SAARC

# TRADITIONAL KNOWLEDGE AND TRADITIONAL CULTURAL EXPRESSIONS OF SOUTH ASIA

Editor
**Sanjay Garg**

SAARC CULTURAL CENTRE - SRI LANKA
South Asian Association for Regional Cooperation

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**Traditional Knowledge and Traditional Cultural Expressions of South Asia**



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# C O N T E N T S

**Legal Safeguards for TK and TCE**



**Traditional Music and Dance**



**Traditional Art and Design**



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## Preface

South Asia, a region renowned for its rich cultural and linguistic heritage, expansive natural and archaeological landscapes and interestingly diverse lifestyles, is also home to a generous body of traditional knowledge and traditional cultural expressions. From the Hindu Kush to the blue waters of the Maldives, from the lush greenery of Sri Lanka to the bustling urban hub of Delhi, from the regal capitals of Nepal and Bhutan to pulsating Dhaka, South Asian societies have sustained their traditional knowledge and traditional cultural expressions through the sometimes taxing process of industrialisation and modernisation that is taking place in the region. Notwithstanding this general tendency, some components of this heritage today face the threat of extinction while yet others are patented and copyrighted not by the actual owners of such knowledge and expressions but by outside parties.

Against such a backdrop, the SAARC Cultural Centre as per its mandate for the protection of both tangible and intangible cultural heritage of South Asia organised a regional seminar entitled 'SAARC Regional Seminar on Traditional Knowledge and Traditional Cultural Expressions of South Asia' (TK & TCE) in April 2013 with the participation of many South Asian academics and practitioners working for the preservation of traditional knowledge and traditional cultural expressions. The seminar was a great success where a number of papers that dealt with various themes of TK & TCE were presented and debated, paving way for a learned and informative discussion pertaining to the preservation and protection of TK & TCE, in the region.

This volume includes sixteen research papers presented at the seminar. Spanning over a range of themes including traditional healing and wellbeing, traditional living and livelihood, traditional art and design, traditional music and art, legal safeguards for TK & TCE, and traditional costumes and handicrafts, these studies bring to fore many important aspects of the cultural dimension of South Asia.

I sincerely thank all contributors of this volume for lending their expertise to bring into light the cultural heritage of South Asia and in particular the challenges it faces in an increasingly 'modernising' world. I also thank all my colleagues at the SAARC Cultural Center without whom this publication would not have been possible. In this connection, I would like to place my appreciation on record for

the hard work done by Ms. Apsara Karunaratne and Ms. Nipunika O. Lecamwasam, for coordinating with the authors and also giving their unstinted support in editing this volume. I sincerely hope that this volume will generate a useful debate and some well-deserved actions by various stakeholders.

**G.L.W. SAMARASINGHE**,
Director, SAARC Cultural Centre, Colombo.

# Introduction

*Sanjay Garg*

In a world saddled with consumerist undertones, Traditional Knowledge (TK) and Traditional Cultural Expressions (TCEs) are seen with a prism that is geared to generate economic gains and in which TK and TCEs become patented commodities to be sold at the highest profit. This trend has adversely affected the significance of TK and TCEs which are an intrinsic part of any civilisation.

Traditional wisdom that is passed from generation to generation, and incorporates the best practices drawn from nature, is manifested in the TK and TCEs of the indigenous people. However, with an extensive reliance on scientific knowledge and growing globalisation and homogenisation, the TK systems and TCEs are facing the threat of extinction. The impact of multi-national corporations and media in promoting and marketing local products and services globally and global products and services locally, has become a great threat to the indigenous cultures, their knowledge systems and cultural expressions. Obtaining patency for traditional knowledge by third parties and sharing very little with the original bearers of traditional knowledge is another impact of globalisation. The influence of information technology in creating homogenisation of culture is also threatening TK and TCEs. If the rich and diverse traditional knowledge is not safeguarded from the influences of globalisation, we may risk their extinction.

## What is Traditional Knowledge (TK)?

The UNESCO defines TK as 'cumulative and dynamic body of knowledge, know-how and representations possessed by peoples with long histories of interaction with their natural milieu. It is intimately tied to language, social relations, spirituality and worldview, and is generally held collectively. Too often, it is simplistically conceived as a pale reflection of mainstream knowledge, in particular, Science'. (UNESCO: 2006) These unique ways of knowing are important facets of the world's cultural diversity, and provide a foundation for locally-appropriate sustainable development. (UNESCO: Links).

Indigenous knowledge is the traditional knowledge of indigenous peoples, or local knowledge particular to an area, region or country, etc. Thus all indigenous peoples are traditional knowledge holders, yet all traditional knowledge-holders are not indigenous. (UNESCO: 2006)

Traditional knowledge, technologies and cultural expressions although is old, can be highly evolutionary, adaptive, creative and even novel. It greatly contributes towards strengthening social cohesiveness and cultural identity, as it is a body of knowledge, customs, beliefs and cultural works and expressions handed down from generation to generation. (Dutfield: 2006)

Indigenous knowledge is local knowledge that is unique to a given culture or society. It is the basis for agriculture, health care, food preparation, education, environmental conservation and a host of other activities. Much of such knowledge is passed down from generation to generation, usually by word of mouth.

**What are Traditional Cultural Expressions (TCEs)?**

Traditional cultural expressions (or, "expressions of folklore") include music, art, designs, names, signs and symbols, performances, architectural forms, handicrafts and narratives. TCEs are integral to the cultural and social identities of indigenous and local communities, they embody know-how and skills, and they transmit core values and beliefs. Their protection is related to the promotion of creativity, enhanced cultural diversity and the preservation of cultural heritage. (Traditional Cultural Expressions: Online)

Various aspects of preservation, protection and promotion of the traditional knowledge, innovations and practices of local and indigenous communities are looked into by many international bodies such as World Intellectual Property Organization (WIPO), UN, UNCTAD, and UNESCO, etc. The work carried out by the international bodies over the years is reflected in signing of various treaties, conventions, agreements, etc. by a number of nation states (**Table 1**). Though these initiatives have had tremendous impact in safeguarding TK systems and TCEs in different parts of the world, their direct impact in preserving and sustaining the TK and TCEs of South Asia is seen to be less than adequate.

## II

The South Asian region boasts of a rich and diverse heritage of TK systems and TCEs, which cover a vast spectrum including agriculture, weather forecasting, health and wellbeing, etc. TK and TCEs play a vital role in defining the identity of South Asian people. The recorded heritage of TK and TCEs in South Asia dates back to early civilisation of the world. The TK of the South Asian Region has

evolved over the centuries with the influence of internal and external factors. These systems, particularly those practiced by the minority, indigenous and vulnerable communities, however, face a great threat in this modern era due to the influence of globalisation.

The SAARC Cultural Centre, Colombo (estb. 2009) recognises the impact of work already done in conserving TK Systems and TCEs in direct and indirect means, but also realises that most of the programmes that look into the preservation and promotion of TK and TCEs are developed by Western policy makers with little or no consultation with the policy makers and bearers of TK in South Asia and, as a result, the views and issues of the South Asians are neither adequately represented at international level nor are they properly reflected in the global policy making. There is, therefore, a dire need to examine in detail the unique features, problems and challenges of the TK systems and TCE of South Asia. This volume is a small effort in this direction.

This volume explores and reflects on the status of TK and TCEs in South Asia both in defining the region's character and also in influencing the lifestyles of its people. This topic is of particular importance at a time like this when there is a growing trend of TK and TCEs being used for the sheer advantage of a consumerist culture disregarding the inter-connectedness of tradition, culture and people. The volume includes contributions from six countries written by experts in their fields and is divided into eight broad themes, viz. Understanding TK, Traditional Healing and Wellbeing, Traditional Living and Livelihood, Legal Safeguards for TK and TCEs, Traditional Music and Dance, Traditional Art and Design, Traditional Costumes and Traditional Handicrafts.

The World Intellectual Property Organization (WIPO) defines TK or the knowledge of indigenous/ local communities involving innovations and practices inherent to them as "knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity" (Traditional Knowledge: Online). TCEs on the other hand is defined as *expressions of folklore*, that "include music, dance, art, designs, names, signs and symbols, performances, ceremonies, architectural forms, handicrafts and narratives, or many other artistic or cultural expressions" (Traditional Cultural Expressions: Online). The distinction however, does not suggest mutually exclusive phenomena. TCEs are an expressive mode of TK in which a TK base is used to build upon and create

expressions that are unique to a culture. TK alternatively is used both in TCEs and also function independently in that it refers exclusively to the content of knowledge itself.

Notwithstanding this minor distinction, both TK and TCEs are increasingly facing grave threats in a commercial context. While in some cases these have being substantially altered, in others these are facing the threat of extinction. **Daya Dissanayake**'s opening paper discusses in detail how TK and TCEs are being unfairly used for commercial advantages and the importance of safeguarding all TK for the wellbeing of mankind and Mother Earth.

Bringing to the fore a much neglected yet crucial theme of Traditional Healing and Wellbeing, **Anurag Chhabra** discusses the issue of mind management using power of cosmic sound vibrations. He argues for a more productive human capital via the development of mental faculties beyond the average using a special technique invented by the sages of Siddha tradition. The second contribution on this theme is by **Nirekha De Silva** who gives an overview of Sri Lanka's TK about health and wellbeing in which she discusses a range of issues from traditional medical practices to rituals pertaining to mental health and wellbeing, methods of safeguarding TK to existing efforts geared towards same and calls for the authorities to give due recognition to dying forms of TK in the health sector in order to prevent them from dying a natural death.

Traditional Living and Livelihood is a recurrent theme in three papers that present three diverse yet connected issues. **Zaha Ahmed** explores the Maldivian craftsmanship and lifestyles as depicted in traditional Maldivian houses detailing their size, selection of material, construction methodologies, interior layout and utility value of different sections of the house, while **G.P.P.G. Manusinghe** delves into the TK base of fishing practices in the Maduganga system in Sri Lanka. Third paper under this theme is by **Satish Selukar** and **Anurag Chhabra** on energy-based farming in which they argue for turning towards tradition (in this case Siddha Krushi or farming) which presents both affordable and effective techniques for agriculture.

Presenting the legal aspect of TK and TCEs, **J.M. Swaminathan** analyses the issues involving the protection of TK as intellectual property. Detailing reasons that justify the protection of TK as intellectual property he further introduces approaches that could be used in the protection of such knowledge.

The next three papers move to explore Traditional Music and Dance. While **Jayaprabha Ravindran** discusses various dance forms (both ritualistic and folk dances) of Kerala including Kathakali, Mohiniyattam, Koodiyattam, Teyyam, Thullal, Aivar kali, Arjuna Nritam, Makachuttu, Parichamuttu, Poorakkali and Thitambu Nrityam, challenges faced by them and measures for safeguarding such dances, **Sumuditha Suraweera** and **Sinharaja Tammita-Delgoda** concentrate on Sri Lankan music and dance. In his paper Suraweera presents a musical collaboration specifically that of Sri Lankan Low-country, Bali ritual music and elements of modern Jazz and Sound Art as a means to revive local interest in a diminishing form of traditional music. Tammita-Delgoda's concentration is on the eighteen Vannams of the Kandyan tradition in which he presents a proactive method to preserve traditional culture, that of keeping tradition in place while it is still alive.

**Firoz Mahmud** and **Nayana Tadvalkar** explore Traditional Art and Design in South Asia. While Mahmud discusses various aspects of the popular art of rickshaw and rickshaw painting in the Dhaka city as an established part of the city's cultural tradition, Tadvalkar analyses the symbols of Rangoli art in the Indian cultural context and traces the traditional meanings such symbols carry.

**Shahida Khatun**, **Shabnam Bahar Malik** and **Sonam Yudon** discuss various aspects of Traditional Costumes in South Asia. Khatun touches on the rich textile heritage of Bangladesh taking the Jamdani Sari as a case study which has now been inscribed in the UNESCO's Representative List of Intangible Cultural Heritage of Humanity. Malik's paper presents an overview of the traditional costumes of the Kalasha Kafirs of Chitral, Pakistan and ends on the note that traditional costumes in the Kalasha valley are slowly but steadily disappearing and those will soon be gone if measures are not taken to preserve this textile heritage. Taking the readers to Bhutan, Yudon discusses traditional weaving (*Thagzo*) in Bhutan detailing traditional methods of dyeing and raw material used in the process. It ends on a note of caution that access to markets with cheaper raw material in neighbouring countries has created competition and is having a toll on indigenous weaving and if continued will be detrimental to the whole industry.

The volume concludes with a paper from **Kalinga Tudor Silva** on Traditional Handicrafts in which he discusses the relationship between caste, craft and TK using *Nakati*, *Kinnara* and *Navandanna* castes as case studies. The

objective of this paper is twofold. It examines both the roles of caste structures and globalisation/ policies in the preservation/ promotion of TK and also argues for a strong policy framework that would match cultural dynamics of different castes with that of globalisation and market forces.

All of these contributions aim at creating awareness on different forms of TK and TCEs in the South Asian region and reflect on their current status. Most importantly these contributions identify the challenges faced by TK bearers and proponents and call for a strong policy framework within which these can be confronted and tackled successfully. This volume, with articles from six South Asian countries, is by no means complete and does not make any such claim either. It only underscores the need for more research on TK and TCEs of the South Asian region and purports to serve as a stepping stone by reflecting on the current status of a valuable part of our collective and shared heritage.

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World Intellectual Property Organization (WIPO): http://www.wipo.int/tk/en

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|---|---|
| 1883 | The Paris Convention for the Protection of Industrial Property |
| 1886 | The Berne Convention for the Protection of Literary and Artistic Works |
| 1891 | The Madrid Agreement Concerning the International Registration of Marks |
| 1891 | The Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods |
| 1934 | The Hague Agreement Concerning the International Deposit of Industrial Designs |
| 1957 | The Nice Agreement Concerning the International Classification of Goods and Services for the Purpose of the Registration of Marks |
| 1958 | The Lisbon Agreement for the Protection of Appellations of Origin and their International Registration |
| 1961 | The International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations |
| 1967 | The Convention Establishing the World Intellectual Property Organization (WIPO) |
| 1967 | Tunis Model Law on Copyright for Developing Countries |
| 1968 | The Locarno Agreement Establishing an International Classification for Industrial Designs |
| 1970 | The Patent Cooperation Treaty (PCT) |
| 1971 | The Geneva Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of their Phonograms |
| 1971 | Berne Convention for the Protection of Literary and Artistic Works |
| 1971 | The Strasbourg Agreement Concerning the International Patent Classification |
| 1973 | The Vienna Agreement Establishing an International Classification of the Figurative Elements of Marks |
| 1977 | The Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Paten Procedure |

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| 1982 | UNESCO-WIPO Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and other Forms of Prejudicial Action |
| 1989 | Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks |
| 1989 | International Labour Organization (ILO) Convention No. 169 on Indigenous and Tribal Peoples in Independent Countries |
| 1989 | UNESCO Recommendation on Safeguarding of Traditional Culture and Folklore |
| 1992 | Convention on Biological Diversity |
| 1994 | The Trademark Law Treaty (TLT) |
| 1996 | The WIPO Copyright Treaty (WCT) |
| 1996 | The WIPO Performances and Phonograms Treaty |
| 2003 | International Convention for the Safeguarding of the Intangible Cultural Heritage |
| 2005 | Convention on the Protection and Promotion of the Diversity of Cultural Expressions |
| 2007 | United Nations Declaration on the Rights of Indigenous Peoples |
| 2010 | Nagoya Protocol regarding the Convention on Biological Diversity (1992) |
| 2010 | Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore |
| 2012 | Beijing Treaty on Audiovisual Performances |
| **Table 1: International Instruments pertaining to TK and TCE** | |

# Traditional Knowledge: Yesterday, Today and Tomorrow

*Daya Dissanayake*

## Abstract

*All Traditional Knowledge has to be collected and preserved, for use in the present and in the future, for the wellbeing of mankind and Mother Earth, wherever it is applicable.*

*Collecting traditional knowledge and trying to retain it without change are two different issues. But the knowledge should be preserved and adapted wherever we can. Traditional Knowledge is what constitutes the 'Mimetic ecosystem' which is always disrupted by the mind viruses which can easily infect all mankind and spread the infection rapidly.*

*We could learn from our traditional arts and practices and develop our own arts and cultural practices on the same basis of loving kindness and within a truly sustainable system. Our Arts and our Culture are now totally commercialised. The primary motive for all human action is profit. Profit at any cost. We have to free ourselves from the clutches of the commercial world, and safeguard all traditional knowledge from being corrupted or abused.*

Traditional Knowledge (TK) is what has come down from the time man was able to communicate with other fellow human beings, probably during the last four-billion year-old web of life. It was always shared because such knowledge helped man to survive. However it kept on changing, developing, and was used, misused and abused.

In the beginning all knowledge was Traditional, and it could be argued, that it still is, to some extent. It began to change when greed and hunger for power took over man's mind. Knowledge became a weapon, to gain more power and wealth, to retain such power and wealth within their family or kin group. There were others who did not want to share their knowledge for fear it would be abused or misused, and others who doubted the ability of the common people to grasp the knowledge.

Then the commercial interests took over. Knowledge became a commodity, to be sold at the highest profit. Knowledge came to be monopolised, patented, copyrighted. From the temple archives, knowledge came to be locked up in universities and private organisations. University of California was holding more

than hundred agricultural biotechnology patents up to a few years ago. Today the count would have gone up. "Three-fourths of new biotechnology products are controlled by the private sector" said Gordon Conway, president of the Rockefeller Institute (Private Property n.d.).

Yesterday TK was evolving, developing, and was always useful for man's survival, and for the preservation of our environment. Today we have to gather such knowledge and preserve it. Tomorrow we should still be able learn from ancient TK, and we also have to keep fighting to save it from exploitation.

Transmission of TK from parents to offspring, from generation to generation, and also lateral transmission to some extent would have been controlled and limited. Transmission of TK would have been through memes (See Dawkins 2006). The meme is the mode of cultural transmission, like the gene is for genetic transmission. The memes propagate themselves in the meme pool by hopping from brain to brain through oral and written words, signs and symbols.

> Once a tradition gets started, it automatically continues until something more powerful stops it. People infected with tradition memes are programmed to repeat this meme in the future and spread this meme to future generations. Traditions die hard. (Brodie 2010: 80)

All the latest electronic media could someday make the meme redundant, or it could be manipulated, like we are already meddling with the genes.

Transmission of TK too would be affected by the survival of the fittest, according to Darwin. TK developed for the primary need for survival. Safety, food and sex were the priorities: to be aware of dangers, to be able to warn others, to find sources of food and to find the right mate. In the beginning it is those who had the traditional knowledge who survived. But then nature played a very dirty trick on mankind.

As man's greed increased those who survived were the more powerful, more cunning and more unscrupulous. Thus, it was not the more intelligent, more learned, more humane humans who passed on their genes and memes. The survival of the fittest, when it applied to human beings, was thus not by natural selection.

The threat of exploitation of TK has been with us for a long time. Sometimes openly. Sometimes in more subtle ways.

It is not copyrights or patent rights we need for TK, but Moral Rights. Because when we gather TK, we could be invading the privacy of individuals or communities. Do we have a moral right to gather and publish such TK in the public domain, sometimes without the consent or knowledge of those who possess it? In the case of knowledge that would have been kept within a family or a small community for hundreds of generations, do these people have a moral right to keep their knowledge to themselves?

Indian scientists at the Tropical Botanical Garden and Research Institute developed a sports drug with the TK they obtained from three members of the Kani tribe in Thiruvananthapuram, South India. The scientists went beyond the gathering of knowledge when they isolated 12 active chemical compounds from the plant *Arogyapaacha, (Trichopus zeylanicus travancoricus*, what is called *Bim Pol* in Sri Lanka) to develop the drug with a brand name Jeevani. They went further, when the technology was sold (licensed out is the more respectable term) to a commercial organisation. As the *Hindu* reported on 8 October 2012, "The benefit sharing is a shambles ... all that is left for the Kani tribe is an unfinished computer training center" (Mathew 2012).

Another attempt of how TK of healthcare has been exploited was when a few years ago the United States granted a patent for a wound healing treatment using turmeric powder. Fortunately the patent was challenged and found invalid as it was an already known TK.

Researchers isolated and cloned a gene, Xa21, to develop a new variety of blight resistant rice, from *Oryza longistaminata*, a wild rice used by the Bela community in Mali who developed detailed TK of its agricultural value. Yet today the patent is held by the University of California in Davis. They offered it to the agribusiness monster Monsanto, but fortunately for mankind, they lost interest (Blight-resistant Rice n.d.). Yet benefit for Mali or the Bela community is still in doubt.

Use of Neem and its extracts is a good example of TK in agriculture and healthcare, in South Asia for millennia. But since 1985 many patents have been obtained for products developed from neem extracts by USA, Europe and Japan.

An apt example for the indifference, or perhaps even contempt shown by big businesses was seen in the commercial world in the line of skin care products launched in 2006 with the name 'Indigenous', by the cosmetics corporation

Aveda. They dropped the range under pressure from protesters (Examples of Use and Misuse of Indigenous Knowledge n.d.).

The reason why we need to gather and preserve TK is because traditional lifestyles and traditional means of communication are disappearing, and sometimes even the very communities are disappearing or getting merged into the mainstream.

In future defensive Intellectual Property strategies should be developed to prevent exploitation, like what has been done by Indonesia to protect their TK of batik making and batik designs. But it also has its downside, when smaller producers get marginalised and could favour larger business houses.

India is trying to catalog an estimated 1500 yoga asana, to prevent further instances like the patenting of some yoga asana in the United States by an Indian yoga guru in 2002 (Lal 2012).

An example of the exploitation of the arts is found in Indonesia. A music theater production titled 'I La Galigo' has toured many countries in Europe and Americas. It is based on an epic creation myth of the Bugis people in South Sulawesi, and uses traditional instruments. The copyrights and performance rights are held by several individuals with no benefits for the indigenous community (Lal 2012).

India has its searchable database, Traditional Knowledge Digital Library which holds over 36000 formulations utilised in Ayurvedic practice. This is one way of protection, because once such knowledge is recorded and preserved, it is easier to contest patent and Intellectual Property claims by individuals. It proved its usefulness a few months ago, in successfully fighting a new patent application in the United States for Turmeric, Apple and Tulsi for treatment of inflammation, psoriasis and gastritis.

Collecting, studying and publishing Traditional Knowledge should not only be in the best interest of the people holding such knowledge but also of all mankind. It does not belong to an individual or even to a group. Such knowledge is universal, and cannot be monopolised using modern patent and copyright laws. These new laws were brought in by man not in the best interest of mankind or Mother Earth, but in the sole interest of earning money, out of greed, and sometimes vanity.

The involvement of World Intellectual Property Organization could also be counterproductive, because it deals with Intellectual Property and patents. But what is required is to cover TK under Human Rights. Another major threat to TK is the TRIPS (Trade Related Aspects of Intellectual Property Rights) agreement, which only benefits the global business community. The product patent regime as formulated by TRIPS takes the new products beyond the reach of the original possessors of this knowledge of medicine and folk remedies.

There are many opportunities for research on TK in Sri Lanka, but it should be done very cautiously so that any knowledge collected would not be exploited. In the health sector, one area comes to mind. Leptospirosis, (commonly known as rat fever), has developed into a major health issue today in some of Sri Lanka's rice growing areas. Historical evidence suggests the prevalence and successful eradication of the same disease during King Sirisangabo's reign (Suddhahami 2011).

Pujawaliya and other books mention *Rakthakshi Maraka Jwara Rogaya* as an epidemic which was caused by a *yaksha*, and relates how king Sirisanghabo saved his countrymen by performing *Satyakriya* (Assertion of Truth) and subduing the yaksha. Prof. Nimal Senanayake, recalls Prof. Kumaradasa Jayasuriya mentioning in the early 1970s that the epidemic during Sirisanghabo's time could have been leptospirosis! (Suddhahami 2011: 131). Since the king had been able to chase the demon away, we have to consider that leptospirosis had been eradicated during the time of Sirisangabo. We could uncover this treatment or prevention.

We have a common issue of healthcare and agriculture with the increasing incidences of renal failure in the Nuwara Kalaviya. If it is due to contamination of the water, we could explore the TK of plants which have been used for water purification, plants which absorb heavy metals and other contaminants. We should also pursue the properties of the ancient Uraketa, which were terra-cotta cylinders used in the wells. Did they filter out any contaminants?

In agriculture we still have some hope for mankind. In the Nalanda district, in Bihar a young man had achieved a 22.4 mt. yield from a one hectare rice field. It was only a few months ago, and he had not used any modern technology, like Genetically Modified seeds, and synthetic agrochemical poisons, but had used only TK (Vidal 2013).

TK of using farm animals in agriculture go back many millennia. Yet this is not the kind of knowledge we can or should use today. Man should never have enslaved and abused innocent animals for man's selfish greed to grow more food. If we had not grown more food, the human population may not have increased so fast, requiring more and more food, requiring the exploitation and abuse of our environment and other living creatures. It is one of the many vicious circles in which man has trapped himself. We have to record and preserve all the traditional knowledge relating to farm animals, but today we need not torture these animals, for ploughing, threshing or transport.

This is not about the violation by greedy businessmen who have gone for huge monoculture plantations. For our traditional villages, or what is still left of them, Dr. Ray Wijeywardena designed and introduced the two-wheeled tractor to Sri Lanka, which does not compact the soil as much as the heavy four-wheeled tractors and does not hurt Mother Earth so much. This same tractor could be used for threshing and for transport, and sometimes more economical than using cows, even if we leave a Carbon foot-print.

