presents the damages caused by the earthquake to the monasteries, *mani lhakhangs*, *chortens* and *mendongs* throughout Sikkim's four districts. The author first looks into the evolution of the Sikkimese *gonpa*'s design, the various styles of building technology, and the present trend towards concrete. Other factors which have affected the monasteries are briefly addressed, such as the closure of the border with Tibet in 1962 followed by a more recent change of patronage.

The second report by Gary Chopel, also a local architect with a keen interest in the Sikkimese *gonpa* and its iconography, takes us through the *gonpa*'s three main typologies that have succeeded themselves historically.

In the third report, Kerry Little relates how the monastery of Hee Gyathang in the Lepcha reserve of Dzongu, North Sikkim, narrowly escaped demolishing after the earthquake thanks to the efforts of a few villagers who fought for its conservation. Built of stones and mud mortar by their ancestors in the 1930s, they argued "that a rich history of community and cultural engagement would be lost for the Hee Gyathang monastery has a unique history: It was built entirely by Lepchas and the cost contributed to by every village in Dzongu."

With Yeshe Wongchuk's article, we turn to the history, content and management of the *mani lhakhang* of Chumpung village, together with the description of a very important practice present in every Sikkimese Buddhist village: the fasting ritual of the grandmothers of the temple. The author describes the rituals held by the grandmothers on the 8th, 15th, and 30th of every month followed by the *mani lhakhang*'s annual rituals which then come to involve the whole community.

This section concludes with an article by Felicity Shaw on the impressive ongoing archival and preservation program at the National Library & Archives of Bhutan, which is responsible for the collecting, conserving and managing of Bhutan's documentary heritage. In 1997, the Library entered into a long-term twinning project with the Royal Library of Denmark which later came to include an archival program. A purpose-built archives building was inaugurated, staff were trained, and the collecting, digitizing, archiving and conservation of Bhutan's documentary heritage, which consists primarily of Buddhist manuscripts, is now well under way. Bhutan's effort and success in the field are an inspiring example for other Himalayan states aspiring to preserve their cultural heritage.

The issue is completed with a book review of Suresh Kumar Gurung's *Sikkim. Ethnicity and Political Dynamics. A Triadic Perspective* (2011) by Mélanie Vandenhelsken and the obituaries of Himalayan scholars André Alexander and Richard Keith Sprigg.

In conclusion, I would like to thank all those who, in various ways, helped me finalise this issue of the Bulletin: Felicity Shaw, Susannah Deane, Alex McKay and Saul Mullard.

EDUCATION, CONTEMPLATIVE PRACTICE AND
NEUROSCIENCE: TOWARD A SYNTHESIS

RICHARD J. DAVIDSON

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It is an honour for me to be here, I would like to thank the organisers and the honourable delegates and especially His Holiness for the inspiration to continue this work and to foster the dialogue that this meeting very much represents between the contemplative traditions and modern Western science.

What I would like to do in the short time we have today is to give a little bit of background on the topic of neuroplasticity which we've heard a little bit about, to talk about some specific areas of the brain such as the prefrontal cortex, which I will say more about in a few minutes which is important for the regulation of the quality of attention and emotions. I will also talk about a very critical issue for education and development which is adolescence, a time of life where individuals are particularly vulnerable but also a time of great opportunity. And finally, I will talk about the capacity to change our brain through secular practices that can also facilitate the development of qualities of the sort that Professor Wallace described; qualities like happiness and equanimity. And the key message of my presentation is that we can change our brain by training the mind.

So let me say a few words about this topic of neuroplasticity and indicate why it is relevant for social and emotional learning. The environment, particularly the emotional environment early in life, produces changes in the brain. These changes are changes involving both the structure of the brain as well as how the brain functions. The brains of our children are constantly being shaped by the environments in which they reside. Some of those environments are nurturing, they are positive environments, some of those environments are destructive, they are negative environments. But those environments are always shaping the brain, and one of the key messages of this presentation is that we can take more responsibility for the brains of our children by cultivating intentionally positive qualities of the mind.

Now there are sensitive periods in development and I would like to give you one example of a sensitive period which is a period for learning a second language. Research shows that in the early years of

life, the capacity to learn a second language is tremendously enhanced and this capacity declines as life unfolds. And so this indicates that early in life there may be special sensitive periods for learning particular types of skills.

Research indicates that social and emotional skills are more important for life success than traditional academic and cognitive skills. And moreover, that the sensitive period for cultivating these skills is more prolonged than for a skill like learning a second language. The circuits in the brain that underlie the capacity to learn social and emotional skills continue to develop well into adolescence. Research indicates that these circuits show plasticity through the period of adolescence. And one of the key regions that exhibits this prolonged development and that undergoes plastic changes is a region near the front part of the brain that we call the prefrontal cortex. There are sectors in this part of the brain that have shown the most development over the course of evolution compared with other brain regions.

There are ways that we can probe in children the functioning and the structure of the prefrontal cortex. We can now very safely test children to measure their brain function and structure. We can also use electrodes that we place on the head, with children, very easily to measure the electrical changes in the brain and through this method make inferences about what is going on inside. Research using these methods illustrates that the utilisation of the prefrontal cortex increases as we get older from young children to adolescents and then to adults.

Now why is that adolescence is so important? There is a very important paradox about adolescence. Adolescence is physically the healthiest period of the lifespan. Prior to the adult declines, beyond the frailties of infancy and childhood. We can see in adolescence improvements in the strength, in the speed, in the reaction time of different kinds of human abilities. There are improvements that we see in immune functions during adolescence. During adolescence there is also an increased resistance to cold, to heat, to hunger, dehydration, and most other forms of injury. In other words, this is a very healthy time of our lives. However, the overall morbidity and mortality rates increase between 200 and 300 percent from childhood to late adolescence in western countries today. It's really quite astounding.

Data from the United States that have recently been made available illustrate that in the period from 15 to 24 years of age there is a 300% increase in death among adolescents compared to the age period that is 10 years earlier. 300% increase in death! And this is all attributed to choices that these individuals make. It's due to drugs, it's due to drunk

driving, and other types of adolescence specific problems. And also due to suicide which tremendously increases during this period. So this is really a very challenging paradox, with adolescence being a time in life when physically children are the most healthy but they show all this tremendous increase in mortality that is due to poor behavioural choices.

Now the age in which puberty occurs is consistently growing younger and younger over the last period of time. In the most recent comprehensive data set available, if you look roughly over the last 100 or 150 years, you see that puberty is around age 15 or 16 in 1860 and has gone down to below age 13 in many countries in 1960. And if you look at the most recent data for the last 50 years, it is declining even further.

Now brain maturation has not changed. The prefrontal cortex is not fully mature until at least age 25 years and this timing has likely not changed much in the past 1000 years. So puberty is getting shorter and shorter, and the prefrontal cortex continues to develop at its normal rate and so this is leading to a longer period, the longest period yet in history, of adolescence where puberty has already occurred but the prefrontal cortex has yet to fully mature.

Now in our laboratory as well as in scientific laboratories now throughout the world there are increasingly refined methods for examining the connections between the prefrontal cortex and other parts of the brain. We can use what is called diffusion tensor imaging to visualize a very important pathway that goes from the prefrontal cortex to parts of the brain that we call subcortical that are especially important in the control of emotions. And this pathway is called the uncinate fasciculus. And it turns out, that in recent researches, it's been found that this pathway which we believe is critical for the regulation of emotions and also in the regulation of all kinds of behaviour in children, shows the strongest age-related changes of any pathway that has been examined in the brain.

So the question we are left with is: Can we teach our children to better regulate their negative emotions, cultivate more positive social skills, and better focus their attention? And the answer is, I believe, yes. And this is where the field of social emotional learning plays such an important role. Social emotional learning is said to facilitate five important competencies that we can see developing in children. One is self awareness. A second is social awareness; the awareness of others around us. The third is self-management; that is managing your own behaviour. A fourth is relationship skills; learning how to facilitate

positive interpersonal relationships. And the fifth is responsible decision making.

Social emotional learning (SEL) programs have been found to change behaviour and also to improve academic performance. In a recent meta-analysis that was done on 207 studies that involved more than 288,000 students from around the United States, this study found that these programs do improve social and emotional skills, children develop more positive attitudes for themselves, for others and towards school, there are improvements in social and class room behaviour that occur, there are decreases in classroom misbehaviour and in aggression, there are decreases in emotional distress, such as stress and depression, and finally, there are actually improvements in standardised test scores and in school grades that are produced by these methods that focus exclusively on social and emotional qualities.

Now we can ask whether interventions can be based on the contemplative traditions more directly that can facilitate some of the changes that we have observed with social and emotional learning. Recent evidence indicates that these contemplative practices when taught in a secular way, can be taught to children and adolescents, they can improve attention and emotion regulation skills, and they may help children and adolescents to make better choices since these practices can help children better regulate their impulses.

I would like to give two illustrations, one is in the area of attention, and this is a quote from a great American psychologist William James that was written in 1890. William James said “the faculty of voluntary bringing back a wandering attention, over and over again, is the very root of judgement, character and will. No one is *compos sui* if he have it not. And education which should improve this faculty would be *the education par excellence*. But it is easier to define this ideal than to give practical directions for bringing it about.” If William James had more exposure to contemplative traditions, I think he would have seen that these represent ideal training grounds for educating attention.

I would like to illustrate this with selective attention where selective attention is a feature of attention where a person might choose to focus on certain features of his or her environment and not other features, to develop a concentration. Children with attention deficit hyperactivity disorder show more variability in their response times during a selective attention task. In other words, they are not very focused and they are not predictable from one moment to the next, their attention wanders and they show variable response times. Their capacity to respond to events in the environment is scattered and because of that

they show variation in their response times. So the question is whether training in mindfulness meditation can lead to more focused attention and more consistency in response times. We tested this over the course of three months of practice and what we reported recently is that the variability of responding decreases over the course of three months of practice. This indicates that meditation is improving the consistency of responding which is one of the hallmark problems of children with attention deficit hyperactivity disorder leading to the possibility that these practices can be very helpful in a very practical way.

We also ask the question whether compassion can be trained in teen-agers. We recently completed a study examining the impact of just two weeks of training in compassion; individuals were practicing for 30 minutes a day; the elements of the compassion training included contemplating and visualising the suffering and then wishing the freedom from that suffering for different classes of people, beginning with a loved one, then they moved on to themselves, a stranger, a difficult person, and then all beings. The phrase that is most often used is “May you be free of suffering, may you experience joy and ease.” Participants are instructed to notice visceral sensations particularly around the area of the heart when they engage in this practice, and participants are instructed to feel the compassion emotionally and not simply repeat the phrases cognitively. And one of the ways we probe the impact of compassion training is by measuring their altruistic behaviour on a task that economists and psychologists both use to assess this quality. And what we see, is that after just two weeks of compassion training, participants, teenagers, can actually show enhanced altruistic behaviour, which is really pretty remarkable after such a short period of practice. And what is even more profound, is that in this study, we measured their brain function before and after just two weeks, and what we see is neuroplastic changes that are induced after just two weeks of practice. One of the areas that is changed is the amygdala, it’s an area that is frequently linked to stress, and we see the amygdala goes down in activity over the course of two weeks. The amount that it declined predicts how altruistic participants are on our measure of altruistic behaviour. And the control group shows changes that are non significant.

A second area that changes is the prefrontal cortex. Activity in this area is enhanced with compassion training, and the amount that it is enhanced also is associated with their altruistic behaviour. And again, we see no significant changes in a comparison group.

To summarise and conclude,

- The brain is plastic. Modern evidence indicates that it is built to change in response to experience and in response to training.
- I have also shown that adolescence is a time of both risk but is also a time of opportunity. The age at which puberty begins is earlier and thus the maturation of the prefrontal cortex is lagging further and further behind pubertal development.
- Social emotional learning and contemplative training are both empirically verified strategies that can improve skills of attention, emotion regulation, and social adaptation.
- Social emotional learning and contemplative training likely produce beneficial changes in the brain.
- Education literally shapes our child's brain and likely produces alterations that lay the foundation for all future learning, emotion regulation and social functioning.
- Qualities such as patience, calmness, compassion, cooperation, and kindness are all best regarded as the product of skills that can be enhanced through training.
- Research is critically needed to document the impact of contemplative training, particularly in children and adolescents, and also social emotional learning and reveal its impacts on the brain.

I want to end by expressing a very deep bow of gratitude to the many people in my lab who perform all this work and especially to Your Holiness for your inspiration and support through many years of collaboration together.

I would like to end now with one of my favourite quotes from the very famous scientist Albert Einstein. And this is something Einstein wrote to a friend of his for a daughter. It was written in 1921, and Einstein said:

A human being is part of a whole, called by us the Universe, a part limited in time and space. He experiences himself, his thoughts and feelings, as something separated from the rest, a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest us. Our task must be to free ourselves from this prison by widening our circles of compassion to embrace all living creatures and the whole of nature in its beauty.

Thank you very much

ASK NOT WHAT BUDDHISM CAN DO
FOR COGNITIVE SCIENCE;*
ASK WHAT COGNITIVE SCIENCE CAN DO FOR BUDDHISM

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Enthusiasts for the scientific character of Buddhism wax eloquent regarding the insights that the Buddhist tradition can deliver to cognitive science, and the contributions that meditative technique can make to understanding cognitive and affective processes. To be sure, there are contributions in this direction, though their significance may be overestimated. Less attention is paid to the value of cognitive theory for developing Buddhist insights in the 21st Century, and the role of science in the dissemination of Buddhism in the modern world. I will pay some attention to that value. I conclude with some remarks on the potential value of Buddhist psychology to the development of moral psychology, an area in which Buddhism has a great deal to contribute.

1. *What well-known brain imaging studies of meditators do and do not Show*

Folks in neuroscience and folks in Buddhist Studies get very excited when brain imaging studies show that meditation transforms the brain, and that long-term meditators experience dramatic, long-term transformations in cognitive function and neural activity. (Brefczynski-Lewis *et al.* 2007; Farb *et al.*, 2007; Moore and Malinowski 2009; Tang *et al.* 2007; van den Hurk *et al.* 2010; Zeidan *et al.* 2010) The toys are impressive, and the protagonists photogenic. The results are significant, in the *statistical* sense of that word. (On the other hand, see

* Thanks to Jamie Hubbard and to Robert A.F. Thurman for helpful comments on an earlier draft.

Chiesa and Seretti 2010 for a sober assessment of how little these results tell us given methodological problems rife in the field.) But what is their *real* significance, for cognitive science or for Buddhism? Less than meets the eye.

First, let us ask why people get excited about the discovery that meditation produces regular, stable changes in the activity of the brain. Let's start with the neuroscientists. They are impressed that meditation techniques have neural signatures, and that long-term practice is neurally transformative. Why should they be so impressed? We know that playing the piano has a neural signature, that doing geometry has a neural signature and that imagining oneself playing tennis has a signature. Moreover, we know that acquiring expertise in any domain transforms the brain, increasing connectivity, blood supply and even neuronal density in relevant parts of the brain. That is how cognitive expertise is implemented in biological organisms like us.¹

Meditation is one more class of cognitive activity, and meditative expertise is one more kind of expertise. One should only be surprised to discover that meditation has these consequences if one thought antecedently that it was less cognitively significant, less subject to expert learning than other cognitive activities. And of course that is precisely why so many neuroscientists are impressed. They never took meditation seriously before these studies. To *them*, we might say, these results say something: meditation techniques are real activities, and people can become expert at them. For most of us, however—those of us who have taken meditative expertise seriously as a skill—this is hardly worth writing home about, much less writing an article about.

Why should these results be important to Buddhist scholars and practitioners? We have known for a couple of millennia that mediation has effects, that some people become expert at it, and that they are transformed by meditative practice in fundamental ways. We didn't even need fMRIs to see that. What surprises the neuroscientists therefore should not surprise us. Buddhist scholars seem, beyond a certain smug satisfaction in the recognition by guys in white coats with big machines, to be interested in the fact that what we do *cognitively*

¹ Of course this is not a reason to abandon research in this area; nor is it to deny the value of that research. It is always important and interesting to determine exactly how these cognitive processes are implemented in the brain, and of considerable theoretical and clinical interest to determine what the precise cognitive, affective and neural consequences of particular meditative practices are. But these are matters of empirical detail. There is nothing surprising about the fact that there *are* such consequences and implementations.

shows up *physically*.² The pictures show that the brain does something when the mind does something.

But why should that be a surprise? There are some, to be sure, who might think that there are neither physical causes nor physical effects of cognitive activity. These are Buddhist dualists, who see the mind as a kind of non-physical substance or a continuum of non-physical events, not even implemented in or causally connected to the physical realm. To them, I say, “welcome to the natural world.” But for most of us, who take for granted some kind of supervenience of the mental and the physical, and even for Buddhist dualists who have typically been interactionists (see the twelve links), there is nothing to get excited about. The five skandhas have in fact been regarded as causally interdependent since the dawn of Buddhist philosophy of mind and epistemology, and to have this demonstrated to the saffron-robed by the white-robed should hardly be necessary.

In short, despite all of the glitzy powerpoints and breathless rhetoric (Goleman 1996, 2003; Wallace 2003, 2206, 2008, 2009a, 2009b) about the union of insight and neurobiology, these neuroimaging results are much ado about what we all should have known already. We should have been surprised only if it all came out differently.³ I take all of this to be pretty obvious, even if it is unpopular to say it out loud. I emphasize it only because we hear a lot about how much Buddhism has to teach cognitive science, how the truths of classical Buddhist metaphysics and philosophy of mind are finally being confirmed in the laboratory, and this work is often cited as evidence. But while this literature shows that Buddhism can provide *data* to neuroscience, for instance, regarding the particular regions of the brain involved in, or transformed by meditation, it does not demonstrate that Buddhist

² Much as we also made of the fact that recent research on the psychology and neuroscience of meditation demonstrates considerable neuroplasticity. Once again, less should be made of that. There is plenty of other evidence for substantial neuroplasticity in *Homo sapiens*. Given that we know that the brain is plastic, there is nothing at all surprising about the fact that meditative practice induces change.

³ Indeed, see Perlman et al., (2010) for the possibility that some of it *does* come out differently; mindfulness does *not* reduce the intensity of pain, although it reduces its unpleasantness, *only* as measured by self-reports. And see Khalsa et al. (2008), reporting results from the same laboratory, showing that while experienced meditators consistently *rate* their introspective skills more highly than do non-meditators, they are *no better than controls* at such introspective tasks as reporting heart rate. Curiously, the authors take these findings to show that meditation makes introspection *easier*, because of the *report* of reduced difficulty; a sober assessment would suggest that in fact meditation *impairs* introspective awareness in that meditators report improvement where there is none.

doctrine tells cognitive science *anything*. And that's not surprising either. Buddhist literature has always been kind of thin on anatomy and physiology, and the fMRI scanners, at Nālandā were pretty primitive (at least according to Xuanzang). Let's set that stuff aside then, and ask where the real action might be. I expect that it will lie in the realm of phenomenology and the cognitive science of attention, perception and memory, on the one hand, and in moral psychology on the other.

2. *Surface vs deep phenomenology*

In order to find the real Buddhism-cognitive science interaction, we need to begin with a distinction between two kinds of phenomenology, which I call 'surface' and 'deep' phenomenology (reflecting the similar distinction that commentators such as Zahavi [2008] draw between phenomenology as introspection and phenomenology as transcendental analysis). Phenomenological reflection, even careful, illuminating reflection, and observation by sophisticated, trained observers, is directed in the first instance, almost by definition, at those cognitive states and processes that are accessible to introspection. Indeed, this is often what some philosophers and psychologists mean by 'phenomenology'—the inner world of which we have, at least in psychological principle, conscious awareness, and which we can describe. It is not always easy to introspect the world in a revealing way, of course, and reasonable people disagree about what one finds when one does look within, and especially what it is to look within, but we have a pre-theoretic fix on this inner world and our access to it. The sophisticated articulation of its contours is what I call 'surface phenomenology.'

The term 'surface' here is meant not to disparage the sophistication of such reflection, or of the theories of mental life arising therefrom, but to emphasize that phenomenology in this sense penetrates no further than the *surface* of our cognitive lives, necessarily only to that which can in principle be observed, not to the non-introspectible processes and events that underlie and generate it. This point will be clearer once we contrast surface with deep phenomenology.

Deep phenomenology is the inquiry into the fundamental cognitive, affective and perceptual processes that underlie and which are causally or constitutively responsible for those we find in introspection. This is necessarily an experimental and theoretical enterprise, not an introspective one. It is the enterprise undertaken in the West by such philosophers as Husserl and Heidegger, and by such psychologists as Simons (2000) and Rensink (2000), and in the Buddhist tradition first

in the development of the Abhidharma and later by such philosophers as Śāntarakṣita and Kamalaśīla. To get a feel for the difference, consider your visual field. Right now. Is it coloured or black and white? Uniform or gappy? Simultaneously or successively apprehended? These are questions about the phenomenology of perception. In each case, the answer is not simple: shallow and deep reflection yield very different answers, although each is accurate at its respective level.

Most of us experience our visual field as richly coloured from left to right, top to bottom. That is true, but shallow. We also know that only the central 10% of the field is actually processed in colour: the rest is black and white, with the colour experience filled in by, not delivered to, central processes. Our deep visual phenomenology is hence largely monochrome; the *lebenswelt* of our surface phenomenology is a construction from the *ur-welt* of our deep phenomenology. (See Stiles 1959, Hurvich and Jameson 1960.)

We experience our field as uniform in character. We have already noted that this is not so from a chromatic point of view at the deep level. But things at the deep level are even worse: There are holes at the centre of our visual world where the optic nerve enters the retina. While these holes not introspectible, and hence not a fact of surface phenomenology, they set a task for the visual system in the construction of our introspectible experience. Moreover, our visual field is delivered to us in the form of two slightly different images that must be integrated by the visual sense faculty. At the surface level we see one world; at a deeper level, two. Philosophers and psychologists since Goethe and Schopenhauer have been aware of this phenomenon.

Finally in this parade of now commonplace facts about our visual system at the *surface* level we experience, our visual field as present to us simultaneously from edge to edge. But we know that at a *deeper* level, only small parts of it are being processed from the bottom up at any moment; the arc of our vision is generated not by a photographic transfer of what is in front of us to consciousness, but through a constantly updated stitching together of moments of apprehension of different zones within that field. What is experienced as a still photograph at the surface level is a filmstrip—or a pair of damaged filmstrips—at the deeper level. (See Fisher and Weber 1993 for a good discussion.)⁴

⁴ Of course Buddhist scholars have been aware for millennia that our ordinary perceptual experience is the result of cognitive processes that operate on sensory input to yield experience of a constructed reality that is erroneously taken to be an accurate

Recent research into inattention blindness has only amplified our sense of the disjunction between the deep and surface facts of our phenomenology. Inattention blindness really is *blindness* at the level of surface phenomenology. But we know that a refocusing of attention eliminates that blindness. We don't see (at the introspectible level) the gorilla when we are counting the basketball catches; we do see the gorilla when we look for it. But this also tells us that at a more fundamental level—the deeper, non-introspectible level—information is cognitively available and that it is actively suppressed before reaching surface consciousness. That filtering, like the invisible seams that stitch together our visual field, and like countless other such processes that we only discover through careful experimental paradigms, is essential to the construction of the surface phenomenology we enjoy. (Simons *op. cit.*) There is far more to experience than meets the eye, or even than meets the most careful and honest introspection.