Early man would have developed 'slash-and-burn' farming culture, which has now been accepted as the most nature-friendly form of agriculture. A recent report presented at the International Society of Tropical Foresters, at Yale University, claims that slash-and-burn practice provides better growing conditions for valuable new trees than more modern methods of forest clearance (Slash and Burn improves Tropical Forest Bio Diversity n.d.). They are rediscovering what man already knew for millennia.

Development has always meant destruction. First the British destroyed Sri Lanka's hill country villages and their traditions and culture by destroying all the forest cover to be replaced by tea and Indian forced labour. With the so-called accelerated Mahaweli project, in 1977, Sri Lanka was able to destroy within a matter of five years the traditional culture and knowledge of two vast regions of the country. Sri Lanka uprooted the hill country villages, broke up their kinship relations and the social structure, scattering them in the newly built Mahaweli zones, without even the basic facilities and destroyed the ancient villages, wild life and the natural forest cover in the Mahaweli zones. Now all the agrochemical poisons from the hill country end up in the ancient irrigations tanks in the North Central province, causing long suffering and deaths due to kidney failure.

The indiscriminate use of Urea in our fields causes further harm. Now scientists are claiming that Urea, in conditions of limited Oxygen produces more Oxides of Nitrogen, which leads to acid rain. We create these conditions by using heavy tractors on our fields, compacting the soil, reducing the soil Oxygen, and then adding unnecessary amounts of Urea.

One of Sri Lanka's very active environmentalists, Mahinda Kumara Dalupotha, published a novel titled *Diya Holmana*. The story is really about the 'silent spring' which we find all over our country. He shows us how Agriculture turned into Agri Business, declaring war against Mother Earth and all TK.

The community agriculture eroded as the state took over the responsibility of agri business. The humane *Vel Vidane* (Village headman in charge of cultivation) was replaced by an inhumane bureaucratic system, which destroyed the traditional, nature-friendly farming which had been carried on in the same paddy fields for several thousand years.

The village temple tells us another side of the story. No one had noticed that the *dolos mahe pahana* (the lamp which burns for all twelve months) had gone out.

In the last chapter he mentions a child who had been diagnosed with cancer, and the traditional village physician said that no one had heard of such a cancer for the past seven generations. The novel ends when the *Vel Vidane* goes to a newly put up pharmacy to buy a drug for his grandchild and he finds the same logo on the bottle, which had become so familiar to them on the pesticide bottles. Dalupotha does not have to say any more about how the Western Pharmaceutical industry is riding on the back of the Agrochemical industry (Dalupotha 2010: 218).

That leads us to the destruction of all Traditional Knowledge we had about keeping us healthy, not only human kind, but animals and plants too. We had our own healthcare system, a system which took care of our health, but today healthcare has been replaced by the big business of ill-health.

The World Health Organization (WHO) had a very ambitious plan with a grand name 'HFA2000', Health For All by 2000. We are in the year 2013 but it is still illness for all. It is because they have ignored all traditional healthcare systems and tried to rely totally on new science and technology.

Our research scientists and academics are slowly learning and accepting that traditional knowledge has been correct all the time, though their predecessors had rejected them offhand. Dr. Allen Roses, world-wide Vice President of genetics at GlaxoSmithKline made a big stir in the healthcare business ten years ago, by stating that 'the vast majority of drugs – more than 90 percent – only work in 30 or 50 percent of the people' (Connor 2003). Now there is ongoing research on genes and the effect of drugs on individuals. All this research and discoveries could be new to the Western world, but it was known in the East for several millennia, once again confirming that all discoveries today are only re-discoveries.

True Ayurveda does not treat the illness, but it treats the person, his body. They knew, as early as 1000 BCE that the same drug would not have the same effect on two different individuals. We do not know if they had any knowledge of genes, but they knew how to treat their patients.

Traditional healthcare as a subject goes back to pre-historic times. Herbal and other forms of medicine would have been used long before man invented writing, so we do not have any records of that TK.

The oldest evidence available is from the study of the 5300 year old 'Iceman' found in the Italian Alps in 1991. He had in his pouch a lump of bracket fungus, *Piptoporus betulinus*, a mushroom which contained an acid which was laxative, and a resin that was toxic to bacteria and intestinal parasites. This showed that either the man himself could not only diagnose his illness, but knew how to treat it, or there was a medicine man or woman in his village who had prescribed the treatment.

Dr. John Attygalle in his Sinhalese *Materia Medica* written in 1917, comments on the medical miracles described in the Culavamsa, about a cephalotomy by King Buddhadasa, for the removal of a hydatid tumor from a man's brain. He had once opened up a belly of a naga, with a knife he carried in his belt, removed an affected part, and treated with some herbs. Though it is normally accepted that the naga meant a snake, probably he was a man of the Naga tribe. He had also straightened out the back of a bhikkhu, who had been bent in half. Jesus also had cured a woman who had suffered for 18 years with a bent back (Attygalle 1994: ix). Today the surgical correction of Scoliosis using modern medical technology would cost about Rs. two million, in Sri Lanka.

Healthcare in Ancient Sri Lanka would go back about 5000 years to the time of Ravana who was said to be a great physician and had written several books on healthcare. But there are those who try to reject Ravana as a mythical figure, because they are obsessed with the Ravana of Ramayana epic, and not the Lankan of the Yaksha tribe.

When we talk of healthcare we think of hospitals and we take pride in the claim that the first ever health centers were established in Sri Lanka. But what should come to our mind is about keeping ourselves healthy. Hospitals should be the last resort, and ill-health should be avoided. Till a few decades ago, our village folk believed that being admitted to a hospital meant a person would not go home alive, because it was the last resort. Till then the village physician could treat them successfully.

The ancient hospitals discovered and excavated around the island show clearly how they had been designed and constructed in keeping with the *Deshiya Chikitsa* (Indigenous Medical Treatment) philosophy and science. The hospitals were on very large flat or terraced land, providing a lot of open spaces with aesthetically laid out gardens. It is again so unfortunate that limited space and funds have deprived the patients today of such facilities in our hospitals, like when 3000 beds are crammed into a space of a 30 acre block of land with surgical and diagnostic and administrative facilities lacking.

In our literature we find many references to healthcare which display the awareness among the people of common treatment methods. A few examples - Sadharmaratnavaliya mentions first – *Avasta piliyam* first aid. Treatment was known for hemorrhoids, filaria and leprosy. There were references to contraceptive drugs *Vanda behet*, and fertility drugs. If there was no traditional knowledge of family planning and contraceptives, how did our ancient people plan their families. We have not heard of or read anywhere about over population, or of very large families, which would have been a burden on the families and the administrators. Even among the elite and the so called royal families, we hear only about one or two children by each woman kept by the kings. If Asoka had 99 brothers, king Bimbisara would have had at least 50 women in his harem! Today not only birth control, but induced fertility are real big businesses.

The importance of taking good care of one's health is reflected well in the precautions like *gaba pirimesima* or *gaba raksanaya*, taken during pregnancy.

They had refrained from taking certain food which was considered bad for the mother or the baby. All the care given to the expectant women would have helped them to deliver the baby at home, with only the assistance of a midwife or an elderly lady, and Caesarean surgery was not resorted to. After the childbirth too, the mother's diet was controlled, special food was given to yield sufficient milk for the baby and to keep the mother and baby in good health. Our people had survived in Sri Lanka for several thousand years without feeding their babies with artificial infant formula. If the mother's milk was not sufficient, they found a suitable healthy lactating mother to feed the baby. The personal touch is seen here as they called her *kiri amma* (Nursing Mother), which is not the same as calling her a 'wet nurse'. The Butsarana mentions that a mother would take medicine herself when her baby was sick.

*Panchakarma* is a good example of the exploitation of traditional knowledge for a quick profit in our tourist resorts and by our people in the west. *Raktamokshana* or bloodletting is done in different ways for different conditions. Today in our hospitals bloodletting is done, in cases of *Polycythemia Rubra Vera*. Had we been able to use some of our ancient knowledge, perhaps these patients would have had better chances of recovery.

Probably one reason for the success of our ancient healthcare system was that our physicians never went against nature. Our *Deshiya chikitsa* would have been based on Ahimsa, loving kindness, not only for human beings but for all living creatures, unlike today, when animals are used to experiment on, and then for clinical trials to test new drugs before using on humans. Animals are infected and then killed to make vaccines, like the vaccine for Japanese Encephalitis, where millions of rats were infected and killed to develop the vaccine which is made from their brain tissue.

In *Deshiya Chikitsa* they had very successful treatment for snake bites. Today we use snake venom anti serum, made by injecting the snake venom into horses, and then collecting the serum from their blood for the anti-venom. The horse gets snake venom injections many times during its life, suffer the poison, and then his blood is circulated through a plasmapheresis machine to collect the serum. To save human lives, horses have to suffer and die in the end.

Our ancient healers could diagnose and treat 76 different ailments of the eye, without the aid of any electronic or digital equipment. The Sivi Jataka even

mentions the transplant of an eye. Astanga Hridaya Samhitha attributed to Vagbatha around eleventh century deals even with heart ailments (Terminalia n.d.). The bark of the Kumbuk tree, *Terminalia Arjuna*, had been used in the treatment of Cadiomyopathy, which also means the diseases were diagnosed by our physicians.

Wondering ascetics in ancient times, which met and exchanged their knowledge and experience, through discussions and debates went on accumulating all the medical lore into a huge store of traditional medical knowledge.

When the Brahmins realised the influence of the medical system, they would have decided to take charge of Ayurveda. They would have manipulated the Hinduisation of this heterodox knowledge and claimed that the healing process was passed down by Brahma, through Prajapati, the Lord of beings, to Indra who taught it to Danavantari. It was then written in the *Susruta Samhita* by Susruta. Probably the *Susruta Samhita* is a collection of all the knowledge that was accumulated by the wondering ascetics, and not the work of just one person. The Brahmins incorporated the medical practices with their rituals and Vedic practices, convincing people that the rituals have to go hand in hand with medical treatment for effective cures. To improve the efficacy of the healing plants, they created a plant goddess, Arundati.

Without such restrictions of the concept of purity and caste issues, and with the belief that treating and nursing a sick person was a most meritorious act, the Buddhist monks would have begun to learn and practice medicine in earnest. As healing became a part of Buddhism, all the medical knowledge began to be collected in early monasteries, so it became institutionalised, then developed into infirmaries attached to the monasteries and grew into hospitals.

Whatever the ailment was, one of the major ingredients always found in our medicine was 'Loving Kindness', which probably was the so called *guru mushti* (what the teacher held in reserve), which some students could not grasp and hence often misunderstood.

When the physician holds the patients hand to check his pulse beat, he becomes one with the patient, both in body and mind. It is not only the pulse beat, but the texture and the warmth of the skin, the look in the patient's eyes, his breath, would tell the physician a lot about his mental and physical condition. Then the physician would treat the patient as an individual, and he would never just treat the illness in isolation. That is why we could say in ancient healthcare, the medicine would only be about one-fourth of the cure. The rest would be the

confidence the patient has in the treatment and the physician, the good intentions of the physician and the strength of the patient's own system.

A well learned ayurvedic physician could diagnose almost any ailment, without resorting to the modern day investigation methods. But his diagnosis was always accurate, because it was personal first hand investigation. There is no possibility of any human errors by a lab technician, or a software bug in the instrument, or the wrong sample being tested or the wrong report being sent to the patient. Diagnosis was never outsourced; probably nothing in the healthcare system was outsourced.

Diagnosis would have been very accurate and must have been always non-invasive. Treatment would not cost very much, often done at no cost, and there are no records of surgical misadventures, harmful side effects of the medicine used or of exploitation of the patients by the physicians.

Multinational drug makers are getting into the act, like a marketing campaign in rural India, calling it *Arogya Parivar* (Healthy Family), to push their western drugs on the poor people in the villages. I believe they are abusing the very concept of *Arogya*.

Then we have herbal drugs, trying to mislead people into thinking that they are based on ancient formulae. But a true indigenous or Ayurvedic drug could never be manufactured on a large scale. To manufacture in such large quantities the herbs have to be cultivated as monoculture crops, and to obtain high yields agrochemical poisons have to be added. Then the herbs have to be harvested frequently to meet the demand of the factory. When they needed a medicinal plant, our ancient physicians were careful about the place where they found it. They would never pick a herb from near a cemetery or by the road side. They would know the time of the month and the time of day to pick the herb. These plants were found in their natural habitat, as a part of a stable and healthy ecosystem. The contents of the plant and the micro-nutrients and metals found in it would be so different from a plant grown on a mass scale with synthetic fertilizer. The part of the plant used for the medicine too would be very important.

A very good example from the present day is the making of tea. We do not pluck just any leaf from the tree, but only the two leaves and a bud. The planter and the tea maker know what would happen to the quality of tea if the third leaf is added. They also know how the colour, fragrance and flavor depend on the

temperature, humidity and the fragrance of the flowers around the factory. And the Japanese have realised the effect of poison added to the plants in the name of agrochemicals and that is why they are so strict about the contamination levels in the tea we export to them.

One more reason for the success of our healthcare system could be the prevalence of only a very few manmade diseases at the time such as diseases caused by pollution, poisons entering through the air we breathe, the water we drink, and the food we eat. Then there are also the so-called life-style diseases, which we have brought upon ourselves and for which we cannot blame anyone, all because we have lost all traditional knowledge of how to stay healthy, and how to avoid illness.

Till recent times, in our villages, we only had physicians to deal with snake bites and fractures. It could be that other illnesses were not very common because people were careful about preventing illness and they had their own home remedies.

When we talk of healthcare in Sri Lanka we have to look at the role played by Buddhist beliefs and rituals. I am not talking about people who claim to strictly follow what the Buddha taught, not about what is considered pure Theravada Buddhism, but what has been practiced as a religion in Sri Lanka all these years.

If in ancient times people accepted the Buddha as the greatest healer on earth, then a mother would have been considered the next greatest. We called her *gedara budun* (Buddha at home). The real Mother Goddess is at home with us, taking care of our mental and physical health. A physician may prescribe a medicine or a course of treatment if mother's own home remedies did not work, but it was the mother who would prepare the medicine and nurse the patient. Probably that is why even in ancient Egypt there was a Goddess of health, not a god.

The days are gone when a mother would prepare the coriander water by herself, hand it to the child and stroke his head as he drank it, telling him that with this drink the cold will be gone. Today we only remind our children to take the tablets or capsules or we take them to a hospital for an injection to be administered by an impersonal nurse. Coriander seed oil is one of the 20 major essential oils in the market and it has been confirmed that it is effective against both Gram-positive and Gram-negative bacteria.

The WHO definition today comes close to the Buddhist concept, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO Definition of Health n.d.).

Today we are struggling to find ways and means of developing 'Sustainable Environmental Systems' and 'Organic food' and try to fight against interference with nature by meddling with natural life forms and genes. Yet our ancient forefathers were aware of the harm of fighting against nature and they tried to live in a truly sustained environment. This would have ensured the good health not only of humans but also of other animals and plants. What Vandana Shiva and Al Gore are trying to do today is what the Buddha had taught us 2500 years ago.

Our ancient healthcare would have gone hand in hand with non-violent agriculture following the first precept of Buddhism.

In the Anguttara Nikaya, Gilana Sutta, we read about three types of sick people. A person who would not recover from the illness whether he does or does not receive amenable food, amenable medicine, or proper nursing. Another person who would recover from the illness whether he does or does not receive amenable food, amenable medicine, or proper nursing. The third type who would recover from the illness only if he receives amenable food, amenable medicine, and proper nursing (Gilana Sutta, 2013). This was understood and accepted by our people and included in TK.

Healthcare in Ancient Sri Lanka also included rituals and exorcisms drawn from Buddhism. *Pirith* or *paritta* means protection. The age old *Pirith Pota* has been translated as the Book of Protection. The power of pirith comes from its truth, the power of truth, sattyakriya, which can be a healing power, in cases of illness. Paritta sutta is said to have been used from the time of the Buddha, to bring mental wellbeing which in turn could help those who are ill, to recover. Ven. Dhammavisuddhi has called Pirith as a prophylactic ceremony.

Today it is claimed that pirith chanting resonates at 7.83 Hz, which is the resonance of our Mother Earth and it has been commercialised with CDs and MP4s with recordings of music at 7.83 Hz.

The first recorded instance of using Pirith for protection is when there was a famine in the city of Vesali, when the *Ratana sutta* was recited by Venerable Ananda. *Dhajagga piritha* is chanted to allay ones fear in a lonely place, in a

forest etc. *Bhojjhanga* pirith giving the seven factors of enlightenment was chanted when Venerable Maha Kassapa was gravely ill and suffering severe pain. As Maha Kassapa thera listened to the pirith and contemplated, "the feverish ailment from which he was suffering slid off the body like a drop of water on a lotus petal" (The Book of Protection: Paritta n.d.). So were Maha Moggallana and Maha Cunda thera cured.

If *Metta*, *Dhajagga* and *Ratana sutta* had failed to cure the patient, the *Atanatiya sutta* is recited by a priest, and this looks more like an exorcism to expel the evil spirit residing in the body of the patient. But the difference with a thovil is that in the thovil the spirit or the yakka is offered bribes to leave the patient, but with the Atanatiya sutta, merit earned from offerings to the Buddha is transferred to the spirit. This ritual probably dates back to the sixth century.

The sacred Bo tree had also played a key role in healthcare, as it is even today. Some of the rituals for seeking good health would have come down from pre-historic times, like the hanging of pieces of cloth, flags, banners on the tree and pouring water on the roots, which the early anthropologists would have called sympathetic magic.

The Bo tree, *Ficus religiosa*, has been a very useful plant in indigenous medicine in India. As the tree had been worshipped from the time of the Indus Civilisation, the components of the tree could have been used for medicinal purposes too. The bark, leaves, fruit and seed had been used for many ailments ranging from diabetes to nervous disorders. Even in our country parts of the Bo tree have been used for medicine, and are mentioned in the *Sarartha Sangrahaya*, believed to be written by Buddhadasa. Because the tree is held sacred, most physicians nowadays claim they use the *Kaputu Bo*. In reality there are two varieties of Bo trees in Sri Lanka, and even in some temples what we find is the *Ficus arnottiana*.

This is one example of a major problem with the loss of traditional knowledge, about herbs used in our *Deshiya Chikitsa*. Sometimes the plant could have become extinct, or people are unable to identify the plant, or the right species and subspecies. Then the physicians would be using either a substitute, or the wrong plant or omit the ingredient completely. This could make the medicine ineffective or sometimes cause harm.

Anyone who has any doubts about the two types of Bo trees, the temple at Wangiyakumbura in Boralanda has got both trees growing side by side in the *Bo maluwa* (Enclosure of the Bo tree).

We also have forms of exorcism at times of illness, which too have come down to us from ancient times. Exorcism has been adapted to become a part of Buddhism as practiced in our country. From the basic *tel matirima* for a headache or mild fever, *dehi-kepima*, to *Bali thovil*. *Bali thovil* is a later arrival from South India around fifteenth or sixteenth century. Their verses are modified to extoll the virtues of the Triple Gems and the nine planetary deities are invoked.

*Nawagrahapuja* (worship of the nine planets) is another way to appease the planetary deities to ward off evil effects and help a patient recover from illness. This is now performed even at Buddhist temples, with some temples having a permanent shrine for the nine planets. Recently a book has been published entitled *Cosmic influence on healthy crop production*. If there is cosmic influence on plants, there has to be some influence on animals and man too.

Even though the Encyclopedia Britannica considers Pattini as a Buddhist goddess, she too came to us from South India, brought here by Gajabahu in the second century. Worship and seeking help from her have also become popular. She could be considered the modern version of a Mother Goddess. Her sacred anklet is believed to have miraculous powers to cure smallpox, chickenpox, whooping cough, measles, mumps etc. Expectant mothers make a vow to goddess Pattini for the safe delivery of the baby.

Worship of God Kataragama is also performed to cure the sick. Lankan healthcare system had probably always relied on medical treatment as well as prayers and religious observances. At first it would have been the influence from India that came in the forms of offering of puja and praying for good health to the Hindu gods like Siva and Vishnu. Koneswaram, Munneswaram and Thirukethiswaram are the oldest Siva temples in our country. With the arrival of the Europeans and the Christian faith, people began to pray to St. Anthony of Padua and Our Lady of Lanka at Tewatta and to several other saints.

There is no argument about the peaceful loving nature of all traditional art forms and cultural practices anywhere on earth. However, we can only talk about it in the past tense, because we could never bring back the ancient glory of our traditional culture.

If we can collect study and properly use some of the Traditional Knowledge we have on agriculture and healthcare, it will be the dawn of a new age. We could bring down the cost of production of all our food because we do not have to use Genetically Modified (GM) seeds, agrochemicals or artificial preservatives, flavors or vitamins and minerals during food processing. This itself would result in healthier people around the world.

When we consider Traditional Knowledge of our agriculture, what we should try to learn is how to use such knowledge to practice non-violent agriculture. We have to accept that small is always more beautiful, keeping in mind that long before Schumacher our people were aware of it. Then we will not harm our environment, we will not harm our future generations with the poisons we imbibe today, and we will provide food for everyone at more affordable costs.

When we consider Traditional Knowledge of healthcare we have to use it to keep us healthy, and we must also use this ancient knowledge for non-invasive diagnosis using our own knowledge and abilities instead of depending on machines and impersonal techniques. With such knowledge we would not have to open up an old and weak patient to decide if his cancer is too far gone and just close up the incision. We would also know how we could prevent such cancers growing inside our bodies.

We should also prevent any cancer growing in our mind, through distorted TK. Traditional Knowledge should never be used to create conflicts and raise hatred among mankind. TK should also be used to build racial, religious and ethnic harmony among all human beings.

What we could only do is to learn from our traditional arts and practices and develop our own arts and cultural practices on the same basis of loving kindness and within a truly sustainable system. When we bring in the latest technology and products and materials to the traditional cultural activities we are doing harm not only to our environment, but to ourselves and our way of life too.

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# Mind Management using Power of Cosmic Sound Vibrations

*Anurag Chhabra*

## Abstract

*Although science continues to break barriers in unraveling the mysteries behind creation and expansion of the universe, the widely accepted theory is that it was the cosmic currents of sound that shaped this universe and continues for it to expand.*

*Matter is manifestation of energy, which implies that the various layers of human body is the manifestation of energy.*

*Human beings are an integral part of the universe and the events taking place in universe have a direct impact on human life. For example change of seasons, change in temperature, planetary movements etc. Effectively, we can conclude that there is direct correlation of cosmic currents of sound on human body as is there on universe.*

*This paper introduces a special technique invented by the sages of Siddha tradition, called **Bhutshuddhikriya** which can be defined as a 'process based on rhythmic breathing patterns meant for the purification of five elements for a sound physical and mental health'. It is a harmonious blend of ancient yogic practices of Aasan, Pranayama and Meditation.*

## Man – The Wonderful Creation of Nature

There are millions and billions of unique objects we see in our life span. From the tiniest to the enormously large and vast, the counting goes on. Beautiful skies, vast oceans, towering mountains with snow capped peaks, lush green belts of grass islands and so on. The most wonderful of all these creations is Man who is known to be the crowned prince created by Nature to take care of its exquisite treasure. Creator is known through his creation like a writer who is known for his heart touching writings or an artist who is known for his spell binding piece of art.

Nature endowed man with supreme intellect, incomparable wisdom and a powerful mind. During the process of evolution, man continued to grow and develop by evolving these powers. He learnt things from nature. He saw the birds and wished to fly and created airplanes. He desired to bridge the long distances and as a result created the telephone. With every new creation, man's desire and

confidence asked for more. He wished to touch the moon, see beyond the sky. This unquenching thirst drove him to give new gifts back to Nature. He studied Nature, its processes and discovered various streams of study and created a wealth of knowledge.

## The Bio Subtle Anatomy of Human Body

There are two fundamental elements behind all creation. They are *Prakruti* (matter) and *Purusha* (Pure consciousness). When these two elements combine, life originates. Consciousness is the constant element which is formless and universally present. It is the matter which manifests into three predominant layers – Body, Mind and Intellect as shown in **Fig.1**.

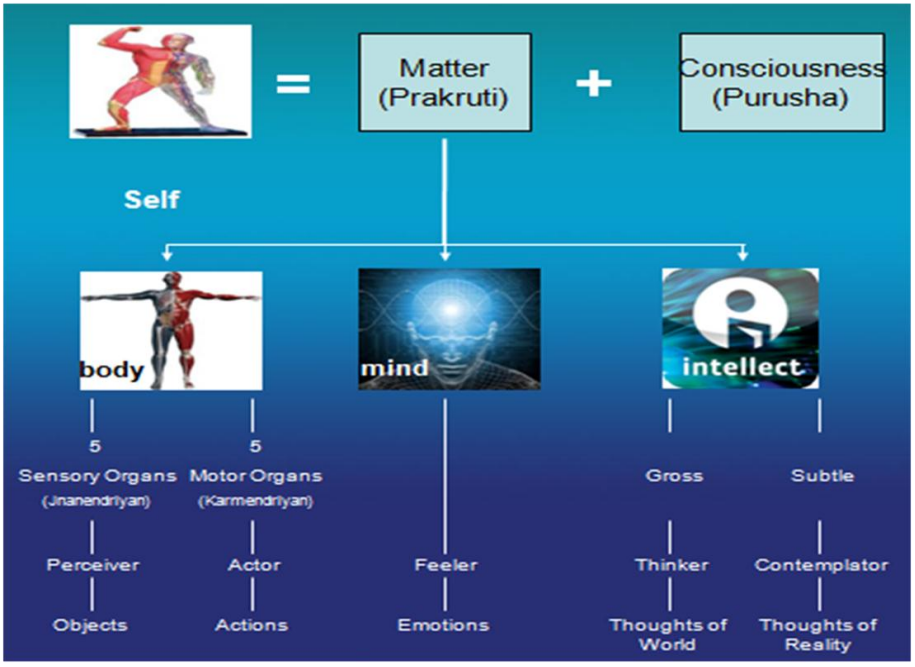



***Figure 1: Bio Subtle Anatomy of Human Body***

Body is the grossest form of the matter which performs functions of Perceiving and Acting. It has five sense organs called *Jnanendriyas* to perceive the external world and five motor organs called *Karmendriyas* to perform action as a response to perception.

Mind forms the mental layer which is subtle. It forms the emotional aspect of human body and performs the function of feeling. Desires are results of emotions; mind is the source of desires.

The third layer of manifestation is intellect which provides capability to rationalise and make correct judgment. It is a source of thought power.

**Fig. 2** indicates the normal sequence of functioning of information and decision making workflow.

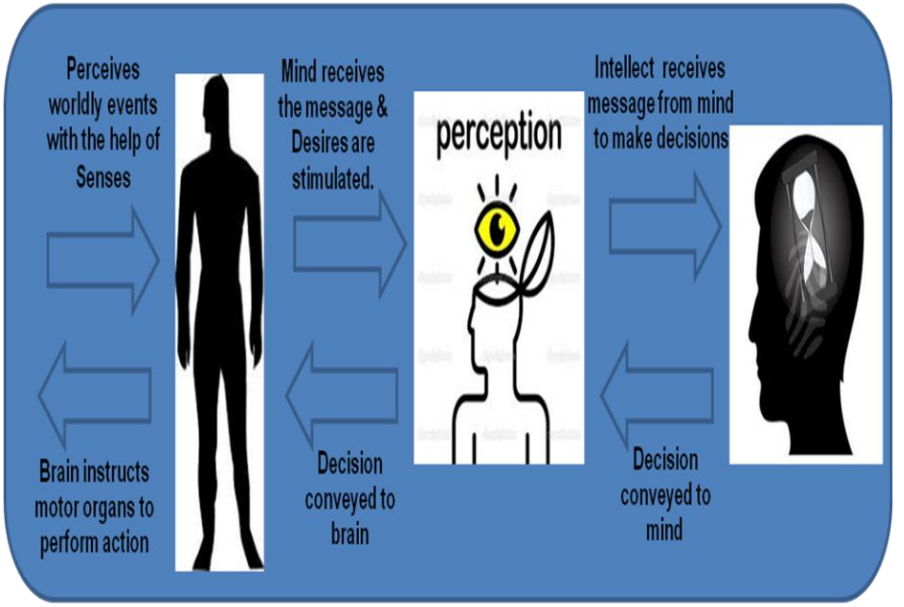



***Figure 2: Normal Sequence of Functioning of Information and Decision-making Workflow***

In *Samkhya* Philosophy, a great piece of work has been done to explain the evolution process of the universe which applies to human body as well. The physical or the gross body comprises of five elements called *Panch Mahabhutas* which are Space, Air, Fire, Water and Earth. Each *mahabhuta* has a *tanmatra* (subtle cosmic element) behind its manifestation. **Table 1** indicates which *tanmatra* is cause of which *mahabhuta* and the endocrine gland to *mahabhuta* association.

The *tanmatra* of *Shabda* (Sound) is the cause of creation of other elements. The effects of *mahabhutas* on body are discussed in detail in the latter part of this paper.

| ***Tanmatra* (Cosmic Element)** | ***Mahabhuta* (Element)** | **Endocrine Gland** |
|---|---|---|
| *Shabda* (Sound) | *Akasha* (Space) | Thyroid & Pineal |
| *Sparsha* (Touch) | *Vaayu* (Air) | Thymus |
| *Roopa* (Form) | *Agni* (Fire) | Pancreas |
| *Rasa* (Taste) | *Jala* (Water) | Adrenal |
| *Gandha* (Smell) | *Pruthvi* (Earth) | Reproductive |

**Table 1: Connection between *Tanmatra, Mahabhuta* and Endocrine Gland**

## Human Mind – Most Talked About but Least Known

Mind is the source of emotions and desires. It is a source of will power to effectively carry out the decisions made by the intellect. The more developed the intellect the more appropriate and thoughtful will be the decisions. In cases where intellect is not developed enough, the emotions overpower the decision making ability and are largely influenced by the desires, impulsiveness and lack of thoughtfulness.

For example a person is highly likely to make wrong decisions when in the state of anger. The emotion of anger overpowers the decision making capability and results in impulsive action that brings negative results.

It is, therefore very important to have intellect control the emotional part of the mind for a happier personality. Making conscious efforts to develop the mental capacities to strike right balance between intellectual and emotional mind is called Mind Management. A well managed and organised mind is the key to peace and happiness not only in personal life but also in family and social life.

Austrian neurologist, Sigmund Freud has carried out intense research and analysis on human mind. In the discipline of psychoanalysis, he talks about the presence of infinite energy in human mind which is usually in the dormant state. According to Freud, mind can be classified into – Conscious, Sub Conscious and Unconscious (Unconscious Mind n.d.).

Conscious mind helps us in carrying out day to day activities of life like listening, speaking, short term memory, studying, writing, imagination etc. The conscious mind is connected with the sympathetic nervous system which provides the necessary energy for normal functioning of the body. It also helps in harmonising with the events happening around.

Unconscious mind on the other hand, acts as the store house for old memories - both pleasant and unpleasant, habits, fear and other similar blockages at mental and emotional planes. Unconscious mind also stores the latent powers but they are usually in dormant state. Subconscious mind acts as bridge between the conscious and unconscious mind.

On an average, a human being, including highly talented and successful people from various walks of life such as scientists, artists, inventors, musicians, philosophers etc. utilises only a fraction of the total capability of mind. The remaining, large unutilised pool of the capabilities, if exploited properly, can transform a human into a super human.

**Sound Energy and the Human Body**

In Vedantic traditions sound is considered as the fundamental principle of existence. It is the source of matter and key to become free from it. Every form of life and physical energy has a uniform, universal energy field called cosmic energy or the supreme consciousness. This universal energy is said to have generated from *Shabda* (sound). Its genesis and absolute expansion is known as *Shabda Brahm*. The eternal source of this cosmic sound is referred to as the *anahat nada* of *Oam*.

In Vedantic literature sound is defined to have four levels of manifestation. All these manifestations are said to have originated from the *anahat sound* of *Oam*.

- ***Vaikhari Vak* (Speech or spoken *shabda*):** This is the gross manifestation of sound energy which is experienced by us in our day to day life. The power of speech comes from the power of *Shabda* which can influence hundreds of thousands of people in a positive or negative way depending upon the intentions of the speaker behind the speech. There are many examples in history of human race that demonstrate the power of speech. For example

few scornful words from Draupadi to Duryodhana resulted in one of the biggest wars, Mahabharata.

- ***Madhyama Vak*:** This is the intermediate unexpressed state of sound whose seat is in the heart. *Madhyama* means 'in between' or 'in middle'. It is the mental speech where we normally experience thoughts. People who think by talking to themselves hold the thought at *Vaikhari* level.
- ***Pashyanti Vak*:** At this level the sound goes further up to the heart beyond the boundaries of languages. It possesses the qualities such as form and colour. There is a near oneness between the word and the experience. For example, true unconditional love is considered as the language of heart. One does not have to express it at gross level to convey the message. Even the animals can understand it. The hermit of Maharshi Ramana in South India is said to have abundance of energy of love even today. The animals living in that area live in harmony.
- ***Para Vak*:** This is the transcendent sound which is the finest impulse of *Shabda*. *Para* means highest or farthest which is beyond the perception of senses. At this level there is no distinction between the object and the sound. The qualities of object are the quality of sound.

These four levels of sound energy described above correspond to four states of consciousness.

- *Vaikhara Vaka* corresponds to physical state of consciousness called as *Jagruti*.
- *Madhyama Vaka* corresponds to mental state of consciousness called as *Swapna*.
- *Pashyanti Vaka* corresponds to Intellectual state of consciousness called as *Sushupti*.
- *Para Vaka* corresponds to transcendental state of consciousness called as *Turiya*.

The Big-Bang theory and hypothesis on existence of dark matter and energy confirm that what the ancient sages observed holds true.

## Sound Energy and Mind

The manifestation process of sound described above clearly indicates that sound (*Shabda*) has a profound impact on mind and its activities which translate into action. To develop the human mental capacities sound plays an important role. **Fig. 3** indicates the spectrum of mind as mind is energy and is composed of light.

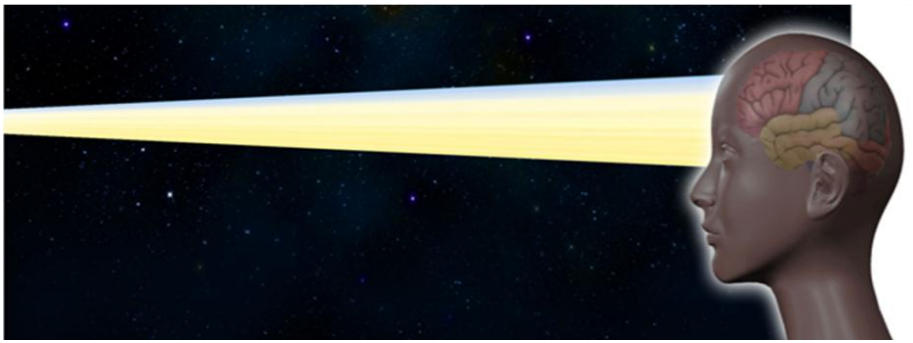


***Figure 3: Spectrum of Mind***

Modern science has made advancements in the study of multi-dimensional sound on human body and mind. These studies have indicated that the multi-dimensional sound helps in deep meditation and brings positive changes in the body. *Sookshma* (Subtle) *Shabda Pranayama* discussed later in this paper results in similar changes.

## *Bhutshuddhikriya* – Ancient Technique for Mind Management with Sound Energy

*Bhutshuddhikriya* is a gateway to the inner domains of self where lies the eternal source of happiness, peace and good health. *Bhut* means the five cosmic elements of Earth, Water, Fire, Air and Ether. *Shuddhi* means purification and *Kriya* means process. It is a process based on rhythmic breathing patterns meant for the purification of gross and subtle bodies that aid holistic management and development of life. It is a harmonious blend of ancient yogic practices of *Aasan*, *Pranayama* and Meditation. The core of this technique is *Shabda* (sound) *Pranayama* which contains the secret knowledge of *Siddham* Yoga tradition.

## Understanding the Cosmic Elements (*Panch Mahabutas*) and their Effect on Body

**Table 2** shows the body parts which are the result of these five cosmic elements, the five faculties of the senses (sound, touch, sight, taste, and smell) which are the expressions of the five elements and the tendencies they exhibit.

| **Element** | **Body Parts** | **Sense** | **Tendency** |
|---|---|---|---|
| Earth | Hair, nails, teeth, skin, flesh, bones, organs etc | Smell (*Gandh*) | *Tamas* |
| Water | Bile, phlegm, pus, blood, sweat, tears, nasal mucus, urine | Taste (*Ras*) | *Sattva+ Tamas* |
| Fire | Physical warmth, digestion | Sight (*Roop*) | *Sattva+ Rajas* |
| Air | air in lungs, belly and bowels | Touch (*Sparsh*) | *Rajas* |
| Ether | Ears, Nostrils, Mouth, Anus etc | Sound (*Shabda*) | *Sattva* |

**Table 2: Five Cosmic Elements and Associated Body Parts**

The imbalance of any or combination of these cosmic elements has a definite impact on health. For example imbalance in Earth element results in weakness, tiredness, epilepsy, underweight, jaundice, hyperthyroid etc. Imbalance of Water element will result in disorders like dropsy, dysentery, wet dreams, common cold, cough etc. Imbalance of Fire element is the cause for rheumatism, cold, indigestion, weakness, infertility, boils etc. The Air elements if not in stable proportion can cause paralysis, stiffness, gastroenteritis, arthritis, pulmonary diseases, Parkinson's etc. The rise or fall of space element results in epilepsy, insomnia, schizophrenia, amnesia, dementia, depression, mental instability, dizziness etc.

So we can see how important it is to have knowledge about these five elements and what is more important is to know how to maintain balance of these to stay healthy.

## About *Sookshm* (Subtle) *Shabd Pranayama*

*Pranayama* circulates life vitality in the body for a faster physical and mental development. Life vitality helps in experiencing the extrasensory levels of consciousness in the subtle dimension. *Sookshma Shabd Pranayama* is a special and effective technique of experiencing the subtle, which is very easy to practice on a regular basis.

In verse 29 of chapter 4 of *Geeta*, Krishna explains Arjun about the significance of *Pranayama*

> To stay in the state of trance, Yogis exercise control on breathing by practicing to offer *Apana* (incoming breath) in *Prana* (outgoing breath) and *Prana* in *Apana*. This process of *yagya* of *Prana* and *Apana* leads to *Kumbhaka* (complete cessation of breath). (Geeta ch.4: verse 29)

This is the secret knowledge behind science of breath contained in the process of inhale and exhale. One can use this knowledge to begin the journey towards absolute truth. Yogis in ancient times could easily practice and gain control over it but with time, as manmade advancements, his mind became more and more energetic and hyper active making it increasingly difficult to gain control on breath for spiritual progress. Mind of modern man has become hyper active and unstable due to an excess of energy. This energy if left uncontrolled can create havoc for mankind but if properly channelised in the right direction then it can be a boon. *Sookshma Shabda Pranayama* is the technique for controlling the restless mind.

## The nature of *Sookshma Shabda Pranayama*

*Sookshma Shabda Pranayama* is a divine and secret knowledge given by *Siddham* Yoga tradition. *Shabda* (speech) is a form of God as it created universe.

In 3-23 *sloka* of chapter 1 of Brihdaranyak Upanishda, the relation between *Prana* (vitality) and *Shabda* (sound/speech) is explained. It says that *Prana* is indeed *Ut* (container), for all this is held aloft by *Prana* and speech alone is *Githa* (expression of sound). (*Brihdaranyak Upanishda*, ch. 1: verse 3-23)

The subtle cosmic element of *Agni* (Fire) uplifts the *Prana* towards the throat where the *Nada* (sound) is produced due to impact. This sustained activity of *Prana* and *Shabda* is *Shabda Pranayama*.

Patanjali Yog Sutra also explains that sound of *Omkara* is expression of God and *Sohum* is *Om*. *Sohum* means 'I am That' which is oneness with supreme i.e. non duality. What makes *Shabda Pranayama* special is it is a blend of *Pranayama* and Meditation.

**Effects and Benefits of *Bhutshuddhikriya***

**Effects:**

*Bhushuddhikriya* works simultaneously on physical as well as subtle bodies. **Table 3** shows some of the key effects on each of these bodies. These effects have been based on real time data collected from the field.

| **Effects on Physical Body** | **Effects on Subtle Body** |
|---|---|
| • Increases Oxygen in blood<br>• Maintains Hemoglobin levels<br>• Reduces workload on heart<br>• Increases blood supply to brain<br>• Stimulates the pituitary gland<br>• Normalises the hormonal secretion<br>• Stabilises respiratory system<br>• Activates nervous systems<br>• Maintains pH level of body | • Increases *Prana Shakti* (Life Vitality)<br>• Stabilises Mind waves at Alpha level<br>• Purifies and Energises *Chakras*<br>• Stimulates Bioelectric currents (aura)<br>• Maintains Energy balance<br>• Activates latent powers of mind<br>• Removes subtle toxins |
| **Table 3: Effects of *Bhutshuddhikriya*** | |

**Benefits:**

- **Physical and Mental Fitness and Stability:** The positive effects on physical and subtle ensure the holistic health of the practitioner. The increased energy flow in *chakras* nourishes the associated glands. The practitioner feels energetic throughout the day.
- **Control on ageing process:** The energy is radiated to all parts of the body. Cells receive the energy required for normal functioning and decay of cells reduce. The early age ageing problems get addressed.
- **Helps the ability to Meditate:** Although Meditation comes naturally to human beings but most people find it difficult to meditate. Due to high amount of mind activity and stress it gets difficult for them to meditate. *Bhutshuddhikriya* helps stabilise mind waves at alpha level which is the

perfect situation for one to mediate effectively. The gentle stream of sound during *Shabd Pranayama* helps to build mind's focus and internalises it. It opens the gates for spiritual progress.

- **Awareness, Memory and Discrimination power:** As the mind stabilises in alpha level the powers of mind are utilised effectively. This leads to development of brain resulting in awareness levels, memory and discrimination power.
- **Ability to respond quickly to a situation:** The alert and aware mind helps accelerate the decision making process.

## Case Studies

A) During an exercise conducted at Swami Vivekananda Yog Anusamdhan Anusamdhana (SVYASA), Bangalore, the measurements were taken using Acugraph machine before and after the *Kriya*. Acugraph (**Fig. 4**) does digital imaging of twelve Meridian lines in the body and is used by acupuncture specialists. The duration of the *Kriya* was 20 minutes.

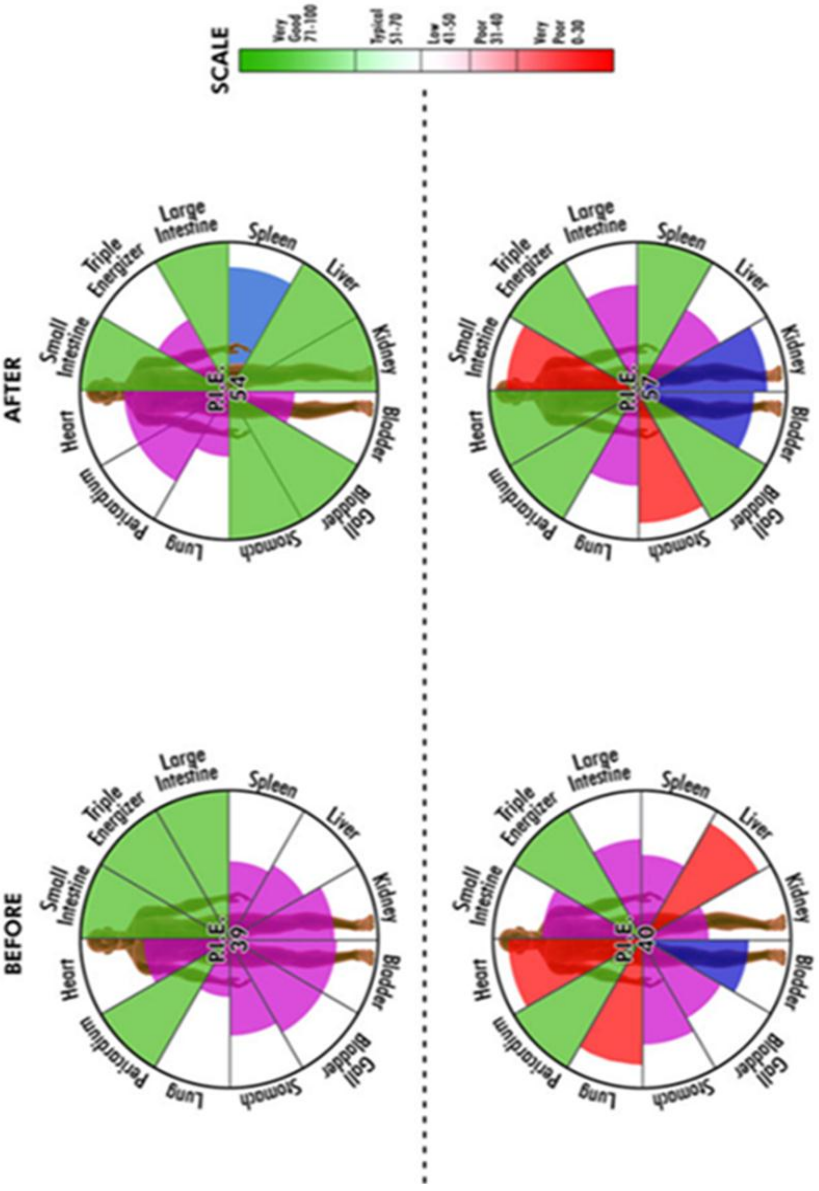
**Fig. 4** shows the Personal Integrate Score of two subjects. For Subject A, only 4 meridian lines are Green before the *kriya* while there are six in Green state after the *kriya*. The PIE score went up to 54 from 39.

For Subject B, 2 meridian lines are green before *Kriya* while 5 are after the *kriya* and the PIE Score rose to 57 from 40.

## Energy Level and Stability Comparison

Before the *kriya*, both the subjects were having excess energy levels which results in hyper activity. After the *kriya* both has their energy levels in normal range of 80-100. The energy stability increased for both of them (**Fig. 5**).

**Note:** Both the subjects, whose data is produced in these charts, were doing the *kriya* for the very first time and these results were taken after 20 minutes of practice. This indicates that *Bhutshuddhikriya* starts showing positive effects from the very first day itself.




***Subject A*** ***Subject B***

***Figure 4: P.I.E Score Comparison***

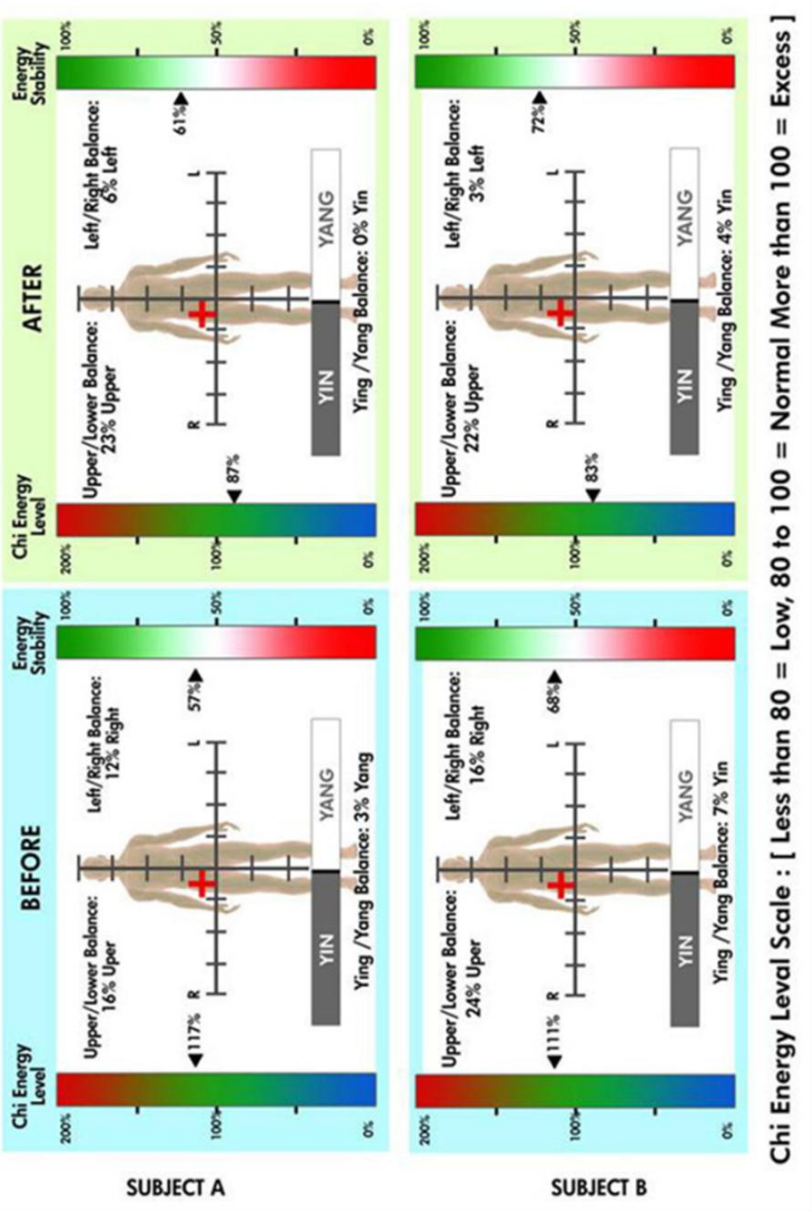



***Figure 5: Energy Level and Stability Comparison***

B) In yet another interesting study, a project was undertaken with Desire Society, Bangalore to study the effect of *Bhutshuddhikriya* on HIV Positive children. Desire society is a privately run NGO head quartered in Hyderabad. It has a small setup in Bangalore with 25 children. 4 of these children are HIV positive. The project was started in April 2011. The CD4 count is produced for 3 children in **Table 4**.

**CD4 Count**

| **Name of Child** | **CD4 Count before *Kriya*** | **CD4 Count after *Kriya*** |
|---|---|---|
| Shwetha, age 10 yrs | **435** (in Apr 2011) | **820** (in Jul 2011) |
| Ramya, age 10 yrs | **53** (in Apr 2011) | **623** (in Jul 2011) |
| Shiva , age 8 yrs | **386** (in Dec 2010) | **492** (in May 2011) |
| **Table 4: CD4 Count** | | |

Shweta and Ramya have shown significant improvement whose CD4 count was taken after 3 months of practice. Shiva's CD4 count was taken after 1 month of practice.

CD4 count in blood is an indicator of strength of immunity system. It measures the number of T cells expressing CD4. The normal range is 500 to 1200 X 106 per liter. HIV infection leads to progressive reduction in the number of T cells expressing CD4. CD4 tests are not a direct HIV test i.e. it does not check the presence of viral DNA, or specific antibodies against HIV. Patients often undergo treatments when the CD4 count reaches a level of 350 cells per micro liter.