Why call this level of our psychological life phenomenological at all? For several reasons. First, it is essential to understand this deep level in order to understand our surface phenomenology. This is the stuff waking life is made of. Second, in the quest to understand what it is to be conscious, we need to understand not only that which we can report in introspection, but that which is waiting in the wings, sometimes introspectible in principle, but even if not, accessible to processes that appear to be making cognitive *decisions* that determine the character of our inner life: attend to this, not to this; patch this remembered bit into this hole; keep the field steady, even though the retinal image is moving, etc. . .

Perhaps most importantly for present purposes, this level of consciousness is important for understanding the interface between Buddhist theories of mind and contemporary cognitive science. This is because Buddhist philosophy of mind and psychology generally promises accounts of deep phenomenology as an explanation of our

representation of an external world existing independently of our perceptual processes. Buddhism does not need cognitive science to tell it about *parikalpita svabhāva*. But the details regarding how this superimposition is achieved are not present in any Buddhist accounts of perception or cognition of which contemporary scholars are aware. This is not surprising. They are hard to discover. Of course there may be lost or yet-to-be-studied texts that develop cognitive theory at a level of detail comparable to that achieved in contemporary cognitive science. But we have no evidence for their existence; to simply argue that Buddhist psychology is scientific and successful, and therefore that all of current cognitive theory is anticipated in the Buddhist tradition does a disservice both to science and to Buddhism.

surface phenomenology. Buddhist accounts of perception, of memory, of attention, and of suffering typically refer to states and processes to which ordinary persons do not have introspective access. And many claims for meditative practice and expertise are claims to access these deep states in meditative equipoise; indeed the reports of meditators are often the principal—though not the only—evidence for Buddhist claims about deep phenomenology.

Buddhist accounts of consciousness are robust theoretical accounts precisely *because* they operate at this level, and the fact that processes at these levels are regarded by most Buddhists as *conscious* processes is the final reason that it makes sense to treat this level as a phenomenological level of analysis. (Indeed such enthusiasts of contemplative science as Wallace [2009] regularly urge that meditators have special access to phenomena at this level, and so can deliver useful data to cognitive science.) Indeed, one of the important features of Buddhist psychology is its identification of a variety of cognitive processes as kinds of consciousness, and hence an early insight into the complex, multilayered, and often cognitively impenetrable character of consciousness itself.

3. *Deep phenomenology matters: The myth of the givenness of consciousness*

Consideration of deep phenomenology raises complex questions about the nature of consciousness. The philosophy of cognitive science has lately been much preoccupied with the nature of consciousness and indeed there is welcome new dialogue between phenomenologists and cognitive scientists, as is evident by the success and quality of *The Journal of Consciousness Studies* and a host of recent books, articles and research programs too numerous to cite and too fecund to ignore. Buddhist philosophy has been focused on the nature of consciousness for much longer. Some have argued that the greatest contribution that Buddhist philosophy can make to cognitive science is an account of the nature of consciousness born of meditative introspection into the deep phenomenology that underlies our ordinary thought. Proponents of such a view argue that consciousness is immediately knowable, self-revealing, and hence always in principle the object of veridical apperception.

Nonetheless, on a Buddhist view, consciousness is a many-levelled phenomenon. The coarsest levels of consciousness are introspectible by ordinary agents in ordinary states; the subtler levels, however, are the ones that matter for an understanding of the nature of our experience,

and these, most traditional scholars argue, are too deep for most of us to introspect. These deeper and more subtle levels of consciousness—what many in cognitive science might regard as analogues to unconscious cognitive processes—are, however, according to most Buddhist traditions, accessible to the introspection of highly advanced meditators. Given the transparency of consciousness, this apperception is taken as immediate and veridical, yielding to those with sufficient training and experience direct insight into the nature of deep phenomenology. This direct experience and insight is taken by some to constitute the foundation of a contemplative science of mind. (Wallace 2008, 2009b) Science, after all, relies upon observation using the best available instruments. If the minds of meditators are the best available instruments for studying the mind, trained introspection amounts to science.

Of course insight into deep phenomenology is important, for understanding the fundamental nature of the self and our subjectivity is central to the project of overcoming primal confusion regarding the nature of reality, as well as the project of cultivating moral perfection, and so central to the elimination of both classes of obstacles to full awakening. Buddhist practitioners and cognitive scientists hence share an important goal—understanding the most fundamental cognitive processes that constitute and enable our ordinary consciousness. But can the meditation cushion really replace, or even supplement in a meaningful way, the laboratory? Might the results of meditation suggest alternative practice in the laboratory? Or might it be instead that science suggests alternative practice on the cushion?

Prior to all of these questions is a meta-question about questions concerning consciousness. Most (but not all) Buddhists share with some (but certainly not all) cognitive scientists and some (but not all) phenomenologists a tendency to think of consciousness as a kind of *thing*, or at least as a discrete *property*. We can then ask how many there are (6, 7, 8...?), whether they are physical or not, what the neural correlates of it are, whether machines can have it, etc... These questions may or may not be interesting, and may or may not have answers. But they share a common presupposition insufficiently interrogated in either tradition, viz., that there *is* something called ‘consciousness,’ ‘*jñāna*,’ ‘*shes pa*,’ etc... about which these questions can meaningfully be asked.

To be sure, we are conscious of things, and to be sure, we are conscious of different things, or the same things in different circumstances, in very different ways; and to be sure, there is all the difference in the world between being unconscious *tout court* and

conscious at all. But that hardly entails that there is *something* called consciousness, a unique, homogeneous mechanism, or even that there is a *discrete property* of being conscious. The distinction between surface and deep phenomenology brings this fact out well. To be able to report on an object of experience is one way of being conscious of it, whether the object of consciousness is internal or external. To respond differentially to a stimulus, whether reportable or not, is yet another way of being conscious of it. Sensory consciousness is one class of processes, but processes of this class may be very different from those involving memory or abstract thought. And most of all, to think that any cognitive process or state is self-presenting, immediately accessible and an object of necessarily veridical apperception is manifestly, demonstrably false, as illusions of perception, attention and memory (e.g. the Loftus effect or the colour phi phenomenon) show.

The fact that consciousness is neither a unitary phenomenon nor is immediately available to introspection, or even to introspection supplemented by *a priori* reflection means that deep phenomenology as an enterprise is essential to understanding ourselves. This is because this complex of non-introspectible psychological/neurological processes that conditions so much of our surface phenomenology and drives so much of our behaviour; it also means that deep phenomenology is *hard*. It requires us to use techniques of examination that rely on theory and experiment, not simple observation, however sophisticated that observation may be, or however difficult it may be to cultivate it. The mind guards its secrets as jealously as any other natural phenomenon.

4. *Why Buddhism and Buddhist practice tell us so little about deep phenomenology*

The multiplicity of kinds of conscious experience, and the susceptibility of each to perceptual, apperceptual or cognitive illusion constitute insuperable obstacles to the pursuit of psychology through introspection, even to the pursuit of purely *phenomenological* psychology through introspection. These obstacles cannot even be surmounted by supplementing that reflection with Husserlian or Yogācārin transcendental reflection, any more than *a priori* reflection could by itself supplement observation in biology or chemistry. We have no reason to believe that experienced meditators are immune to inattentional blindness, to the Loftus effect, or that the monochromicity of their peripheral vision is available to them (and Khalsa et al. *op. cit.*

give us good reason to believe that they are not).⁵ Moreover, none of these effects, each demonstrable in the undergraduate laboratory, are reported in thousands of years of meditative experience or could be deduced *a priori* from immediate data of experience.

It would be foolish to reply that the reason for this is that these phenomena are soteriologically irrelevant. Nothing could be further from the case. Attention is a kind of mindfulness, and Buddhist meditational theory and soteriological theory emphasizes the need to train attention as a vehicle for epistemological as well as moral development. The psychological nature and epistemic status of perception and memory occupy a great deal of Dharmakīrti's attention, and for good reason: perception is our fundamental mode of access to the empirical world, both internal and external; and memory is central to the debate about *svasaṃvedanā*, which in turn is fundamental to many Buddhist debates about the nature and status of self-understanding in general. The status of *yogapratyakṣa* as a *pramāna* hinges on the transparency of consciousness to this kind of perception, and so on.

Moreover, illusions or failures of attention, memory and perception have definite consequences. They always represent a kind of *avidyā*, and they often cause demonstrable additional suffering. It is important if not to eradicate them, to become aware of their dimensions and to work to ameliorate their effects. We simply have to acknowledge that with respect to many phenomena central to its principal domain of concern, Buddhist practice and theory has not been entirely successful. While cognitive science may tell us something about how Buddhist practice produces its effects, and may even confirm its claims to produce surprising effects, it would be foolish for cognitive science to rely on Buddhist meditation as a substitute for controlled experiments as a source of evidence or to rely on Buddhist theory as a substitute for well-confirmed cognitive or brain theory as an explanation of *how* it produces those effects.

To put this point another way, deep phenomenology to be sure, requires the kind of careful phenomenological reflection and

⁵ Of course, the Khalsa finding is but one data point. Davidson (personal communication) reports that at least two experienced meditators appear to demonstrate less inattentive blindness than typical subjects. But this has yet to be demonstrated experimentally. It might be that further research shows that meditators are indeed relative immune to perceptual and cognitive illusion. But this has not been established to date. And even if it were to be demonstrated, this would not show that the prevalence of these illusions or their cognitive or neurological basis could be discovered by meditation.

introspection in which Buddhist meditators (among others, of course) are trained. But that kind of reflection, while necessary, is insufficient to yield deep results. That is where experiment, neuroimaging, and the theoretical resources they bring to the table come into play.

5. What cognitive science offers to Buddhism in deep phenomenology

So far, I have been damping expectations regarding the contributions of Buddhist practice and theory to the enterprise of deep phenomenology. But this is not to deny that there is real scope for collaboration between experienced Buddhist meditators, scholars of Buddhist theories of mind and cognitive scientists, nor to deny that the domain of cognitive phenomenology is the appropriate venue for that collaboration. It is instead to suggest that the principal direction of traffic might be different from that generally supposed by boosters of these collaborations. Cognitive science may have more to contribute to Buddhism than the other way around. (This is *not*, however, to claim that this is a one-way street. I will close with speculations about where the most valuable contributions of Buddhism to psychology might be found.)

Buddhist practice is committed to an understanding of the nature of mind and experience, and its transcendental phenomenological reflection, as pursued in the Yogācāra tradition, as well as in the advanced meditation traditions such as Mahāmudra and rDzog chen, as well as the introspective deliverances of meditators in these traditions, are significant contributions to our understanding of our inner lives. But, as I have indicated, the Buddhist project of insight into the nature of mind for the purpose of the alleviation of suffering requires more than such reflection can deliver on its own. Moreover, the naturalism that permeates Buddhist theory—that is, the commitment to an empirical understanding of causal processes—as well as its epistemological commitment to accepting the deliverances of perception and inference (including, one must suppose, observation and theory developed by those in white coats as well as those in saffron or maroon robes) commits Buddhist theorists of mind to attend to contemporary scientific results concerning the mind. This commitment, I am pleased to say, that is honoured more and more frequently, largely as a consequence of HH the Dalai Lama's commitment to dialogue with science, but also as part and parcel of Buddhism's more general engagement with modernity, and the consequent increasing familiarity of Buddhist scholars and practitioners with science.

Let me just indicate by example how this might go. Consider how we might adumbrate the Yogācāra insight that the world we inhabit is fundamentally *paratantra-svabhāva*, but is experienced by us in its aspect of *parikalpita-svabhāva*. The idea here is that our *lebenswelt* is not delivered to us pre-packaged independent of the nature of our consciousness and our cognitive capacities, but is entirely dependent upon them for its construction and significance. On the other hand, pre-reflective awareness does not deliver that dependency, but superimposes an imagined independence, the illusion of a transcendent existence that is merely captured by passive subjectivity. This Yogācāra analysis of experience, developed by Vasubandhu among others, is the result of a combination of sharp introspection and transcendental phenomenological reduction. It is an excellent point of departure for a deep phenomenology.

But it is only a point of departure. We cannot determine by Yogācāra analysis alone *how* that superimposition is accomplished, and what causal processes mediate the interaction of the sensory system with distal objects to generate the experienced world. We must, if we are intellectually honest, turn to modern cognitive science to take us to these depths. The laboratory can help to tell us both that and how the illusion is created, in virtue of what kinds of perceptual and cognitive processes the world we inhabit is dependent upon us, and how those processes are implemented in the nervous system. (Ironically, but profoundly, it also tells us that this illusion afflicts apperceptive consciousness as well, confirming not the self-luminosity, but the self-opacity of consciousness, a point appreciated by such critical exegetes as Tsongkhapa.)

We find out through careful empirical investigation how colour is assigned to the periphery; how blind spots are filled; how the illusion of constancy is maintained, and how attention operates at a preconscious level to determine what arises to introspectibility. The details and the extent of the illusion that constitutes our perceived world will forever elude introspection because they lie too deep for the light of introspective awareness to penetrate. Nonetheless, it is necessary to understand these details in order to understand how our surface consciousness arises. This understanding is revealed only through experiment; over two thousand years of serious practice left them unknown; less than a century of experiment has disclosed them.

All of this has relevance for *pramāṇa* theory as well. Classical Buddhist epistemology draws a sharp line between perception and inference, and holds perception always to be the veridical apprehension of particulars. Neither of these theses is tenable, if we take empirical

results seriously. Perception, we learn from empirical research, is never immediate, and never devoid of inferential processes. It is guided by attention and pretension, mediated by memory and low-level inference. To isolate the bare sensory information at the lowest level is not to identify *real* perception purified of contaminated cognitive processes, as perhaps one might hope were one desperate to salvage Dharmakīrti's epistemology; it is only to identify the pre-cognitive, non-epistemic stimulation of sensory receptor cells. Those processes are a long way from anything plausibly perceptual. At any level of processing at which even basic sensory qualities are available to cognition, much that Buddhists would regard as conceptual has entered the processing picture.

This also means that to the extent that perception delivers us its objects—however simple and unrecognized they may be—as objects of experience, as opposed to as constructions of mind, perception is deceptive, and the result of imperfectly engineered apparatus resulting from the satisficing processes of evolution modulated by the slings and arrows of everyday life, just like any other cognitive process. This deception is already implicated in the fundamental confusion that is the result of suffering. Adopting a more fallibilist epistemology with a more nuanced understanding of the perceptual process will thus add depth both to Buddhist theory and practice. *Yogapratyakṣa* is not immune from this. Our introspective awareness of our cognitive processes, no matter how sophisticated, is as constructed, and hence as fallible as any other perception.

And of course all of this has implications for the debate regarding *svasamvedanā*, or the question regarding the intrinsically apperceptive character of consciousness. Much Western phenomenology, from Husserl down to Zahavi and Gallagher (2008), like Buddhist Yogācāra, endorses this pervasiveness of pre-reflective self-consciousness. Many Western empiricists, joined by many Buddhist Mādhyamikas, reject it. The jury may be out here, but I believe that the preponderance of evidence still lies with the Mādhyamikas and empiricists. The opacity of our own contribution to our own phenomenology undermines *svasamvednā* at both the surface and deep levels. At the surface level, too much of our ordinary processing goes on without our even being aware of it, as the phenomenon of autopilot demonstrates. At the deep level, too much of our consciousness is so primordial, so automated, that it is not even introspectible. To talk of self-consciousness at that level, a level at which even to talk about consciousness is stretched, stretches the meaning of 'self-consciousness' to the point of emptiness—in the pejorative, not the metaphysical, sense of that term.

6. *Buddhism and moral psychology: A real contribution*

So far, I have been heretically emphasizing the degree to which Buddhism can learn from cognitive science, and the degree to which its own internal imperatives compel it to do so. But that is only one lane of a two-way street. There is a domain in which Buddhism probably has a great deal to contribute to cognitive science, one in which arguably Buddhist insight is well in advance of contemporary theory in the West, and that is moral psychology. Buddhist ethics has always been grounded in a sophisticated moral phenomenology, connecting suffering and vice to attachment and aversion, those to deep confusion about the fundamental nature of reality and in particular the self and subjectivity, and these in turn to deep primal fear.

Moral progress in turn has been understood as a transformation of one's comportment toward the world, comprising both a transformation of moral and metaphysical vision and an elimination of the profound fear of death, enabling our pervasive subconscious awareness of impermanence to become a source of joy and compassion rather than a source of fear and grasping. (Garfield 2009 and in press, Finnigan and Tanaka 2010) The phenomenological reflection that underlies this moral psychology as well as the recommendations it entails for moral development, involve both deep introspective engagement and a powerful transcendental reflection on what we have come to know as *dasein* and *mitsein*. While aspects of these insights have emerged in the West, principally in the work of Freud, and more recently in the discipline of cognitive behaviour therapy, there is little either in ethical theory or in the psychology of ethical thought and action that approaches Buddhist ideas, particularly as articulated by such philosophers as Śāntideva, in sophistication.

Buddhist reflection indicates to us the ways that our perception of ourselves, of those around us, and of the world of animate and inanimate objects to which we relate is conditioned by ideology and by affect. It also indicates the plasticity of that perception, of our preconscious ideology and of our affect, albeit also the difficulty of exploiting the plasticity in daily life. And it holds open the prospect that the application of a cognitive understanding of the fundamental nature of reality, including the pervasiveness of impermanence and interdependence, and of the technique of mindfulness can effect the transformation that takes us from fear into contentment, and from egocentric misery into altruistic joy.

This is, of course, the burgeoning science of positive psychology and of ethical development, science that may succeed in redrawing of the map of the domain of moral experience, motivation and action through empirical investigation. And this investigation is has been and will continue to be theoretically and clinically fecund. It involves straightforward experimental and imaging paradigms of the kind used to examine motivation, affect, perception and moral reasoning already, turning our gaze on phenomena such as fear vs equanimity, egoism vs altruism, compassion vs indifference and their connection to the perception of independence vs interdependence, permanence vs impermanence, etc. Not rocket science, but potentially more valuable to humankind than much that is. And a domain in which Buddhist *theory*, as well as practice, has much to contribute to contemporary cognitive science.

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REMARKS CONCERNING POSSIBLE RELATIONSHIPS
BETWEEN SCIENCE AND BUDDHISM ON TWO LEVELS:

I. FUNDAMENTAL PRINCIPLES, AND II. METHOD

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Both science and Buddhism are vast and irreducible systems which certainly have many differences. But at a fundamental level, there is a similarity in some of their goals, methods, and first principles. Indeed (i) one of the main goals of both of these systems is the research of truth; (ii) the result of this research is the discovery of a similar truth—the absence of absolute existence of all phenomena, called ‘relativity’ in science, and ‘emptiness’ in Buddhism—which in physics can be given the status of a first principle from which the various laws of nature can be derived; and (iii) the method used for discovering this truth is in both cases a penetrating view on the nature of reality.

I a.

HH the Dalai Lama wrote:

Spirituality and science are different but complementary ways of investigation. They have the same major goal: the research of truth. [...] Science, just like Buddhism, seeks to understand the nature of reality by means of a critical investigation. [...] We need both of them to relieve suffering on the physical as well as psychic level.¹

The fundamental principles of Buddhism (emptiness) and of science (relativity) are also of a similar nature.

In science, relativity theories are those theories which have allowed us to reach the most comprehensive understanding of the physical reality. The principle of relativity states that no physical properties have any absolute existence. They are only relative to the system of coordinates chosen as reference points, and therefore they change when this reference system itself changes. In particular, these properties vanish in the proper reference system. Hence Galileo wrote four hundred years ago: “for all things that partake in it, motion is as if it

¹ SS Dalai Lama, *Tout l'univers dans un atome. Science et bouddhisme, une invitation au dialogue*, Robert Laffont, 2006. (*The Universe in a Single Atom. The Convergence of Science and Spirituality*, Morgan Road Books, New York 2006).

were not, [...] motion is as nothing”.² In other words, motion is not an intrinsic property of physical bodies, but a relative property *between* two bodies. As a consequence, we feel ourselves to be at rest while we are in motion with regards to other bodies: for example, whilst sitting in this conference hall, we consider ourselves to be at rest while in actuality we are turning with the Earth at 30 km/s around the Sun, 250 km/s around the centre of our Galaxy, etc. Therefore rest and motion, which seem to be antinomic properties, are in reality the same phenomenon seen from two different reference systems.

More than 2,500 years ago, the Buddha discovered the emptiness (*shunyata*) of all things, i.e. the absence of their intrinsic existence. The various phenomena are relative, never absolute—they appear through interdependent arising, and therefore do not exist independently. The *Prajnaparamita Hridaya Sutra* states that “form is empty, emptiness is form”³ (where ‘form’ refers to the physical aggregate, i.e. matter in a general sense). In Buddhism, emptiness (of proper existence) is the very mode of being for all phenomena. It is remarkable that some of Nagarjuna’s writings⁴ from around 2,000 years ago anticipated Galileo’s statements almost word for word: “motion, its beginning and its cessation are analogue to motion”; “the agent of motion, the motion and the place of motion do not exist [according to their proper nature]”.

Since Galileo, the principle of relativity has been applied to position, orientation, and motion (including speed and acceleration in Einstein’s theory),⁵ and more recently to scales (of length, time, and mass), in the new theory of scale relativity.⁶ As a consequence, physical quantities such as energy, momentum, angular momentum, etc., are entirely relative and cannot be defined in an absolute way. With Einstein’s relativity theory, space, time, gravitation, and geometry itself can also be shown to be relative to the choice of the reference system. In 1907, Einstein realised that “someone moving in free fall in a gravity field does not feel any longer his own weight”. In other

² Galileo Galilei, 1630, *Dialogo sopra i massimi sistemi*, Torino, 1975. (Translated from French : *Dialogue sur les deux grands systèmes du monde*, Ed. du Seuil).

³ The Dalai Lama. *Essence of the Heart Sutra: The Dalai Lama’s Heart of Wisdom Teachings*. Boston Massachusetts: Wisdom Publications (2005).

⁴ Nagarjuna, in Kalupahana D.J. (trad.), *Nagarjuna: The Philosophy of the Middle Way*, State University Press of New York 1986.

⁵ Einstein A., *The Principle of Relativity*, Dover 1923, 1952.

⁶ Nottale L., ‘Fractal Space-Time and Microphysics: Towards a Theory of Scale Relativity’, *World Scientific*, Singapore, 1993. Nottale L., *Scale Relativity and Fractal Space-Time: A New Approach to Unifying Relativity and Quantum Mechanics*, Imperial College Press 2011.

words, in the coordinate system which accelerates with the fall (which is similar to the proper reference system of the falling body), the force of gravitation disappears. Moreover, in this free-fall system of reference, the parabolic geometric form of a trajectory seen from Earth, also disappears and becomes a point (relative rest), or a straight line (inertial free motion)—therefore ‘form is empty’.

But there is more. We have known since Einstein’s research that the laws of physics themselves—namely, the equations of transformation laws between coordinate systems and the equations of field and of motion in this field—can be derived from the principle of relativity itself. These laws emerge from the mere statement of the vanishing of the various physical quantities in the proper frame (emptiness). They are but manifestations of only the change in reference system (i.e. of making differences), without any need for any intrinsic ‘substance’: ‘emptiness is form’. Therefore, the relativity-emptiness principle is not only a universal truth, but also a constructive principle from which the equations of physics can be derived.⁷ For example, the equations of motion can be obtained by simply mathematically writing that there is no motion in the proper frame, followed by changing the reference. The entire complexity of the world then emerges from the mere multiplicity of all the relative states of reference systems.

There is no ‘object’, no ‘subject’, only relations. But, at a deeper level again, relations themselves can be shown to have no absolute existence. Consider an empty space in which there are only two bodies in relative motion, the distance between which increases with time. Each of the bodies considers itself to be at rest and the other to be moving, whilst actually there is only inter-motion, which is a relation, between them. But if one chooses to relate this apparent motion to a coordinate system which is itself expanding⁸ (it is said to be ‘co-moving’), this relative motion disappears in its turn. Another example is the definition of the position of a body. We need a reference point (the origin of the coordinate system) outside the body itself to specify its position. It is therefore given, not by a coordinate, but by a difference of coordinates, i.e. a length interval, which has the status of a relation between the two points (the reference point and the body). But this is not enough, since, in order to attribute a number to the distance of the body from the origin, we also need a unit. This unit is nothing other than another length interval between two other points, i.e. another

⁷ *Ibid.*

⁸ See e.g. Weinberg S., *Gravitation and Cosmology*, John Wiley & Sons, New York, 1972.

relation. The final result of the measurement of the position of the body, for example 3.2 metres, means that the first length interval is 3.2 times longer than the unit. The numerical value 3.2 is the ratio of the two length intervals, and it is therefore a relation of relations. But if one attempts to measure the length of a body with respect to itself, this ratio is always 1, and the measure becomes empty of any information.

As we have seen in the previous examples, when we account for the relativity—not only of position, orientation and motion, but also of scale—we reach a new level of relativity theories, including the relativity-emptiness of relations. This new theory of scale relativity allows one to set the foundations of quantum laws on the principle of relativity itself.⁹ In standard quantum mechanics, elementary particles still seem to own intrinsic mass, spin and charge. This seems to contradict with the Buddhist claim of the universality of emptiness. But, in scale relativity, the quantum laws can be derived from the geometry of space (generalised from curvature to fractality, i.e. explicit scale dependence), and the particles and their properties (mass, charge, etc.) emerge from the geometric properties of space-time itself (more specifically, of its geodesics, which are the mathematical lines which optimise the proper time). Elementary particles (which are also field and wave in quantum mechanics) have therefore only a relative existence and are no more than space-time. Their various properties are merely a result of the difference between their proper coordinate system and the system of reference given by the measurement apparatus, but there is no ‘particle’ in the place where we measure it. Maybe this supports the profound insight of the *Kalachakra tantra*, according to which the fundamental cause of the whole physical world would be ‘particles of space’, from which all other elements of the Universe take form.¹⁰

I b.

Another point, relevant to the theme of the present session (Understanding our Mind) concerns the analogy used for describing the nature of mind in Buddhism. It is said to be space-like, luminous

⁹ Nottale L., *Scale Relativity and Fractal Space-Time: A New Approach to Unifying Relativity and Quantum Mechanics*, Imperial College Press 2011.

¹⁰ SS Dalai Lama, *Tout l'univers dans un atome. Science et bouddhisme, une invitation au dialogue*, Robert Laffont, 2006. (*The Universe in a Single Atom. The Convergence of Science and Spirituality*, Morgan Road Books, New York 2006) *Tantra de Kalachakra, Le Livre du Corps Subtil*, Texte intégral traduit du sanskrit par Sofia Stril-Rever, Desclée de Brouwer 2000 (in French).

(aware), and radiating ('clear light'). These metaphors are actually taken from the physical world.

It may therefore be interesting to recall what physics says about the nature of light. Since Maxwell's discoveries, we have known that light is nothing more than a propagating electromagnetic field—specifically, electromagnetic waves. This understanding of the nature of light and electromagnetism is at the heart of many of the technologies of the modern world (radio, television, telephone, electric motors etc.). In the physical description, there is matter (masses, charges), and there are fields of force created by these masses and charges (gravitation, electromagnetism, etc.), and allowing their interactions. In quantum mechanics, both matter and fields are described in terms of elementary particles, but also in terms of different spin properties (this is an internal angular momentum). Due to these properties, matter particles (called fermions) cannot be in the same state, in particular, not in the same position. This is the basis of the observed organisation of matter (with its various solid, liquid, and gaseous phases, which correspond to the Buddhist 'elements'). Field particles (for example light photons), called bosons, have a tendency to aggregate, which is translated at macroscopic scales as being the radiating property. Therefore the luminous character (linked to the transport of information through interaction) and the radiating character of light are inseparable.

But what about the spatial aspect? Is light also space? These theories (the classical and quantum description of fields) are not yet complete, since they still describe an electromagnetic field *in* space, not yet as *being* space. In the evolution of ideas in physics, field theories have comprised three steps: (i) a description in terms of local forces; (ii) a description in terms of a space-filling field deriving from a potential; and finally (iii) a description in terms of space (more generally space-time) itself. In the case of the gravitational field, Einstein's theory has skipped to the final step. What was described by Newton as a gravitational force between two masses; by Laplace as a gravitational field created in all space by a mass, and given by a difference of potential; becomes in Einstein's theory a mere relative manifestation of the (curved) geometry of space-time.¹¹ The same is now true in modern relativity theory. In scale relativity, an electromagnetic field—and therefore light itself—has no proper existence, since it is understood as a manifestation of the fractal geometry of space-time at the microphysical level.¹² Finally, the space-

¹¹ Einstein A., *The Principle of Relativity*, Dover 1923, 1952.

¹² Nottale L., *Scale Relativity and Fractal Space-Time: A New Approach to Unifying*

like, luminous, and radiating characters of light are inseparable.

It may therefore be considered remarkable that the Buddhist description of mind and its functioning has known three similar steps: (i) mind functioning in terms of attraction-aversion-confusion (similar to the forces of attraction, repulsion, and diffusion in physics); (ii) mind as a potential of consciousness (not manifest), and a field of consciousness (in similarity with the physical field, which manifests itself only in terms of a difference of potential between two points but vanishes at a single point); and (iii) mind as space, from which all other aspects emerge (in similarity with the space-time description of relativity theories). The final step is the most profound one and fully accounts for the law of relativity-emptiness. This parallelism could be considered to support the universality of the relativity-emptiness principle, which applies both to matter (the aggregate of 'form' in the Buddhist description) and mind (the four other aggregates of sensations, perceptions, mental formations, and consciousnesses), and generates their structures and functions at the relative level.

II.

The second point to be discussed here is the question of the method, in both science and in Buddhism. One of the main practices of Buddhism is well-known—that of mind training and meditation (*shamata*: calm abiding through concentration without distraction, balancing attention and relaxation; and *vipasyana*: penetrating vision).

What is less well known is that the method used by great scientists such as Galileo, Newton, Poincaré, Einstein, etc. for making their discoveries, is also of a similar nature. Firstly, scientific research (as well as learning) always needs concentration. Secondly, in science, there is for the theoretician a large part of objective observation in the long term, followed by deduction (which is a linear process), and induction (which proceeds by extension and may reach larger territories). But grand changes of paradigm always result from intuition and have appeared as global *in-sights*. In these cases, it looks as if the scientists have skipped to the result by making a great mental leap, apparently completely separate from the basis of previously admitted knowledge. The truth often appears as a sudden realisation—a 'Eureka!' moment, as a global knowledge, beyond words; and then most of the time it is decades before we are able to 'materialise' the initial insight into the form of a detailed and efficient mathematical

theory. For example, it was twenty years from Newton's first understanding of universal gravity to the writing of the *Principia*; ten years from Einstein's fifteen-year old insight—according to which, if one follows an electromagnetic wave, i.e. light, time vanishes—to his 1905 construction of the theory of the special relativity of motion,¹³ followed by another ten years to construct his generalised theory of relativity,¹⁴ etc.

Why is this so? If a scientific discovery in physics was the result of a mental construction or of imagination, this would be impossible, because the number of imaginary constructions is infinite, while the actual laws to be found are those of a unique world. The answer may be that, as some of these great scientists have described, their discoveries were the result of an interior vision, of a penetrating view about the nature of reality. This can occur only by looking into our own minds, rather than looking only at the exterior—which yields the problem to be solved, but not the solution, which comes from the interior. Let us suggest two analogies for this process. It is like trying to see something veiled by fog: when the fog dissipates, the landscape appears immediately and in its entirety, without having to build each of its elements. Another analogy would be of someone trying to find their way in an unknown jungle. It is impossible—everything is obscured by vegetation. But by climbing to the top of a mountain, the whole jungle appears clearly, with its rivers, lakes, rocks, clearings, etc. After descending the mountain again, whilst still nothing is locally seen, one is now able to make a map, or guide people and say “the lake is to the right, the river just beyond these trees, etc.”

In other words, this demonstrates that the truth is already there, and does not have to be constructed or reconstructed. The work does not need to be done on truth, but on ignorance. This is clear from the expressions ‘dis-cover’, ‘un-veil’, which are used for qualifying fundamental discoveries (as opposed to the term ‘inventions’, which refer to technological progressions). In these cases, the truth was covered by mental obscurity, so that the method of ‘discovery’ consists of being able to see through this obscurity in order to let the truth shine and to make it appear clearly. This involves practising meditation and mind training.

Let us conclude with the question of education. What is true for research scientists is also true for students, at all levels of education. The aim of teaching is to transmit knowledge. Profound knowledge, in

¹³ Einstein A., *The Principle of Relativity* Dover, 1923, 1952.

¹⁴ *Ibid.*

Buddhism as in science, has often been acquired through many generations of very hard and long work, and, fortunately, it can be transmitted in a faster way. But the student must re-discover the truth, on his own if he does not want his knowledge to be superficial. Even though it is faster, this process of re-discovery is of the same nature as the discovery. Namely, there too, the method consists of dissipating the obscurities, the limitations and the ignorance which are obstacles to the truth in the student's mind. A genuine, profound, and stable understanding can be reached, provided that the student also experiences the joyful and enthusiastic experience of insight, the 'Eureka!' moments through which everything becomes clear and luminous. Therefore, it seems to me that the practice of meditation and mind training in order to develop good qualities should be a fundamental part of any educational project. Let us finally give the last word to Nagarjuna: "When the idea of I and mine is destructed relatively to the internal and the external, appropriation comes to an end, and with its destruction, [...] the liberation occurs..."¹⁵

¹⁵ Nagarjuna, in Kalupahana D.J. (trad.), *Nagarjuna: The Philosophy of the Middle Way*, State University Press of New York 1986.

BROKEN SHRINES: SIKKIM'S MONASTIC HERITAGE AFTER THE EARTHQUAKE

CHETAN RAJ SHRESTHA

1. INTRODUCTION

1.1 SCOPE OF THE REPORT

Monasteries were among the most heavily damaged institutions in the 6.8 RS earthquake that occurred on 18 September 2011 in Sikkim. The scale of the damage ranged from hairline cracks to near total collapse. A report prepared by the Cultural Affairs and Heritage Department (CA&HD) surveyed 93 properties in the four districts and it revealed that very few monasteries had emerged intact from the quake.

This report attempts to survey, study and categorise related damages to the monasteries. It will also glance at the social impact of the quake on monasteries and their communities. However, before proceeding with the details of the report, it is necessary to encapsulate the provenance and importance of monasteries in Sikkim.

1.2 MONASTERIES AND THEIR IMPORTANCE

Monasteries have great meaning in the lives of Sikkim's practicing Buddhists and believers from other faiths. They are important as centres of spirituality, learning and community. Some of the larger monasteries support around 700 monks and also nurture small hamlets that come up around them. They provide economic opportunities to the village folk and act as centres of community life during funerals and festivals. They are also repositories and producers of the Tibeto-Buddhist scriptures, the prevalent form of literacy in pre-British Sikkim. Their role is similar to the monasteries in Europe at the turn of the previous millennia, which served as nodes of arts, learning and human settlements.

Monasteries are also indispensable to Sikkim's artistic and architectural identity. They also attract the student of Buddhist architecture and its history, particularly in the pan-Tibetan region. The arts in Sikkim have always had a religious coloration and the artisans have always been crucial to the monastery's visible identity.

Sikkim's recorded history is recent and its monasteries were the only institutions, apart from royalty and sections of the aristocracy, that could afford to build on a large scale. Domestic architecture in Sikkim has always been perishable and apart from a few well built residences of the aristocracy—the *kothis*—nothing much survives and what remains in Sikkim's archi-historical vocabulary is almost entirely monastic.

1.3 HISTORY OF THE MONASTERIES IN SIKKIM

The antecedents and forms of monasteries in Sikkim can be traced to Tibet. A telling example is the mythical history of Ralang Monastery in South Sikkim, one of the first large monasteries in Sikkim. Legend says that this monastery was built by the 4th Chogyal Gyurmed Namgyal (1707-1733) and was endorsed by the 12th Karmapa Changchub Dorje (1703-1732) in Tibet. The monastery was sanctified by scattering sacred grains of Tibetan barley. At the consecration ceremony, the Karmapa sent two ambassadorial vultures from Tibet and they blessed the monasteries in his name by circling the monastery three times.



Ralang Monastery, South Sikkim (Photo – Author)

The early monasteries would have closely imitated the Tibetan monasteries with their adobe walls and flat, crenellated roofs. Over

time however, Sikkim's extreme weather probably influenced the designs. The adaptations that Sikkim made to the design of monasteries are:

- i. *Planning*: Large monasteries in Tibet tend to be sprawling complexes, housing thousands of monks. This is a difficult style to replicate in Sikkim where the available land is less. Early monasteries in Sikkim had a limited number of monks, and this reflected in their planning. Monastic complexes then consisted of a single large structure surrounded by smaller ancillary structures, and this is reflected even today in monasteries such as Phodong and Labrang.
- ii. *Roofs*: The roofs were made to slope to manage Sikkim's extreme rainfall, resulting in a distinct deviation from Tibet's predominant flat roof style.
- iii. *Design*: While the plans of the main monasteries remained more or less the same, there was a distinct eschewal of the intricate detailing on the facades of the monasteries. Sikkim's monasteries tend to be simpler and sparer.
- iv. *Ornamentation*: Certain deities such as Kangchendzonga who were more central to Buddhist worship in Sikkim were given greater space in the monasteries.

1.4 TYPOLOGIES

Architecturally speaking, there are two main bases for classification of monastery typologies.

- i. *Planning*: The monasteries can be divided into three main typologies in planning and massing. These typologies are exemplified by Dubdi, Rinchenpong and Phodong Monasteries. Please refer to accompanying article by Gary Chopel.
 Many of these traditional planning methods, which arose mainly because of the properties and limitations of stone and timber, have been made redundant by the introduction of concrete. While fundamental principles, such as the east facing altars, are obeyed, the structure now often follows the designer's dictates.
- ii. *Structure*: There are four established styles of building technology for monasteries in Sikkim.
 - a. *Vernacular*: Monasteries built in the local vernacular style are few in number. This may be because they are usually the

first ones to be upgraded to reinforced concrete (RCC). They employ the *ekra* or 'wattle-and-daub' style and have little or no structural ornamentation. Kewzing Monastery is an example of this style.

- b. *Masonry*: Monasteries built in this style utilize stone, mud mortar and local timber. They employ load bearing techniques and are characterised by thick walls and small openings. There is a steadily diminishing number of these monasteries in Sikkim. Hee Gyathang, Chawang, Tato Pani, and Samtenling monasteries are examples of this style.
- c. *RCC*: New monasteries are all built, without exception in RCC, a medium which needs little explanation in Sikkim. The new monasteries that have come up in recent times are Mani Choekhorling in Rabong and Jorethang Monastery. A number of old masonry monasteries were also torn down to make way for concrete structures. They include the monasteries at Phodong, Tashiding and Phensang.
- d. *Composite*: The three structural styles mentioned are not inviolable and there tends to be a fair amount of cross breeding. A high percentage of monasteries tend to use two or more of the above structural styles. Some examples are: Pemayangtse Monastery (RCC and masonry), Labrang Monastery (steel and masonry), Kewzing Bon Monastery (*ekra* and masonry), Chungthang Monastery (*ekra* and RCC).

2. RECENT MONASTERY CONSTRUCTION IN SIKKIM

This section traces the recent history of monastery design and building in Sikkim. It studies some of the principal factors that have influenced monastery constructions in recent years.

2.1 THE DETACHMENT FROM TIBET

Sikkim has always had close religious, cultural and political links with Tibet. This link was sundered after the flight of the Dalai Lama in 1959 and the closing of the border following the Sino-Indian war of 1962. Sikkim has been cut off from Tibet since then, and this precluded any possible checks on deviances in monastery building. Though, how much Tibet mentoring could have come from Tibet during its own devastation is a matter for debate. The damage to Tibet's cultural

heritage by the Chinese invasion and the Cultural Revolution is well known.

Sikkim's monastic building practices has been forced to evolve, if that is the word, in isolation. Factors such as patronage and material, which influence the design and building processes, are now exclusively local, except for the occasional interjection by the well travelled Rinpoche. Sikkim's recent history in monastic design shows only the broadest adherence to established principles. And its current lack of awareness on heritage practices highlights a profound ignorance of the role architecture can play in preserving cultural identities.

2.2 THE TREND TOWARDS CONCRETE

While the older monasteries used local materials such as timber or stone, the newer monasteries show a complete reliance on RCC, irrespective of location. The conversion to RCC took place post 1975—the year Sikkim was integrated in the Union of India—after which cement, steel and semi-skilled labour in RCC became widely available.



Pemayangtse Monastery, West Sikkim (Photo – Anna Balikci)

Pemayangtse was one of the first examples of a concrete frame being used on an old monastery. In 1960, Sir Tashi Namgyal, then Chogyal funded a restoration/expansion program at the monastery. This was a

sensible strategy as it used the existing building and worked around it. Concrete, perhaps because of its scarcity, was used sparingly. Later projects have refrained from such understanding. Many old monasteries have been dismantled and rebuilt in concrete, such as Tashiding, Phensang, Phodong and more recently, Tholung.

The advantages of RCC over traditional masonry are many:

- i. *Convenience*: It is cheaper and more easily purchased than stone or timber, which is naturally available but difficult to procure. There are also numerous governmental restrictions on stone quarries and timber harvesting.
- ii. *Easy*: Building in RCC does not require a high degree of craftsmanship. There has been an influx of semi-skilled labour in RCC after 1975 and particularly during the last two decades.
- iii. *Maintenance free*: RCC is mistakenly seen as maintenance free and this makes it attractive as an option. Masonry, thatch roofs, clay plastered walls and other such elements of traditional buildings appear cumbersome, having meaning and romance only to the preservationist or the outsider.
- iv. *Structural freedom*: RCC as a material is much more malleable than traditional masonry. If built well, it has more strength. Also, it is more amenable to the modern designer, with the freedom that its elasticity affords.
- v. *Progressive image*: RCC also has a progressive image. Many of the monasteries, who have made the switch from masonry to RCC or aspire to it, complain of the fustiness of old monasteries. RCC implies progress and access to funds, which in turn implies connections and contractual possibilities that can only come from good fortune.

Conversely, traditional building materials have their advantages over RCC. Timber is more amenable to carving than cement, which means there is a loss of detailing when monasteries are executed in concrete and for a building type which confers great importance on decorative motifs, it can show a serious lapse in quality. Timber floors are warmer than cement or marble floors. Lime plaster holds warmth and moisture better than cement plaster and paint. These materials are thus more responsive to rain and the cold, Sikkim's great climatological constraints.

This is not to say that the Sikkim's masonry monasteries are perfect specimens of their kind. Many of them are fragile, even when preserved well. A primary reason for their present frailty is that the connections

with Tibet were always tenuous owing to the distance and terrain. The absence of a strong building culture meant that acclimatization to Sikkim was not extensive. So the adaptation remained incomplete. They display an absence of features such as wall plates, gable bands, corner stones, through stones, that are needed in masonry buildings for lasting stability. Old monasteries such as Labrang and Ngadak have come down to us largely intact and as such, they could be seen as studies in traditional building practices. Some of the other existing traditional masonry monasteries are to be seen at Khechuperi, Meli, Pabyuk, Tato Pani, Lachen and Hee Gyathang.

Sikkim's humidity and paucity of good materials for traditional building is a misfortune for which none can be blamed. The absence of good hard stone, found only in the alpine regions, and lime and clay deposits made the buildings inherently weak. The 6-8 month long rainy season meant that there was always a steady battle between the structure and moisture which the latter invariably won.



Labrang Monastery, North Sikkim (Photo – Author)

2.3 CHANGE IN PATRONAGE

Governmental involvement is another stark trend in recent monastic construction. The governmental departments have supplanted the community and the aristocrats as the chief patrons of monastery

building. The advantages are a certain equality in attention, any constituency can be heard and appeased. But the disadvantages are many. There is a decline in building quality and no care is given to design or site specificity. There is no set up for exhaustive checks and balances during the construction phase. There is also an excessive partiality towards concrete, which is easier to estimate and for which a supply chain already exists.

The second source of funds for the construction of new monasteries are wealthy patrons from abroad. Buddhism is an international religion and several monasteries are linked with teachers and Rinpoches of international standing. They channelise building funds and their demands of newness, material extravagance and excessive ornamentation often dictate the building process. Many of the prettier new monasteries in Sikkim reflect this trend.

3. SURVEY OF DAMAGES

This section provides a general district-wise survey of the impact of the earthquake on monastic institutions. It is based on the information compiled in the CA&HD report. The reports were compiled based on site visits by officials of the CA&HD, the author of this report and in some cases, administrative officials. The report covers 93 religious institutions in all the four districts, a great majority of them monastic. It classifies the damage in three categories:

- i. *Moderate*: These include structures with hairline cracks and minor subsidence. They need medium term preventive and repair works.
- ii. *Sensitive*: These include structures with major cracks, partial structural failure and subsidence following soil settlement or retaining wall failure. They need retrofitting and repair works fairly quickly.
- iii. *Critical*: These include structures with major structural failures and as such need immediate intervention. Many masonry monasteries have suffered near total collapse.

3.1 DISTRICT-WISE ASSESSMENT

3.1.1 *North District*

The North District was the worst hit of the four districts. According to some studies, the epicentre of the quake was in this district. This

district is also where the land is the most fragile, being closest to the Himalayan mountain chain and it saw the maximum number of landslides. The structures that have suffered intense damage in the North District are:

- i. Lachung Singring Monastery (RCC)
- ii. Tholung Monastery (RCC)
- iii. Chungthang Monastery (*ekra* and RCC)
- iv. Chungthang Mani Lhakhang (RCC)
- v. Lachung Monastery (RCC)
- vi. Chawang Monastery (masonry)
- vii. Phamtam Monastery (RCC)
- viii. Menrang Monastery / Mani Lhakhang (masonry)
- ix. Ringhim Monastery (masonry)



Ringhim Monastery, North Sikkim (Photo – Sikkim Now!)