***Bhutshuddhikriya* Process**

Things to remember while doing *Bhutshuddhikriya*:

- Location of *chakras*
- Should be done empty stomach (at-least 3 hours after meal). Morning time before breakfast is best
- Try to be in positive frame of mind
- Sitting in straight posture
- *Shabd Pranayama*: Breath making sound from throat

Following are the steps of *Bhutshuddhikriya*

| | |
|---|---|
| 1. Prayer (*Tamoso Ma…*) | 8. *Astraay Phat* on *Vishuddha Chakra* |
| 2. *Panch-Tatva Ahwahan* | 9. *Shikhaye Vashat* on *Ajna Chakra* |
| 3. *Kavachay Hum* on *Ajna Chakra* | 10. *Shirse Swaha* on *Sahatrara Chakra* |
| 4. *Karatalkar* on *Mooladhara Chakra* | 11. Meditation (Observation only) |
| 5. *Astraay Phat* on *Swadishthan Chakra* | 12. *Aum chanting* (Downwards) |
| 6. *Shikhaye Vashat* on *Manipur Chakra* | 13. *Nadi Shodhan Pranayam* (Upwards) |
| 7. *Karatalkar* on *Anaahat Chakra* | 14. Prayer |

**Prayer:**

*Tamaso mā jyotir gamaya,* (O Lord!! Please lead me from ignorance to knowledge)

*Asato mā sad gamaya* (Please lead me from unreal to real)

*Mṛtyormā amṛtam gamaya* (Please lead me from mortal to immortal)

*Aum śānti śānti śāntih!!* (May there be peace, love and non violence)

***Kavchay Hum*:**

- Observation on *Ajna* (Brow) *chakra*
- Beginner – 30, Medium – 45, Adv-60
- Breathing rate - Slow, Med, Fast, Very fast

***Kar-tal-kara*:**

-Observation on *Mooladhara* (Root) *chakra*

-Beginner – 05, Medium – 10, Adv-15

-Breathing rate – Very Slow

-The same process is done on *Anaahat* (heart) *chakra* also

***Astraya Phat*:**

-Observation on *Swadhishthan* (Sacral) *chakra*

-Beginner – 10, Medium – 20, Adv-30

-Breathing rate –Slow

-The same process is done on *Vishudha* (throat) *chakra*

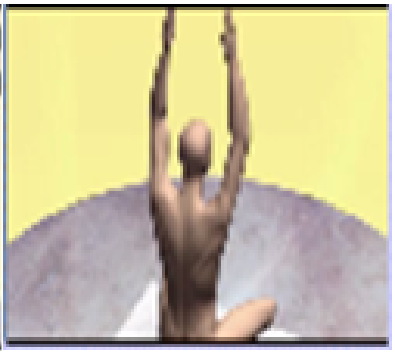
***Shikhay Vashat*:**

-Observation on Manipur (Solar) chakra

-Beginner – 15, Medium – 30, Adv-45

-Breathing rate –Slow

-The same process is done on *Ajna* (Brow) *chakra* also

***Shirse Swaha*:**

-Observation on *Sahastraara* (Crown) *chakra*

-Beginner – 30, Medium – 45, Adv-60

-Breathing rate –Slow, Med, Fast, Very fast

-The same process is done on *Ajna* (Brow) *chakra* also


**Meditation:** In this no imagination and stress. Observation for 5-15 minutes.

***Aum chanting***: From *Sahastrara* (Crown) to *Mooladhara* (Root) chant *Aum* on each.

***Naadi Shodhan Pranayama***: From *Mooladahara* (Root) to *Sahastrara* (Crown).

Bring your attention to *Ajna* and do the following prayer:

> Thank You Almighty!! For blessing me with human life and endowing me with immense possibilities and potential. May the peace and happiness that I experienced doing this *kriya*, be experienced by all.
>
> May everyone be healthy.
>
> May everyone be happy.
>
> May there be peace! Love!! Non Violence!!!

## Research Potential

Human mind is among the most complex creations of Nature. The mysteries of human mind have presented one challenge after the other to the scientific community. It is believed that average humans use only a fraction of the mind. It is amazing to believe that the wonders of science that we see around us are a result of only a factional use of the mind. The result is far from imagination if humans start to develop their mental faculties beyond the average. These mysteries of mind present immense opportunities of research for the welfare of mankind. Apart from the clinical research, nuclear genetics presents a great opportunity to be explored. It would be interesting to explore what happens within RNA and DNA when the sub-atomic particles within our cells come in the effect of bio-electric field that is generated with the help of constant sound vibrations of our breath. Would it be possible to cure defects in chromosomes using sound therapy? Would it be possible to understand human behaviour and predict it to perfection? Or change it if we can understand the effect of various layers of manifestation of sound on mind? Many such questions will find answers in these hidden subtle domains of mind.

## Appendix: *Chakras* – The Energy Centers

1) ***Mooladhar* (Root *Chakra*):** *Mooladhara* is considered the 'root' or 'foundation' *chakra*, and is the transcendental basis of physical nature. The location of *Mooladhara* is at the base of the spine, and it is associated as well with the perineum, close to the anus to aid action of excretion. Its relation comes with coccygeal spinal nerve which controls the function of excretion.

2) ***Swadishthana* (Sacral *Chakra*):** *Swadhisthana* is positioned at the tailbone, two finger-widths above *Mooladhara*. Its corresponding point in the front of the body is at the pubic bone which is the sacral region. It stimulates unconscious desires, especially sexual desire. It is very closely related to sacral spinal nerves. Being connected with the sense of taste, it is associated with the tongue, and being connected with reproduction, it is associated with the endocrine organs of the testes in men and ovaries in women. These produce the hormones testosterone or estrogen, which are important factors in sexual behaviour. These are also the locations the spermatozoa or eggs are stored with their latent genetic information, like the latent *samskaras* that lie dormant within *Swadhisthana*.

3) ***Manipura* (Solar *Chakra*):** *Manipura* is considered the centre of dynamism, energy, willpower and achievement (*Itcha Shakti*), which radiates *prana* throughout the entire human body. The position of *Manipura* is stated as being either behind the navel or the solar plexus. Being related to the sense of sight, it is associated with the eyes, and being associated with movement, it is associated with the feet. In the endocrine system, *Manipura* is said to be associated with the pancreas, and the outer adrenal glands; the adrenal cortex. These glands create important hormones involved in digestion, converting food into energy for the body, in the same way that *Manipura* radiates *prana* throughout the body. Thus it is related to lumbar spinal nerves.

4) ***Anaahata* (Heart *Chakra*):** *Anahata* is said to be located near the region of the heart. Because of its association with touch, it is associated with the skin, and because of its association with actions of the hands, it is associated with the hands. In the endocrine system, Anahata is supposedly associated with the thymus gland, located in the chest. It is also associated with love and compassion, charity to others, and forms of psychic healing. Due to the

similarity of functions performed and organs it controls, it is related to thoracic nerves.

5) ***Vishuddha* (Throat *Chakra*):** *Vishuddha chakra* is known as the purification centre. It is positioned at the neck region near the spine, with its superficial activation point in the pit of the throat. Due to its association with hearing, it is related to the ears, and due to its association with speaking, it is associated with the mouth. *Vishuddha* is often associated with the thyroid gland in the human endocrine system. This gland is in the neck, and produces hormones essential for growth and maturation. Its relation comes with cervical nerves which has similar functions and areas of action.

6) ***Ajna* (Third Eye**): Midbrain is the position of *Ajna chakra*, directly behind the eyebrow centre. It is associated with the third eye on the forehead. It is associated with the pituitary gland which is considered as the master gland of all endocrine glands, whose secretions control all the other endocrine glands. It helps midbrain do its function of controlling the sensory organs.

7) ***Sahasrara* (Crown *chakra*):** Located at the top of the head in that one area, or a little way above it, sahasrara is responsible of controlling all functions of body directly or indirectly. This is associated with frontal lobe of brain.

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# Sri Lanka's Traditional Knowledge about Health and Wellbeing: History, Present Status and the Need for Safeguarding

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## Abstract

*This paper explores dying secrets of traditional knowledge in health and wellbeing in Sri Lanka and attempts to find ways of safeguarding it as an intangible cultural heritage of humanity. It traces the historical evolution of traditional knowledge and traditional cultural expressions. It considers the internal and external forces that influenced the evolution of Sri Lanka's traditional knowledge, followed by an account of the historical developments and achievements in traditional knowledge in healing and wellbeing, with examples from ancient historical and literary sources.*

*The challenges faced by traditional knowledge about health and wellbeing as well as the influences of colonisation are outlined in this paper. The paper identifies the contribution of international organisations as well as the government's Indigenous Medical System in protecting traditional knowledge on health. Finally the need to adopt and implement a more comprehensive, locally relevant and participatory plan to safeguard traditional knowledge about health and wellbeing is discussed.*

## Exploring the Concepts

Over the years various terms have been used to describe the subject matter of this paper that includes healing practices, healing rituals, dances, performances, and story-telling. These terms imply yet others including, but not limited to, 'folklore', 'indigenous heritage', 'traditional cultural heritage', 'traditional cultural expressions' and 'traditional knowledge'. There is not, at this time, an agreed legal definition of these terms, and they continue to be under discussion in a number of national, regional and international fora.

This paper uses the terms 'traditional knowledge' and 'traditional cultural expressions'. A useful starting point in considering the meaning of traditional knowledge and traditional cultural expressions has been highlighted by the 'Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore' (IGC) of the World Intellectual Property

Organization (WIPO), which has dealt most comprehensively with the protection of traditional knowledge and traditional cultural expression. The IGC defines the term traditional knowledge as:

> … the content or substance of knowledge resulting from intellectual activity in a traditional context, and includes the know-how, skills, innovations, practices and learning that form part of traditional knowledge systems, and knowledge embodying traditional lifestyles of indigenous and local communities, or contained in codified knowledge systems passed between generations. It is not limited to any specific technical field, and may include agricultural, environmental and medicinal knowledge, and knowledge associated with genetic resources. (The Protection of Traditional Knowledge: Revised Objectives and Principles 2007: 19)

Elsewhere, traditional cultural expressions are defined as "any forms, whether tangible and intangible, in which traditional culture and knowledge are expressed, appear or are manifested" (WIPO 2006: 11).

In general the phrase 'traditional knowledge' has been described as the 'understanding or skill possessed by indigenous peoples pertaining to their culture and folklore, their technologies, and their use of native plants for medicinal purposes' (Munzer and Rustiala 2009: 37-8). Put another way, traditional knowledge is the cumulative and dynamic body of knowledge, know-how and representations possessed by peoples with long histories of interaction with their natural milieu. Traditional knowledge is intimately tied to language, social relations, spirituality and worldview, and is generally held collectively. Thus all indigenous peoples are traditional knowledge holders, yet all traditional knowledge-holders are not indigenous.

Attempts to define traditional knowledge and cultural expression, as well as delineate distinctions between them, are not without critics (Posey 1999: 3). Too often, traditional knowledge is conceived unsophisticatedly as a pale reflection of mainstream knowledge, in particular, science. Importantly, indigenous groups claim that their rights extend to defining for themselves the extent and characteristics of their intellectual property (Fecteau 2001: 69-84).

In Sri Lanka, existing systems of traditional knowledge include Traditional Administrative Systems, Traditional Social Systems (Caste Systems), Irrigation Systems, Traditional Legal System, Architecture including Traditional Village

Planning, Art, Religions- Buddhism, Hinduism, Islam, as well as Literature and Rituals, etc. Traditional knowledge is an intangible cultural heritage of humans that portray the rich civilisation and diversity of a community. By recognising traditional knowledge, cultural diversity can be promoted. Pluralistic and multi-cultural societies give an opportunity to its members to maintain their own identity which contribute towards satisfaction and self-fulfillment. Traditional knowledge promotes Cultural Nationalism, a national identity shaped by cultural traditions and by language. Cultural Nationalism is an ideology that constructs an alternative lifestyle that rejects dominant Western culture and value systems. Traditional knowledge is a means of safeguarding the 'National Consciousness,' an understanding that a group of people in a certain geographic area share a common ethnic or linguistic or cultural evolution as a first step of gaining colonial independence. Due to the impact of traditional knowledge on culture, sustainable development, environmental conservation, food security, agriculture, traditional healing and wellbeing, the importance of protecting traditional knowledge internationally and nationally has been repeatedly emphasised.

The final concepts central to this paper are health and wellness.

A healthy person according to Ayurveda is one who is in a balanced condition of humors, *datun* (body elements), *agni* (digestion and metabolism), *malakiriya* (proper evacuation) and with pleasantries in physical, social and mental behaviour (Kusamaratane 2005: 5).

Wellbeing can refer to:

a. a positive state of being;

b. a person's overall sense of health and wellness;

c. a person's feelings of happiness or general satisfaction with his/her quality of life; and

d. the experience of contentment and fulfillment with one's life circumstances (PADHI 2009: 19).

Wellbeing is a dynamic concept, where one should work towards achieving the state of wellbeing by fulfilling one's needs. The achievement of wellbeing is determined by psychological and social dimensions, that is, the individual efforts and the social context in which the individual is placed (PADHI 2009: 19).

## Sri Lanka's Traditional Knowledge: A Brief History

The evolution of Sri Lanka's traditional knowledge has been influenced by many internal and external forces. One of the main forces that contributed towards the evolution of traditional knowledge was the island's strategic location on the silk route connecting the East and the West. This strategic location enabled the infusion of Eastern as well as African and Middle Eastern cultures into the indigenous culture in the process of evolution and development of traditional knowledge. India, being the closest neighbour and the homeland of a rich civilisation, had a major influence on Sri Lanka's civilisation and knowledge.

Healthcare in Ancient Sri Lanka goes back about 5,000 years according to ancient legends. King Ravana is said to be a great physician and is supposed to have written several books on healthcare. Some forms of indigenous medical treatment had existed long before the arrival of Vijaya and the Indians. Mother Goddess, Ancestral worship like the *Nee Yakku* of the Veddhas, and Tree worship have been part of the treatment for ailments before Vijaya's arrival.

## Achievements in Traditional Healing and Wellbeing

There have been numerous achievements of traditional knowledge in health and wellbeing in Sri Lanka. The country claims to be the first in the world to have established dedicated hospitals. According to the *Mahavamsa* (the primary historical chronicle of Sri Lanka), hospitals had been established in Sri Lanka during the reign of King Pandukabaya during the fourth century BCE (Geiger 1960: 102). There were four types of hospitals in Ancient Lanka: (a) Monastic hospitals where in-house treatment was provided for ailing monks for short or long periods; (b) hospitals for laymen (c) maternity homes and (d) hospitals where only outdoor treatment was provided (Siriweera n.d.).

Some surgical instruments found during archaeological excavations reflect high standards of technology and bear similarities with the surgical instruments in modern western science (Aluvihare 2012). Furthermore, *Sarartha Sangrahaya*, a comprehensive manuscript which Sri Lankan physicians still use for reference was written by King Buddhadasa in 398 CE ('Historical Perspectives' IAAM n.d.).

Ancient inscriptions on rock surfaces reveal that organised medical services have existed within the country for centuries and have been used to treat humans as well as animals.

References to healthcare in ancient Sri Lanka suggest awareness among the people on medical treatment methods as well as performance of surgery on humans and on animals.

## Traditional Medical Practices

Sri Lankan beliefs and knowledge have been used in healing practices. Some forms of traditional healing in Sri Lanka include Ayurveda, *Kadum Bidum* and *Rasa Shastra*.

Ayurveda is a system to control, direct, build-up and finally prolong life by warding off illness and ageing. The guiding principle of Ayurveda is that the mind exerts a profound influence on the body (Liyanaratne 1999: xvi). According Section 89 of the Ayurveda Act No. 31 of 1961, Section 89, currently Sri Lanka has Ayurveda (North Indian traditional medicine), Siddha (South Indian traditional medicine), Unani (medicine of Arabic origin) and indigenous (based on medicinal recipes passed down in certain families) medical systems.

*Kadum bidum* (Orthopedics) is an authentic traditional healing system to treat fracture and dislocation. There are many schools practicing the traditional healing methods for Orthopedics. The western medical profession treats a fracture instantly through an operation by fixing wires or plates. Indigenous method of orthopedic treatment is different. They demobilise the limb with the fracture or dislocation, apply oil and tie it with a medicinal (herbal pack) bandage called *thel paththuva*. This bandage is removed after 2-3 days. If there are any changes in the alignment of the bone then the *thel paththuva* is repeated. This practice continues till the fracture/ dislocation is completely healed. (Personal Communications: S.M.H. Seneviratne and S.M.K. Nimal Karunarathne).

*Rasa Shastra* has a cure for all health problems in the twenty first century CE. It is a highly effective way of treating illnesses using alchemical fusion between mineral and organic compounds including such diverse materials as mercury, gold, silver, tin, lead, zinc, sulfur, copper and diamond. The raw metals and organic compounds used in Rasa Shastra are subjected to various purification processes called *Shodhana*, *Marana* and *Bhashma*. Rasa Medical System can treat

HIV/ AIDS, all types of cancer, diabetes, leukaemia, all types of skin diseases, neuro and spinal disorders, cardiac problems, hypertension, urinary disorders, kidney problems and sexual disabilities including impotency. This system helps avoid surgical operations (Personal Communications: Kularathne and Kularathne).

## Rituals pertaining to Mental Health and Wellbeing in Sri Lanka: A Brief Account

Local Sri Lankan beliefs, knowledge, and practices were used in protecting mental health through rituals and performances such as *pirith*, meditation, *bodhi pooja, pahan pooja*, vows, yoga, astrology, palmistry, healing through spirits, exorcism, *tovil*, charms and amulets, *adi veil* and *hetme ritual*.

*Pirith* is the recitation or chanting of the word of the Buddha to ward off illness, fear, and danger from evil spirits as well as to invoke the blessings of the Triple Gem for protection. It is a ritualistic function and can be chanted individually or as a group ('Pirith Paritta or Protection' n.d.).

Meditation is a practice in which an individual trains the mind to control complex emotions and regulate attention to realise benefits including physical wellbeing and emotional balance (Lutz *et.al.* 2008). Meditation is a powerful tool for mental health as it can help to overcome depression, anxiety, stress and negative emotions. Meditation can also have an impact in curing physical ailments such as high blood pressure and cancer (Personal Communication: Priyantha).

*Bodhi Pooja* is the veneration of the *Bodhi* Tree. It is a widespread ritual in Sri Lanka performed by Buddhists. *Bodhi* tree, being a sacred object of Buddhists, has become a necessary feature of every Buddhist temple in Sri Lanka. The *Bodhi Pooja* ritual includes bathing the *Bodhi* tree with scented water, offering flowers, herbal drinks, milk rice, fruits, betel and coins, hanging flower garlands or flags on the *Bodhi* tree, lighting of oil lamps and camphor and reciting *gatha* (verses). The ritual is concluded by the usual transference of merit to deceased family members and the deities that are believed to be protecting Buddhism's presence in the world. It fulfills the emotional and devotional needs of the devotees. It is performed to obtain mental relief, avert evil influences, and make a wish or fulfill a vow.

*Pahan Pooja*, the lighting of oil lamps as an offering, is another popular ritual. It is sometimes performed simultaneously with the *Bodhi Pooja*. The objective of the *Pahan Pooja* is to avert the evil influence of inauspicious planetary conjunctions.

A vow is a sacred voluntary oath between a human and a deity, where the deity is both the witness and recipient of the promise (s.v. 'Vow' *Encyclopedia Britannica* n.d.). A wow goes beyond usual social and religious requirements, as it commits oneself and members of one's family or community to a special obligation, render some service, or devote something valuable for a particular deity's use or to practice some form of ritual when the vow is fulfilled. Vows are common in all the four major religions in Sri Lanka namely Buddhism, Hinduism, Christianity and Islam.

Yoga is a form of exercise that contributes towards spiritual, mental and physical wellbeing. A regular practitioner of Yoga could reap benefits such as a healthy body and mental happiness.

The traditional word for astrology in Sinhalese is *Jyotishaya*. It means 'science of the light'. Astrology is an occult subject which tells about our future. Astrology is used widely in Sri Lanka on occasions such as giving a name to a child, cutting the first hair of a child, giving first solid food to a child, reading the first letters to a child, the first menstruation celebrations, identifying a partner to get married, marriage ceremonies, building a new house, starting a new business and engaging in agriculture. After reading their horoscopes, astrologers also guide people on various forms of rituals, poojas, good deeds, talismans and charms they should use to get over mental or physical problems (Personal Communication: Perera).

Malayalam Palm-reading is a very important and vast field of astrology which has been practiced over the years by the *Rodia* community of Sri Lanka (Personal Communication: Leela). It is an art of forecasting the future by reading the lines of one's palm and hence it is also known as Palm-reading or Chirology. It is practiced in the whole world but with numerous cultural variations.

It is believed in Sri Lanka that health problems can be caused by demons. These could be physical or mental disorders. *Daha Ata Sanniya* or the 18 ailments are believed to be caused by the impact of demons. These ailments include blindness, paralysis, excess heat, body sores, insanity, dumbness, ear diseases,

delirium, death, vomiting, diarrhea, nausea and parasitic worms, evil dreams, loss of consciousness, bile-related disease, rheumatism and epilepsy. A *yakadura* (demon doctor) will diagnose the sickness and arrange treatment. These rituals involve prayers and invocations to gods and demons, trances and possession, chanting, dancing and drumming.

There are many forms of *Shanthi Karma* (a ritual consisting of chanting, drumming, and dancing aimed at warding off evil spirits) practiced in Sri Lanka for the health, protection and wellbeing of individuals as well as the society at large. *Gammadu Shanthi Karma*, *Devol Madu Shanthi Karma*, *Bali Shanthi Karma, Kavadi Shanthi Karma* are some forms of *Shanthi Karma* practiced today in Sri Lanka (‘Shanti karma’ n.d.).

The *Tovil* is a psychodrama (Jayatunga 2012) performed by exorcists to combat diseases believed to be caused by demons and ghosts (Sri Kantha 2004). It is all a therapeutic encounter for the patient, an entertaining public gathering of friends and relatives, and a religious discourse.

*As vaha* (evil eye), and *kata vaha* (evil mouth) are countered by *mathirima* (chanting) for protection. It is believed by Sri Lankans that if someone feels jealous or says something with jealousy it will cause injury or bad luck for the person at whom it is directed.

*Aadi Vel* Festival is a celebration of the Kataragama deity’s triumph over evil forces and his marriage to the Sri Lankan Veddha girl Vallone. It is one of the most important Hindu festivals hosted in Colombo since 1874. The rituals, including colourful processions in Colombo, chariot processions, coconuts being smashed, worshipping with camphor and flame and Kavadi dance contribute towards the mental and spiritual wellbeing of the Hindu devotees (Muttulingam 2012).

*Hethme* Ritual is a traditional method of sorcery of the indigenous *Veddha* community. This traditional cultural item is normally performed to ensure safety and protection of the *Veddha* people and to dispel diseases and calamities while praying to gods to invoke blessings on them. (‘Audio Visual Conservation Record of ‘Hethme’ Ritual for the Preservation of Cultural Life and Value System of Veddha Community’ n.d).

## Importance of Safeguarding TK in Health and Wellbeing

While traditional beliefs, knowledge and practices have been, and continue to be, socially and economically important there are a number of challenges for traditional beliefs and practices. Sri Lanka's is a complex socio-religious and political history that mixes Sinhalese, Tamil, Muslim, Buddhist, Islam, Hindu beliefs, as well as the influences of colonisation.

Although the long history of foreign influence in Sri Lanka could be dated back to third century BCE, it was only the Europeans who attempted to colonise. Sri Lanka was occupied by European Colonial powers from 1505-1948 CE. The colonial influence resulted in an erosion of the traditional beliefs, knowledge and practices of the country to a considerable extent. Perhaps the most significant development during this time was that the Sri Lankan state supported and encouraged Christianity, first in the form of Catholicism and later Protestantism. Indeed, many Buddhist and Hindu temples were destroyed by the Portuguese during the sixteenth century CE. This disoriented the colonised from their traditional art of living including the life styles, religious beliefs and arts and crafts.

Giving state priority to western education, religion and culture had severe negative effects on the traditional knowledge of Sri Lankans as the state structure and the social system in place to protect traditional knowledge were replaced by the new systems introduced by the colonisers.

Re-educating the western educated was the primary problem in gaining colonial independence. Coomaraswamy (1979) states "I have no idea how many it might take to outgrow a missionary college education, or to recover from a course of lectures on Comparative Religion offered by a Calvinist" (10).

The introduction of a capitalist mode of production resulted in the destruction of the rich civilisation Sri Lanka inherited. The capitalist mode of production threatened the traditional knowledge and traditional social systems. Any established institution is governed by the values that drive the society in which it operates. This is portrayed by the mandates of the pre-colonial institutions, rituals, practices, as well as their arts, crafts and architecture. Most foreigners, who attacked and rejected the existing institutions such as the caste system in India and Sri Lanka, did so without properly understanding the moral basis of these institutions. The colonial powers thus introduced new value systems without

understanding the moral basis of a society, which resulted in them not being able to realise the moral commitments of these societies as well as in the breaking down of traditional knowledge systems that were based on the value systems of said societies.