Of the large monasteries in the north, there were two notable exceptions to the damage caused: Phensang Monastery and Hee Gyathang Monastery.

Phensang Monastery (RCC) suffered damage only in the form of hairline cracks. It gives lie to the assumption that the monasteries in

North, especially the recent ones, suffered because of the sheer intensity of the quake.

Hee Gyathang Monastery (masonry) escaped the damage—collapsing of walls and bending of timber members—that has occurred in almost all the masonry monasteries. This was mainly due to the initiative taken by the locals where they propped the weak structure with a framework of steel poles. This frame relieved the walls of the roof and the floor’s weight. This allowed the structure to ride out the earthquake with major but not fatal damage.



Chungthang Monastery, North Sikkim (Photo – Rajendra Desai)

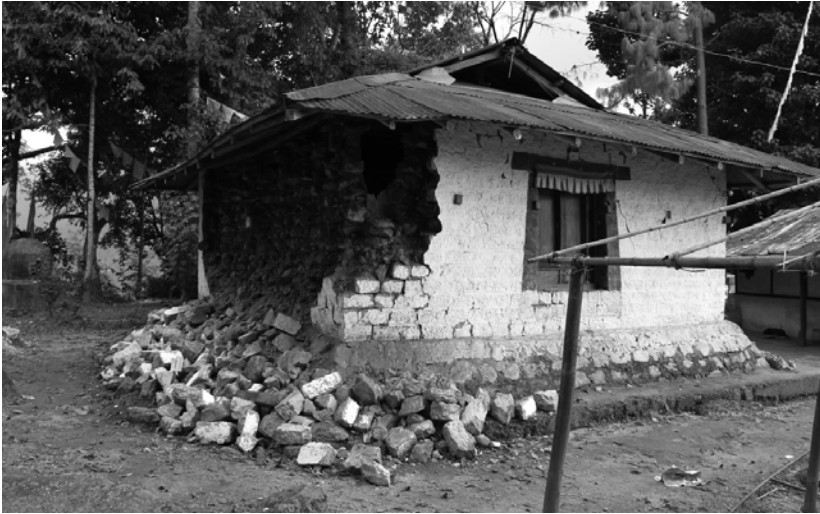
3.1.2 *East District*

The East District has the maximum number of damaged properties but that fact is not an indication of the intensity of the quake.. It is because the concentration of Sikkim’s population is much higher in the East District, it is home to 45% of Sikkim’s population, and perhaps also because of its relative accessibility from Gangtok. There are few monasteries which have the kind of damage prevalent in the North. 45 of the 93 buildings in the CA&HD report are in the East District. The affected structures in the East District are:

- i. Rey Mindu Monastery (RCC)
- ii. Old Rumtek Monastery (RCC)
- iii. Khamdong Monastery (RCC)
- iv. Rongey Mani Lhakhang (masonry)
- v. Tirkutam Monastery (RCC)



Rey Mindu Monastery, East Sikkim (Photo – S T Gyatso)



Rongey Mani Lhakhang (Photo – S T Gyatso)

3.1.3 *West District*

The West District has experienced the most damage after the North District. The damage here has been concentrated in the Pemayangtse - Khechuperi - Yuksom - Gerethang - Tashiding basin.

The structures that have suffered intense damage are in the West District are:

- i. Pemayangtse Monastery (composite)
- ii. Khechuperi (masonry)
- iii. Hongri Monastery (masonry)
- iv. Dubdi Monastery (masonry)
- v. Tashiding Monastery (composite)



Khechuperi Mani Lhakhang (Photo – Suraj Rai)

3.1.4 South District

The South District has seen the least damage of all the four districts. The structures that have been affected most in the South District are:

- i. Ralang Monastery (RCC)
- ii. Jorethang Monastery (RCC)
- iii. Samtenling Monastery (masonry)

Although not a built structure, the Sangmo caves (Shar phyogs sbas phyug: the eastern cave), in South Sikkim also deserve mention. The caves, located near Rabong, are an important pilgrimage site as one of the four major caves in Sikkim, and one in which Guru Padmasambhava is thought to have meditated in the eighth century AD on his way to Tibet. The internal faces of the cave have completely collapsed, and it is now inaccessible to the pilgrim or visitor.



Ralang Monastery interior, South District (Photo – Author)

3.1.5 *Chortens* and *mendangs*

There has also been substantial damage to the innumerable *chortens* and *mendangs* that are scattered across the state. The *chortens* and *mendangs* are masonry structures. *Chortens* tend to be inherently vulnerable to earthquakes because of their design, which comprises of a series of bellies and necks. Some of the notable *chortens* that have been

substantially damaged are the ones at Tumlong, which have great historical importance, Lachung (Thomchi Monastery), Khechuperi, Pemayangtse and Dubdi. The *mendangs* which have been damaged are Mangru Mendang in South Sikkim, Bichu Mendang in Lachung, North Sikkim, Khamdong Monastery in East Sikkim and Tashiding Monastery in West Sikkim.



The *chortens* at Tumlong (Photo – Author)



Tashiding Monastery *mendang*, West Sikkim (Photo – CA&HD)

3.2 FACTORS INFLUENCING THE DAMAGE TO THE MONASTERIES

The factors which have influenced the damage to monasteries in the earthquake can be divided into four main types. They are:

3.2.1 *Intensity / Location*

The effects of the quake were distributed unequally all over Sikkim. In terms of damage caused, it was the most intense in the North District and the least intense in the South District. Even within the same district the intensity appears to differ according to location.

A striking example is in the West District. The relatively populous areas of the West District are in two basins. The first basin runs along Sombaria - Chakhung - Soreng - Rinchenpong - Kaluk - Dentam - Uttarey - Pelling. The second basin runs along Pelling - Rimbi - Yuksom - Gerethang - Tashiding. The first basin suffered negligible damage, even in old masonry structures such as Anden Mani Lhakhang. The second basin suffered tremendous damage with almost all major monasteries showing effects of great impact.

The topographical placement of the monasteries within the hill's terrain also may have been a major factor. Monasteries on the ridges of hills are demonstrably more vulnerable because of seismic force concentrations.

3.2.2 *Subsidence*

The earthquake could be seen as a 35 second resettlement of the mountains. This movement has also caused damage, particularly in areas where the soil was loose. Subsidence led to land settlement and also in some cases failure of retaining walls. This is telling of the scale of damage as almost all structures in the hills tend to be supported by retaining walls. The failure of these walls may also have been due to incorrect construction. This is potentially one of the most far reaching damages, one whose full effects may be known only after subsequent monsoons.

Jorethang Monastery is an example of the other kinds of damage wrought by subsidence. It is located on the edge of the hill, a distance from the road. The entire approach shows massive subsidence and the retaining walls have failed nearly completely. This may have been in part due to the tunnelling works nearby, taking place due to hydro-power related activity, which had already loosened the soil and made the substructure more vulnerable.

Other monasteries which have shown major subsidence are the ones at Rey Mindu, Pemayangste, Ralang, Mangru, Phamtam and Lingdum.

3.2.3 Age

Masonry: Most of the older masonry monasteries suffered damages because of the weakness caused by ageing. A number of masonry monasteries date back to the late 1930s when they were rebuilt following the earthquake of 1934. The main effect of age in the older monasteries is the weakening of the mortar and timber members. Also, the older monasteries at some point swapped the traditional thatch for corrugated sheets and this increased the load on the walls, a load they were not designed to carry, hastening their weakness. When the weight of the corrugated sheet roofs were taken off the walls, as is the case in Ngadak and Hee Gyathang, the walls have not suffered any great damage.

RCC: The effects of age on RCC monasteries cannot be determined as most of the RCC monasteries are fairly young, dating to after 1975. One of the earlier known RCC interventions was at Pemayangtse in 1960. It does not show signs of stress due to ageing.

3.2.4 Inferior construction

Some of the damages were visibly due to inferior construction methods employed by the contractors, most of whom tend to be monks. The mistakes in construction tend to be:

- i. Incomplete curing
- ii. Wrong reinforcement techniques
- iii. Wrong proportions of mixture components
- iv. Ill-constructed retaining walls
- v. Inferior structural design

Evidence of inferior construction could be seen in the damages at Phodong Monastery, Old Rumtek Monastery, the Golden Stupa building at New Rumtek Monastery, Chongey Mani Lhakhang.

Older masonry structures too show the absence of practical load bearing construction methods and materials. Their failures have been discussed in Section 2.2

3.3 OTHER EFFECTS OF THE QUAKE

The monasteries proved to be particularly vulnerable during the September 18 earthquake. The damage has been enough to cause alarm,

and excitement, in bureaucratic, building and religious circles. As expected of an event of this magnitude, the social fall-out has also been great. There are some note-worthy effects on the populace at large:

- i. *Psychological fear*: The monasteries are seen as solid entities, capable of providing refuge in crises. In Lachen, the entire population camped in the monastery, which escaped major damage, after the earthquake. There is a possible social fallout of the quake. This comes from the contradiction in the instinctive need to see the monastery as a traditional refuge and also seeing the same monasteries suffer the worst damages.
- ii. *Evidence of retribution*: There is a belief that the Gods are angry, especially with the monasteries. There are few structures that have emerged unharmed. The precise nature of the disgruntlement is not known but the large scale damage to monasteries—proportionately, they are the institutions that have been most affected—are seen as evidence of divine anger.
- iii. *Exposure of poor building standards*: The governmental buildings have proven to be more vulnerable than private ones. Amongst the monasteries too, there is a growing realization that, while much of the damage were caused by natural forces, some contributions were made by the amateurish construction techniques used by monks. How far this will go to dissuade the monks from construction remains to be seen.

CONCLUSION

The damage has been widespread and in some cases, near total. But there are positive developments from the earthquake.

The damage has led to a corresponding frenzy in calls for preservation, a call that has been matched by governmental promises in aid to revive and protect the more vulnerable ones amongst the monasteries. Governmental promises have a paradoxical combination of urgency and distance in them so one can only speculate to the level of final fulfilment, but it is incumbent upon us to hope for the best.

But perhaps the most valuable effect has been to give Sikkim's heritage an exposure to its keepers. There is now a growing awareness amongst the people themselves about the twin dangers over-development and neglect and their fatal effect on an already tottering legacy. Affected monasteries have been covered by the local press and their historical significance discussed and evaluated in the social media.

While we can safely assume that the more stringent of these voices will fade away soon enough, we should be comforted by the quiet, but nevertheless palpable, movement towards a more responsible building and conservation culture.

NOTE

I should add that my studies in monastic architecture have so far not been extensive and that there may be fallacies or inaccuracies in the text. Corrections are welcome and will be incorporated into future versions. Also, I have not visited all the monasteries in Sikkim after the earthquake, so there may be exceptions to my arguments. Again, corrections are welcome.

HISTORIC EVOLUTION OF THE SIKKIMESE MONASTERY ¹

GARY CHOPEL
Senior Architect
Building and Housing Dept. Govt of Sikkim

Tiny, landlocked and unpredictable, Sikkim the Himalayan kingdom of yesteryears was inhabited by the Lepchas until the Bhutias came from Tibet around the thirteenth century and the Nepalese around the nineteenth.

The migration of these two communities were very important to the Sikkimese heritage as they brought with them two very important practices to the state which indicated the direction of the Sikkimese culture to follow. While the later introduced the practice of terrace farming in the state, it was the former that laid the blueprint for the architectural style of Sikkim.

Sikkimese architecture is complex as it shows influences of its neighbouring regions and because of this feature, it is all the more interesting to study. While influences from Nepal and Bengal could be seen in its local vernacular vocabulary, the Bhutanese and the Tibetans had a more serious role to play with its presence distinctly visible in its monastic form and also in the more elaborate *kothis* (Tibetanised domestic house style) of the state.

Religion effects architecture and as the ruling class was from a Buddhist based society, its influence was vocal in dictating its style and the design of the Sikkimese monasteries or *gonpas*, which were commissioned with special patronage from the royal family.

Religion was a new concept to the animist Lepchas and thus commissioning of the *gonpas* was important so as to ensure that the entire state was united under one religion.

After Phuntsog Namgyal (1604-1670) was consecrated the first Chogyal of Sikkim in the early 1640s, the first *gonpas* were built in

¹ This research is a draft report based on personal research material of the author and is part of his ongoing Sikkimese architectural evolution studies. The classification of era, time and categories are his own and not adhering to any norms or standard.

what is now West Sikkim, a trend followed by subsequent Chogyals who set out missionaries to different parts of Sikkim to establish shrines and propagate the dharma. In a similar manner the first Shabdrung Rinpoche had used religion as the main tool to unify early Bhutan.

Complexes were built on hill tops for purity and also for visual connection with other *gonpa* and this was most prominent in the monastic circuit of West Sikkim which covered the *gonpas* at Pemayangtse, Sangha Choeling, Kechupalri, Dubdi, and Tashiding. This 'golden circuit' went on to become the most important corridor in the state with the Pemayangtse - Sangha Choeling ridge as its centre as it was visually linked with other important *gonpas* at Risum, Rinchenpong, Dubdi, Hungri, Silnon, Ralang, etc.



The golden circuit (source - Sikkim: Eicher Goodwill)

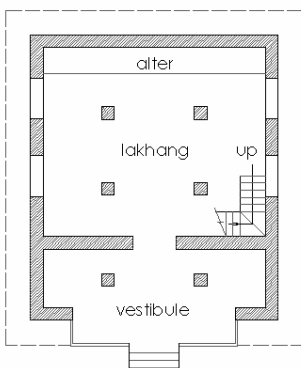
The site chosen for Dubdi, Sikkim's first *gonpa*, was a hill top above Yuksom in West Sikkim. The Dubdi and Shanga Choeling *gonpas* laid the foundation of the Sikkimese monastery's architectural evolution. Below follows a brief description of Sikkim's three main styles of monastic architecture.

1. *The shrine style gonpa* (1650 – 1750)

The ‘shine’ was the first style to be built in the state. Its layout was very simple as it was a small square building which was mostly made of stone masonry laid in mud mortar. The original roof was of thatch and even wooden planks in some cases.



Dubdi Gonpa, above Yuksom, West Sikkim



Plan of Dubdi Gonpa

The shrine had a simple one room layout with a small vestibule in the front flanked by *mani* wheels on either side which led to the room which housed a *lhakhang* or *dukhang* (the prayer hall) on the ground floor with the altar on the opposite side facing the entrance door. The layout of the *lhakhang* was done in the traditional *kawa zhi dung gyed* principle (which when literally translated means ‘pillar four beam eight’), that incorporated four columns and eight beams in its structural design highlighting the fundamentals of Buddha’s teachings. There

was a small wooden staircase usually on the right side of the *lhakhang* that led to the first floor which had a store room and also housed the Kangyur and Tengyur collection of manuscripts and was more like a special library floor. The raised attic of the *gonpa* could be accessed from here and was at times used to store the *gonpa*'s precious artefacts. The roof of these structures was four way sloping with a heightened attic for maximum light and ventilation.

These structures were simple in design with beautifully carved beams and columns all made of wood which was a local material and historically cheaper.

The *gonpas* of Dubdi, Sangha Choeling, Tashiding and probably Pemayangtse's original structure were built along these lines and are thus amongst the most important *gonpas* in the state. The Third Chogyal Chagdor Namgyal (1686-1717) was perhaps the most important ruler of this early era who personally took much interest to their commissioning or reconstruction.

2. *The dzong style gongpa (1750 – 1850)*

These were made during the time when the Sikkimese *gonpa* design was at its evolution peak and was at its experimental best in terms of architecture. The *gonpas* built during these times are perhaps some of the most beautiful structures to be commissioned in the state.

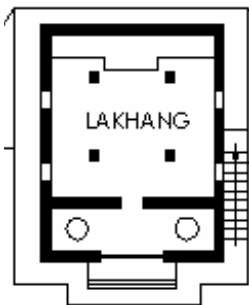
The *gonpas* were more rectangular in shape (due to the need to house a larger *dukhang*), very well detailed (in terms of iconography and colour) and made in random rubble masonry laid in mud mortar. The ground floor still had a similar approach with a vestibule flanked by *mani* wheels on both sides which connected to the main *dukhang*. The *dukhang* was more organized and it had a clean floor with the staircase absent on its right side. The layout still was based on the *kawa zhi dung gyed* principle and had a special three tier bracket design which is most visible above the openings at the vestibule and main door. These *gonpas* were also used as a *dzong* or administrative centre and the first floor was thus accessible to the priests, the landlords and the royalties, therefore the staircase was now made external usually on the northern wall of the building which connected to the first floor. This perhaps was one important development in the evolution and provided us with a hint that the *gonpa* apart from being a centre of religion was also gaining importance in its function as the administrative centre while the ground floor still remained accessible to the public.

The first floor now had two rooms that were used as the Kangyur-Tengyur room and the other as a private room for the priests, the landlords or members of the royal family. The roofing was still four-way but the attic space was not defined here as the structure was a dual purpose building and the attic could no longer be used as store. These *gonpas* were examples of some of the best architectural and iconographical works that can even be seen today.

In this stage the *gonpa* is now taking the shape of a monastery with *thrashas* or smaller dwellings for monks being introduced around the main temple and laying the blueprint of a complex.



Rinchenpong Gonpa, West Sikkim



Ngadak Gonpa

Special features of these *gonpas* are their wooden balconies and other projections which are finely carved and detailed. The Rinchenpong, Risum, Tholung and Namchi Ngadak *gonpas* were all built in this era and are thus considered masterpieces of Sikkimese architectural endeavour. The size also remained larger and though the building now was more rectangular, it still remained true to its design simplicity and adhering to religious texts.

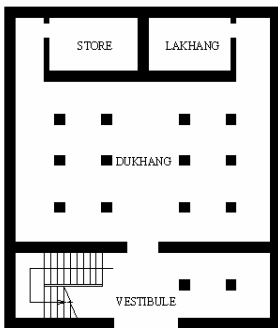
3. *The enclosed style gonpa* (1850 – 1950)

As the kingdom was constantly threatened by the invasions of the Nepalese from the west and the Bhutanese from the east, security was one of the primary concerns in the region and this can also be seen in the *gonpas* of this era as it is very much visible in its layout.

The *gonpa* here adapts a more institutional look with a large ceremonial courtyard in the front flanked by a *yabring*, a covered structure providing seating for high lamas and dignitaries, and subsequently surrounded by *thrashas* to give it a fortress type configuration.



Phodong Gonpa, North Sikkim



Phensong Gonpa

On an individual level the main *gonpa* now looks more solid with the staircase absent from the side and all entries are from the front vestibule which could be shut and locked. The vestibule here is more versatile space as it is flanked by a staircase usually on the left with a store below and a large space for *mani* wheel on the other side. The vestibule connects to the *dukhang* which is much larger to house more people in the assembly and

incorporates necessary structural changes with introduction of more columns and beams thus terminating the traditional *kawa zhi dung gyed* theory—Enchey and Labrang, however, are special as they still have the four column eight beam configuration. There is a private shrine room behind or besides the altar that houses a second prayer room.

The staircase in the vestibule leads ones up to the first floor lobby called the *rapshay* that opens to a daily ritual room, the Kangyur-Tengyur room and a store or a treasure room. The staircase further continues up to the second floor that is usually used as a store and ends at the heightened attic space.

This type of planning is seen in the more recent *gonpas* which incorporates the use of cement and other historically alien material.

The walls of these structures were made of stone laid in traditional mud mortar. These structures were made as an institution and thus its size is the biggest of all. The *gonpas* at Phodong, Phensong, Rumtek, Enchey, etc. belong to this era.

General observations

Though the *gonpa* layout went through a series of changes, there were a few features that remained more or less constant.

Firstly the Sikkimese *gonpas* always portray the three tiers ‘man-monk-god’ concept that could be seen in its planning. The ground floor was usually the *dukhang* and represented the common man. The first floor housed the manuscripts and was meant for the scholars or the monks. The heightened open attic space was called the *sangdopalri* and represented the space for god. The best examples of the Sikkimese roof can be seen at the *gonpas* of Phodong, Pemayangtse and Tashiding. This thus defined the roof form of the building which was usually stepped in three layers.

Secondly the *gonpa* always has very strong cardinal directions and the main front façade usually faces towards the east or south depending on the area and its historic relevance.

All the *gonpas* have a multipurpose courtyard in the front and a *yabring* flanking one of the sides of the courtyard.

The *chortens* and *mendang* are towards the north-eastern edge of the site or in a separate complex and never in front of the main courtyard.

Many of the *gompas* are designed in the traditional *rinchen surgyed* layout or the diamond shaped eight corner layout which is considered

to be most auspicious and perfect planning wise as it is based on the principals of a Buddhist mandala with very strong cardinal points.

The main structure is designed in the traditional *kawa zhi dung gyed* layout. This arrangement is considered to be most ideal for the main prayer hall as it represents the Buddha's theories of the Four Noble Truth and the Eight Fold path which remain the fundamental principles of Buddhism.

BETWEEN THE EARTHQUAKES STANDS A MONASTERY

KERRY LITTLE¹*University of Technology Sydney*

In late December 2011, during the Lepcha Namsong (New Year) festival, the annual village Cham was celebrated at the monastery on the hill at Hee Gyathang, in Lower Dzongu, North Sikkim. The Cham is a Buddhist ritual—a masked dance intended to remove obstacles and protect the monastery and the village from misfortune. During a Cham masked dancers whirl slowly around the monastery ground, appeasing troublesome local deities, and attracting benevolent deities that bring peace and prosperity for the year ahead.

This Cham would have been the last held at Hee Gyathang but the foresight and perseverance of a small group of villagers who have extended the life of this old stone and timber building. Like the Cham they have gathered to witness, they have removed obstacles to protect the monastery and in so doing, have protected an important symbol of Lepcha social history.

The lifecycle of the old timber and stone monastery in Hee Gyathang can be measured between two of Sikkim's devastating earthquakes. It was built to replace the former village monastery, which was destroyed by an earthquake in the early 1930s, and its life was almost ended in 2011, before the September 18 quake, when it was slated for demolition and replacement.

A new concrete monastery was proposed for the same site but this news stirred community discussion about what makes an old—albeit damaged—building more important than a new one and the historical markers that make it worth saving and restoring.

The decision to build a new monastery was made before the 2011 earthquake, but damage sustained in the quake made it a safety risk and the argument for replacement gained strength.

But the prospect of a new monastery left many villagers concerned that a rich history of community and cultural engagement would be lost

¹ The author acknowledges the significant contribution to this article from Tenzing Gyatso Lepcha who researched and recorded the history of the Hee Gyathang monastery.

for the Hee Gyathang monastery has a unique history: It was built entirely by Lepchas and the cost contributed to by every village in Dzongu.

Tenzing Gyatso Lepcha was one of the villagers who fought hard to retain the existing monastery and described the heritage value of the building in community rather than religious terms. “This is the only monastery that was entirely built by Lepchas. The grandfathers of almost everyone in this village carried stones on their backs to the top of the hill where the monastery stands.”

Tenzing’s grandfather was village *mandal* (village headman) at the time and was instrumental in getting the monastery built. He also worked with the Lepcha community in Dzongu who contributed to the cost of the monastery. Tenzing raised the broader significance of the building when advocating for the monastery’s restoration. “This monastery was built by all the people from Dzongu. They made the tools, they contributed money to buy the materials; they carried the stones. It is a significant community building,” he said.

Tenzing and fellow villagers who wanted to save the monastery discussed alternatives with neighbours, the panchayats (elected village representatives) from Hee Gyathang and neighbouring cluster villages, the contractor/builder and Dzongu’s Member of Legislative Assembly. As the cost of demolition of the old building wasn’t included in the budget for building the new, they negotiated that the new building could be constructed alongside the old—an approach that appeased those who wanted to keep the old monastery and those who supported a new monastery. They lobbied for funds to stabilize the old monastery, which were spent on steel scaffold erected one month before the 2011 earthquake, thereby saving the building.

One of the village panchayats, Norzing Lepcha, said the monastery is an important building because it was built by the village ancestors. He suggested when the new monastery is constructed the old can be converted into a prayer room. He appreciates the community sharing ideas for its cultural preservation and would be happy to see it used as a museum.

Chetan Shrestha, a heritage architect and Partner at Sanctum Conservation Works, who consulted with the Lepcha community on the historical value and condition of the monastery, noted the Hee Gyathang monastery is one of the few in Sikkim built exclusively from stone and mud mortar that survive. “Sikkim has already lost a majority of its archi-historical heritage. The good sense shown by Hee Gyathang village could prove to be an example of the positives of sensible conservation. If it were also to fall, there might be nothing left for the

future generations to learn about ancient building practice’. [see earlier article ‘Broken Shrines’]



Hee Gyathang monastery, Dzongu, North Sikkim

The Hee Gyathang monastery was built under the leadership of twelve *mandals* representing all parts of Dzongu who divided the responsibility for its construction. Some were responsible for the building of a wall of the monastery; others were responsible for the middle part; others for the wooden structure. The people at Hee Gyathang served food to all the people involved in the construction until the monastery was completed in 1936.

Saving a religious building for its community history is rich in spiritual practice. Consider the devotion to Buddhism by the Lepchas of Dzongu who decided the monastery should be on the top of the hill so every person could hear the sound of monastery activities. This site was higher than the monastery they replaced and involved significant hardship for the construction. It took several months to cut the hill, level the ground and men and women had to carry the stone and white mud from up to three kilometres to the construction site.

The commitment to the building and Buddhist practice is etched in

the ten main wooden pillars for which the timber was brought from a forest three kilometres away. Local people also made the tools required to work the timber into pillars.

The Hee Gyathang monastery is now safely clad in scaffold. But while it may have been given a reprieve, to be truly safe it needs to be restored. This will require considerable funding, that in modern Sikkim won't be raised by twelve *mandals* with labour provided by community volunteers.

Tenzing Lepcha and his friends are forming a committee to work on the restoration of the monastery. The committee will create fundraising proposals and opportunities. They hope to emulate their ancestors and create an inclusive community response to safeguard the future of the monastery on the hill.

THE PRECIOUS OCEAN OF AMAZING FAITH:
 THE HISTORY AND PRACTICES OF
 CHUMPONG *MANI LHAKHANG* (TEMPLE)

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Namgyal Institute of Tibetology

Introduction

This paper presents the history of the *mani lhakhang* of Chumpong (gCong phung) village in West Sikkim and the practices related to it. The importance of this temple is not obvious but whosoever enters and looks around will notice its religious and cultural value and will respect it as a great *lhakhang*. Nothing has ever been written about the importance of this particular village temple and its rituals performed by the elderly women of its village.

Chumpong village is itself an important location, which was on numerous occasions blessed by high lamas. In the *lHa btsun 'Jigs med dpa' bo bka' 'bum*² text, it is mentioned that “[b]etween Pad+ma yang rtse and sGrub sde gSang sngags rdo rje gdan [near Yog bsam] lays a resting place”, which, the elders in the village explained to me as being Chumpong. Only then did I realise the importance of the village and its temple and started collecting information about it from 2007.

The blessing of Chumpong

Chumpong village is located in West Sikkim near Pemayangtse (Padma g.yang rtse) monastery. Chumpong’s original name was Dechen Kyishong (bDe chen skyid gshongs) or the ‘Valley of Great Joy’. Chumpong belongs to the same revenue block as the village of Nako (Na kog). Nako’s original name was Norbu Kyishong (Nor bu skyid gshongs), or the ‘Valley of Gems’.

¹ I am very thankful to Mélanie Vandenhelsken, Carl Yamamoto and Anna Balikci-Denjongpa for their assistance with the English translation/editing as well as Sonam Gyatso Dokhambo, Joint Director, Ecclesiastical Department, for letting me access their files.

² 1735.

In his biography, Jigme Pawo—the third lHa btsun chen po³ rDzogs chen 'Jigs med dpa' bo—explains that he arrived at Yoksam (Yog bsam) on the 25th day of the 10th month of the Earth Female Ox year (1709). On the 26th, he met the lamas of surrounding monasteries together with the Bhutia people of the area, visited Dubdi (sGrub sde) monastery on the 27th and then offered tea for a daily ritual in all the surrounding monasteries. On the second day of the 11th month, on his way to Pemayangtse where he had been invited by the 3rd Chogyal Chagdor Namgyal (Phyag rdor nam rgyal), Jigme Pawo stayed for one night in a village called Dechen Kyishong.⁴ As we have seen, this was Chumpong's original name.

On the 3rd day, Pema Karwang (Phyag mdzod Pad+ma gar dbang), the treasurer of Pemayangtse received him halfway. According to the History of Sikkim by Thutob Namgyal and Yeshe Dolma ('*Bras ljongs rgyal rabs* by mThu stobs nam rgyal and Ye shes sgröl ma)⁵ the meeting between the two men took place in Chumpong. Pema Karwang received Jigme Pawo with incense and a ceremonial scarf at a pond (*chu mig can*) in Chumpong. According to oral sources, this pond would have been at the place called Kongchu (sKong chu), which is to the left of the *lhakhang*. An important lake was previously located there but the lake has since disappeared due to bad deeds and lack of care. Nowadays, this place is very steep. From there, the way divides into two paths, one leading to Pemayangtse and the other to Pelling (Pad gling).

A short history of Chumpong mani lhakhang

This temple is believed to be very old and a place of great bliss. Indeed, as mentioned above, Jigme Pawo rested in Chumpong while he was travelling from Dubdi to Pemayangtse. He mentions in his biography⁶ that he rested on a flat stone which he used as a natural throne. The temple of Chumpong is located near this stone, which is nowadays called '*tsao tara*', which means 'resting place' in Nepali. As the temple is known as 'Tukshe Gonpa', its surrounding area is called 'Tukshe Gonpa Tsao tara'.

³ 1735: 270.

⁴ In a house belonging to a villager called Mr dBang drag; we don't know where it is today.

⁵ 2003: 70 line 11.

⁶ 1735.

In former times, one of the Chogyals⁷ built this temple together with the villagers. They chose the location because of the presence of the stone where Jigme Pawo had rested. They built the temple more generally for the benefit of the Dharma and particularly for the benefit of the six classes of beings. The king and the villagers started by giving some land to the temple which is today about 20 acres in area.

The temple was rebuilt in 1970 (Iron Dog year) by the villagers of Nako and Chumpong, and when the villagers collected donations for this purpose, Chogyal Palden Thondup Namgyal (dPal ldan don sgrub rNam rgyal) added Rs400—which was a large amount at that time.⁸ While the construction was ongoing, the Chogyal paid a visit to Chumpong village. The villagers invited him to the *mani lhakhang* and presented him with the dishes of hospitality (lk. *gsol chang chang gyu*). The king saw that furniture was needed to complete the construction and again offered Rs200. He also explained the rules to be followed in the temple: that water and prostrations should be offered daily (*phyags mchod*), that a fasting-ritual (*smyung gnas*) should be held three times per year, and that recitation of the mantra ‘*Om ma ni padme hung*’ should be held on the eighth (*tshes brgyad*), fifteenth (*tshes bco lnga*) and thirtieth day (*gnam gang*) of each month.⁹

In 1990 (Iron Sheep year), the temple was badly damaged when a tree fell on it due to a strong wind. Villagers collected donations¹⁰ and completed the repairs the same year.

In 1993 (Wood Dog year), the villagers decided to completely rebuild the *mani lhakhang*, collected donations for this purpose and received additional support from the Ecclesiastical Department. The collection was organised by Tobgay Mandal, a resident of Nako and the temple was completed a few years later. Mr Karma Lhundrub, a resident of Chumpong, was the main sponsor of the altar; Mr Tshering Dondrub, a member of the same family, donated the temple’s electrical installations.

The religious articles of the temple

On the temple’s main altar, Chenrezig (sPyan ras gzigs) occupies the central place, while Manjushri (’Jam dpal dbyang) is on the right side

⁷ This could be the third Chogyal Chagdor Namgyal or the fourth, Gyurme Namgyal since both were close to Jigme Pawo.

⁸ Information found in the Ecclesiastical Department’s *mani lhakhang* file.

⁹ The ritual calendar will be detailed hereafter.

¹⁰ Some villagers gave money while other gave wood for the repairs.

and Vajrapani (Phyag na rdo rje) on the left. Numerous small statues surround them: two statues of Jampayang ('Jam dbyang), three statues of Buddha, one of 'eleven-headed Chenrezig' (bCu gcig zhal), one of Tara (sGrol ma) and one of the Fifth Karmapa.

There are sixteen volumes of the 'Bum, which were donated by a villager from Ben named Sangay Gyatso (gSang sngags rGya mtsho) and a woman from Chumpong named Tsengay Palden (Tshang rgyas dpal ldan).

A few years earlier, a village committee was set up to look after the *mani lhakhang* and its rituals together with all the other cultural and religious events taking place in the village. This committee, called the 'Congregation of Joyful Youth' (gZhan nu skyid gshongs tshogs pa), is made of one member-representative from each village household. The committee offered one pair of long ritual brass trumpets (*ra dung*), one pair of short horns (*rgya gling*) and one pair of drums (*zang rnga*). The list of ancient articles is as follows: seven copper bowls, seven brass bowls, ten brass containers for butter lamps, a small wood printing block for prayer flags, one big drum (*rnga*), one pair of flat cymbals, one *rdo rje* and one bell, one silver ring for rice offerings, one pair of conch shells, one round cymbal, and one flute. In 1997 (Earth Tiger year), Mr Tshering Namgyal Denjongpo (Tshe ring rNam rgyal 'Bras ljong po) from Gangtok (sGang tog) offered 108 containers for butter lamps.

The temple is used by the elderly women of the village who make up a community called the 'Grandmothers of the Temple' (*nya mo lha khang*). These women perform monthly and annual rituals led by the fasting-ritual guide (*smyung gnas blam*) in the case of the fasting-rituals (*smyung gnas*), or by the temple's head-lama (*dpon slob*) in the case of the other rituals. The villagers' committee looks after the material functioning of the temple and nominates its caretaker.

Entrance to the 'Grandmothers of the Temple' (nya mo lha khang) community

Before entering this community, a 'grandmother' should receive the vows necessary for the fasting-ritual (called *smyung gnas sdom pa*) from a high-ranking rinpoche. Then, the first day she enters the village *lhakhang* she has to offer a 'feast offering' (*tshogs*) together with butter lamps (*mchod me*), and sponsor that day's lunch for all the grandmothers and provide the items needed for the head-lama's ritual (*zhabs tog*). She has to bring all the required items for the day: six kilos of butter, eight kilos of cheese, and forty kilos of rice. Only after this

can she join the other ‘grandmothers’ for the regular monthly rituals. She will, however, sit at the end of the bench where these ladies sit.

About those in charge of the lhakhang: the head-lama (dpon slob), the caretaker (dkon gnyer), and the fasting-ritual guide (smyung gnas blam)

To become the *mani lhakhang* head-lama, one should be the possessor of at least one of the three capacities (*rab* ‘bring *tha ma*): an excellent one (*rab*)—one who is a celibate monk (*dge slong*)—an intermediate one (*’bring*)—one who has taken one of the *prātimoksa* vows and has practiced at least one fasting-ritual—or an inferior one (*tha ma*)—one who is able to write and read the ritual texts and knows the liturgy.

As for the caretaker (*dkon gnyer*), the committee collects donations from Nako and Chumpong villagers in order to pay his yearly salary. The wealthy give Rs500 per house, middle class people give Rs200 and the poorest give Rs100. The present head-lama combines the capacities of head-lama and caretaker of the temple. He is a lama of Pemayangtse monastery named Tsampo Karma (mTsham po Kar+ma).

As for the previous caretakers, around 1988 a Bhutanese pilgrim arrived at Chumpong and took charge as caretaker of the temple. He soon entered into a dispute with the villagers about the temple’s landed property. After some time, the villagers searched for another caretaker and eventually found another Bhutanese man. Around the year 2000, the latter went to a sponsor’s house to perform a ritual (*mDo mang*) and died there from a disease he had previously contracted. The villagers organised a grand funeral and a forty-nine day ritual for him.

As for the fasting-ritual guide (*smyung gnas blam*), in 1980, a lama from Bhutan named Zhung Lam (*gZhung blam*) led several fasting-rituals (*smyung gnas*). Currently, Sonam Phuntshog (*bSod nams phun tshogs*) from Pemayangtse monastery holds the position.

Monthly rituals in the mani lhakhang.

Three times a month, the eldest women of the village of Nako, Chumpong and Arithang gather in the temple with its head-lama. On the eighth and the thirtieth day of each month, they make feast offerings (*tshogs*) and butter lamp offerings (*mchod me*) with goods brought from their own homes. They also bring rice, milk, butter, cheese, vegetables, biscuits, etc. for the single meal they take during these days. They recite the mantra ‘*OM ma ni padme hung*’ for the whole day. In the morning, the head-lama offers fumigation (*bsang*)

and ‘golden drink libations’ (*gser skyems*) to the deities. Then, he recites complete ritual texts.¹¹

On the 15th, they perform the *gNas gsol*, the ritual propitiation of the sacred land. They organise it in turns, with two elder ladies taking charge of each ritual. On that day, they recite the *Rig ’zin srog sgrub* (Lhatsun Chenpo’s treasure text revealed in Sikkim) and prepare cake offerings or *tormas* (*gtor ma*) of the deities of this text. They also recite the *gNas gsol* text and offer fumigation (*bsang*) and drinks to the deities.

Annual rituals

Three times a year, the eldest women of the village perform a fasting-ritual: during the first, the fourth and the ninth months of the Tibetan lunar calendar. If they can, they perform sixteen days of fasting; otherwise, they do only eight.

1. *Drug pa tshes bzhi* (sixth month)

On the 4th day of the sixth month, they perform *Drug pa tshes bzhi* sponsored by one of the eldest women of the village named Ama Dolma (A ma sGrol ma, dByib shing Anyo).

On the fifth month, they practice an important ritual for villagers called Chirim (sPyi rim or Nyin log, samsaric ritual). On this occasion, a ‘collector’ (called *rgya dpon*) collects a sample of different grains (*phi tab*, rice and maize) from the villagers and brings it to the *lhakhang*. Then the committee collects donations of Rs20 per house. This money is used for the feast offering and the butter lamps. For this occasion, eight lamas of the village perform the ‘hundred offering’ (*tshogs brgya*) and one exorcism ritual (*gtor zlog*) based on the text *Drag po sde bzhi*. On this day, all the villagers bring coins and different seeds after having passed them around their bodies in order to remove obstacles. These coins and seeds are placed next to the ransom effigies and are thrown away together.

2. *’Bum bskor* (second month)

On the 15th day of the second month, the sixteen volumes of *’Bum* are carried from Pemayangtse monastery to a village called Zindrang (Zin da rang) by its villagers. The books are carried in a procession led by

¹¹ *sMon lam* as well as *sKyabs thugs rje bdag nyid* written by dNgul chu D+har ma b+ha dra and *Thugs rje chen po yi ge drug pa* by Drub chen Thang stong rGyal po.

Pemayangtse ‘cooks’ (*ma byan*; called *zu nar bo*, i.e. players of the *zu nar* musical instrument, for this occasion) playing ritual music, and lamas from Pemayangtse. One householder in Zindrang is the sponsor of the day where the lamas perform a whole day ritual (*tshogs brgya*). The text are kept in the sponsor’s house for the night where the lamas and ‘cooks’ also stay.

On the 16th day, the sixteen volumes are carried to another village called Zingyang (Zin sgyang) where, as in Zindrang, rituals are held in the sponsor’s house where texts and religious practitioners also stay for the night.

On the 17th day, villagers from Nako-Chumpong carry the ‘*Bum*’ from Zingyang to their village. On that day, the ‘Grandmothers of the Temple’ offer tea and snacks to the participants. The ‘*Bum*’ carriers circumambulate the temple once before entering it. The text is kept here for a short time where the lamas recite sections of it. Then they go to the village sponsor’s house, where the same procedure is followed as in the previous villages.

3. *gNas gsol* (seventh month)

The *gNas gsol* (‘Propitiation of the Sacred Land’) is performed by two or three lamas (or *mchod gnas*) from Pemayangtse monastery. Early in the morning on the 8th day of the seventh month, they blow flutes (*rkan gling*) from each corner of the main temple of Pemayangtse, and then leave for Chumpong. Half way, they blow the flutes three times so that Chumpong villagers will hear them. The latter then prepare some tea near the *lhakhang* and offer fumigation (*bsang*).¹² After having received these offerings, a lama performs a ‘request’ (*zhal len*) to the local deities (lHa srin bde brgyad) along with an offering of *chang*. Then, they enter the temple where they remain the whole day performing a ritual (*tshes brgyad*) with the ‘grandmothers’ reciting the mantra ‘*OM ma ni padme hung*’.

Early next morning, the lamas engage porters to carry the *chang* and rice collected from villagers (called *chang phud chum phud*) in the direction of Yoksam and leave with them. When they arrive at a place named Tingting Gang (Ting ting sgang), the villagers of Yoksam welcome them with tea and snacks. They then proceed to Chorten Norbu Gang (mChod rten Nor bu sgang) where the first Chogyal of Sikkim is said to have been enthroned. They prepare the *tormas* for the performance of next day’s 10th day (*tshes bcu*) rituals (*tshogs brgya*).

¹² This offering to the lamas is called *gsol chang chang gyu*.

On the 11th day, they go to Tsoka (mTsho kha), a place located one day's walk away from Yoksam in the direction of Kangchendzonga (Gangs chen mdzod lnga).

On the 12th day, they go to Dzongri (rDzong ri), further away in the direction of the mountain. They take one day's rest on the 13th, and on the 14th, prepare the *tormas* (*gNas gsol*) with the rice previously collected from Nako, Chumpong and Yoksam.

On the 15th day, they perform the *gNas gsol* and *Rig 'dzin srog sgrub* rituals and make a 'golden drink libation' (*gser skyems*) with the *chang* collected from the villages.

Budget of the temple

Since 2003, the Ecclesiastical Department of Sikkim has given Rs3000 per year to the temple, as it has to all of the temples of Sikkim. The yearly expenses for 2006 were two hundred and twenty-five kilos of oil for the butter lamps, five kilos of butter, rice and dye for the cake offerings, dye for the butter, fruit for the offerings, cheese, butter, vegetables, grains, tea, snacks and pay for the eight lamas who performed Chirim. The total expenses for the year amounted to more than Rs35,000.

Until the year 2000, part of these expenses was covered by the villagers' contribution and a portion of the proceeds of the cardamom cultivated on the mani lhakhang's land. Fifty percent of the crops would go for the allowance of the caretaker and fifty percent went towards the ritual expenses. However, the cardamom crops having failed since the year 2000, the full expenses, including the caretaker's allowance, are now born by the villagers.

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BHUTAN'S NATIONAL ARCHIVES:
PRESERVING THE PAST, BUILDING THE FUTURE

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Introduction

Bhutan's first five-year development program was launched in 1961 with generous support from India. The National Library was established in 1967 as part of a government program to preserve and promote the rich cultural and religious heritage of the country in the face of the modernization process. The library finally moved to its own purpose-built premises in 1984. The complex comprised the Stack Building, which had been consecrated as a *lhakhang* to provide the appropriate environment for preservation of the literary treasures written in classical Tibetan (or *Choekey*, as it is known in Bhutan) to be housed there and a small administration building to accommodate the library staff. In 1996 the National Library entered into a long-term twinning project with the Royal Library, Denmark funded by Danida¹ to establish an online database of the collection, classify the religious literature, conduct literary surveys across the country and set up a library network. The project also included extensive staff training programs, including conservation workshops. This far-reaching project set the National Library on its own path to modernization.

Archives project launched

With the passing of the Legal Deposit Act (1999), the National Library attained official depository status as the National Library & Archives of Bhutan (NLAB) and became responsible for the collecting, conserving and managing of Bhutan's documentary heritage.² In 2000 a further

¹ Danida (Danish international development assistance) is the term used for Denmark's development cooperation. Danida is not an independent organisation, but rather an area of activity under the Ministry of Foreign Affairs.

² The Act mandates that within three months of publication/production, private sector publishers and producers must deposit at the NLAB, free of cost, four copies of the

project was initiated, to construct and equip an Archives Building and send nominated staff for training in Archives work. The Royal Library, Denmark was also responsible for implementation of this project.

In April, 2002 a ground-breaking ceremony was held for the new building. Senior librarian Kunzang Delek—the appointed project manager who would later take the post of archivist—was sent on a study tour to Denmark in October that year to familiarise himself with activities of the National Library's Project partner-institution, the Royal Library in Copenhagen. He also visited Moesgård Museum in Aarhus, to study archives storage there with the chief conservator, who was working as a consultant on the Archives Project. In September, 2004 Kunzang Delek went to Singapore to study for a Master of Science in Information Studies—Archival Informatics at Nanyang Technological University. An assistant conservator (a fresh secondary school graduate) had been appointed that month and received general in-house library training until the newly qualified archivist's return the following March³. The Archives Building had already been finished and fitted out by then. It was formally commissioned with a consecration ceremony in late June, 2005.

Though traditionally Bhutanese in outward architectural style, the Archives Building meets international standards for storage of library and archival materials, with detailed specifications for every aspect provided by the funding agency. Both floors are fitted out with standard library adjustable steel shelving and on the upper floor there is also a long bank of manually operated compact steel shelving.⁴ The upper floor also includes a digitization and preservation workshop, equipped with a two-door refrigerator for storage of preservation materials as well as a large chest freezer which may be used instead of the fumigation chamber for fragile items. The building is closed to the public. Archives staff work from offices in the Administration Building

material if printed, and two copies if non-printed. Government and government-related sectors must deposit ten copies of the material if printed, and five copies if non-printed. For the full text, see Archives section of the National Library website, www.library.gov.bt/.

³ The nominally one-year course had been compressed into six months for Bhutan's trainee archivist, who could not be spared from library duties for a longer time.