In more recent times, reliance on scientific knowledge, trends in globalisation and homogenisation of cultures, have made traditional knowledge is face the threat of extinction. Furthermore, the influence of western medical systems and the impact of multi-national corporations and media in marketing global medical and wellbeing products and services have become a great threat to traditional knowledge. Obtaining intellectual property rights such as patents for traditional knowledge by third parties and sharing very little rights with the original bearers of traditional knowledge is another negative impact of globalisation. The influence of information technology in creating homogenisation of culture is also threatening traditional knowledge. If the rich and diverse traditional knowledge, health, and wellbeing systems are not safeguarded from the harmful influences of globalisation, we will not be able to pass down this heritage to our next generations, which we are currently enjoying thanks to our forbearers. Colonisation of the country, trends in globalisation and homogenisation, and the extensive reliance on western scientific knowledge have resulted in the gradual extinction of traditional knowledge.

Western scientific traditions are adopted and practiced in South Asia as new ‘acceptable’ knowledge and are studied in universities and practiced in centers of science and technology since the eighteenth century CE (Goonatilake 1998: 24). The very process of legitimising Western knowledge in South Asia has resulted in de-legitimising the rich heritage of traditional knowledge.

An enormous share of our traditional knowledge has been lost during the colonial period due to some policies of the colonial administration. Although post-colonial revival efforts have galvanized some aspects of traditional knowledge, it still faces the threat of extinction. Reasons for this include not having a systematic procedure to pass down traditional knowledge from generation to generation, present education system not catering sufficiently to transmitting traditional knowledge, the death of the knowledge bearers, and the young generation not being very interested in following the path of their parents who were engaged in traditional knowledge based occupations.

Protecting traditional knowledge would improve the lives of traditional knowledge holders and communities who depend on traditional knowledge for their livelihoods, health and wellbeing. According to the World Health Organisation, up to 80 per cent of the world's population depends on traditional medicine for its primary health needs (WHO: 1993).

Increased use of traditional knowledge technology could increase performance by enabling greater commercial use of their biological wealth and increasing exports of traditional knowledge related products (Dutfield 2006: 12).

Traditional products and services in health have a strong role in boosting the identity of traditional knowledge bearers, which in turn contributes towards their wellbeing. Safeguarding traditional knowledge against globalisation and cultural hegemony, industrialisation and market economy, bio-pirates and copy right infringements will ensure cultural diversity and the wellbeing of communities.

## Methods of Safeguarding Traditional Knowledge

This paper suggests that TK can be safeguarded in a number of ways. These include, identification, documentation, research, preservation, protection, promotion, enhancement, transmission (particularly through formal and non-formal education), and revitalisation of the various aspects of such heritage.

## Existing Efforts in Safeguarding Traditional Knowledge

Various aspects of preservation, protection and promotion of traditional knowledge are looked into by many international bodies. The work already carried out by certain international bodies has a tremendous impact in safeguarding traditional knowledge in health and wellbeing.

A useful starting point in considering the meaning of traditional knowledge and traditional cultural expressions is highlighted by the 'Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore' (IGC) of the World Intellectual Property Organization (WIPO) which has dealt most comprehensively with the protection of traditional knowledge and traditional cultural expressions. Most recently, in 2012, the IGC provided a draft text outlining various provisions of an international treaty to protect traditional knowledge and cultural expressions.

The International Labour Organization (ILO), the United Nations Commission on Human Rights (UNCHR) and the United Nations Permanent Forum on Indigenous Issues are working on safeguarding the rights of indigenous peoples around the world. The Convention on Biodiversity (CBD) and the International Treaty on Plant Genetic Resources (ITPGR) have come into force to protect Biodiversity internationally. The World Intellectual Property Organization (WIPO) and the Trade Related Aspects of Intellectual Property Rights (TRIPS) have been put in place to develop and enforce intellectual property law to safeguard traditional knowledge.

The Local and Indigenous Knowledge Systems (LINKS) programme is a UNESCO interdisciplinary initiative that works with traditional knowledge resource management and development. (See - http://www.unesco.org/new/en/natural-sciences/priority-areas/links/). The United Nations University Institute of Advanced Studies has a Traditional Knowledge Initiative that seeks to build greater understanding and facilitates awareness of traditional knowledge (TK) to inform action by indigenous peoples, local communities and domestic and international policy makers. Key outputs include research activities, policy studies, capacity development and online learning and dissemination. (See http://ias.unu.edu/en/research/traditional-knowledge-initiative.html#outline)

Nationally there is a structure in place to promote and safeguard traditional healing. This includes the Ministry of Indigenous Medicine that was established on 14 February 1980, 62 Ayurvedic Hospitals, 208 Central Dispensaries, 1424 Ayurveda Medical Practitioners employed by the government, and 20000 registered traditional medical practitioners. In addition, there is a National Institute of Traditional Medicine, Sri Lanka Ayurveda Drugs Corporation, Sri Lanka Ayurveda Medical Council, Ayurveda Department, a Research Institute and Herbal Gardens under the Ministry (Ministry of Indigenous Medicine, Sri Lanka n.d.).

## Conclusion

Although the study recognises the impact of work already done in conserving traditional knowledge in direct and indirect ways, the concern is that most of the programmes that look into preservation and promotion of Traditional Knowledge and Traditional Cultural Expressions are developed by Western policy makers

with little or no consultation with the traditional knowledge bearers and policy makers in developing countries. As a result the views and issues of Sri Lankans are not adequately represented at international level and are not prope rly reflected in policy making.

Some concerns at the national level are that:

- the indigenous medicine structure is not being as strong as the western medical structure, and
- the colonial laws that prohibited treatment of fever or performing surgery by traditional healers are still prevalent.

The government gives recognition only to *Ayurveda*, *Siddha* and *Unani* traditions. If the diverse forms of traditional knowledge and traditional cultural expressions on health and wellbeing are not given due recognition, they will die a natural death.

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# Traditional Maldivian Houses – Unfolds the Maldivian Craftsmanship and Lifestyle

*Zaha Ahmed*

## Abstract

*The paper explores traditional Maldivian houses in order to have a better understanding of the lifestyle of the Maldivian community. Homes are one of the most fundamental elements that teach rituals and behavioural patterns in a community. The techniques used to build the houses bear testimony to the skilled craftsmanship of the ancient Maldivians. In addition to the exterior, the interior also plays a vital role in portraying the daily routine of residents. The orientation and size of the openings are allocated to respond well to the hot and humid climate of Maldives.*

*This paper further explores how the spatial arrangement of the different forms of dwellings exhibit different functions.*

*Studying and researching the traditional Maldivian houses provide a better opportunity to observe the rituals and long lost lifestyle of the ancient Maldivian. Moreover it will broaden our knowledge on the building materials and construction methodology of that era.*

## Introduction

The Maldives is a chain of coral islands situated in the Indian Ocean, south of India and south west of Sri Lanka. There are approximately 1,192 islands. There is no written history of the Maldives before its conversion to Islam in 1153 CE. However, various archaeological and heritage sites bear evidence that the country has been inhabited for at least two thousand five hundred years. There are no records of the first settlers, but folklore and oral tradition handed down through many centuries give clues to the identity of the original people of the Maldives.

> ... it has been said that if we knew the period when the people first settles in Maldives, we would learn when travel first begun in the Indian Ocean. The islands lie almost in the center of the most frequent routes of the Indian Ocean, the most travelled ocean in ancient time. (Mohamed 2008: 25)

It is even written that these travelling journeys were very dependent on the monsoon. Therefore these foreign travelers had to stay in Maldives till the wind changed to go back to their home towns. This could take many months, and often sailors married Maldivian women for this time period. Subsequently this became a reason for the travellers to settle in Maldives.

Since the Maldives atolls are full of reefs and shallows, shipwrecks were very common at that period. The survivors of the shipwreck usually did not find a way back home, therefore they also settled in Maldives.

No matter what the reason was to settle down in Maldives, it is quite overwhelming to learn and explore how the people managed to survive in these isolated islands. These people came with the knowledge from their forefathers and had utilised the readily available resources to obtain food and build their shelters. At that ancient time these islands were covered with different types of tropical green vegetation. The coconut tree was the most abundant of all (**Fig. 1**).

***Figure 1: Maldives having an Abundants Amount of Coconut Trees***

> … passing seaward to the south of this country 'Seng-ka-la' (Ceylon, Ratnadvipa) about thousands of 'li' we arrive at the island 'Na-lo-ki-lo-chou' (cocoa- nut island = Maldives) The people of this island are small of statue, about three feet high, their bodies are those of man, but they have the beaks of birds, they do not raise any crops, but live on coconuts. (Vilgon 1991: 1)

Understanding how the Maldivians used the coconut palm trees and other available resources in the construction of the early dwellings helps us to widen our scope of traditional knowledge of Maldivian architecture. Homes are the most fundamental element to learn the core of the livelihood of the ancient Maldivians. Moreover learning the traditional knowledge and traditional expression reflected in the techniques in assembling these structures will help to celebrate the fine and outstanding Maldivian workmanship and craftsmanship.

## The Size of the House and the Selection of Material

Before constructing a house the occupants cleared out an area to build the house. During this process different types of trees were cut and removed to clear a ground area for construction. This removed pile of vegetation that became the raw material to construct the house.

The major raw materials used in the construction of these houses were coconut palm timber, sand stone, palm leaves, *magū dhandi* (Sea Lettuce tree) and *Dhumburi dhandi* (Cork wood). All these materials possessed characteristics that helped the dwelling to adapt to the hot and humid climate. The sand stone which was used to lay the foundation was easily collected from the beach area. Many of the Maldivian islands underwent natural changes, some grew in size with the collection of sand brought in with the changes in tide at different times of the year, while others underwent erosion at other times. During this natural process, sand stones got collected at the edge of the beach areas. When the foundation is made from a raw material that is already a part of the island ground, it gets rooted well in the soil. Moreover selecting a material that easily adapted to the soil condition of Maldives provided houses a stable and sustainable foundation. The *magū dhandi* (Sea Lettuce tree), which is usually used for the frame work of the house has a very unique feature of acting as a damp proof membrane. These sticks have an inner membrane which has the capability to absorb and store the moisture. Therefore these kept the houses damp proof and provided a comfortable interior for the occupants. Next *Dhumburi dhandi* (Cork wood) and palm leaves are weaved to be the skin of the house (**Fig. 2**).

As Vilgon (1991) points out "… with the palm- leaves they cover their houses. Because of all this they hold the coconut-palm for the best and most precious of all trees" (75).

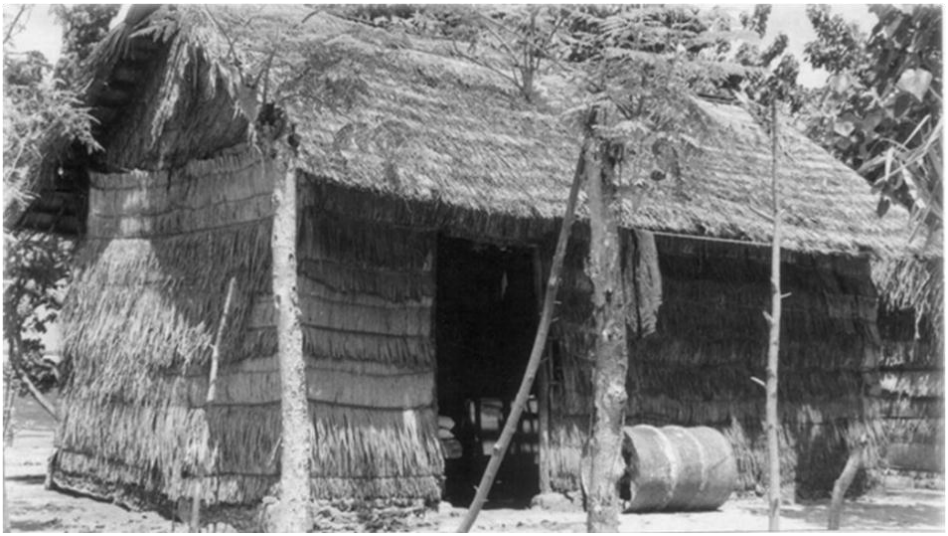

***Figure 2: Traditional Maldivian House built using Readily Available Resources***

When it was weaved small apertures were created. These openings were too small to allow water in, but were big enough to allow circulation of air. Thereby this technique allowed a good ventilation system in the Maldivian traditional house (**Fig. 3**).

Initially the size of the house was determined by the biggest wooden bench kept in the house. The typical traditional Maldivian house was 66 feet by 42 feet. These houses were designed such that they could be extended if the family grows in size.

> Among the islands some have 1000 houses, others 500, others 100, others 10 and some 5 houses. On the islands there are no towns. There are no houses of stone, but all are constructed of coconut-wood and coconut leaves. They can join two or three tree houses together to keep the father and the son's families at same place. (Vilgon 1991: 69)

The techniques used to assemble the whole structure were connected in a way that enabled the structure to adapt to change. Furthermore the house can be relocated or new parts can be attached.Vilgon (1991) states "Usually their houses are constructed so as they are able to be taken apart and removed. When they do not like the place where it is, they move it to some other place" (69).

The orientation of the house was very much dependent on their traditional beliefs. Therefore placing the house facing east to west was considered to be brave and also believed that it brought good fortune into the house. By orienting this way, the elongated sides of the house were exposed to the north and south side, which was a very climate-friendly design. As it is a country that has a hot and humid climate, by orienting the house like that, it was expected to avoid the intense heat from the sun during the morning and evening times of the day. Therefore I believe that the ancestors' belief is not essentially just a myth but it contains a logical and practical base.

***Figure 3: Good Ventilation System in the Traditional Maldivian House***

## Construction and Methodologies

Like houses in most of the Asian countries, to avoid the ground moisture, the floors of the Maldivian traditional house also were raised a few meters above ground. Unlike most traditional Asian houses, traditional Maldivian houses did not sit on stilts, but the floor sat on layers of stacked stones.

> Their buildings are of wood and they take care to raise the floor of their houses some height above the ground, by way of precaution damp, for the soil of their island is damp. This is the method they adopt, they cut the stones, each of which is of two or three cubits long, and place them in piles... (Vilgon 1991: 27)

After determining the placement of the house and collecting the raw material for building, the construction work begins. Next the collected sand stones are cut into approximately 4 to 6 feet pieces. The tools used at that period were stone cutting axes and they were shaped and smoothed using local carpentry tools. Next the stones are buried to an extent that they were stable, outlining the outer wall of the house and the partitioning wall. The builders straightened the stone layer using a stretched coir rope. After this step a timber beam is laid down vertically, with the narrow edge fitted on top of the stone layer. Then the vertical timber columns are established in the most load bearing locations of the house (usually long span walls have 6 to 7 columns, while short span walls have 4 columns.) These

columns tend to have the same height as the walls of the house. Next a horizontal timber strip is laid above the columns connecting them as a whole. After this again timber strips are laid in equal distance apart facing the long span side. Above this, another piece of timber is laid crossing the lower layer. Tongue and groove interlocking were commonly seen in most junctions of the house. Next, vertical timbers are attached with the lower timber pieces.

The height of these vertical components determines the slope of the roof. Maldivians preferred to increase the heights of these components to achieve steeper roofs thereby enabling them to easily collect rain water. Above these vertical components, timber rafters are laid to complete the roof skeletal structure. Before laying out the roof skin, a timber framework is assembled in a very traditional way. Initially they collect timber sticks called *Dhumburi dhandi* (cork wood). After this procedure they take these bundles of sticks to the sea and they gather in clusters and cleaned these sticks. It was a very social activity, which strengthened communal bonds. Next the sticks are tied together with coir rope in a grid form to create the roof framework. They attach this framework carefully to each other from the bottom to the top. Next they weave the palm leaves to create the thatch roof skin (**Fig. 4**).

***Figure 4: Weaving Palm Leaves to Create the Skin of the House***

Tying this skin onto the framework requires about 7 to 10 people. Towards the end of the roof edge on the ground two people are needed at each side to tie it from the side. Moreover on the top of the roof at least 4 people are needed on the roof to tie from the center. And also extra two to three people are needed to hold the roof while work is in progress. Similar to the roof, the walls were

also made from palm-thatched layers. The systematic and organized construction techniques not only bound the house together but also create a working atmosphere, which brought people of the community together as each person contributes his/her own share in constructing the house.

### Interior and Spatial Layout

The normal Maldivian traditional house followed a typical rectangular floor plan. Usually it was partitioned into two rooms, one is the private and the other is the public room.

> In the vestibule of the house they construct an apartment with they call the "*malem*", that divides the house into two parts, and there the master of the house sits with the friends … The interior of house is divided into two parts, one for the men and the other for woman and children. Both are equipped with suspension beds. The women part of the room also has a swing called "*Aendhu"*. The two parts of the room is separated by a curtain to seclude the sex. (Vilgon 1991:97)

The public room (outside room) was usually used by the men and the male guests who stayed in the house, while the private room (inside room) was occupied by the women and children of the family (**Fig. 5**).

***Figure 5: The Inner Room where the Women and Children Sleep***

Furthermore the public room was mostly utilised to hold communal activities such as dining, conducting religious rituals, holding family gatherings, etc. Unlike

the public room the private room was used for more personal activities like women giving birth, etc.

Near the entrance of the house there is a jar full of water with a bowl called *Ouelendj* (coconut-shell on a handle stick) made from coconut shell. The main purpose of keeping this jar is to encourage everyone to wash their feet before entering the house as in the ancient time all the inhabitants except the king walked on bare feet. The streets were swept well and kept clean.

> Every person who enters a house is obliged to wash his feet with water from the jar placed near the "Malem", and rub them with course fabric of "Lif" (Stipau with envelope the base of the stalks of the palm leaves), places there after he enters the house. (Vilgon 1991: 29)

The interior of the public room had three items of furniture. A big wooden bench (*bodu ashi*), small bench (*kuda ashi*) and front bed (*dhimā endhu*). Once visitors were welcomed into the house, they were directed to be seated on the lavishly decorated small wooden bench that was located on the west side of the house. This wooden bench is considered to be the most dominating piece of furniture in the public room. In accordance with the belief at that time, this wooden bench was meant to be occupied by the master of the house and distinguished visitors. Moreover these benches were covered with colourful hand woven mats. These mats were usually woven by women of whom some carried out this work as an occupation, while others did this work because it was their passion and to pass time. They combined colours such as black, yellow-brown and white together to create a very tasteful and vibrant product (**Fig. 6**).

Above these, colourful mats, bolsters and pillows were kept especially for the comfort of the master of the house. In front of this bench there was a bigger bench which was situated at the east side of the house and it was used by other men excluding the master to sleep, rest and eat. Vilgon (1992) notes that there were "1160 mat weavers, of whom 1155 are females" (209).

Moving to the *Etherege* (inside room) this space also usually had 3 items of furniture. They were the *vihā endhu* (Labor bed), *dhekunu endhu* (south bed) and the *undhoali* (swing). These bed frames were done by timber and mattress was made by tightly woven coir ropes. These ropes were made from a long and elaborate process carried out by the skillful Maldivian women. Initially these coconut husks were soaked. To achieve this they burried these coconut husks near

the beach area where the waves broke or in any shallow water area. Once these coconut husks were burried in rows these areas were called *bonbifaa.* It took 3-4 weeks for the coconut husk to be fully soaked. Next these were shifted to remove dirt and other rubbish, dried in the sun and packed into bales. Twisting was simply done by making a rope of the hank of fiber and twisting by hand. This work usually took place outside and it was considered as a community binding activity (**Fig. 7**). As Vilgon (1991) observes "The fiber which covers the outside of the coconuts is made into ropes both thick and fine" (57).

***Figure 6: Making Coir Ropes***

The swing in the interior room is a very important piece of furniture in the room. Maldivian women used to sit on this swing and rock the children to sleep. This is also a place where women read out mythical stories and sang lullabies. Therefore this became an area where a close bond between mothers/sisters/aunt and the children developed (**Fig. 8**).

The interior space of the Maldivian traditional house was small and they tried their best to utilise every square meter of the house. Even though the spaces were compact, they wisely utilised the available space. One of the most effective techniques the Maldivians used was to place multifunctional furniture.

> They do not possess any furniture, nor other belongings, unless who have brass pots and boiling vessels to make sugar … Some houses contain a few articles

of furniture, such as a small table, chairs and boxes or trunks (Vilgon 1991: 139)

***Figure 7: Weaving Colourful Mats***

***Figure 8: The Swing Bed in the Interior Room***

This spatial separation justifies the importance of the spatial hierarchy of the house. Moreover, it also conveys the idea that the Maldivian women and the children at that time were kept very protective since they were fragile. Even through a simple design ideology the livelihood of the Maldivians at that time could be roughly visualised.

## Outdoor utilized as an extended space

The Traditional Maldivian houses usually had a big outdoor space. Usually people built their houses more or less in the center of the island in accordance with the size of the island. Generally the houses were protected against the intense sunrays by the shade of the coconut palms and breadfruit trees. These houses were almost all surrounded by thick vegetation. Some of this vegetation helped give shade to the occupants, while others provided fruits to eat. According to Vilgon (1991) "They are almost all surrounded or attached to a fenced garden, where we could see some banana plants, lemon trees, sugar canes and cotton bushes" (183).

Next thing the housewives practiced was to work out door in their backyards. They sat in groups under the shade of the trees and conducted their daily household works. Moreover this outdoor was fully utilised while celebrating important occasions. To adapt this space into a temporary festive space, people built a temporary shelter over the area. Furthermore, different types of natural things such as vibrant flowers, varieties of leaves, and different types of sea shells were used to decorate the space. Therefore this open space being adjacent to the traditional Maldivian house was vital because the space was a focal space for the community activities to take place (**Fig. 9**).

***Figure 9: Working in the Outdoor Space***

In addition open spaces were filled with different vegetation so this green landscape provided a cool ventilated atmosphere for the occupants.

## Conclusion

The ancient Maldivians who built these traditional houses may not have been professional architects, but I believe that these houses comprise one of the best examples that captures the traditional knowledge and traditional expressions of Maldives. From the way the house is positioned on the site to the finest details of the joints, everything truly reflects the precision in Maldivian craftsmanship. Moreover the household items and the furniture narrate the way Maldivians lived in that era. The spatial arrangement and interior show the simple and orderly manners of the Maldivians at that time. It is very interesting to know how the Maldivians selected the required material from nature and creatively assembled them according to their traditional knowledge.

Studying and researching the traditional Maldivian houses provides a valuable opportunity to observe the rituals and long lost lifestyle of the ancient Maldivian. Moreover it will broaden our knowledge on the building materials and construction methodology of that era.

Replicas of these traditional houses are seen in resorts, but they are only similar in physical appearance, the traditional methodologies are often not applied. To safeguard the Maldivian craftsmanship, the techniques need to be revived and practiced. More outdoor spaces are needed around present day houses in order to increase social interaction and strengthen community bonds.

The Maldivian traditional house was designed to be very climate-friendly and to stand strong in any climate. Present day houses can also explore similar designs by conducting research on these traditional building techniques. We should incorporate these aspects in present architecture to create buildings that represent Maldivian identity and pass on this knowledge to the future generations as these houses will provide them with a guide to the early lifestyles of Maldivians.

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# Traditional Knowledge in Fishing Practices: Maduganga System, Sri Lanka

*G.P.P.G. Manusinghe*

## Abstract

*Maduganga inherits the characteristics of typical river systems lining the South West coast of Sri Lanka, but for its ecological significance it was declared a Ramsar Wetland and was protected as a Wildlife Sanctuary. Traditional knowledge of the inhabitants about the biotic and abiotic components of the system as a whole may have accumulated over the centuries as per the historic sources revealing inhabitance of the research area from thirteenth century CE.*

*Being a mangrove fringed estuary, Maduganga is an excellent breeding ground for fish. Local community engaged in marine fisheries use fishing gear and vessels engineered in accordance with the ecosystem. In fishing practices locals make use of accessible mangrove (Ceriop tagal, Avicennia and Rhizophora species etc.) and other terrestrial plant species (Derris uliginosa, Alstonia mocrophylla etc.) as resources.*

*The traditional knowledge of the local community was challenged, their practices altered, and beliefs questioned with the colonial invasion, industrialisation, globalisation, tourism and the application of scientific knowledge, paving way to unsustainable practices in this sensitive ecosystem. Hence the importance of preserving traditional knowledge of inhabitants is felt deeper at present.*

## Introduction

It is believed that the local community living in an ecosystem is the guardian of its sensitive ecological unit and the knowledge systems they developed over centuries of residence in such environment is of immense use in conserving the ecosystem (De'Rozario 1999: 8). Maduganga is a sensitive wetland ecosystem inhabited since at least thirteenth century CE according to historic resources. From generation to generation inhabitants of the area have comprehended this environmental system as a nursery of life and that the degradation or modification of it triggers dire repercussions. The traditional subsistent methods including fishing practices they adopted, thus, cause minimal harm to the environment. But

with the western colonial rule, industrialisation, urbanisation and globalisation unsustainable activities of the same community are escalating. Hence in the present research it was attempted to recognise the traditional fishing practices which made use of the components of the system sustainably and the threats faced by traditional knowledge in biodiversity conservation.

## Physical Environment

Maduganga, situated between longitude $80^{o}$ 01' 02" - $80^{o}$ 70' 15" and latitude $06^{o}$ 14' - $06^{0}$ 19' in the Galle District of Southern Province of Sri Lanka is consisted of 15 islands. Even though referred to as a river, it resembles more a lagoon or estuary in structure (CEA/ EUROCONSULT 1997: 3). Amarasinghe and Liyanage (1996) refer to the system as estuary (Amarasinghe and Liyanage 1996: 3). Randombe, Rathgama, Bolgoda and Koggala are also among such rivers turned lakes and lagoons lining the south-west coast of Sri Lanka. But the ecological significance of Maduganga is higher than that of other systems. Since it provides shelter for 20 endemic and 30 nationally threatened vertebrate fauna (Bambaradeniya et al, 2002: 11), 8 endemic and 13 nationally threatened invertebrate fauna (Bambaradeniya et al, 2002: 13) in addition to 19 endemic and 8 nationally threatened plant species (Bambaradeniya et al, 2002: 8) including the pristine mangrove forest, Maduganga was declared a Ramsar Wetland in 2003 (www.ramsar.org). IUCN Assessment of Biodiversity reports 10 major vegetation types in Maduganga from which mangroves, mangrove scrubs and mangrove mixed swamps are dominant extending 144 ha (Bambaradeniya et al, 2002: 9).