⁴ In a meeting with the author in July 2001, the then library director, Mynak R. Trulku explained that the project had allowed for installation of electrically operated compact shelving, but he had opted for manual operation on grounds of safety and because less could go wrong (an important consideration, as servicing would have to be carried out by technicians called from India).

and the Conservation Building, the latter also accommodating the library fumigation chamber and a conservation studio.



National Library & Archives of Bhutan
From left to right: Administration Building, Stack Building housing
Choekey Section, Archives Building

Archives work in the 1980s

The initial focus in developing a national collection had been on first identifying original manuscripts and block-printed works held within the country and then acquiring these through purchase or donation. Printing blocks had also been surveyed, and most of the 4,400 wood-blocks held at the time of the 1984 move had been transferred from religious complexes for better preservation. Archival printed materials then amounted to around 900 volumes. In 1987 the library embarked upon a microfilming project, the purpose of which was to build up an archival and research collection of old and rare books, archives and documents held in the National Library as well as those held in *gonpas*

and *lhakhangs* across the country.⁵ The project was very active for some years, during which most important manuscripts in the library collection were microfilmed, and also a selection of works from religious complexes in the vicinity. In mid-1992 the library acquired a fumigation chamber together with a sufficient number of custom-built, airtight aluminium storage boxes for the Wood-block Collection, under a conservation project funded by the Japanese government.⁶ Library staff fumigated the wood-blocks first, then all the archival materials. Thus, by the time the Archives were established there was already a substantial collection of materials to be reviewed for possible transfer.

Launching the National Archives

So as to allow time for the interior of the building to dry out and reach the humidity and temperature levels recommended for archival storage, staff began the fumigation and transfer of archival materials only in March, 2006. While existing facilities were rather limited, the archivist insisted that whatever they did, they should try to fit in with internationally established standards for archives preservation and control. Collection of letters of historical value began immediately. The Wood-block Collection was reviewed, and by mid-year the oldest and most valuable sets had been transferred to compact shelving in the Archives. By the end of 2007 the entire Microfilm Collection of 337 rolls of film representing 1,250 rare books and manuscripts had been relocated in the Archives. The Choekey Collection in the Stack Building was reviewed, and during 2007 the oldest and most important works were transferred to the Archives. These included several manuscripts, including a 12th century manuscript with gold lettering written on black paper.⁷

⁵ Start-up costs were funded by the United Nations Development Programme (UNDP) as part of a UNDP-assisted project, Preservation of Cultural Heritage, and on-going expenses for film and other materials were covered through Ford Foundation grants for some years from 1990.

⁶ In December, 1991 Bhutan and Japan signed an Exchange of Notes for a Japanese cultural grant of ¥46 million relating to procurement of the fumigation equipment. The fumigation chamber and storage boxes arrived in June, 1992. (*Kuensel*, vol. 6, no. 48, December 7, 1991, p. 1; vol. 7, no. 24, June 20, 1992, p. 7)

⁷ The Buddhist doctrine of merit provides motivation for copying the scriptures. The copying of text in silver or gold ink is considered to earn the copier extra merit, while the writing of some especially important texts in gold aids purification of negative karma. Often text is written in gold ink on black or indigo blue paper. Lapis lazuli may be powdered and mixed with black to dye the paper. A *serdrim*, or gold-letter

A substantial body of new material came into the Archives under the provisions of the Legal Deposit Act during 2006, and in 2007 the Legal Deposit librarian began transferring the materials accumulated since 1999. Fumigation and transfer of other works was suspended until this backlog had been dealt with. Bhutan-related governmental and nongovernmental publications held in the Foreign Books Collection were reviewed later.

In 2008 library security came under review: as a precautionary measure it was decided that any valuable works still housed in the Stack Building should be moved to the Archives. First priority was given to transfer of 14 *serdrim* (manuscripts written in gold ink) dating from the 12th to the early 20th century. During 2009 the archivist surveyed the entire contents of the Choekey Collection and transferred all other very old and/or rare works into the Archives. Some rare items (especially those which the archivist judged too fragile for treatment in the fumigation chamber) were fumigated in the chest freezer.



Digitizing a *serdrim* for the Archives

manuscript, is a manuscript written in gold ink, made by mixing gold dust with animal glue (traditionally made from boiled cow hide).

Some items were also digitized, including all 14 *serdrim*, a very time-consuming process as some of the works comprised many volumes. (Digitizing is done by photographing works page by page with a Canon EOS 400D digital SLR mounted on a tripod. Each page has to be separately focused.) On average, the three staff working on the digitization could process one volume per day. Digitization was followed by quality assurance (i.e. checking the files on the computer) and the making of corrections (i.e. digitizing any pages which had been missed and/or re-digitizing any work found to be faulty). The final step involved analysing the contents of the volumes for the library database records.

Archives staff

Staff comprise the archivist, assistant conservator and assistant archivist, the latter recruited in 2009. The assistant conservator is responsible for all aspects of paper preservation, while the assistant archivist is in charge of the Archives Repository, with full responsibility for stock inventory.⁸ Through the nature of their duties, the Legal Deposit and Microfilming & Records librarians are also closely associated with the Archives. Other staff may be drafted to lend a hand as needed (for example when works are to be digitized). Fresh school leavers on trainee attachments to the NLAB provided valuable assistance over several years, especially during 2009 when the transfer and digitizing of rare books was at its height.

National Archives Act and beyond

After transfer of materials was well under way, the archivist began work on the drafting of a National Archives Act which, when eventually in force, would heighten awareness of the importance of archival material and also alert individuals and organisations to their responsibilities under the Act. The draft has undergone several

⁸ The archivist, already an experienced arts administrator, undertook postgraduate studies in archival informatics on appointment to his post. The assistant conservator has had two one-month stints of hands-on training at the National Archives of India, New Delhi (2007) and at the Royal Library, Denmark (2009) respectively. The assistant archivist, a formerly an administrative officer in government service, attended a six-month general library training course mounted at the National Library of Korea in 2010. The course was an Education and Training Program for Librarians in Asia and Africa under Korea's Cultural Partnership Initiative Program (CPI).

revisions over the years, some reflecting the archivist's own changed perceptions as he gained more experience. Further inhouse discussion within the Ministry of Home and Cultural Affairs (Home Ministry) is still required to ready the draft for cabinet approval and subsequent legislative committee review, but it is expected that the National Archives Bill will be ready for presentation to Parliament during 2012.

Once the Act has been passed, a nationwide mapping survey of all record-creating agencies and repositories, including *gonpas* and *lhakhangs*, will be conducted. Everything of historic value will be listed, even those items in family houses. The survey will be followed by an appraisal exercise to decide which records should be collected up (or copied) for the Archives, as having national archival value for Bhutan. Records Officers will be appointed in each Ministry/Division and Archives staff will train them in filing and care of the records. Guidelines will be drawn up concerning what kinds of records should be discarded and what should be retained for the Archives when a file is closed. The long-term aim is to maintain district archival centres throughout the country, as foci for material to be collected up for the Archives.

Collection development policy

In general terms, the archivist sees the National Archive as documenting the identity of the country and he is keen to make it as comprehensive as possible for the benefit of historians of future generations. It is important to note that at later stages in the development of the Archives the majority of items will be secular in nature. The Archives collections are fairly static in size at present. Transfer of the most important old and rare scriptural works and other archival materials from the main collections has now been completed: the only documents flowing in on a daily basis are those few which arrive under the provisions of the Legal Deposit Act. Following the mapping survey and appraisal exercise, it is envisaged that documents will start arriving in much greater numbers.

With experience gained to date, the archivist now has an enhanced perspective. Instead of gathering in scriptural materials from the districts, his goal is to leave the religious works comprising Bhutan's cultural heritage where they are and train the local caretakers and/or householders in simple conservation measures. Valuable works will be digitized on site for the Archives. Storage arrangements will be

checked and improved where possible by Archives staff, who will also provide training to those who are looking after the collections. Works brought in for conservation will be returned to their owners afterwards. Transfer of any works to the Archives for permanent safekeeping will be considered only if local storage conditions are clearly inadequate, no better arrangement can be provided, and consent has been obtained from the local people. Housed in village *gonpas*, *lhakhangs* and private homes, these sacred texts, symbolising the verbal body of the Buddha, have a much deeper significance than just the printed word.

Training in conservation and preservation

Four conservation workshops were held under the auspices of the DANIDA Project. Major workshops were held at the NLAB in 2005, 2007 and 2009.⁹ These workshops were conducted in the Conservation Building, where office space on the upper floor had been equipped for development as a conservation studio in 2005. Though primarily for the benefit of NLAB staff, the 15-20 participants also included staff of other culture-related institutions and several monk body representatives. In their report on the final workshop the facilitators noted that—as with the previous workshops—participants showed great interest and enthusiasm, and that a core group had now gained a fairly good insight into problems of preservation both in general and also specifically for Bhutanese conditions.

Looking to the future, the facilitators suggested that a national preservation centre be established as this would be best suited to the situation in Bhutan, where there were only a few conservators available to take care of all kinds of materials, and that such a centre could also be responsible for education in conservation and preservation within Bhutan.¹⁰ Meanwhile, the conservation facilities already established at the NLAB would remain until there was a better alternative in place.¹¹

⁹ The first workshop, held at the Royal Academy for Performing Arts in 2000, was conducted by Jonas Palm, Head of Conservation at the Royal Library and Jesper Trier, Head of Conservation, Moesgård Museum, Aarhus, Denmark. The three workshops held at the NLAB were conducted by Jonas Palm, now Director and Head of Division of Preservation, The National Archives, Sweden and Birgit Vinther Hansen, Consulting Conservator, Dept. of Preservation, The Royal Library, Denmark.

¹⁰ They also stated that there was a need for more workshops in the country and mentioned the then library director, Gyonpo Tshering's proposal that there should be a major event held in central Bhutan to make it possible to get participants from around the country. The event could be either a workshop on preservation or an international conference on preservation of cultural heritage in the Himalayan region.

Promotional and outreach activities

The goal is to promote the Archives Project positively, rather than to just archive materials which arrive via the Legal Deposit Act. Although formal promotion can come only after the passing of the National Archives Act, there is still plenty of scope for informal promotion. In order to heighten public awareness of the Archives and to promote its activities, the archivist actively encourages donation of private papers by individuals, directly approaches government departments to request transfer of old records to the Archives, offers advice on record-keeping, and initiates and then arranges conservation and restoration of historical documents and literary treasures. The Royal Civil Service Commission (RCSC) has approached the archivist for advice on record-keeping and he is now helping RCSC to set up its own records system.

After protracted negotiation, the Home Ministry agreed to the transfer of two series of old land records into the Archives, the results of surveys undertaken between the late 1960s and early 1980s. The records are held in hundreds of book form registers of approximately foolscap size. Transfer of the registers and digitization of the records began in early 2010. After the work has been completed a set of the digital records will be sent to the Home Ministry. The registers will be fumigated and then stored in the Archives repository, and a set of the digital records will be stored in a closed access section of the library server. The public will have limited access to the library digital records, subject to permission from the Home Ministry on a case-by-case basis. On successful completion of this project, the archivist hopes to get agreement for the country's earliest census records to be transferred to the Archives on the same or similar terms for storage and access.

Learning that an 18th century *serdrim* held at Kilung Lhakhang, eastern Bhutan was in need of restoration, the archivist arranged for it to be brought in to the Archives. The work to be restored was an 18th century, 352-leaf manuscript copy of *Gyetongpa* ('The 8,000 verses of

(See Palm, J. & B. Hansen. *Report from Workshop in Preventive Conservation/ Preservation, Thimphu, Bhutan, October 2009*. Copenhagen, Dec. 2009, p. 6-7)

¹¹ Although a building at the NLAB had already been equipped for development as a conservation laboratory, its long-term suitability later came into question. Originally erected for another purpose, the traditionally styled building was dusty inside due to the plastered walls and ceilings; there were no facilities for proper storage of chemicals and the upper floor lacked easy access to piped water; further conversion work would be costly.

transcendental wisdom'), the short version of the *Prajnaparamita* sutra. When the book arrived in early 2010 it was digitized for the collection and then passed to the assistant conservator. Repair of the damaged parts of the leaves took about two months.¹² Afterwards, the library carver made upper and lower boards for the book which had lacked these traditional protective covers. Then the book was wrapped up and tied between the new wooden boards, fumigated, and returned to its *lhakhang* with advice for the caretaker on conditions required for proper storage.



Restoring a *serdrim* from Kilung Lhakhang, Lhuentse

¹² The book had been wrapped in cloth but not held between boards, so damage was particularly marked at the centre of the upper and lower margins of each leaf, where there was pressure from the tapes wound around the bundle. The upper and lower margins of the leaves were quite badly damaged (from damp and insect attack, it appears) with much of the surface partially crumbled away. The assistant conservator carefully scraped off the loose flakes which had been discoloured by iron oxide. Fortunately, the damage seldom went beyond the wide margins: the gold-letter text has survived virtually intact. After scraping away the damaged parts, the assistant conservator tore Bhutanese handmade paper to the right shape and gently fitted it into place to fill the gaps, using flour paste to bond together the edges of the insert and that side of the thick leaf. Turning the leaf over, he repeated the process. After finishing, he painted the patched-in paper inserts to match the dark bluish-black colour of the leaves.

Also in 2010, the archivist initiated restoration of an ancestral document which was amongst the family papers of a public figure. The document was digitized for the Archives after repair, and copies made for the collection. The owner of the document was very happy with its restoration. It is hoped that any attendant publicity might encourage others holding such documents to request their restoration, or even offer them for the Archives.

Pema Lingpa's autobiography

A longer-term project has recently begun, to conserve a set of 641 wood-blocks believed to have been carved by Bhutan's patron saint, Pema Lingpa and to carve a new set of printing blocks and then offer a block-print edition for sale. The archivist initiated this project which is being undertaken jointly with conservators at the Division for Cultural Properties, Department of Culture.



Wood-blocks believed to have been carved by Pema Lingpa himself

Pema Lingpa (1450-1521) is revered as Bhutan's patron saint and stories of his colourful life and daring exploits in revealing *terma* form part of Bhutan's vibrant cultural tradition. He is regarded as the direct incarnation of Longchen Rabjampa (1308-1363) one of the great codifiers of the Dzogchen teachings of the Nyingmapa tradition. Notable descendants of Pema Lingpa include male members of the Bhutanese royal family and the sixth Dalai Lama. Born in the Tang valley of central Bhutan, Pema Lingpa travelled and taught in both Bhutan and Tibet. In 1488 he founded the monastic hermitage of Kunzang Drak on the side of a cliff high above his home village, Drangchel.¹³ In later life Pema Lingpa wrote his autobiography, and a set of wood-blocks on which the autobiography is carved is preserved at Kunzang Drak along with many of his most important sacred relics. The wood-blocks are believed to have been carved by Pema Lingpa himself (legend has it, in a day).

Conservation of the wood-blocks: It was quite well-known that the autobiography was held at Kunzang Drak, and the archivist had taken a small inspection team to Tang to check on it because he had heard that the condition of the wood-blocks was deteriorating. On returning to Thimphu, the archivist arranged for the wood-blocks to be brought in for conservation. The local community was reluctant to let the wood-blocks leave the *gonpa*, fearing that misfortune would follow for the village. However, when it was explained that the wood-blocks would be returned after conservation work had been carried out to preserve them better, the villagers agreed to the proposal. A final invocation and appeasement ceremony was held at Kunzang Drak for the safe journey and return of the wood-blocks, which were carried to Thimphu in two Toyota Hiluxes. Villagers at the sending-off ceremony were seen to have tears in their eyes. The wood-blocks were first fumigated and digitized at the NLAB, and then sent to the conservation laboratory at the Department of Culture.

The printing blocks are carved from birch,¹⁴ a common tree in Bhutan's mountain valleys and the hardwood generally used for this purpose. The chief conservator reports that the condition of most blocks is satisfactory apart from a few blocks which are broken or have broken bits in the carved text. A conservation-approved adhesive is used to repair broken pieces. The main problem is woodworm. The four

¹³ There is no village at Drangchel now, only a small chorten; the walk up to Kunzang Drak is a steep climb of around two hours from the road to Tang.

¹⁴ *Betula utilis*, locally known as *Takpa Shing*

conservators fill the holes with sawdust mixed with animal glue and a conservation-approved insecticide, combining the mixture with a black powder bought from the town. In past times, a black powder from Tibet (composition unknown) was used but this is not available now. Conservation work began in September, 2010 and is expected to take from one to two years.



Conservation laboratory, Dept. of Culture

After conservation the wood-blocks will come back to the NLAB for further fumigation and may be re-digitized. One or two sets for the NLAB will be printed from the wood-blocks in the traditional way (with roller, ink and brush) before they are returned to Kunzang Drak. A ceremony will be held at Kunzang Drak to mark their return and Archives staff will give the caretaker full instructions about how the wood-blocks should be preserved in good condition in the *gonpa*.

Preparation and carving of a new set of wood-blocks: The carving of a new set of wood-blocks for Pema Lingpa's autobiography will be the NLAB senior carver's final project, taking him through to retirement. Pema Lingpa's carving style was not particularly good (letters a little

fat and curved according to the archivist, who also observed that Pema Lingpa was himself quite short and wide) but the style will be reproduced as accurately as possible, for the sake of authenticity.

The archivist and senior carver selected and marked three birch trees in the upper Chumey valley of central Bhutan for the project and requested the Home Ministry to give the order for the trees to be felled. The wood was delivered as roughly sawn planks, which were then sent to a Thimphu wood-craft centre for fashioning into printing blocks. After delivery to the NLAB, the blocks were left outside for a few months to season and subsequently treated to kill/repel insects etc. The carver himself attends to the finishing work of smoothing the blocks with a plane and then sanding them.

As the original set of printing blocks was rather worn as well as in need of some repairs, the senior carver borrowed a copy of the autobiography printed on Bhutanese handmade paper which had been made from the Kunzang Drak set at an earlier time, and has photocopied that to use as template for the carving of the new set. He began carving in January, 2011. When the carving is finished some years hence, the NLAB plans to offer for sale by public subscription both a block-print edition on Bhutanese handmade paper and a regular edition on standard paper.

Outstanding problems for resolution

Climate control in the Archives Building: Although when commissioned in August, 2005 the climate control system appeared to work properly, it was later found that if left running round the clock, the system heated up and the temperature control function was lost. Attempts to fix the problem have so far been unsuccessful, as locally based technicians are unfamiliar with this particular system. Meanwhile, the system is run during office hours only. Temperatures and humidity remain within the approved range. The archivist has already requested urgent recruitment of an appropriately qualified technician for maintenance of the climate control system in the Archives Repository.

Compliance with the Legal Deposit Act: Government compliance was good from the outset, but although private sector compliance has improved, publishers remain reluctant to supply materials when expensive items are involved. Producers of audio-visual material may also be reluctant to provide copies for fear of illicit borrowing and then piracy. Revision of the Act is under consideration in association with

the coming up of the National Archives Act. Regarding audio-visual media, the archivist stresses there is clearly a need to include clauses to assure producers that there will be no breaches of copyright where items deposited under the Legal Deposit Act are concerned and that such items will be kept secure and not loaned out.

Lack of awareness of the importance of records: There is a need to enhance awareness of archives as the repository of the collective history of the nation. At present there is little awareness in Bhutan of the importance of records, and papers dealing with completed exercises are often thrown out.¹⁵ There is also a strong reluctance to send closed files to the Archives. Once the National Archives Act has come into force it will become easier to address these issues. Meanwhile, the Department of Culture has already distributed an official order to all the districts requesting people to be on the lookout for old books and other documents and to carefully look after any such materials in their possession.

Establishing balance between traditional cultural practices and archival security: The wish to show proper respect to the religious literature may be at odds with the need to preserve the books safely and securely. When the Repository first opened, there was some pressure from outside to include in it an altar on which a butter lamp would be lit on the four special days each month, but the archivist was able to resist this. However he failed in his attempt to move representative early editions of the Canonical scriptures from their wooden shelving at either side of carved wooden altarpieces in the Stack Building to the clinical security of compact steel shelving in the Archives Repository. The archivist took a philosophical view of this setback, observing that professional archive keeping was just beginning in Bhutan and that it was hard to convince everybody concerned at this stage of archival development. Times do change however: the traditional practice of lighting a butter lamp at each Stack Building altar on the four special days each month has recently been replaced by the symbolic lighting of electric candles as is now commonplace elsewhere in the region.

¹⁵ Bhutan is not alone in this: similar attitudes prevail in the author's home territory Hong Kong, which is only just beginning to see the necessity for Archives legislation. The informal Archives Action Group which had been established to address the issue saw some good progress in meeting with various government officials during 2010. Hong Kong's governing body, the Legislative Council, has now established its own archives reflecting professional guidelines with the help of an Archives Advisory Committee.

Promotion and preservation of culture under GNH

The concept of gross national happiness (GNH) was developed in an attempt to define an indicator that measures quality of life or social progress in more holistic and psychological terms than gross domestic product (GDP). It attempts to serve as a unifying vision for Bhutan's five-year planning process and all the derived planning documents that guide the economic and development plans of the country. Proposed policies in Bhutan must pass a GNH review based on a GNH impact statement. The four pillars of GNH are defined as sustainable and equitable socio-economic development, conservation of the environment, preservation and promotion of culture, and good governance.

Though the formal policy for preservation and promotion of culture, the third pillar of GNH, is still being drafted in the Home Ministry, promotion and preservation activities are already being carried out with considerable emphasis. Preservation and promotion of culture may well be only one of four pillars accorded equal importance under the philosophy of the planning process, but the important thing is that the pillar is there.

Looking ahead

The archivist's long-term goal is to digitize printed materials held in the Archives and make them electronically available for public reference. Archived printed materials would be stored in three formats: paper (i.e. the original document); digital format; microfilm format. The documents themselves would be kept in storage and not be for handling. He also wishes to revive the microfilming project active in the pre-digital era and microfilm the records of the monasteries as first priority. The records would be digitized as part of the same exercise. However, a funded project would be needed to achieve this goal.

A more immediate concern is preservation of Bhutan's intangible cultural heritage, especially the *cham* (mask dances). In December, 2008 Core of Culture¹⁶ presented a high-definition video archive of

¹⁶ Core of Culture (<http://www.coreofculture.org/about-us.html>) is a Chicago-based organisation devoted to dance heritage preservation. Creation of the Bhutan Dance Database has been its biggest project to date. A second copy of this pioneering dance archive has been deposited in the Jerome Robbins Dance Division of the New York Public Library, the world's largest archive of original documents and films on dance.

over 300 hours of footage on Buddhist ritual dances (mainly *cham*) to the Royal Government of Bhutan, to be housed in the Archives. Between 2005 and 2007 the dances of some 20 *tsechus* (festivals) around the country had been filmed for this audio-visual record, with principal focus on the smaller and hence more endangered *tsechus*. The Bhutan Dance Preservation Project was part of a cultural exchange program between the government and the Honolulu Academy of Arts which concluded with the exhibition “The Dragon’s Gift: the Sacred Arts of Bhutan” in 2008.¹⁷ This valuable record of Bhutan’s traditional dance culture has now been deposited in the National Archives. Observing that a nation has both tangible and intangible cultural properties the archivist (formerly a vice principal at the Royal Academy for Performing Arts) is keen to extend the brief of the National Archives to document and digitally record other traditional dances and ceremonies, the authenticity of which are now endangered by the combined challenges of an increasing tourism presence and consequences of the modernization process.

The archivist considers that generally speaking, everything is going extremely well in his department at present. The only areas for improvement would be more staff and additional funding for purchase of equipment. For the 11th five year plan (starting mid-2013) the archivist will propose an increased staff establishment along with all necessary equipment to support their various programs. His current equipment wish list includes the following: dedicated fixed digital camera setup for archives work at the NLAB; duplex scanner for processing less fragile loose-leaf material (i.e. traditional format books); more archival storage boxes for wood-blocks; fumigation chamber upgrade (desirable but not essential).¹⁸ The archivist would also very much like to acquire—for on-site work—a portable microfilm

¹⁷ In June, 2004 a memorandum of understanding had been signed to establish a five-year cultural and artistic exchange program with the Honolulu Academy of Arts, concluding with an exhibition entitled “The Dragon’s Gift: the Sacred Arts of Bhutan”. Opening in Honolulu in February, 2008, the exhibition later travelled to museums in New York, San Francisco, Paris, Cologne and Zurich, returning home in late October, 2010. The exhibition was then mounted in Thimphu, Trongsa and Trashigang before finally closing.

¹⁸ The archivist observes that although present day fumigation chambers are safer and more environmentally friendly, their own fumigation chamber (acquired in 1992) uses carbon dioxide cartridges and the exhaust from these is not considered to be very harmful.

camera which can also capture data digitally, if such a dual function camera exists or is under development.

Although administrative arrangements for proper record keeping cannot be put in place until passage and formal enactment of the National Archives Act, there is nevertheless much that can be achieved in the meantime. Achievements to date in promoting the Archives demonstrate that a resourceful, positive and self-motivated approach can bring rewards even in the absence of an Archives Act or of project funding. There is no danger of donor dependency here.

BOOK REVIEW

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Suresh Kumar Gurung, *Sikkim. Ethnicity and Political Dynamics. A Triadic Perspective*, Delhi: Kunal Books, 2011

Presentation of the book

Gurung's "Sikkim. Ethnicity and Political Dynamics" is the most recent study of political science on Sikkim. Its review of the literature touches on the notions of ethnicity, ethnic groups and their processes of formation, ethno-political mobilisation, nationalism, etc. from the point of view of two of the approaches to the concept of ethnicity in anthropology, primordialism and instrumentalism. The main aims of the book are "to understand the process of evolution of emergence of cultural-territorial or ethnic politics in Sikkim" and "address[...] the issue of interrelations between political process and emergence of cultural-ethnic politics directly" (p.13). Its central focus is identified as being ethnic mobilizations, which the author considers to be the common conceptualization of the various movements related to ethnicity, tribalism, nationalism, regionalism, etc. (*ibid.*).

In the context of Sikkim, a difference can be made between ethnic mobilizations before and after the emergence of political parties during the second half of the 20th century (p.16). Some of these political parties indeed "articulated interests of a particular community [*i.e.* ethnic group]" (*ibid.*). However, none of these movements rose explicitly to claim the interests of a particular community, but the political struggle expressed divergent political projects for Sikkim, *i.e.* monarchy or democracy. New political concepts and a modern legal system were introduced after Sikkim was "merged" with India in 1975. However, and paradoxically, ethnic consciousness has gradually taken a larger part in political life. This time, political parties expressed "community oriented claims and demands" and competition started for the "ethnic space" (*ibid.*). Political parties played a role in the legitimization of community-oriented claims.

The rise of ethnic mobilizations in Sikkim indeed “presents a problem of understanding” (p.19) with regard to both the absence of ethnic conflicts and strong inter-ethnic ties. Indeed, the introduction of parliamentary democracy and an individual-oriented legal system after the merger with India should have prevented such movements (*ibid.*). A more important role can be attributed to political parties—and the way they combine communities’ identity assertions and modern legal-political institutions is questioned—than to affirmative action. The role of ethnic elites in the distribution of government patronage is influential in “aggravating ethnic cleavages” (p.20). However, the resources provided by the state often become objects of struggles between communities. In brief, the state of Sikkim promoted traditional community orientation instead of democratic structure, while it should have been the opposite. Simultaneously, the democratisation process has been limited by ethnic mobilization.

In the presentation of the methodology (p.21), “ethnicity” is equated to “ethnic group,” which is defined based on literature from 1970 to the end of the 1990s. The main question addressed in the book is then formulated as, “why, how and under what circumstances ethnic-cultural identity and consciousness become instruments of political action” (p.22). The author refutes primordialist and instrumentalist approaches of ethnicity (p.23) and proposes instead a “triadic perspective” that takes into account the political context, a contextualisation of ethnic politics and a historical analytical method.

The second part of the book, “State of Sikkim: A Profile,” sketches “A brief political history of Sikkim” (p.43-46). The author resorts to Lepcha and Limbu legends in his presentation of the pre-monarchic history of Sikkim, then analyses the takeover by the Bhutia monarchy as, “Centuries old Lepcha polity based on non-hereditary kingship [being] replaced with a theocratic and hereditary monarchical system” (p.34). The main events of Sikkim’s Bhutia monarchical period are presented reign after reign, followed by the “British connexion,” which is the period of growing influence of British India colonial power over Sikkim, “Sikkim as a protectorate state” and “Sikkim after the merger with India.” The inconsistencies of the laws that framed the integration of Sikkim into India with the Indian Constitution, the defaults in the application of these laws in the decade that followed 1975, as well as the maintenance of former inequalities are underlined.

The next section describes the changes through time of the “politico-administrative structure” of Sikkim (p.46) from a simple

system to the current one. In the conclusion, the author argues that the reservation of seats in the legislative assembly (established in 1951 and maintained after 1975) led to “perpetual ethnic division, competition and confrontation among various communities” (p.59). This also led political parties to address and represent community interests.

The part on the economy of Sikkim presents the economic organization and resources of Sikkim in former times, and Gurung argues that the laws passed after 1975 did not sufficiently reform the old land revenue system. Drawing on official statistics, he then strives to demonstrate the inequalities between Bhutias-Lepchas and Nepalese in terms of distribution of land in favour of the former since 1975. Characteristics of agriculture, industry, tourism and employment in Sikkim are presented before an overview of demographic changes since the first censuses (p.74).

In the third part, concerning the “Major Ethnic Groups of Sikkim: their History and Identity,” the author argues that ethnic diversity is a source of tension since it entails a “divergent concept of belongingness” and a “sense of diverse origin” (p.91). The major ethnic groups of Sikkim are identified as being the Lepchas, the Bhutias and the Nepalese, who are then presented separately (p.95, 105 and 113). The appellation “Nepali” is discussed and the author argues in favour of its validity based on racial and historical criteria. Nepalese history in Sikkim is presented before coming to “other communities / groups” (Limbus, Sherpas, and Yolmo/Kagatey).

In the last section of the chapter, “The question of identity,” (p.140), the author goes further in his theorisation of conflicts as inherent to multi-ethnic societies, arguing that a multi-ethnic society is characterised by the presence of a dominant culture (the “Tibetan way of life” during the monarchy, and “Nepalese culture” since 1975). This situation led to movements of assertion of distinct identities to resist assimilation, and to conflicts. Additionally, due to the changing relations between groups, it has not been possible to create a common civil identity. The post-merger fears of the Bhutias are discussed, and connected to the larger context, including the reservation system, the electoral system, the land reforms, and to the Sikkim state itself. Gurung indeed argues that Bhutias view the Sikkim state as merely representing the interests of the Nepalese community. The political / identity issues of other groups (Lepchas, Sherpas and Nepalese) are also discussed.

In the fourth part, “State Policies, Political Parties and Ethnic Question Before 1975,” the argument of the tensions inherent to multi-ethnic societies is counterbalanced by the idea that the state can maintain or reinforce ethnic divides and competition through its actions. Gurung proposes to apply this approach to Sikkim by carrying out “a careful analysis of those different historical events as well as perceptions of different ethnic groups about the government” (p.156).

He here argues that, before “merger,” political power was in the hands of the minority Bhutia elite, Lepchas being accommodated as minor partners. Tensions arose between Bhutias and Nepalese newcomers at the end of the 19th century, and the latter also suffered various forms of discrimination. These were institutionalised in laws and institutions implemented during the first part of the 20th century (“Parity formula,” and Sikkim Subjects Regulation). Through these, “A vast majority of the Nepali population was excluded from the governing process and they were treated as merely producers of revenue without any right” (p.219). Consequently, Nepalese perceived democracy and merger with India “as the means for transforming such uneven distribution of power” (*ibid.*). Thus, political movements were also matters of ethnic mobilizations.

In the fifth part, entitled “Parliamentary System, New Modes of Mobilization and Ethnic Politics,” the author proposes to assess the role of legal-constitutional framework and party politics in “aggravating ethno-cultural tensions in Sikkim” (p.221). After providing details on the history and legal framework of the introduction of Sikkim into the Indian Union, he explains that community considerations continued to play an important role in party politics after “merger.” This framework (in particular the amendments to the Representation of the People Act, 1950 and 1951) led to the emergence of an opposition between “Sikkimese” (insiders) and “Plainsmen.” This opposition was strengthened during the mandate of Bhandari as Sikkim Chief Minister since 1979 (p.236-239). Thus, “in the parliamentary democracy the political mobilization of ethnic communities for electoral gain became the cause of social tensions” (p.235). In the 1990s, “Mongoloid consciousness” gained significance, which led to the separation of the “Mongoloids” from the other Nepalese (p.239) and to the emergence of the OBC¹/Mongoloid as a political force that entailed the “opportunity

¹ Other Backward Classes.

to reinvent nativist [indigenous?] identity for various sub-groups of the Nepalis” (p.248).

The next elected Chief Minister, Chamling—elected in 1994 with the support of the OBC—being a firm believer in democratic values, equalised the ethnic representation in the political system, and set as a priority the provision of safeguards to ethnic communities (p.250). But ethnicity continued to play a political role during his mandate. The author then examines the questions of citizenship and of persons who were “left out” from the various laws regarding Sikkim subject status, Indian citizenship, and Sikkim residency (p.255). Those laws are at the core of the antagonism between Sikkimese and outsiders. The “issue on seat reservation” (p.268) also catalysed ethnic tensions. The seat reservation policy “is so precariously designed that traditional bonds and networks play a pivotal role both in terms of electoral success and continuation of power” (p.302). The discussion on the application of the “reservation system” (or affirmative action) in Sikkim (p.288) is concluded by the argument that the ideals of justice and equality could not be applied in India due to the nature of Indian society, beset as it is with various forms of social grouping and discrimination. As to answer the main question of the chapter, it is stated that successive governments, through political parties, seek support from certain ethnic groups in favouring them, and thus create discontentment among others.

In the sixth part (“Political and Ethnic Organisations: the Issue of Ethnic Identity”) Gurung argues that the formation of political parties and organisations manifests social differences. He then presents the history of the pre-“merger” political organisations that gave birth to the first political party, the Sikkim State Congress. In response, The Sikkim National Party, also labelled “Chogyal’s party” (*i.e.* king’s party) was formed, representing mainly the interests of Bhutias and Lepchas. However, over time the exclusive nature of the Sikkim National Party in terms of ethnicity disappeared, since some of its leaders were Nepalese. This political struggle led to the integration of Sikkim into India.

As for the post “merger” period, the author argues that regional, rather than national, parties are in absolute control of the Sikkim state. He then relates the formation and history of 21 of the Sikkimese political parties (p.330-356) and “ethnic social organizations” (p.356-395). This historical review of the political parties enables discussion of the distinction made at the political level between Sikkimese and Indian

identities, and the divide and tensions between the OBC/Mongoloid and NBC²/Aryans (p.338). But Gurung argues that these tensions have now disappeared in Sikkim, “In the last [...] decade of the SDF [Sikkim Democratic Front, founded by the current Sikkim Chief Minister] rule there has been no ethnic disturbance in Sikkim which in itself is the most remarkable achievement of the party” (p.347). However, this party too “has a history of articulating and aggregating ascriptive elements” (p.355).

Regarding the ethnic organizations, the author argues that their creation reflects the desire of ethnic groups to assert their separate, distinct identities, while the fear of assimilation is inherent to multi-ethnic societies, and to a changing political scenario. In Sikkim, all the ethnic groups felt for different reasons endangered by the political and legal changes after the incorporation of Sikkim into the Indian state, and the various ethnic organisations were created in this context.

To conclude (p.409), before 1975, ethnic division was the consequence of discriminatory laws and policies, which excluded certain groups from the process of governance. This actually shows the inability for these groups to cope with cultural or linguistic standardization. The ethnic division was partly perpetuated after “merger” both by political parties that aggravated ethnic tensions and by the government of India that maintained some of the provisions that existed before 1975. Finally “It appears that ethnic consciousness and mobilization in Sikkim has evolved in close relation with state policies and party politics. It definitely establishes a close relation between the two in which politics shapes the process of definition and development of ethnic identity” (p.422).

Critique of the book

The author clearly explains aiming at a better understanding of ethnic movement and politics in Sikkim rather than participating to the theorization of ethnicity (p.23). However, his largely theory-based argument contains some important flaws. The first flaw is a lack of clear formulation of the main arguments and theoretical approach. The review of the literature presents an important number of concepts (relating to ethnic groups, nationalism, etc.), but fails to link them together. Additionally, the analysis revolves around two different

² Newar-Bahun-Chetri.

arguments presented in the introduction. One of these is not clearly presented as an argument, but turns out to be central in the first parts of the book: the way ethnic relations influence politics (p.7; see also p.11). The other argument presented later (p.13, see presentation of the book) is developed toward the end of the book. Two other broad, theoretical arguments are presented in the preface, and another argument is given at p.22: “why, how and under what circumstances ethnic-cultural identity and consciousness become instruments of political action.”

This review of the literature additionally contains misinterpretations such as in the summary of Fredrik Barth’s “Ethnic groups and boundaries” (1969). Here, the author states that Barth’s set of prescriptions and proscriptions were imposed by rulers to maintain control over a given society (p.3), whereas, according to Barth, they govern situations of contact between groups as well as structure inter-ethnic relations, and may or may not be agreed upon by people.

Finally, the author argues against primordialism and instrumentalism (p.23), but does not provide any alternatives (the book lacks any mention of the constructionist approach of ethnicity, for example). More problematical is his actual resorting to primordialism in various ways throughout the book, thus contradicting the final analysis presented in his general conclusion, where he states that politics and policies shape the process of definition and development of ethnic identity (p.422).

The first example of his resorting to primordialism is the labelling of Nepalese, Lepchas and Bhutias as “cultural-racial group” (p.15). While a cultural distinction between those groups could perhaps be argued, to state that they differ racially—leaving aside the very problematical, if not irrelevant, use of the idea of race in human sciences nowadays—is simply a mistake. The author again resorts to this idea of race to differentiate “Aryans” from “Mongoloids” amongst the Nepalese (p.156; see also p.114, 146, 157 and 240). However, the questions generated by the term “Nepali,” its various meanings, and the inner diversity of people labelled as such are clearly discussed (p.157). But the discussion is interwoven with the racist view, which is taken as such and not discussed as a colonial construct that was introduced in political language in Sikkim as in Nepal.

This stance determines the author’s understanding of ethnic identity. It is for instance stated regarding J.N. Kazi’s book (*Inside Sikkim – Against the Tide*, 1993), “This book is resourceful in terms of perception of the ethnic Bhutias on various issues of socio-political importance” (p.12). An analysis of this type of discourse, and of the

historical and political conditions that gave rise to it, would have been of great interest, while simply reproducing it also reproduces the colonial view of ethnic relations between Bhutias and Nepalese in terms of cultural incompatibility. Generalisation of behaviour according to ethnicity is expressed several times in the book (“nature loving and friendly Lepchas” p.105; see also p.59, and 110). The primordialist position is also probably the reason for the very surprising statement, “owing to their religious belief, the Bhutias and Lepchas were averse to digging for agriculture or mining purposes, and hence by tradition, they were not cultivators” (p.165). How would have any Sikkim inhabitant survived in the past, had he not practiced agriculture?

One of the implications of this position is political: most of these statements are politically sensitive in Sikkim. Indeed, whether or not Bhutias were cultivators in the past, the division of the Nepalese and the criteria that supports it, etc. have deep political implications. Results of human sciences often are used to substantiate political debates; academic findings may thus take side without wishing it. However, in one case, Gurung clearly resorts to a political reasoning, based on a primordialist approach. He indeed firstly states that Lepcha and Limbu are indigenous to Sikkim, secondly that they belong to the Nepalese group (p.32), thirdly that Nepalese are divided into two races: Mongoloid and Aryans, and fourthly that all Mongoloid are as early settlers in Sikkim as the Lepchas and Limbus (p.157). The early settlement of Lepchas and Limbus in Sikkim does not raise any doubt, but the early settlement of Magars, though stated by Thutob Namgyal and Yeshe Dolma (1908) and by Hooker (1854) is still matter of debate (see Mullard’s ongoing research). As for the question of Lepchas and Limbus being part of the Nepalese, this is now a political debate that is less and less positively answered in the political arena. History and anthropology cannot give a general answer to this question: there are no reasons to consider the Lepchas as Nepalese. As for the Limbus, there are various groups among them, each settling at a different time in Sikkim, from far back in the past until recently, and all the groups were all included into the Nepalese for political rather than historical reasons, at a later stage of history. Finally, it is also not possible to state that all the “Aryans” came to Sikkim at the end of the 19th century, and that all the “Mongoloid” arrived earlier. There are still many gaps in the history of ancient Sikkim, and more questions than conclusions can be raised.

The primordialist view also leads to the construction of an analysis of politics in Sikkim merely in terms of ethnicity, while ethnicity is

pictured as “natural,” self-explained, and thus, paradoxically, influencing politics but not changing in relation to politics (let us recall that this position is argued at the end of the book, but contradicts most of earlier analysis). The rise of ethnic mobilizations is indeed explained by the growth in caste/community consciousness (p.15), which is itself explained as a “natural” or “universal” resistance to assimilation. This almost circular reasoning explains ethnic mobilizations by the rise of ethnic consciousness or by the type of inter-ethnic relations. It is argued by the author since the very definition of “cultural-territorial identity and mobilization” as “changing nature of cultural identity, structure of identity, political-economic foundations ranging from relative deprivation to internal colonialism of such movements, symbols and patterns of mobilization etc.” (p.14). Besides being unclear, this “definition” of ethnic mobilization does not take into account interrelations with the state and political context.

This view is related to another theoretical approach that opposes tradition and modernity, as well as community and the individual. Gurung indeed understands the rise of ethnic mobilizations in Sikkim as a paradox since modern politics was introduced in Sikkim (p.19, and 21-22). We find again in the introduction of the third part this idea of tensions inherent to societies which are ethnically differentiated, while “undifferentiated societies,” that is centred on the individual, rarely experience tensions (p.91; see also p.140). This form of “modernist” approach resorts on the “claim to the liberation of individuals both from illegitimate domination and from unreasoning acceptance of mere tradition” (Calhoun 1993: 222) and to the idea that that community necessarily opposes nation (there are numerous criticisms of this approach; see among others Hastings 1997). It fails to take into account numerous examples of development of communalism in the frame of nationalist movements (see for example the work of C. Jaffrelot on Hindu nationalism), and of community-based claims for political rights and democracy like in Nepal (Hangen 2010). As for primordialism, it is deeply questioned, and almost no more developed today (see for example Brubaker 2004, Wimmer 2008).

An analysis (and not only a statement) in terms of mutual influence of politics and ethnicity would have enabled going beyond these views. Such a relationship is expressed in some of the theoretical developments, but not applied to the analysis of the Sikkim data. However, all the information is provided in the book to enable the reader to understand Sikkim politics not only as being determined by ethnicity, but as a organisation into which ethnic and political

affiliations are combined to form a political majority. Such a view enables taking into account the changes of ethnic alliances, thus to go beyond the Bhutia-Nepalese divide as analytical tool, to take into account the importance of political ideology, to understand the sudden rise and fall of political parties, and the failures of single-ethnic group ones rather than viewing them in terms of paradox. The author's thoughts obviously evolved for the best in the process of writing, but the book lacks the last "recasting" that would have given cohesion and coherence to the whole.

The book poses other problems. Firstly, some relevant and important information is lacking: no mention is made of the controversy regarding the conditions of integration of Sikkim within India, authors arguing that Sikkim was annexed in the aftermath of the Indo-Chinese war (for example Datta-Ray 1980), others that it was "merged" following the 1975 referendum (for example Das 1983). Gurung simply mentions the political struggle and referendum that led to the transformation of Sikkim into an Indian state, but no mention is made of the possibility of an Indian military intervention. The point here is not to suggest taking any side in the debate, but mentioning that the debate exists.

Secondly, some of the information presented in the book was never released earlier, and it is a pity that the sources—either oral or written—are often not mentioned. Much information is indeed given without any reference source to support it. For example, see the following: the first paragraph of the introduction (p.1); the first paragraph of the "brief political history of Sikkim" (p.31); p.35; in the section on state policies and ethnic divide during the monarchy (p.158-162) and so forth. Interesting information is for example given on p.167, which offers a new understanding of the much debated parity formula, but unfortunately in the absence of supporting source documentation: "The concept of Parity Formula was a true copy of the 1896 scheme agreed between Sayyid Mahmud, son of Sayyid Ahmed Khan of Allahabad, and Theodore Beck, son of Aligarh College. They drew on the scheme of 'Parity' representation between the Muslim minority and Hindu majority on behalf of the association called Muhammedan Anglo-oriental Defense Association founded by Sayyid Ahamed Khan in 1893. [...] Nari Rustomji who was a Persian Muslim and the Dewan of Sikkim was the man behind for adopting this communal scheme in Sikkim." This information seems very plausible, but would have necessitated at the minimum referencing documents regarding the mentioned 1896 scheme and Muslim association.

The text also presents surprising information, like the statement that the Tibetan lamas who migrated to Sikkim at the end of the 17th century (and enthroned the first Bhutia king of Sikkim) would have destroyed documentary evidences on the pre-monarchic political system. The source of this interesting information should have been provided (see also p.93; the explanation given in footnote 1, p.147 is insufficient). Another surprising statement appears on p.78: “The North district, which was prohibited for Nepali settlement, represents 59.56 per cent (4226 Sq. Km.) of the total area of Sikkim (7096 Sq. Km.) but due to inhospitable climate, rugged and perpetually snowcapped mountain ridges makes the place unsuitable for human habitation.”