Mangrove swamps which trap saline waters in pockets with foliage as detritus are excellent breeding ground for aquatic life. In the mangroves of Maduganga four shrimp species (CEA/ EUROCONSULT, 1997: 16) crabs and lobsters thrive (Bambaradeniya et al, 2002: 13). IUCN Assessment of Biodiversity recorded 70 fish species including two endemic and two threatened species, from Maduganga in 2002 (Bambaradeniya et al, 2002: 11). Fresh water forms, brackish water forms, fresh-brackish water forms (catadromous) and marine brackish migratory species (anadromous) are among them. This rich aquatic faunal diversity of the wetland resulting in the growth of traditional knowledge systems of local community was chosen as the focus of the present study.

## Previous Research

Individuals as well as institutions have assessed the natural resources of Maduganga and recorded the traditional and current resource utilisation patterns. Mala D. Amarasinghe explored the socio economics of communities living in selected mangrove areas of west and south west coast studying fishing as a method of subsistence (Amarasinghe, 1988). Even the research on similar environments widens our knowledge on fishing practices in Maduganga. H.A.A. Kumara and others study human interaction with mangroves of Negombo (Kumara et al, 2003: 11-19).

A number of researches by various institutions preluded conservation measures. The Central Environmental Authority (CEA) in their Wetland Project recognised Maduganga as a wetland and published the 'Wetland Site Report and Conservation Management Plan' in 1997. According to the Coast Conservation Act 2km of Maduganga from the river mouth comes under the Coast Conservation Department (CCD). The project report of Maduganga as a Special Management Area or SMA site (Goonethilake et al, 2005) documents the resource utilisation including fisheries and draws a resource management plan. In 2006, 2300 hectares of Maduganga was gazetted a Wildlife Park. In 2001 IUCN assessed the 'Status of Biodiversity in the Maduganga Mangrove Estuary (Bambaradeniya et al, 2001). They have recognised the ecological zoning of Maduganga and major threats to its biodiversity. These previous research aiming on assessing and conserving the ecological value of Maduganga system sheds light on the present study whose main objective is to recognise, preserve and make use of the traditional knowledge for the sustainability of this ecosystem.

## Research Methodology

The present study is a component of the wider research "Man - Environment Interaction in Maduganga System; Past and Present". An ethnoecological approach was used to culturally understand the relationships among organisms (Johnson et al, 2011: 280) to study traditional ecological knowledge rooted in the ecosystem. Some researchers focus on habitat type and others landscape, in the sub-discipline of landscape ethnoecology (Johnson et al, 2011: 283). Eugene Hunn has suggested that local people understand the ecotope they dwell in to be adaptive to the site for successful living (Johnson et al, 2011: 287), which is true of the community of Maduganga.

It is said that traditional knowledge is holistic. When studying the fishing practices of local people, the researcher has to study the biotic and abiotic components of the system, the local knowledge of these components used in fishing, various fishing practices, as well as beliefs regarding fishing which form the traditional knowledge system of fishery in Maduganga. In gathering data related to traditional fisheries both literary surveys and field surveys were done. The history of the research area and previous research on Maduganga were studied in the literary survey while field visits, interviews and participatory observation was carried out in the field survey to retrieve data on fisheries, and its socio economic and environmental contexts.

## Importance of Studying the Traditional Knowledge of Fishing Practices in Maduganga

In ethnobiology 'traditional knowledge' is also called as ethnobiological knowledge, learned long ago and passed on with faith for at least two or three generations (Anderson 2011: 2).Traditional knowledge is holistic, it does not only constitute of science, but also arts, crafts, concepts, beliefs and subsistence of all kinds bound to the context the community lives in and it blurs the distinction between tangible objects and intangible knowledge. Hence researchers suggest these traditional knowledge systems exist as flexible and adaptive knowledge-practice-belief complexes (Folke 2004: http://www.ecologyandsociety.org/vol9/iss3/art7).

'Traditional Ecological Knowledge' is often referred to as TEK. As mentioned before, TEK is place-based thus focusing on ecosystem, habitat type, or landscape. It is the age old way of management or the sustainable use of nature. Hence ecological conservation is not merely protecting fauna, flora and their habitats but also preserving the traditional methods and concepts of natural resource management (Anderson 2011: 9). Therefore TEK of Maduganga community is useful in conserving the sensitive ecosystem. Traditional fishery is only a fraction of their knowledge system. But it provides insights into the whole knowledge complex and draws lessons. The present research discovers the local community's sustainable use patterns of the environment, their interaction across the river system and methods of passing traditional knowledge from generation to generation. Ethnobiologists stress the value of traditional means of knowledge

transition when the classroom system fails to impress children (Anderson 2011: 9).

## Fishing as a Subsistent Method

Fish is important in human dietary patterns since it is rich with proteins. Fish is probably the most accessible source of protein for man throughout evolution. In Maduganga where fresh water, brackish water and marine fish are found, locals fish for daily consumption and recreation while commercial fishing is narrowing. Inhabitants believe that the fish density and diversity of the river is dropping with time. People who engage in fishing are continually decreasing and the traditional fishing methods are changing (Puññasara: Personal Communication). It is said only 100 - 150 fishermen engage in inland fisheries. Inhabitants call the estuarine fisheries as the 'job in the river' (*Gange Rassawa*) and the marine fisheries as 'the job in the sea' (*Muhudu Rassawa*) depicting the stronghold of fisheries in their cognition.

## Zonation in Fishing

Due to the geomorphology, hydrology, vegetation and biodiversity variations a zonation of fishing activities can be observed in Maduganga which demonstrate the local communities' knowledge of the landscape and how they adapted fishing to exploit TEK of river terrain. Fresh water streams flow to the river at upper reaches. Sitting on the banks, men fish in these streams using fishing rods as the waterways are shallow and narrow. Downstream they are seen fishing in *oru* or motor boats with fishing rods and nets. In the middle reaches *jakotu* or shrimp traps are visible. People fish in these areas stationing their *oru* near the *jakotu*. Mostly they are seen with fishing rods. When the river gets narrower at lower reaches number of kraals turns lesser. It was observed that the fishing activities are scarce in the slim lower reaches compared to the mid and upper reaches. Near the river mouth fishing harbour is situated. Seafarer fishermen start their daily journey to the sea from here.

Marine fishers also utilise geomorphology in their fishing practices. A reef exists at the coast of Welithara, at the river mouth. It extends from the river mouth and westward parallel to the beach (CEA/ EUROCONSULT 1997: 28). In the reef where ornamental fish varieties are abundant (CEA/ EUROCONSULT 1997: 28) people engage in catching them. The *Vallam* vessels fish in the rocks using

hooks. Larger motor boats fish in deep sea using nets. *Vallam* are also equipped with motors for faster navigation. As they are small and narrow *vallam* can sail near rocks safely. For the bulky motor boats it is convenient to sail in the deep sea avoiding rocks.

The relative shallowness of the river and lack of a shore are also used to advantage in fishing. In the past the inhabitants had used the traditional traps of *Karaka* and *Kemana* to catch fish in shallow waters. *Karaka* is a funnel like basket which is made of sticks woven together at the top narrower than the bottom. Both the top and the bottom are open and nearly three feet high. When the fisherman standing in the shallow waters sees a fish he places *Karaka* surrounding the fish trapping it and thurst his hand from the top opening, to catch fish. The *Kemana* is also a funnel like trap two three feet long. Unlike the *karaka* which is placed horizontally *kemana* is placed vertically in shallow waters. The narrow end of the tunnel shaped is tied closed. When fish enters it from the open end fisherman close the entrance with the attached door made with sticks. Karaka is described by Robert Knox in the seventeenth century (Knox 1981: 142). Even in the wider mid reaches men cast nets or fish with rods while half submerged in the water. Setting gill nets and beating water with batons to frighten away fish towards the net is a common practice in the river (Jayasiri: Personal Communication).

**Shrimp Kraals**

Tens and twenties of *jakotu* are a remarkable feature in Maduganga which is a traditional method of exploiting shrimps, an exclusive estuarine resource. There is an accumulated TEK complex consisting of legends, beliefs, practices, cognition of ecosystem and sensitivity to its change, all related to shrimp kraals. *Jakotu* functioning in accordance with the life circle of the prawn shows the local knowledge of aquatic life of the ecosystem. Eggs of prawn are hatched in the sea. Nauplius who comes out of the egg lives there and turns to protozoea. At the next stage mysis, the prawn enters mangrove lagoons or estuaries because of nutrition and protection available in mangroves. The prawn spends post larva stage there and at juvenile stage it returns to the sea (Pinto 1986: 48). The design of the *jakotu* is to trap the larger returning juvenile.

The structure of *jakotuwa* depicts that the local community had a precise knowledge on the behavior of shrimp. *Jakotu* act as fences in stopping shrimps

swimming seaward. By hitting the kraal, shrimp swim along these fences and enter the kraal from the narrow opening (at the seaward face it does not have an opening as the prawn migrating from the sea is at the smaller mysis stage). Shrimp is unable of finding the small entrance to turn back and hence they swim forward along the fence and pass the two rooms in the kraal and end up in the third. Fisherfolk call the three rooms of the kraal, *pitakotuwa, madakotuwa* and *irakotuwa* (Wickramaratna et al, 2007: 69). In the farmost corner of the third room *irakotuwa,* there is a kerosene lamp to attract shrimps. The owner of the *jakotuwa* lights the lamp with the fall of dusk. Unable to locate the entrance, shrimp which had got attracted to the light get trapped in the *irakotuwa* until the fisherman come to collect the catch early morning with the hand net (*Athanguwa*). They collect shrimp to baskets and keep them hung to the kraal, submerged in water. Water fills the basket and shrimp would not die until the seafarer fishermen arrive to buy them for fish bait. Some of the kraal owners erect huts on the posts in the river and stay the night guarding the catch from the otter and other animals forcing in and from thieves. They close the third or the last room of the kraal with a wooden lid and keep it locked at night (Shantha: Personal Communication).

Small estuarine shrimp - *Metapenaeus dobsoni,* large white shrimp - *Penaeus indicus*, tiger prawn - *Penaeus monodon* and *Machrobrachium rosenbergii* exist in Maduganga (CEA/ EUROCONSULT 1997: 16). Locals' nomenclature of shrimp species showcases their observation of nature. The smallest named *Malissa* (flower like) *Mal* flower like indicating the smallness, *Kiri issa* (milky coloured) named for its whiteness and *Kalissa* (black coloured) *Kulu* turned *Kal* to denote the darkness of the prawn. From these the Kalissa or the tiger prawn is the rarest in the estuary. More commercially important species are Kiri issa or large white shrimp and *Machrobrachium rosenbergii*. But the majority of the harvest of the *jakotu* comprises the smallest species Malissa. Kraal owners do not let these tiny shrimp go unused, but sell them for fish bait to marine fishermen for hook and line fishing.

The legends of the community cite that the shrimp culture was practiced in the Maduganga from centuries (Jayasiri: Personal Communication). It is believed that this method was introduced to the locality by the Japanese who invaded the south-west coast of Sri Lanka in the thirteenth century CE. (Wickramaratna et al, 2007: 70) They further narrate that decades ago there were hundreds of *jakotu* in the river (Jayasiri: Personal Communication). They have stories about kraals in

the history famous for large harvests, such as *Atholiya jakotuwa*, *Velkotuwa* and *Kapollakotawa* (Wickramaratna et al, 2007: 70). Locals bound to their environment are sensitive to the changes in the river system, which cause fluctuation of fish and shrimp catch. With the Salt Water Exclusion Scheme in 1965 (Arumugam 1969: 71) the saline conditions of the river was controlled resulting in a decline in the shrimp harvest. But with time salt water exclusion structures were abandoned (CEA/EUROCONSULT 1997: 11 - 14) and again the shrimp culture developed. Owners of *jakotu* admit that the harvest increased after the tsunami in 2004 (Shantha: Personal Communication) due to the increase of the salinity with the inclusion of sea water.

Local community has its unique way to pass traditional knowledge to younger generations. During the season when shrimp are abundant in the river banks children catch shrimp using a rod with a loop, named *Kudda.* Here they carefully put the loop around the protruding eyes of the shrimp and pull entangling the shrimp in the loop. This fishing practice is senseless at first sight because of the trouble taken to catch shrimp one by one. But the practice could have been adapted to motivate and train younger generation to fish with patience and it must have been a good exercise to study the behavior of shrimp. When these youngsters grow up to take up fishing and shrimp kraals, they are already familiar with the aquatic life of the ecosystem.

## Crab Catching

With the TEK, generations of fisher folk have adapted traditional techniques to catch Mud Crab - *Scylla serrata* and Grapsid Crabs - *Chiromantes spp.* found in Maduganga. It is again a knowledge complex sprung out of and shaped by man's interaction with ecosystem. The crab trap is called *Kakulu Athanguwa* (crab hand net). It is a nylon net bound to a bicycle rim to which a code with a float is attached. A fish, commonly *Anguluwa* (Long - whiskered catfish: *Mytus gulio*) or *Aada* (Eel: *Anguilla bicolour*) used as bait, is bound to this net and dropped on the river floor at night. Fishermen are aware that crabs stay in burrows at day and come out in the night. In the early morning before sunrise the trap is dragged out of water with the crab feeding on the fish. Only the experienced fishermen can catch the crab without letting it escape because there is no mechanism to entangle the crab on the trap (Shantha: Personal Communication). The fishermen's knowledge of fauna is depicted in the skillful way they handle the crab. They

grasp the crab from their last pair of legs. The last pair of legs of edible Portunidae crabs is modified in the shape of oars for swimming (Pinto 1986: 26). Fishermen say that when they catch crab from this pair of legs the crab becomes inactive (Shantha: Personal Communication). Hence they bind these two legs and sell the crabs when they are still alive.

## Marine Fisheries

It is said that 43 per cent of the people living in the estuarine area practise marine fisheries (CEA/ EUROCONSULT 1997: 27), most of them being the residents of Brahmanawaththa and Weliwathugoda. Resource utilisation across the river is evident in marine fisheries as small estuarine shrimp - *Metapenaeus dobsoni* or *Malissa* is used by seafarers as bait to catch fish. From the two kinds of marine fishers we stated before fishers who sail in Vallam use shrimp as bait. They visit *jakotu* early morning in motor boats to get shrimp. As they want shrimp alive, they tie the shrimp baskets outside the boat to keep it submerged in the water. In rocky waters of the sea they put few shrimps to a cone like container and put it to the water with the hook. In the water shrimp scatter out of the cone and the fish that swims in to feed on shrimp get hooked. They mostly catch *Paraw* or Trevally *(Carnax sexfasciatus, C. sansun)* from this method (Shantha: Personal Communication). Fishers pay back kraal owners with a portion of the catch. Cooperation between the two communities shows that the knowledge systems they have formed is not limited to their own habitat or to their livelihood, it is so rich that they share the resources and TEK across the river very efficiently and sustainably.

## Fish Bait

Species selection for fish bait demonstrates the locals' traditional knowledge on species interaction and predatory relationships in the ecosystem. In Maduganga estuary species most exploited as fish bait is the shrimp *Metapenaeus dobsoni* or *Malissa* due to their availability and convenience of capture. Apart from shrimp and fish, polychaetes and molluscs are also used as bait. The large polychaete *Marphysa boradellei* or *Kalanda panuwa* in Sinhala lives in Maduganga. They are utilised as bait as well as fish food since they are rich in proteins (Pinto 1986: 45). Flesh of the abundant mollusc *Telescopium telescopium* (Pinto 1986: 45) and

*Terebralia palustris* (De Silva and De Silva 2006: 52) is also a fish bait used by the fishermen living near mangroves.

**Ethno-botanical practices in fisheries**

Local fishermen's TEK also consists of their knowledge of plant life in the ecosystem. They use both mangroves and terrestrial plants in fishing practices. But with the protection of mangroves after declaring Maduganga as a sanctuary the use of mangroves decreased. People experimented alternatives for mangroves.

**Use of mangroves**

In fisheries mangrove twigs are used for the 'Brush - pile' or *Mas athu* method in which mangrove twigs are put in different places of the river. These piles of twigs make shelter for fish and they are attracted to feed on algae, aufwuchs, protozoans, rotifers, worms and crustaceans which gather and grow in piles (De Silva and De Silva 2006: 51). After few weeks (it depends on the fish species the fisherman is interested in) fishermen encircle the brush pile with nets and remove the branches to catch the gathered fish with hand nets. Fleshy Avicennia twigs are preferred for setting brush - piles. This fish trap is common in Negombo estuary. They mostly use twigs of *Rhizophora mucronata, R. apiculata* and *Lumnitzera racemosa* for the piles (Amarasinghe 1988: 5) and it is said that 80 per cent of the lagoon's fishery depends on brush - piles (Pinto 1986: 42).

In another traditional fishing method fish are poisoned to stupefy for easy capture. In mangroves latex of *Excoecaria aagallocha* was used as fish poison. As it is a toxic it would cause blindness and blistered skin if contacted by man (De Silva and De Silva 2006: 52). It depicts the locals' knowledge of the characteristics of plants surrounding them.

Shrimp kraal owners use two 5 feet branches of *Rath Kadol (Ceriops tagal)* to get the corner of the shrimp kraal in triangular shape because of the woods' flexibility and the way of branching. This branch used is called *Haedapolla* (shaped branched) (Sumanadasa: Personal Communication). It is another example for the depth of their TEK adapted to their environs. Realising the importance of protecting the mangrove fringe they use bamboo species, *Domba (Calophyllum inophyllum), Hawari Nuga (Alstonia macrophylla)* and *Rukkaththana (Alstonia scholaris)* (Sumanadasa: Personal Communication) in kraal construction. They

believe, even though mangrove branches are durable in water they are weaker above the water level (Puñña sara: Personal Communication).

Other uses of mangroves in fisheries include tanning the fish nets with tanning derived from mangrove trees. According to Amarasinghe, tanning is extracted mainly from the barks of *Rhizophora mucronata*, lesser from *R. apiculata* and *Ceriops tagal* to tan net and sails to make them durable (Amarasinghe 1988: 6). A few decades ago people used to beat the cut wood to peel the barks, dry, pack and sell them to fishing villages. Also in Maduganga the mangrove barks were used to tan the nets and sails years ago. But with the evolution of fishing practices sails are no more in use and the nets are made of nylon which does not require tanning.

**Use of terrestrial plants**

Local fishermen use many species of terrestrial plants in fishing practices. The *jakotu* is covered with mats woven with stripes of *Bata* or bamboo (*Davidsea attenuata*) culms. This bamboo species is not abundant in the Maduganga environment. Usually fishermen are supplied with lorry loads of bamboo from Bulathsinghala of Kalutara District (Shantha: Personal Communication). Cut into 10 feet strips they are woven by the wives of fishermen with plastic code. As the mats deteriorate quickly due to its physical characteristics and being submerged in water, annually or once in two years they are replaced with new ones. At present they have learnt to cover the third room of the kraal with more durable striped PVC tubes. The third room is rendered this exception because it should be stronger as all the trapped shrimp gathers to it. But the traditional use of organic matter is sustainable than the synthetic PVC.

**Fishing Gear**

In making the various fishing equipment, a variety of flora in the region is widely used showcasing their knowledge of valuable plants. Fishing rods are usually made of the tip of bamboo culm or rachis of the *Kithul* palm (*Caryota urens*) and a thangus code with a hook bound to it. *Kudda* used by children to catch shrimp gathering near a river bank is a loop made of a fiber taken from a sheath of the banana leaf (*Kesel kenda*), tied to scraped midrib of a coconut leaflet (*Pol iratuwa*). Traditional fish traps, *karaka* was made with bamboo twigs bound together with a rim made from the climber *Kalavel (Derris uliginosa)* and *kemana*

was made with ribs of coconut leaflets bound with coir. A small number of people engage in weaving baskets (*Pasa*) used in shrimp kraals, when requested by the kraal owners. In the past these were woven with *Kalavel (Derris uliginosa)* (Shantha: Personal Communication). But now they use cane. The latest development is weaving with thangus string which is more durable.

**Canoe Making**

Canoe making is another way in which the local community has excelled the art of making use of plant life. A few decades ago carving wooden boats was a local industry. The traditional vessel *Oru* is a dug - out - trigger canoe. These were used for fishing and transport. The largest of *Oru* were those found in ferries, coastal lagoons, estuaries and coasts, 30 feet *Hadi oru* or *Bala oru* (Vitharana 1992: 18). The smallest of them are only 5 feet in length. Today we find only one wooden *oru* in the study area. It reflects the type of canoes used in the area from ancient times. This dugout canoe of Maduganga is nearly 10 feet long and possesses one outrigger. They use two canoes bound together as a platform to build floating cabanas for tourist hotels. This double canoe is traditionally known as *Angula* (Vitharana 1992: 18).

Since a few decades, organic local productions have been turning in to inorganic industries. Likewise wooden boat carving changed in to molding fiber canoes and boats. Motor boats as well as canoes travelling in Maduganga are made of fiber. Among the seafarer vessels we find boats and *vallam. Vallam* is a form of *Toni* or *Dhoni* vessel (Vitharana 1992: 18). The 20 feet *vallam* we see today in the research area is whole built with fiber. A fiber outrigger is attached to the vessel using wooden poles. Masts appear on board as supports to fishing. Masts of some of the *vallam* are bound with plastic chairs to provide seats for fishermen to keep watching until fish get hooked. These are powered by motor engines. They also carry plastic or wooden oars to sail safely through the narrow mouth of the estuary.

Usually the wooden oars of *oru* and *vallam* are made of the *Kithul* palm (*Caryota urens*) trunk (Shantha: Personal Communication). When the tree trunk is planked the rounded planks of the extremes are used to carve out oars. Common bamboo (*Bambusa vulgaris*) culms are taken as masts. Before the fiber industry came to the region the wood preferred for boat making were mango (*Amba*) - *Mangifera indica*, *Domba - Calophyllum inophyllum*, wild bread fruit (*Val del or*

*Gam del*) - *Artocarpus nobilis* (Puññasara: Personal Communication) and bread fruit (*Rata del*) - *Artocarpus altilis* (Sumanadasa: Personal Communication). These timber are chosen to dig canoes as they are durable even when consistently exposed to water (Puññasara: Personal Communication).

The Portuguese used jack wood for boat making. But the jack tree was far too valuable for the local community to be used for timber. They believed that the boat made of jack wood led to bad ends because of the curse of destroying the precious tree (Pieris 1983: 226). The selection of woods for canoe making depicts the traditional knowledge and valuation of the environment, fashioned by the experience of generations. In addition it demonstrates another facet of plant utilisation in their daily lives.

## Conclusion

The traditional sustainable way of living in the research area which was in cooperation with nature has been challenged by the people's unsustainable interventions in the ecosystem. Traditional knowledge bound with the community's life is challenged, their practices altered, and beliefs questioned with the colonial invasion, industrialisation, globalisation, tourism and the application of scientific knowledge. Under the colonial rule cinnamon cultivation spread widely in the area and mangroves were felled and land was reclaimed for cinnamon cultivation. Even today cinnamon plantations cover stretches along the river banks. Heavy use of fertiliser and pesticides in these plantations causes nutrient accumulation, altering the aquatic life of the system. Traditional fisher folk complain that not only the agro chemicals but also the escalating number of motor boats operating in the river with the rise of tourism has caused a decline in their harvest. Motor boats disturb the reproduction and growth of fish, shrimp as well as mangroves in the ecosystem with high turbulence of water and discharge of oil. Sewage disposal by emerging hotels and factories adversely affects biodiversity.

The use of industrialised fishing gear in commercial fisheries challenges traditional fishing practices. They destroy the early stages of aquatic life in bulks which traditional fisheries attempt to preserve so that their fish catch will not be affected in the long run. Even the mechanism of the shrimp kraals depicts how they save and harvest shrimp by closing the seaward face of the fence preventing prawn in small mysis stage migrating from the sea getting trapped in the kraal.

Instead they let them swim upward the estuary grow there to become juveniles and catch them on their way back to sea. Hence the traditional fishing is a 'conserve and use' practice by means of the traditional knowledge of the ecosystem, which can be called 'sustainable'. The future of TEK of Maduganga has to be conserving and at the same time adaptable to the continuous changes faced by the community and the environment of the system.

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# Energy-Based Farming: The Future Way of Affordable Agriculture

*Satish Selukar and Anurag Chhabra*

***Abstract***

*Traditional agricultural practices were designed to have more harmony, integration and sensitivity towards environment and various natural ecological systems. These traditional systems are getting rapidly extinct over the past few decades. In the recent times, however, the demand for organic farming has gained a lot of voice and attention. Organic farming can create millions of jobs in the agro sector as it can spur over 30 per cent of employment per hectare as against non-organic farming which is a boon for developing and under-developed nations.*

*This paper introduces affordable and qualitative techniques of Siddha Krushi (Farming), derived from the experiments and research carried out by the sages of Siddha tradition more than 2000 years back. These researches were primarily based on subtle currents of light and sound energy which tune the orientation of the five element composition of the seed in accordance with surrounding environment such as soil, water, air etc. for improved quality and productivity of the crop. The three techniques which discussed in this paper are 1) Fire treatment, 2) Vibration treatment and 3) Healing (Cosmic Light) treatment.*

*The techniques discussed above are affordable and effective. A handful of farmers in Vidarbha region of state of Maharashtra, India have applied this to great effect and surprise. In the coming time these techniques combined with modern technology and knowledge will greatly serve the mankind.*

## Introduction

Culturally and traditionally, the South Asian region, which is endowed with unparalleled natural diversity, has had an agriculture based economy. The early inhabitants of this region realised this potential and directed their research to improve the agriculture quality and yield. The knowledge grew with time and various methodologies and techniques evolved as a result. A new thrust in this evolution came during the Vedic age which is considered as the golden period in the evolution of human race. Society was highly developed and organised during

that time and people were aware of the importance of community based living for the welfare of all. As a result there was peace, happiness and prosperity all around. This principle of prosperity applies to all agro-based nations. An educated, happy and prosperous farmer is a symbol of the prosperity of that particular nation.

The Vedic advice is 'Get rid of gambling and learn the art of farming'. *Rigveda*, which is considered as the first among the four Vedas, has a mention of agriculture related texts at several places which show the level of development and organisation in the society during that period (1700-1100 BCE). The people during that period had farming and animal breeding as primary source of livelihood which holds true even today. The true native culture in south Asian region can be seen even today in the villages of this region.

## Problem Statement

Due to high population density and growth, the natural reserves in the south Asian region are being exploited heavily thus rendering adverse impact on the environment despite the steep technological development. The real impact of this gradual exploitation that is going on over the decades is now visible.

Despite the unprecedented improvements in methodologies, processes and industrial tooling there is a long and growing list of challenges that the agro fraternity especially the farmers are facing in this region. Below are some of the key challenges presented in statistical terms to highlight the crisis:

Of the total available land area in the region about 54 per cent is the agriculture land out of which 74 per cent is arable land to fulfill the demand to feed nearly 1.60 billion people. There is imbalance from the global perspective where on one side there are countries with high user density, cheaper manpower but not enough land and on the other side there are countries having sprawling land but not enough man power. Both are challenges from the local perspective leading to a globally alarming situation of food insecurity.

Lack of proper knowledge (both traditional as well as modern) and awareness due to limited access to education on quality farming is one of the most significant challenges inhibiting the agricultural growth. The farmers are not able to adapt to the rapid nature of climate and market dynamics.

Prevalence of poverty and severe under-nutrition due to low per capita gross income results in lack of access to better technology and education for efficient agriculture. Majority of farmers are living below the poverty line and cannot afford quality seeds and supporting quality supplements such as fertilizers etc.

Heavy crop damage due to sustained increase in climate uncertainty over the last few years has become a recurring phenomenon. South Asia is bearing the maximum brunt of the impact caused due to climate change.

Lack of an effective action plan to handle this crisis situation properly is another menace.

Depletion of natural resources such as water, land, forest, soil etc. leading to a fall in crop quality and lower returns is driving farmers to look for alternate sources of livelihood.

Deepening energy crisis combined with increased tariffs have led to under supply of power to the farms affecting the quality and productivity of the crops.

As a result of these challenges, farmers are moving to urban cities in search of alternative professions thus increasing the pressure on urban infrastructure. Most farmers are keen to sell their crop land for real estate purposes to make quick money. Farmer suicides have become very common.

**Solution – What can be done?**

There are many steps being taken by the government, industries, NGOs and farmers themselves to overcome these challenges and improve the situation. The rapidly deteriorating conditions show that some of these steps are working while most are not.

Through this paper, we intend to introduce affordable, sustainable and environment friendly farming solutions which are based on traditional knowledge from the Pre-Vedic and Vedic ages. These solutions are based on sciences of subtle vibrations of light and sound energy. The *Siddha Krushi* methods are originated from the belief that was derived from the experiences of Vedic sages that all creations in this universe are interconnected with a universal energy field of subtle vibrations. This energy field acts as medium to transfer messages (energy charge) across each other for attaining harmony between the seed and the surrounding environment.

The above theory of passing messages through universal energy field to influence the characteristics was endorsed by Sir J.C. Bose, (Chandrashekaran and Subbaraj 1996: 377-8) a famous physicist after whose name Bosons are named. Mr. Bose performed extensive experiments on biological (circadian) rhythms to study the response of living and non living objects especially on the plant physiology.

Most of this knowledge has either got lost or restricted to very few communities due to the unwritten nature of the text, lack of focus on education and improper safeguarding methods and policies due to which a large number of farmers today have no other option but to completely depend upon unaffordable modern technology.

These solutions have been researched, compiled, structured and packaged under the methodology titled *Siddha Krushi*, coined by Maharshi Arvind Foundation which is a NGO head quartered at Mumbai, India.

Heat, sound and light are three basic energies prevalent in the nature which govern all the activities in the bio physical and subtle domains. The techniques in *Siddha Krushi* methodology are designed for the application of these energies in a structured sequence for optimising and tuning of the Seed with the surrounding environment so that the seed responds well to the natural phenomenon. **Fig. 1** gives an overview of the techniques covered under *Siddha Krushi* framework in the given sequence.

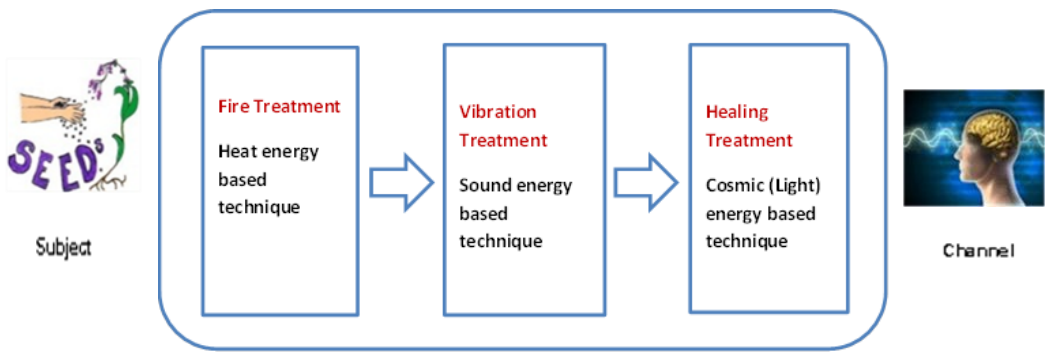


***Figure 1: Siddha Krushi Framework***

Seed is the central subject of attention in this framework. Stronger the seed immunity, higher will be the quality and production of the crop. The seed is highly vulnerable for infections during germination period hence treatment to safeguard the seed is absolutely necessary before the sowing process. The techniques designed in *Siddha Krushi* are aimed to strengthen the immunity of the seed in environment friendly ways.

**Fire Treatment (Heat Energy-based technique)**

This process is described in Atharveda as Vedic Organic Agriculture. *Agni* is the fire element which contains Space and Air elements as well. This technique is used for preparing the optimal environment for the germination and development of seed by maintaining the temperature and purification of the environment. It is conducted a day before sowing the seed. The heat generation is carried out by lighting fire in a specially designed earthen structure shown in **Fig. 2**.

***Figure 2: Top End View of the Earthen Structure used for Generation of Heat Energy***

Following natural principles are used in this process:

- Attracting energy from the Sun.
- Biorhythms of nature (Time of the day, season for e.g. Sunrise and Sunset)
- Sonic vibrations by chanting of specially designed seed syllables.
- Resonance impact in an area
- Thermodynamics (Burning of organic substances in the fire)
- Diffusion, Vaporisation and Condensation

## Essentials

The fire pot as shown in **Fig. 2** is a stack of three squares. The largest square is at the base and smallest at the top. An earthen pot is fitted in the center of the squared structure. The two snakes like structures as shown in the diagram made up of copper are attached on the pot. Between the faces of the snakes both top and bottom, a trident shaped structure made up of brass is kept. Powder made up of herbal leaves, camphor, ghee made up of cow milk and dry wood (preferably mango) include other essentials.

## Sound Treatment (Sound Energy-based Technique)

After the fire treatment, the sonic vibrations of sound are used to give vibration treatment to the seed. Specific structure of sonic patterns, coded in syllables and vowels are called as *Mantras*. The specific configurations of syllables and the corresponding combinations of phonemes in the *mantras* make the latter powerful 'carriers' of the cosmic energy of sound. The repeated chanting of these mantras builds up the impact of vibrations which penetrates into the subtle realms of the seed activating its genetic properties at cellular level.

In the Vedantic traditions sound is considered one of the most important principles of existence, as it is both the source of matter and the key to become free from it. It is regarded as the basic source of energy and motion existing in the universe. The existence of material world is said to have manifested from the cosmic impulse, the infinite bang of *Shabda* (Sound).

## Power of Sound Energy

The scientific investigations on the existence and properties of sound waves indicate that the effects of sound could be as physical as those of the other forms of energy. The Doppler Effect is worth mentioning in this regard. The historical breaking of a bridge due to the superimposition of the cyclic sound created by the orderly footsteps of Napoleon's army; Falls of several huge and stout bridges due to the synchronization of sound of noisy winds or noises of the surroundings – for instance, the falls of the Lao Bernard bridge in France in 1852 and 1871, the Ohio river's bridge in USA in 1854 and those of its Niagara water-fall in 1864 and 1889, the bridge over Tacoma river in Washington, in 1940 – are some of the well known examples of this significant effect. Some German scientists are said to

have gained, during the time of First World War, the knowledge about the development of a weapon that could produce sound waves of a frequency higher than $10^5$ vibrations per second. Such waves would ruin the targeted persons in less than a second because the resultant sonic effect would destroy the neurons of the subjects at a rate faster than that due to a high power direct electrical shock.

According to acoustic experts, even the harmonious tune of a musical instrument if repeated under appropriate synchronization (in terms of frequency, amplitude, intensity and rhythm) with other musical output (e.g. the tinkling sound of the bells in the ankle-ornament of a dancer) can result in the destruction of the stage set for the musical performance. Similar destructive effect could be observed by the orderly, superimposed high-intensity audible sounds. **Fig. 3** demonstrates the sonic vibration treatment.

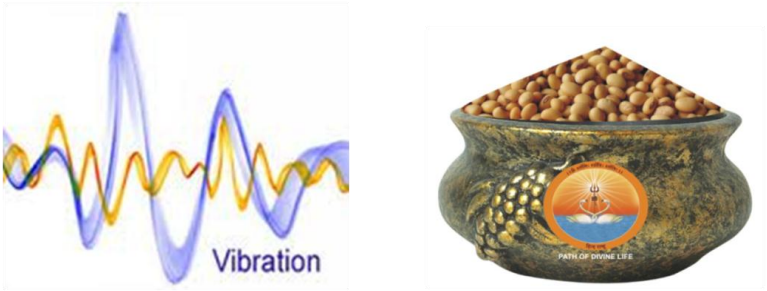


***Figure 3: Vibration Treatment of Seed using Sound Energy***

## Essentials

- Seeds in a pot or vessel
- Any audio device capable of running the music file of specified Mantra for long hours.

## Process

Place the pot(s) containing seeds in the East corner of the room. Please take care that the pot is not disturbed by anyone during the period of treatment.

Chant the specific string of syllables twice for 20 minutes in a day in the room where seeds are kept. One can keep the audio device playing the same mantra for the rest of the time.

While chanting keep the mind pure and full of positive thoughts. Visualise that the sound vibrations of the syllables being chanted are forming a positive energy field around the seeds and brining positive changes in it.

Continue this process for 8 days.

**Healing Treatment (Cosmic Light Energy-based Technique)**

Just like a post-surgery process, comes the healing process. In *Siddha Krushi*, same concept is used where after the two processes of fire and vibrations; the healing treatment is given to complete the process. The human energy channel channelises the energy from the higher realms and redirects it to the subject; in this case it is the seed.

In Vedic literature, the cosmic energy field is divided into 14 levels called *Lokas*. With Earth as the center, seven of these fields are above (*vyarthis*) and seven are below the Earth (*patalas*). The fields below the Earth are inferior (negative) fields. Higher the level above Earth, more powerful and positive will be the energy field with stronger healing power. **Table 1** shows the association of *lokas*, planes of existence and consciousness.

| **Loka** | **Planes of existence** | **Planes of consciousness** | **Driving power** | **Astronomical regions** |
|---|---|---|---|---|
| *Satya* | *Sat* | Infinite existence | Power of Supreme Intellect & pure consciousness | Entire Universe |
| *Tapa* | *Chit* | Infinite Consciousness | | |
| *Jana* | *Anand* | Infinite Bliss | | |
| *Maha* | *Vijana* | Intelligence and Intellect | Power of Truth | Inter galactic space |
| *Swah* | *Manas* | Mind, Emotions | Power of mind | Milky way galaxy |
| *Bhuvas* | *Prana* | Life | Power of Action, swiftness & direction | Earth's Solar System |
| *Bhu* | *Anna* | Food, Body, Matter | Power of will, resolution | Earth |

**Table 1: The Seven Planes of Cosmic Energy as per Vedic Tradition**


***Figure 4: Energy Channel doing the Healing***

## Essentials

Unlike the fire and vibration treatment processes, this process does not require any external instrument which is why the role of energy channel i.e. the individual assumes a lot more significance. The effectiveness of this technique depends significantly on the capacity and level of purity of mind of the individual at physical, mental, intellectual and spiritual levels.

Anyone who wants to become an energy channel needs to undergo the energy development and therapy course. In this course, the individual is initiated into energy and given the process, practicing which regularly, the individual can increase extra sensory capabilities to be able to connect with higher planes of consciousness and draw subtler levels of cosmic energy.

## Process

The channel should channelise cosmic energy into the seed every day for 8 days before sowing it. The channel needs to visualise the pure cosmic energy field around the seed at psychic level and as a result existing negativity (toxins, germs, composition imbalance etc.) inside the seed is reducing by way of outward movement of energy which is black in colour. The seed immunity is strengthening.

After sowing the seed, heal it daily for 40 minutes with a belief that it is acquiring nutrients from the surroundings such as soil, air and water (**Fig. 4**).

## Things to take care of

Healing can be done at any time of the day though the early morning time of rising Sun is considered best as the pollution levels are lowest.

Avoid direct contact with metal or other human body or Earth as they are good conductors of energy.

Sitting posture should be such that the spinal column is straight and mental condition is calm.

Cosmic energy flow is very high when Brain is at Alpha level.

Avoid negative thoughts of greed, hatred, selfishness etc. as they interrupt the positive flow of energy.

**Case study – Paddy crop**

This case study is the experience of Mr. Sanjay Dumbhare, a farmer based in Bhandara district of Maharashtra, India. He used the Healing Treatment on the Paddy seed (*Jai Shri Ram -2*) and crop. At any point of time no chemicals were used. He attended the energy development course of Path of Divine Life's Self Development programme more information of which can be found at www.pathofdivinelife.org/courses and applied the knowledge acquired during monsoons of 2012. After 15 days of healing treatment the difference was noticeable when the crop grew into vegetative state. After one month the height of the crop was found to be on shorter side compared to other paddy crops in farms in the neighbourhood. It was infected by pests and the colour was pale yellow. He continued the healing process and sprayed liquid mixture of cow urine and water on the crop. After one and a half months the crop started gaining height and also turned greener and pest free than crops in the neighbourhood.

The finished crop's taste is also found to be much better than the inorganic one.

Some of the benefits of *Siddha Krushi* techniques as experienced by the farmers are mentioned below:

- *Siddha Krushi* is a low cost affordable solution. It saves money by reducing the amount spent on chemicals and increases productivity with higher quality.
- The treatment can be given from anyplace at anytime and does not require any instrument. Since there is no external instrument used hence there is no maintenance cost.
- *Siddha Krushi's* Healing treatment given in a group, yields better results.

- By not using chemicals, it gives immense satisfaction that we are contributing to the nation's health.
- This is a double benefit treatment as it not only heals the seed but also the healing channel.

Note: Contact details of the farmer mentioned in the above case study are available on request.

## Conclusion and Next Steps

Natural and Bio energy sciences are transforming the way World thinks and works. These sciences were researched a lot during ancient ages and experiences were preserved in the form of traditional knowledge. Food security is among the major challenges mankind is facing today. To have better food productivity, nutritional value and affordability, deciphering the science of natural energies is going to be a transformational step. *Siddha Krushi* opens a world of immense possibilities in this direction. Systematic researches in these fields will go a long way in addressing the solution to many related problems and create a new era of peace, prosperity and happiness on our planet.

As a next step, we propose that the unstructured research carried out by a handful of farmers in India can be given further support to be performed in a controlled environment so that a structured metrics can be produced for the experts to explore this interesting field further.

It offers possibilities of new ideas and inventions in the field of bio technology and nuclear genetics research.

## Acknowledgements

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# The Legal Safeguard for Traditional Knowledge and Traditional Cultural Expressions

*J.M. Swaminathan*

## Abstract

*This paper attempts to address issues involving the protection of traditional knowledge as intellectual property in societies. Intellectual property rights as enshrined in the TRIPS Agreement are characterised as individual/private rights. Indigenous or traditional knowledge differs from individual/private property in that such knowledge is moral, ethical, spiritual and holistic. However, individual self identity is not separate from the surrounding world and traditional knowledge is an integrated system of knowledge, practice and belief. An attempt has been made to justify the reasons for protecting traditional knowledge as intellectual property and the possible legal approaches to the protection of such knowledge.*

## Introduction

The World Intellectual Property Organization (WIPO) uses the term Traditional Knowledge to include traditional and traditional based literary, artistic and scientific works, performances, inventions, scientific discoveries, designs; marks, names and symbols; undisclosed information and all other innovations and creations resulting from intellectual activity in industrial scientific literary or artistic fields. The terms 'traditional' and 'tradition based' refer to knowledge systems, creations, innovations and cultural expressions that have been transmitted from generation to generation and are regarded as pertaining to a particular people or territory and continuously evolve in response to changing environment (Secretariat for the 3rd session of the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, Geneva 13-21 June 2002). UN Declaration on the Rights of Indigenous People (UN Doc E/CN.4/1995/) uses the expression "indigenous knowledge cultures and traditional practices". Therefore, categories of Traditional Knowledge would include agricultural knowledge, scientific knowledge, technical knowledge, ecological knowledge, medicinal knowledge including knowledge relating to medicines and remedies; knowledge relating to bio-diversity, traditional cultural expressions in the form of music, dance, song handicrafts,

designs, stories, art work and elements of languages such as names, geographical indications and symbols and movable cultural properties.

Traditional Knowledge has become the focus of attention in recent times and was an important aspect in the discussions relating to the Doha Declaration. Paragraph 19 of the Declaration inter alia reads:

> Ministers instruct the Council for TRIPS in pursuing its work program ... to examine inter alia the relationship between the TRIPS Agreement and the Convention on Biological Diversity the Protection of traditional knowledge and folklore and other relevant new developments raised by members pursuant to Article 71.1.

The developing countries argue that they have not derived great benefit from traditional forms of intellectual property although they find themselves rich with traditional knowledge especially genetic resources and folklore. They would like to exploit these resources. Secondly, there is a growing political importance of aboriginal communities in several countries.

Referring to the connection between intellectual property and traditional knowledge Gudman (1996) states

> … built upon cartesian duality of mind and body intellectual property rights are aligned with practices of rationality and planning. The expression "intellectual property rights" makes it appear as if the property and rights are products of individual minds. This part of a western epistemology that separates mind from body subject from object observer from observed and that accords priority control and power of the first half of the duality. The term "intellectual" connotes as well the knowledge side and suggests that context of use is unimportant... In contrast to this modernist construction in a community economy innovations are cultural properties in a sense that they are a product and property of a group. (102-3)

Indigenous (viz. traditional) differs from scientific knowledge in being moral, ethically based, spiritual, intuitive and holistic; it has a large social context. Social relations are not separated from relations between humans and non-human entities. The individual self identity is not distinct from surrounding world. There, often, is no separation of mind and matter. Traditional knowledge is an integrated system of knowledge practice and belief.

## Protection of Traditional Knowledge

Property rights are considered collective or communal in nature. Western notions on property on the other hand are individualist. Further, specialised knowledge may be held exclusively by males, females, certain lineage groups or ritual or society specialists to which they have rights of varying levels of exclusivity and in such cases this does not necessarily give the group to privatise what may be more widely considered the communal heritage. One of the problems that arise in the modern legal system is whilst customary laws regulate access and use of local knowledge resources and cultural products and when the manufactured goods spread beyond the control of the local administrative or judicial institution either through raid or misappropriation and commercialised without the consent of the community what protection could be offered to such communities (Dutfield and Suthersanen 2008: 328).

Supposing in a hypothetical case there is an exotic coffee produced in a particular area and a company isolates the DNA of that coffee and obtains exclusive rights for the use of the DNA in coffee production. The Company would argue that DNA was a natural resource which was in the public domain by mixing the labour with the plant that is by isolating the DNA the Company could claim that it deserves to claim the benefits of intellectual property protection for the coffee producers. This difference has been brought out by J. Boyle in his article 'The Second Enclosure Movement and Construction of Public Domain'. He points out that public domain is not the same as commons although certain commentators such as Litman (See Litman 1990) uses the term interchangeably (Boyle 2003: 33). The crucial difference according to Boyle (2003) is that "commons" as generally understood would incorporate intellectual resources which have been developed communally and which has a positive value. By contrast public domain is a repository of intellectual products which will become valuable only with the labour of others. In the example quoted above whilst the coffee company would argue that by mixing its labour with the plant it deserves to receive the protection of intellectual property protection for its coffee, producers would argue on the contrary that the particular type of coffee was not always present in nature and it was a product of selective breeding by the community of the coffee growers of the particular area over several decades if not several hundred years.

There is therefore a debate as to whether the interest of those who produce intellectual products communally and over a time should be protected. In developing countries most of which are rich in traditional knowledge have called for reforms in intellectual property rights which would protect traditional knowledge. The TRIPS imposes a uniform regime of Intellectual Property Rights (IPR) on all members of World Trade Organization (WTO) and critics argue that this does not acknowledge the claims of traditional knowledge. WIPO in 2000 established an intergovernmental committee on Intellectual Property (IP) and genetic resources.

**Objections to the Protection of Traditional Knowledge**

There have also been objections to the protection of Traditional Knowledge. The common objections are –

1. That already the public domain is threatened by intellectual property protection and therefore it is not necessary to extend the protection further.
2. The claims in respect of bio-piracy are greatly exaggerated.
3. Commercial users have to pay to access knowledge that has hitherto been freely available and they will not use and no benefits will therefore be generated for the traditional knowledge holders and their communities.

Furthermore, Traditional Knowledge holders have their own regime to regulate access and use of knowledge. These customary rules would vary widely from Western intellectual property rights. The protection of Traditional Knowledge only recognises existing rights and does not create new rights and not everything in the public domain should be in the public domain. Disclosed Traditional Knowledge has always been treated as belonging to nobody. Further, the concept of public domain is conceptually problematic as in many traditional societies traditional knowledge holders have permanent responsibilities concerning the use of traditional knowledge irrespective of whether it is secret or not.

In respect of bio-piracy whilst the opponents of protection of traditional knowledge argue that claims are exaggerated there is no consensus on the definition of bio-piracy. Bio-piracy is a compound word consisting of the words “Bio” and “Piracy”. Piracy has been defined as –

1. practice or an act of robbery of ships at sea
2. similar practice or act in other forms especially high jacking and
3. infringement of copyright

The verb "to pirate" could mean –

1. Appropriate or reproduce work of another without permission for one's own benefit, or
2. Plunder.

Therefore, it is inherent in bio-piracy that there is misappropriation of genetic resources or traditional knowledge and unauthorised collection for communal ends of genetic resources and/or traditional knowledge (Dutfield and Suthersanen 2008: 333).

Perhaps the concept should be better defined. Certain countries have taken the initiative of documenting cases of bio-piracy and countries such as Peru have established a national anti bio-piracy commission who reports its work to WIPO, IGC (Inter Governmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of WIPO).

## Protection of Traditional Knowledge and Intellectual Property Rights

The protection of traditional knowledge is progressively taking center stage in global discussions relating to intellectual property and international trade law. This is, because, firstly a large number of countries believe that they have not derived great benefit from traditional forms of intellectual property but find themselves rich with traditional knowledge especially in genetic resources and folklore. They would like to exploit these resources and several major companies share this interest. Secondly, there is a growing political importance of aboriginal communities in several countries (Gervais 2003: 467). Property rights in the Western Legal systems do not exist in indigenous local communities. In view of its exclusionary effects, they tend to see the attempt to obtain property rights on derivatives of their traditional knowledge as 'piracy'.

Regarding pharmaceutical seed and agricultural industries they coined the term 'bio-piracy' to denote the extraction and utilisation of traditional knowledge associated with biological and genetic resources and the acquisition of intellectual

property rights on inventions derived from such knowledge without providing for benefit sharing with the individuals or community that provided the knowledge or resources.