Some of the above mentioned problems could be related to the problem of editing. Many typos, a page printed twice (p.158 and 162, and the page 164 starts in the middle of a sentence), incomplete book references (for example, references 11 and 23, pages 24-25), incomplete footnotes (for example, the footnotes 92 to 96 on p.88 mention “*op. cit.*” or “*ibid.*” but it is unclear to which previously mentioned text this refers to, and it cannot be to the last complete book reference, which is completely unrelated; the given numbers seem to refer to previous footnotes, but those footnotes often also mention *op. cit.* or *ibid.*; the footnotes problems are found in every chapter where most of the references state “*ibid.*” and “*op. cit.*”) are only part of the editing flaws to be found in the book. Flawed editing also most probably explains the lack of clarity of some sentences, as well as mistakes in the reproduction of the sources. For example, Markham’s figures for the population of Sikkim are changed in Gurung’s book: while the original source (Markham 1876: Xc, based on Dr Campbell) gives a total population of Sikkim in 1840 of 7000 persons, comprising 3000 Lepchas, 2000 Bhutanese, and 2000 Limbus, while referring to Markham’s figures Gurung (p.75), gives 3010 Lepchas, 1995 Limbus, and 1995 Bhutias without explaining this alteration. Finally, the book lacks a detailed table of contents.

Interest of the book

S. K. Gurung’s *Sikkim. Ethnicity and Political Dynamics* finally brings together information that was hitherto scattered in different books and unpublished documents, and also provides detailed historical data. As already mentioned, it also provides some new information. The discussion of the post 1940s events, for example, is partly based on primary sources (legal documents, administrative reports, etc.) and thus

brings those sources to public knowledge. Additionally, the introduction raises several interesting questions, such as concerning the failure of ethnic political parties (we have here to understand the failure of political parties representing a single-ethnic group) and the ineffectiveness of opposition parties in Sikkim. It also presents politically sensitive questions, which, though they should have been dealt with in a more scientifically rigorous way, nevertheless open the topics for further discussion in the academic sphere.

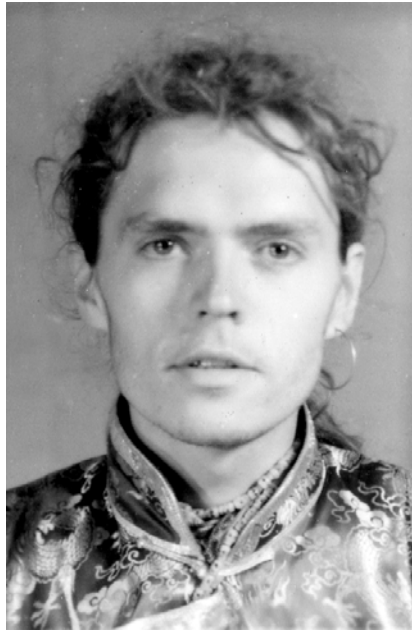
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DR ANDRÉ ALEXANDER 17.01.1965 – 21.01.2012

CONSERVATION PIONEER
AND HIMALAYAN HERITAGE HERO

PER K. SØRENSEN
University of Leipzig



Few if any architect, historian and conservation heritage experts can boast of having visited and worked at so many sites of Tibetan and Himalayan architecture as André Alexander. For most of his adult life, he was successively or simultaneously active in Tibet, China (in Beijing, and along the Silk Road), Mongolia, Nepal, Sikkim, India (Ladakh) and Bhutan. Preparing again to go to Sikkim, he unexpectedly passed away in his native Berlin on January 21, barely 47 years of age, of sudden heart failure. To countless friends, colleagues and admirers, to many communities and to the many projects he was involved in, the loss felt upon his untimely demise is immense and almost irreplaceable, André was a true pioneer in the preservation and rehabilitation of Tibetan houses in the entire Tibetan cultural world.

Born André Teichmann, he studied history in Berlin, but soon found himself as a wandering backpacker on lengthy travels in Asia. A key experience that would alter his life for good proved to be his visit to the Lhasa Jokhang in 1987. A few years later he witnessed the widespread destruction of wall-paintings there and old buildings torn down in the Barkhor area. Whereas most of the religious architecture generally survived the chaotic and destructive Cultural Revolution in Tibet (1966-78/79), the survival of non-religious, vernacular and residential architecture, the unique mansions of the nobility that make up most of the core of the old Barkhor quarter—the key pilgrimage circuit for countless pilgrims arriving from all over Central Asia—was dramatically endangered due to waves of unbridled modernization and radical urban development following these turbulent years. “Back in the late 1980’s, when I first visited Lhasa,” he wrote, “The old city was still mostly preserved... “On each subsequent visit,” André explained, “houses had vanished—stone by stone, block by block, alley by alley.”

Seeing many houses disappearing in Lhasa’s old town motivated André and a friend Andrew Brennan to launch the Lhasa Archive Project in 1993 with the aim of documenting Lhasa’s endangered vernacular architecture before it was gone for good. Fortunately, they were well equipped for the task, not least due to Peter Aufschnaiter’s 1948 townhouse map. Soon their mission attracted the active interest of colleagues and well-wishers, foremostly the talented artist Pimpim de Azevedo. In 1996, they officially launched their now widely acclaimed and internationally respected Tibet Heritage Fund (THF). The mission was urgent: Lhasa was about to irrevocably alter its unique cultural and physical identity. From the very start their documentary project was actively supported by institutions and individuals such as Heather Stoddard, Shalu Association, UNESCO, and the Network for Norway-Tibet University Cooperation.

As the work of THF (and its predecessor, the Lhasa Archive Project) became better known, it received funding and awards from UNESCO, the Network for Norway-Tibet University Cooperation, the Shalu Association, offering financial and material support. It was a race against time, of the more than 400 buildings they listed at that time, only 150 or so were still standing by 2001. Aside from surveying historic houses and creating typological records, THF pioneered a number of renovations, stressing the importance of reinvigorating the local architectural heritage and age-old traditions. The individual works were conceived of as community-based restoration and rehabilitation programs for the local residential population, but also incorporating

extensive vocational training programs for new generations of local craftsmen, surveyors, carpenters and artisans.

In 1998, at the height of their work, a number of Tibetan master craftsmen were involved, using traditional construction techniques and indigenous craftsmanship, instigating a last-minute revival of skills on the brink of passing into oblivion. Fearlessly, they negotiated with the local authorities, proved able to ensure permission and to mobilize resources necessary to laydown sewage and plumbing pipes in order to improve the sanitation conditions for local residents. It all took place within the framework of the Lhasa Old Town Conservation Project of 1996-2000, where THF entered into cooperation with the Lhasa City Cultural Relics Office. The two partners jointly organized the upgrading of historic homes in the Barkor districts, a program later to be continued by the Lhasa municipality on their own basis with central government funding. Of particular importance, THF contributed to restoring the magnificent Meru Nyingpa temple behind the Jokhang. In the end, as a result and as a tangible success of their collaboration, the local government finally put their demolition plans on hold, placing 93 historic buildings under special protection. This fruitful and unusual collaboration, however, came to an abrupt end in 2000.

With the discontinuation and ensuing dismissal from Lhasa proper, André and THF extended their activities to other areas of Tibet (Amdo and Khams, Qinghai, Sichuan), and even to the old city of Beijing (Hutong renovation), to Mongolia and throughout the Tibetan cultural domain of the Himalaya dotted with Tibetan architectural sites. In 2003 and 2004, a small THF team conducted a survey of Old Leh, reviewing the state of its buildings. In 2006, THF and the Ladakh Autonomous Hill Development Council signed an agreement to work together to preserve historic Leh. THF also co-operated with local people to establish the Leh Old Town Initiative (LOTI), which is registered as an NGO under the India Society Act. Since then, André and his THF team worked on a series of restoration projects in Leh and Tsatsapuri (Alchi). In 2007, THF and the Anjuman Moin ul-Islam Society cooperated on the restoration of Leh's oldest mosque, the Masjid Sharif in the Tsa Soma garden in the Chutayrangtak area of the old town. With the help of Intach J&K, the idea to build a museum on the site was developed—the first proper museum in Leh. Designed by André and constructed with the help of the Habitat Unit of the University of Technology (Berlin), the idea was to publicise the Central Asian trade routes, of which Ladakh had been an important crossroad, and which had lasting influence on the development of Ladakh's unique culture. The museum is due to officially open in 2012.

In 2010, Sem Hope Leezum, daughter of Sikkim Chogyal Palden Thondup Namgyal (1923-1982), invited André Alexander to Gangtok. They soon decided to restore the royal Tsuglakhang, one of Gangtok's central Buddhist temples. It was built in the late 1920's, and the wall-paintings were done under the supervision of the 9th Panchen Lama's painter. The murals were sponsored by the 11th Chogyal, Sir Tashi Namgyal (1893-1963) and planned by his half-brother Tharing Rinpoche (1886-1947). Some time after Sikkim joined the Union of India, Palace and Tsuglakhang were handed over to a non-profit trust. The wall-paintings had become extremely soiled from soot (butter lamps) and had considerably darkened from a varnish applied decades ago. A project to restore the paintings of the Tsuglakhang, as a first restoration project in Sikkim, was successfully carried out in 2011. André was to return to Sikkim in the spring of 2012 in order to start work on the restoration of a number of monasteries and *mani lhakhangs* that had been damaged by the 18 September 2011 earthquake. In the short time that he spent in Sikkim, André managed to create awareness for preservation and was already spearheading Sikkim's nascent conservation movement.



The newly completed Tsuglakhang, June 1931¹

¹ Photograph: Williamson Collection, Museum of Archaeology and Anthropology, University of Cambridge.

Over the years, as the work of THF had become better known and their activities expanded across Central Asia, it received funding from UNESCO, the Network for Norway-Tibet University Cooperation, the Shalu Association, Misereor, the Heinrich-Böll-Foundation, the Price Claus Fund and many others. It received an UNHabitat Dubai Best Practice Award, three UNESCO Heritage Awards, the Global Vision Award, an award by Qinghai Golok Prefecture Government (2004), and a selection for the BBC television series on “Heritage Heroes” in 2011.

On the scholarly side, André’s publications include *The Temples of Lhasa* (Serindia, 2005, volume one of THF’s conservation inventory), and as co-author *A Manual of Traditional Mongolian Architecture* (THF, 2005), *Beijing Hutong Conservation Study* (2004, Beijing Communications Press), and *The Old City of Lhasa*, Vol. 1 (THF, 1998) and Vol. 2 (THF, 1999) as well as countless field reports and articles.

In recent years, his commitments having multiplied, André was incessantly active, occasionally teaching courses about traditional Tibetan architecture at Berlin University of Technology, in-between living at project sites in the Himalayas (Ladakh, Sikkim and Bhutan), and completing his dissertation, which was successfully defended in 2011.

A number of still unpublished books now await publication, including his doctoral study on vernacular housing and architecture in Lhasa (the second volume of THF’s conservation inventory based upon materials collected by THF) due to appear in 2012 with Serindia Publications. A large study on Tibetan imperial architecture edited jointly with Per K. Sørensen with the title *Empire Road* is underway. When published, this large study will serve as an appropriate homage to the legacy of André and his vision of THF.

André was a very colorful, unconventional and inspirational personality, very much respected by a large number of people. With his warm-hearted and winning nature and his fearlessness, his vision and engagement, he touched the heart of everyone who met him, sharing their admiration of his practical and entrepreneurial talent that achieved so much with limited means and against countless odds. Yet notwithstanding the painful loss of its founder and mentor, the co-directors of THF, Pimpim de Azevedo, Yutaka Hirako and Sylvester Kaben are determined to continue the important work of THF. Information about THF’s work and laudable mission can be found at www.tibetheritagefund.org

An appeal has been launched for well-wishers to contribute to THF

to express their respect for André and his work in order to provide emergency funding for the local craftspeople working with THF across the Tibetan world, and to maintain the conservation and disaster recovery projects initiated by THF in Yushu (Jyekundo), Ladakh and in Sikkim. Details for donations are at:

<http://www.tibetheritagefund.org/pages/support-thf.php>

*We are all workmen: prentice, journeyman, or master,
building you - you towering nave.
And sometimes there will come to us a grave wayfarer,
who like a radiance thrills
the souls of all our hundred artisans,
trembling as he shows us a new skill.*

Rainer-Maria Rilke

ANDRÉ ALEXANDER

MESSAGE FROM PRINCESS HOPE LEEZUM

About two years ago I received a letter from Chogyal Wangchuk mentioning that the wall paintings at the Tsuglakhang—Gangtok’s royal temple—had become very dark due to the natural aging of the varnish which had been applied as well as from the smoke of the butter lamps that had been kept burning after the death of Crown Prince Tenzing and the late Chogyal, Palden Thondup Namgyal.

Chogyal Wangchuk wasn’t sure how to clean the walls but suggested some traditional methods including using a dough made of barley flour (*tsampa*)—the way we used to clean silk brocade in the old days—sort of like our version of dry cleaning.

I first got to know of Dr André Alexander through Dr Saul Mullard. I had mentioned my dilemma in getting the walls cleaned at Tsuglakhang to Saul and he very kindly told me he had met this conservation expert at a symposium and maybe he would have some suggestions. Saul had André Alexander’s contact information and we emailed him on the spot.

I really had no idea at that point how the face of *gonpa* conservation in Sikkim would change by that one simple email and the great gift André Alexander would give us in teaching us how to restore and protect our monasteries. I didn’t even quite realise how renowned André was in this field; nor his compassion as well as his passion for preserving our culture through architecture.

I wrote to André of Tsuglakhang and our intention of cleaning the walls and perhaps doing some repair work to the cracks that had developed over time and he gave some helpful tips over email. I asked if it was possible for him to please come and see the Tsuglakhang and give some first hand help and he replied that he really would like to but was very busy with his Ladakh Museum project and also his area of interest was in very very old structures and as Tsuglakhang was less than 100 years, it wasn’t really his field. I repeated the invitation but it wasn’t till I threatened to rub all the walls down with a large ball of *tsampa* dough that he finally gave in.

When André arrived in Sikkim and saw the Tsuglakhang the first thing he said was, “as so many of the old Buddhist temples no longer exist, this is perhaps some of the finest examples of Central Tibetan wall art left in the world today”, and agreed to take on the project.

Now at Tsuglakhang, the once hidden paintings are visible again, the cracks in the walls have been consolidated using the original formula for the mortar, and the entire building stabilised and reinforced through the posts.

More than just the Tsuglakhang though, André has left us in Sikkim with a legacy of preservation and conservation tools which we can apply to all our old monasteries. Now we know how to care for our rich architectural heritage and culture without resorting to new constructions and cement. And although André Alexander is no longer with us, his compassion and knowledge will remain as a testament to his life for all those who were ever fortunate enough to have met him.



Dr André Alexander
working on the wall murals at the Tsuglakhang in Gangtok

RICHARD KEITH SPRIGG (1922-2011)

HELEEN PLAISIER

With the death of Richard Keith Sprigg on September 8, 2011, the Himalayan scholarly community has to say farewell to this pioneering intellectual, who was a generous mentor and engaging friend to many of us. Keith Sprigg remains well-known for his important contributions to Tibetan, Lepcha, Limbu, Burmese and other languages, as well as for his Firthian approach to phonology applied to the field of comparative Tibeto-Burman linguistics.

Keith Sprigg was born in Melton Mowbray in the United Kingdom on March 31, 1922 and completed his first academic degree in Cambridge in 1942, where he received a First Class Honours in the Classical Tripos. He joined the Royal Air Force during the Second World War and between 1943 and 1947 he served in the UK, India, Ceylon, Singapore and Japan. During this eventful period, he managed to pursue his linguistic studies and obtained War Degrees, a B.A. in 1944 and an M.A. in 1947.

In 1948, Keith started working at the School of Oriental and African Studies in London as a Lecturer in Phonetics. He studied Tibetan in Kalimpong and Gyantse, during visits in 1949 and 1950, during which time he was mentored by David Macdonald. This visit not only kindled a long-lasting interest in both Tibetan and Lepcha, but in Kalimpong, Keith also met his future wife Ray Margaret Williams, a great-granddaughter of David Macdonald. Keith and Ray married in 1952 in Melton Mowbray.

During 1951 and 1952, the Lepcha scholar Karphoo Tamsang from Kalimpong worked with Keith on the Lepcha language at the School of Oriental and African Studies. In 1955 and 1956, Keith and Ray went on an expedition to Nepal to do fieldwork for six months. The country had not been open to foreign visitors for long as they travelled from eastern Nepal to Kathmandu, which made for an interesting and impressive journey. Keith was able to collect abundant material on the languages he had become interested in, such as Limbu, Newari, Bantawa, Sherpa and Tamang.

Following this long fieldtrip, Ray and Keith had two children, David, born in 1957, and Maya, who was born in 1958. Keith continued to work at SOAS, and the first fieldtrip would be followed by many others, to Sikkim, Pakistan and India. He completed a Ph.D.

in the 'Phonetics and Phonology of Tibetan (Lhasa dialect)', and was promoted to Reader in Phonetics at SOAS in 1968.

When Ray suffered a stroke on New Year's Eve of 1975, she remained partially paralysed and her health was fragile. In 1980, Keith took early retirement and he and Ray settled in Kalimpong. In Kalimpong, Dr Sprigg became somewhat of an institution. He was much-liked by the local residents, to whom he would often address an elaborate greeting in their native language, which left some of them dazzled even after many years of doing so. Many scholarly guests from all over the world came to seek his advice and guidance, or simply to enjoy the delightful company of him and his wife. Those who did not know him personally in Kalimpong recall the sound of Keith's bagpipes, which travelled far in the hills and was familiar to many.

In 1982 he was awarded a Litt.D. by the University of Cambridge, and on his 65th birthday a Festschrift was presented to him (D. Bradley, M. Mazaudon and E.J.A. Henderson, eds, 1988, *Prosodic Analysis and Asian Linguistics to honour R.K. Sprigg*, Pacific Linguistics). A bibliography of his work up to 1987 can be found in his Festschrift. For his work on Lepcha language, culture and history, Keith was awarded the K.P. Tamsang Lepcha Language and Literary Award in 1996. He was made a life member of the Indigenous Lepcha Tribal Association in 1997, who refer to him as 'a champion of the Lepchas'.

When Ray died in 1999, Keith returned to the UK and initially stayed with his children. Keith later remarried and lived in Crowborough, Sussex, with his second wife Elizabeth. In his later years, Keith was struck by macular degeneration, but although his eyesight slowly deteriorated, he kept working and completed a dictionary of Balti, which was published in 2002 (RK Sprigg, *Balti-English English-Balti Dictionary*, London: Routledge Curzon). Elizabeth and Keith enjoyed travelling and visited several conferences together. Keith kept in touch with the academic world and his colleagues and former students until his health started giving away. The last year of his life, Keith was not in good health and his eyesight was very poor. He was lovingly nursed by his wife at home.

Those of us who have had the privilege of knowing this remarkable man may recall Keith appreciated saying a cheerful goodbye, along the lines of 'Happy we have met, happy we have been, happily we part and happy we shall meet again'. We remember his intellectual sharpness, his generosity and his unfailing sense of humour. Keith Sprigg shall be dearly missed by many.

Richard Keith Sprigg's contributions to Lepcha Studies:

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- 1999, 'An Anglo-Lepcha and 'Linguistic Survey of India'(1899)', *Aachuley: A Quarterly Lepcha Bilingual News Magazine* (Kalimpong) 3:3, 5-18.



NOTES ON CONTRIBUTORS

RICHARD J. DAVIDSON is the William James and Vilas Research Professor of Psychology and Psychiatry, Director of the Waisman Laboratory for Brain Imaging and Behavior, the Laboratory for Affective Neuroscience and the Center for Investigating Healthy Minds, Waisman Center at the University of Wisconsin-Madison. He received his Ph.D. from Harvard University in Psychology and has been at Wisconsin since 1984. He has published more than 250 articles, many chapters and reviews and edited 13 books. He has been a member of the Mind and Life Institute's Board of Directors since 1991. He is the recipient of numerous awards for his research including a National Institute of Mental Health Research Scientist Award, a MERIT Award from NIMH, an Established Investigator Award from the National Alliance for Research in Schizophrenia and Affective Disorders (NARSAD), a Distinguished Investigator Award from NARSAD, the William James Fellow Award from the American Psychological Society, and the Hilldale Award from the University of Wisconsin-Madison. He was the Founding Co-Editor of the new American Psychological Association journal *EMOTION* and is Past-President of the Society for Research in Psychopathology and of the Society for Psychophysiological Research. He was the year 2000 recipient of the most distinguished award for science given by the American Psychological Association—the Distinguished Scientific Contribution Award. In 2003 he was elected to the American Academy of Arts and Sciences and in 2004 he was elected to the Wisconsin Academy of Sciences, Arts and Letters. He was named one of the 100 most influential people in the world by *Time Magazine* in 2006. In 2006 he was also awarded the first Mani Bhaumik Award by UCLA for advancing the understanding of the brain and conscious mind in healing. *Madison Magazine* named him Person of the Year in 2007.

JAY L. GARFIELD (MA, PhD University of Pittsburgh) is Doris Silbert Professor in the Humanities and Professor of Philosophy, Director of the Five College Tibetan Studies in India Program and Director of the Logic Program at Smith College. He is also Professor in the graduate faculty of Philosophy at the University of Massachusetts, Professor of Philosophy at the University of Melbourne and Adjunct Professor of Philosophy at the Central University of Tibetan Studies. Professor

Garfield's research addresses problems in the foundations of cognitive science, particularly psycholinguistic development; philosophical logic; Buddhist philosophy, particularly Indian and Tibetan Madhyamaka and Yogācāra and modern Buddhism; hermeneutics and cross-cultural interpretation; and the history of Indian philosophy in the pre-independence period. He is (co)-author, (co)-translator or (co)-editor of 20 books and over 100 articles. His recent books include *Fundamental Wisdom of the Middle Way: Nāgārjuna's Mūlamadhyamakakārikā*; *Empty Words: Buddhist Philosophy and Cross-Cultural Interpretation*; *Ocean of Reasoning: A Great Commentary on Nāgārjuna's Mūlamadhyamakakārikā*; *Pointing at the Moon: Buddhism, Logic and Analytic Philosophy*; *TransBuddhism: Translation, Transmission and Transformation*; *Buddhist Philosophy: Essential Readings*; *The Oxford Handbook of World Philosophy*; *Moonshadows: Conventional Truth in Buddhist Philosophy*; *Indian Philosophy in English: Renaissance to Independence*; and *Contrary Thinking: Selected Essays of Daya Krishna*.

LAURENT NOTTALE. Post-graduate degrees: Ecole Centrale de Paris (1975); PhD (Doctorat d'Etat) in physics (speciality: astrophysics) from Paris 6 University (1980). Current researching position: Director of research at CNRS (French National Centre of Scientific Research). Laboratory: LUTH (Laboratory 'Universe and Theories'), Paris-Meudon Observatory, France. Research interests: Astrophysics: cosmology, gravitational lensing, planetology. Theoretical physics: relativity theories, quantum mechanics. Theory of Scale relativity and Fractal space-time: applications to various sciences. Laurent Nottale has more than 200 scientific publications. His main books are: *Fractal Space-Time and Microphysics: Toward a Theory of Scale Relativity* (330 pp). World Scientific, 1993. *La Relativité dans tous ses Etats: Au-delà de l'espace-temps* (319 pp). Hachette, 1998 (in French). *Scale Relativity and Fractal Space-Time. A New Approach to Unifying Relativity and Quantum Mechanics*, Imperial College Press, 2010 (800 pp). Web page: <http://www.luth.obspm.fr/~luthier/nottale/index.html>

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