Some of the criticisms that Gervais points out relating to the current intellectual property system is that the application of patents concerning drugs or other products that have derived from traditional sources, could include the source of traditional knowledge to ensure that the invention is indeed novel as required by the patent laws worldwide. Such a result could be achieved by minor changes to the current practices. According to Gervais the cases in which patents should not have been granted are in fact examples of bad patents and not those of a bad patent system. Therefore, he suggests that a dialog should be established between the holds of the traditional knowledge, the private sector and the government. Greater awareness raising would result in more technical, finely calibrated and nuanced assessments of the traditional knowledge/intellectual property nexus. According to Gervais's arguments the case for the current intellectual property system not being able to protect traditional knowledge is not convincing. The fact that the community owns traditional knowledge does not necessarily mean that all forms of intellectual property protection is excluded. Example of collective marks and geographical indications show that in certain cases rights can be granted to representatives of group or community. An example in the field of real property is the concept of 'communal property'. Gervais states that one should ask the question whether our current conceptions of intellectual property particularly in relation to who we identify as creators of IP and what we deem to be appropriate subject matter should be rethought. If we look at the requirement that intellectual property promotes a progress of science and useful arts why should certain forms of traditional knowledge not be protected by intellectual property or put differently in the absence of statutory exception?, Should intellectual property be defined by the common characteristics of current forms of intellectual property viz. (a) an identifiable work of invention or other object, b) identifiable authors or inventors and c) defined restricted acts in relation to the said object without the authorisation of the right holders?, Are these historical accidents of the nineteenth century when intellectual property rights emerged?. If this be the case how can one protect amorphous objects or categories of objects and grant exclusive rights to an ill defined and ill definable community or group of people.

Looking at the issue from the patent point of view, Dutfield (2005) points out that just because the United States Company holds a patent for a stable storage form of neem pesticides it does not prevent Indian farmers from continuing to use neem as a pesticide as they have done for generations (495-520). It may be argued that as long as the patent requirements of usefulness, novelty and inventive steps are strictly upheld there is no reason for local communities to feel exploited since it is in their knowledge that if their knowledge was simply copied there would be no invention to patent. Although Dutfield points out both these theories are correct the turmeric patent case US patent No. 5304718 shows that the theory and practice may somewhat differ. In this case neem patents of which there are over 150 in the world and the lapsed quinoa patent exemplify some of the various ways that inventions may be derived from traditional knowledge and how the just entitlements of traditional knowledge holders may vary as a result. In the turmeric case the invention was traditional use of the plant and it is because this traditional use has been documented that the invention was deemed ultimately to lack novelty. Quite a few of the neem related inventions embody uses identical to those of Indian farmers but the products and/or methods of extraction are different. In such cases it can safely be assumed that the existence of relevant traditional knowledge was *a* but not *the* sine qua non of the invention. On the other hand in the quinoa patent US Patent No. 5304718 (Cyto Plasmic Male Sterile Quinoa) Traditional knowledge was not a sine qua non for the invention except in the sense the development and continued existence of Quinoa varieties can be attributable to the efforts of past and present Andean peoples.

It is argued that the patents systems based on the European and United States models are inherently harmful to the indigenous people and local communities and they reinforce the existing injustices. These may be mitigated by a careful drafting and interpretation of IPR Laws. IP Laws do not enable all creative or inventive expressions to be protected. In traditional societies the sources of traditional knowledge may be attributable to individuals' kinship or gender based groups. In theory such knowledge may be patentable. However a great deal of traditional knowledge is not traceable to a specific community or geographical area. Once traditional knowledge is recorded and publicly disseminated its use and application is beyond the control of the original knowledge providers. However if a researcher investigates a piece of published traditional knowledge and improves it in a practical way the result may be that there is an invention which the researcher can own.

It is now proposed to consider how traditional knowledge may be protected under the Trademark Law. Traditional cultural artistic expressions such as paintings have been reproduced without authority on carpets, printed fabrics, T Shirts, dresses, garments and greeting cards. Sarees of South Asia, Tie and Dye Cloth in Nigeria are such examples. It is proposed to look at Trademark law from the point of view of protecting traditional knowledge firstly *against* trademarks and protection *by* trademarks. Although at first sight the distinction appears to be between positive and defensive protection of traditional knowledge. Some indigenous people and traditional communities want positive protection of their cultural expressions and they want to benefit from the commercialisation of these expressions. To them such use deprives these expressions of their cultural significance which in turn may disrupt and dissolve their culture. So this group argues for the defensive protection of cultural expressions. The trademark law may prohibit registration of distinctive signs and a trademark which may offend sections of the community including indigenous local communities or which falsely suggest a connection between such sign and an indigenous or local community may not be registerable. In New Zealand for instance following a proposal by a Maori Advisory Group an absolute ground for a refusal of a trademark has been added: the Commissioner for Trademarks must not register a trademark where its use or registration would be likely to offend a significant section of the community including the Maori (section 17 (1) (c) (1) of the Trademarks Act 2002). In South Africa it is provided that the trademark should not be registered or should be removed from the register if it is "likely to given offence to class of persons". 'The class of persons' would be wide enough to include indigenous or local community (Section 10 (12) of Act No. 194 of 1993). In the United States of America a registered trademark may be refused registration and a registered trademark cancelled if the mark consists of or comprises matter that may disparage or falsely suggests the connection with persons (living or dead) institutions beliefs or national symbols or bring them into contempt or disrepute (15 USC S 1052 (a)). Therefore United States Patents and Trademark office may refuse to register a trademark that falsely suggests a connection with an indigenous tribe or beliefs held by that tribe. The patent office protects not only Native American tribes but also other indigenous peoples worldwide (The Final Report on National experiences with the legal protection of expressions of folklore 2002).

In the United States in accordance with the Trademark Law, Treaty Interpretation Act 1998 office had to complete a study of the official protection of insignia of federally and State recognized Native American tribes. As a result of this study a data base of an official insignia of Native American tribes that may prevent the registration of a mark confusingly similar to official insignia has been established. The registrars and applicants may consult such data bases compiled by other registrars. It may be difficult for local indigenous communities to make such information available internationally by means of a data base administered by a body such as WIPO.

**Convention on Biological Diversity and Traditional Knowledge**

In this connection it may be relevant to consider the provisions of the Convention on Biological Diversity (CBD) and TRIPS. There is a difference in views between developing and developed countries about the need to reconcile the needs of TRIPS and CBD. Developing countries believe that patents systems are not based on searching both written and oral prior art for which wide novelty such as in the US do not insist on disclosure of the origin and proof of prior informed consent for the use of biological materials or knowledge on which the invention is based. This has resulted in extensive Bio piracy which has been documented based on products on plant materials and knowledge developed and used by local indigenous communities such as the case of Neem Tree, Kava, Barbasco and Turmeric (Dutfield 2001: 140-5, Rao and Guru 2003). In 1995 two researchers at the University of Mississippi Medical Center were granted the US Patent for using Turmeric to heal wounds. However, in India this has been common knowledge for several thousand years. Numerous other patents on products for processes using various medicinal properties of turmeric not known in India have also been granted by the US Patent and Trademark office and European Patent Office. US Patent Office has also granted a patent to Reliv International Ink for "Dietary supplement for nutritionally promoting healthy joint function" (Jacoby and Weiss 1997: 75-81). The Dietary Supplement for which patent was granted contained among others turmeric and ashwagandha two of the more common substances having been based by the traditional systems of medicine in India. There have also been bio piracies of patenting Indian herbs. Basmathi, Cummin, Gooseberry, Blackberry, Pepper, Bitter Gourd, Brinjal and many other plants and fruits have already been patented. The US Patent office has patented eight ginger formulations. The US Patent has also granted patent to Natreon Inc for thirteen

claims covering products and processes of Amla. In countries such as India there is a rich reservoir of medicinal plants in forest areas. The medicinal plants in wild areas are relied for two reasons –

1. Quality of the medicinal plants
2. The prospects of cultivation of medicinal plants by large manufacturers of ayurvedic medicine in land scarce States such as Kerala

When US Patent Office granted Basmathi rice patent to RiceTech it was challenged by APEDA and RiceTech withdrew the 4 claims. Similarly the US Patent granted to W R Grace & Company for the Neem patent was challenged by the Research Foundation for Science and Technology of India and it was vacated in May 2000. An aligned problem is the growth of genetically engineered crops. Genetically modified crops carry one or more genes from an unrelated species. This has more advantageous over breeding methods in scope reliability precision and speed. Prof. M.S. Swaminathan has observed that

> … while bio technology is going to be the key factor in the agricultural development there is need to address the concern on safety to humans and environment. India needs a regulatory framework that can at all times identify transgenic products in use having independent data and not what is given by the MNC as no unequivocal conclusion can be drawn about the overall effect of genetic engineering technologies. While we cannot discard new technologies one has to adopt them with adequate safeguards (Swaminathan 2001)

The Sixth meeting of the Conference of the Parties (COP-6) was held in Hague in 2002. The Bond guidelines on access to genetic resources and fair and equitable sharing of the benefits arising out of their utilisation were officially adopted. COP Decision Viii/7 requested WIPO and UNCTAD to analyze certain issues relating to the imposition of disclosure or origin.

At the Sixteenth Session of the Standing Committee of Law of Trademarks Industrial Designs and Geographical Indications of WIPO in Brazil, a non exhaustive list of customary names used in Brazil associated with Bio-Diversity. This was an attempt to bring these items of traditional Brazilian knowledge to the trademark registries worldwide and to highlight the fact that trademarks incorporating items of traditional knowledge particulars should generally be refused registration. In Australia the preferred technique to protect non-

indigenous persons who sell indigenous artifacts at the expense of indigenous artistic community is through the use of certification marks (Wiseman 2001: 14-25). In New Zealand where Maori words and symbols and words can be found in many registered trademarks the Maori Arts Board in consultation with Maori artists registered the 'Maori Trademark' and two companion marks viz. mainly Maori mark and a Maori co-production mark. These marks are used to promote and sell authentic quality Maori arts and crafts and also to authenticate exhibitions and performances of Maori arts by Maori artists. In India also there has been experimentation with certification marks. The Policy Sciences Center has been instrumental in implementing with the Indian Commissioner of Handicrafts certification system for production of products labeled and made in India. Also a certification mark 'Indian organic' owned by the Government of India is available for use on the basis of compliance with national standards for organic production. The protection of traditional knowledge by trademark law is modest by giving some protection by means of collective and certification marks. For the protection of traditional and cultural expressions the indigenous communities may have to turn to protection closer to copyright. However it is not easy to fit copyright into the protection of traditional knowledge. This is because –

1) Traditional cultural expressions are often the result of continuing and slow process of creative activity exercised by a local or indigenous community by consecutive imitation whereas copyright usually requires some form of individual creativity

2) Copyright is author centric whereas notion of an author in the copyright sense is usually absent in the case of traditional cultural expressions and

3) Traditional cultural expressions continue to evolve and have evolved over centuries which do not fit into a fixed term protection.

## Concept of Trust

It has also been suggested that a concept of trust may be effectively utilised with regard to Traditional Knowledge particularly the principles of public trust doctrine while privately owned aspects of traditional knowledge are protected through private trusts. For instance, San Hoodia Benefit Sharing Trust was created for the San Tribes in a benefit sharing venture with the South African Council for Scientific and Industrial Research. In Sri Lanka, this can be done

through a benefit sharing as stipulated in Chapter 11 of the Trust Ordinance No. 9 of 1917 (Sumanadasa 2011).

## Pyramid Model

It has also been suggested that one distinctive approach to the regulation of traditional knowledge is by responsive regulation (Drahos 2007: 385-415). It has been suggested that creating an international enforcement pyramid for traditional knowledge is the key to a strategy of regulation for traditional knowledge because the actors that are most interested in the enforcement of ownership norms concerning traditional knowledge are also likely to have the weakest capacity to take an enforcement action of some kind. Therefore, access to networks as a means of increasing capacity and power has become a key theme of social science theory. For example, a network of software companies led by the business software alliance can do a lot to further an agenda for stronger protection of intellectual property rights.

## Traditional Knowledge and Human Rights

In addition, protection for Traditional Knowledge cannot be separated from human rights protection of indigenous peoples and is also inextricably linked to the protection of land rights. Therefore, it has been suggested that a treaty on Traditional Knowledge be the best possible means to strengthen the protection of Traditional Knowledge holders. Treaties bind the signatory governments. A treaty articulates the general principles that may evolve over a time into a powerful international regime with a high rate of compliance. There are many treaties which begin as ‘vague and platitudinous’ and end up as a highly abiding enforcement regime. Developing countries that advocate strong Traditional Knowledge protection are also the same governments which groups such as Human Rights Watch classify as violators of rights of indigenous people particularly in relation to land rights. In 2002, a group of 12 countries representing 70 per cent of the world’s biological diversity met at Cancun in Mexico and formed a group of like minded mega diverse countries. The Cancun Declaration that launched the mega diverse group contains sweeping agenda that includes the pursuit of a new international regime for the fair and equitable sharing of benefits that arise from the use of bio diversity. Therefore, the best

strategy for the protection of Traditional Knowledge may be a framework in the form of a treaty.

Traditional communities in their dealings with industry have to accept that western legal forms and instruments including patents and contracts are the basic rules of the game. Traditional Knowledge holders and communities are concerned with the universalisation and prioritisation of one type of intellectual property system that excludes all others including their some customary systems. This does not seem to be unfair. If indigenous people in WTO Member States are required to accept the existence of patents that they are economically prevented from availing themselves and contracts that they cannot realistically enforce in the courts why should their own knowledge related customary regimes be not protected by others. Securing of protection of traditional knowledge according to local regulations require the existence of effective local governance structures and customary law including property regimes and respect for those structures and regime from outsiders. This is easier to achieve in countries where customary law systems can operate with relative freedom and where rights are enforceable (Dutfield and Suthersanen 2008: 349).

While TRIPS is silent on traditional knowledge the Doha round of talks has made traditional knowledge and folklore an integral part of the TRIPS Councils work. As a consequence Brazil, China, Cuba the Dominian Republic, Ecuador, India, Pakistan, Thailand, Venezuela Zambia and Zimbabwe submitted a paper to the Council of TRIPS in June 2002 which inter alia required –

1. Disclosure of the source and country of origin of the biological resources and traditional knowledge used in the invention
2. Evidence of prior informed consent through approval of authorities under the relevant national regimes and
3. Eminence of fair and equitable benefit sharing under the national regime of the country of origin.

## South and South East Asia Experiences

Clause 19 of the Doha Declaration provides:

> We instruct the Council for TRIPS, in pursuing its work program including under the review of Article 27.3 (b) the review of the implementation of the

> TRIPS Agreement under Article 71.1 and the work foreseen pursuant to paragraph 12 of this Declaration to examine inter alia the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the Protection of Traditional knowledge and folklore, and other relevant new developments raised by members pursuant to Article 71.1. (WTO Doc No. WT/ MIN (01)/ DEC/ 1)

China and other G77 countries issued a statement that TRIPS Agreement should be supportive of and not run counter to the objectives and principles of CBD.

Prof. Gurdial Singh Nijar (1996) in a third world network publication advocated that traditional knowledge may be best protected by "Community Intellectual Rights". China has collated and documented its folklore. More than 3 million folk ballads and 7 Million Proverbs have been so collated and documented.

ASEAN in a draft Agreement agreed that it member states "shall recognise , respect, preserve and maintain the knowledge, innovations and practices of indigenous peoples and local communities embodying traditional lifestyles to their natural resources including genetic resources." (The ASEAN Framework Agreement on Access to biological and Genetic Resources at http://www.grain.org/system/old/brl_files/asean-access-2000-en.pdf)

Indigenous Peoples Rights Act 1997 of the Republic of Philippines has enforced the traditional and alternative Medicine Act 1997 by which traditional communities can require uses of such knowledge to acknowledge the source of such knowledge and demand a share of the financial return. In introducing this Bill Senator Flavier observed

> … that the existing legal framework for intellectual property has failed to recognize the more informal, communal system of innovation through which farmers and indigenous communities produce, select, improve, and breed a diversity of crop and livestock varieties, a process which takes place over a long period of time. The existing IPR framework effectively side steps the traditional knowledge of indigenous communities even if it is widely acknowledged that without the input of indigenous knowledge many products used extensively throughout the modern world would not exist today. (Genetic Resources ActionInternational (GRAIN) Bio-Diversity Rights Legislation http://www.grain.org/brl.phillipinescirpa- 2001- en.cfn.)

**Positive or Negative Protection of Traditional Knowledge**

The protection of traditional knowledge may be positive or negative. In either case an entitlement theory could be built on. This could be either a property regime or a liability regime. In a property regime the exclusive rights vest with the owner and such rights could be refused. The liability regime is "use now pays later" system. An example of this is the approach adopted by Peru in 2002 known as the Regime for the Protection of the Collective Knowledge of Indigenous People. In the case of public domain traditional knowledge an indigenous group may be entitled to compensation from outside parties in the form of 0.5 per cent for the value of shares of any product developed from knowledge. A further question that arises is whether the rights which are to be protected and enforced should exist independent of registration with any government agency. Whilst it has been argued that such rights should exist independent of any filing with any governmental agency, on the other hand registration would enable the effective enforcement of such rights.

Carlos Correa proposed misappropriation regime. He observed:

> … national laws would be free to determine the means to prevent it, including criminal and civil remedies (such as obligation to stop using the relevant knowledge or to pay compensation for such use) as well as how to empower communities for the exercise and enforcement of their rights (Correa 2001)

Correa refers to two United Nations documents which he considers to be implicitly supporting his proposals. The first is Decision V/16 of CBD's conference of the parties and the second is the Principles and Guidelines for the Protection of Heritage of Indigenous Peoples which was elaborated in 1995 by Erica – Irine Daes then special rapporteur of UN sub commission on Prevention of Discrimination and Protection of Minorities. The WIPO IGC's draft provision for Protection of Traditional Knowledge contains an article on protection against misappropriation.

Positive protection of Traditional Knowledge is being discussed in a substantive manner firstly at the third session of the IGC (Inter Governmental Committee) on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of WIPO in June 2002 where WIPO prepared a paper called "Elements of Suigeneris System of Protection of Traditional Knowledge". In autumn 2003 WIPO general Assembly decided that the IGC's new work would

focus particularly on the international dimensions of the relevant issues and agreed that "no outcome of its work is excluded, including the possible development of an international instrument or instruments." IGC drafted two sets of provisions first the provisions for the protection of Traditional Knowledge and secondly the provisions for protection cultural expressions. Both these proposals were presented at the eighth session of the IGC and were further deliberated on the Ninth session.

Drahos (2007) suggests that the members should establish a global bio collecting society that would co-ordinate enforcement work so as to constitute an international enforcement pyramid. The Treaty should establish a review mechanism and a set of indicators that could be used to evaluate the progress of the States on the regulation of traditional knowledge. The Treaty should have strong co-ordinating national enforcement activities to ensure that it does not become a dead letter.

However both proposals were controversial and it may take several years for the treaties to be completed.

## Conclusion

Law of Intellectual Property Rights presents enormous challenge to the protection of Traditional Knowledge. Many forms of traditional knowledge do not qualify for the protection of intellectual property regime as they are too old and in the public domain. Therefore, the protection of exclusive rights for any period of time would appear to go against the general principles that intellectual property can only be granted for a limited time so that it may return to the public domain for others to use in due course. There are also several other types of traditional knowledge such as spiritual beliefs methods of governance, languages, biological and genetic resources which may be unfit by their very nature for protection under the intellectual property regime. Further problem is that property rights as is understood in the Western Legal systems may not be applicable to local communities which hold traditional knowledge.

United Nations documents have to some extent supported the development of a regime based on misappropriation. These include decision V/16 of the CBD's conference (Convention on Biological Diversity conference) and the principles and guidelines for the protection of the heritage of the indigenous peoples (see

Annex to document WIPO/GRTKF/IC/9/4). There have also been attempts outside the WTO for the recognition of rights of traditional knowledge. General comment 17 to the International Covenant on Economic, Social and Cultural Rights provides that State parties should adopt measures to ensure the effective protection of the interests of indigenous peoples relating to their productions which are often expressions of their cultural heritage and traditional knowledge and the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UN DOC A/R/ES/61/295) further provides that indigenous peoples have the right to maintain control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions as well as the manifestations of their sciences technologies and cultures including human and genetic resources and develop their intellectual property over such cultural heritage and expressions. Whether these rights could be used under an intellectual property regime based on the TRIPS Agreement however remains unclear.

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# Dance Forms of Kerala: Symbols of Traditional Culture

*Jayaprabha Ravindran*

## Abstract

*Kerala or the land of 'Kera' or coconut is synonymous with pristine beaches with a never ending array of coconut palms, backwaters, magical monsoon, rich and vibrant flora and fauna, fragrant spices, countryside reverberating with the sounds and music of various rich art form, fairs and festivals. Present day Kerala comprises erstwhile princely states of Travancore, Cochin and Malabar which was part of Madras province. It has a total population of approximately 33.3 million comprising Hindus, Christians and Muslims and few Jews and some other minorities.*

*Kerala with its rich and vibrant history and deep rooted cultural divisions based on caste structure has distinct art forms for different communities and castes. Music and dance are the main components of art. Music has undergone a lot of change with the evolution of Malayalam as a language. Dance forms of Kerala are varied and colourful. There are two distinct types of dance forms: Ritualistic or classical and folk dances. 1) Ritualistic Dances: koodiyattom, Kathakali, Mohiniyattom, Krishnattom, Thullal, Thiruvathira Kali etc. These are all conducted in specially designed stages on religious festivals. Does it cater to the masses or is it elitist? and 2) Folk Dances: Poorattam, Kaliyattom, Theyyam, Aivar Kali, Pootham Kali, Pulikali, etc.*

*The paper explores the origin of different dance forms, performers, stage setting, accompanying music and targeted audience and highlights problems faced by these dance forms. The role of the government and also the role of influential and rich business establishments in encouraging and protecting the traditional dance forms needs to be explored if they are to survive in the present world.*

## Introduction

Kerala, the land of *kera* or coconut, as the name suggests is the land of pristine beaches with a never ending array of coconut palms, backwaters, magical monsoon, rich and vibrant flora and fauna, fragrant spices, countryside reverberating with the sounds and music of various rich art forms, fairs and festivals. Culture of any place is closely linked to legends and myths that have

been handed down through generations. One such legend which is accepted by Keralites irrespective of caste and community is that regarding the origin of Kerala. As per the legend, Kerala rose up from the sea when Lord *Parasurama* (mythological figure) threw his axe into it and the sea receded to bring up a narrow strip of land from underneath. Lord *Parasurama*, believed to be the sixth avatar of Lord *Mahavishnu* (Hindu God), is believed to have thrown his axe from Gokarnam southward across the ocean in rage and in repentance for his actions of killing *Kshatriyas*. The land of Kerala emerged from the waters of the Arabian Sea with the blessing of *Varuna*- the God of Oceans and *Bhumidevi*- the Goddess of Earth. It is speculated that the nickname God's own Country' for Kerala is influenced by this legend.

Historic references to Kerala are found in many ancient scriptures and writings of travellers from across the world. It was known by different names like Malai, Manibar, Bilad ul Phul Phul, Malaibar and Keralaputra (Kareem 1971: 1). The early history of Kerala remains largely unexplored. Yet information is available in various Tamil writings and writings of foreign travellers and inscriptions and copper plate grants which are preserved. According to these Kerala have had trade relations with Egypt, Babylon, Phonecia and the Greco-Roman world. It is, therefore, very clear that Kerala and her people have had commercial and cultural relations with foreign countries.

Geographically, Kerala lies on the South Western tip of India and is flanked by Arabian Sea on the West and Western Ghats (Sahyadri Mountains) on the East. The Western Ghats are a continuous stretch of mountains except for a small break in the form of a pass at Palghat. This geographic location has been most beneficial for the state as it was well protected from any kind of foreign invasion. As it was bound by the sea on the western side, it was natural for it to have many ports and it is proven that Muziris (Muziris Heritage 2013: http://www.keralatourism.org/muziris/history) was a thriving centre of trade with many Arab and African countries. Muziris was reputed to be the ancient world's greatest trading centre in the East. As the focal point of commerce for over 2500 years, this bustling seaport traded in everything from spices to precious stones with the Greeks, Romans and the rest of the world. It was also the doorway to India for varied cultures and races: Buddhists, Arabs, Chinese, Jews, Romans, Portuguese, Dutch and even the British (Muziris Heritage 2013). However, due to some natural disaster this port disappeared and instead many other ports on the

same coastline came up as centres of trade and are still important. Cochin, Calicut, Ponnani are a few to name some.

Present day Kerala comprises erstwhile princely states of Travancore, Cochin and Malabar which were part of Madras province. It has a total population of approximately 33.3 million comprising Hindus, Christians and Muslims and few Jews and some other minorities. Generally it is said that the northern part of Kerala has a predominantly Muslim population, the Central part has majority of Hindus and the Southern part has majority of Christians. Though Kerala has the distinction of being the state with the highest density of population of 819 per square km its growth rate in terms of population is lower than that of any other part of the country i.e. 3.44 per cent. It has the distinction of being the most literate state and a sizeable portion of the Keralites is working abroad and form part of 'Non Resident Indians'. With higher levels of education people migrate in search of greener pastures.

Keralites are known for their adaptability to their surroundings. Whatever be the region/ country they are living in, Keralites are seen to be deeply nostalgic about their home state and culture back home. It is not uncommon for Keralites to return to their home state for major temple festivals. For those unfortunate ones unable to reach home state, they actively take part in the celebrations being organised by Cultural Associations of Keralites which can be found across the world. What is it that these people are craving for? Visit to any of these cultural celebrations being organised would make things clear. Keralites miss the sound of music, dance performances peculiar to the festive season.

**Social Structure of Kerala**

Kerala followed a caste system which was quite different from other parts of India. While the Indian caste system was modeled on the four-fold division of society i.e. *Brahmins, Kshatriyas, Vaisyas and Shudras*, in Kerala the Namboodiri Brahmins formed the priestly class. Rarely was one recognised as an inferior caste except for *Shudra* or untouchables. Thus, the Kerala caste system was ritualised but it was not the *Varna* model found in the North of India. Though it was not modeled on the *Varna* model of caste system it was very cruel and rigid compared to others. From 800 CE onwards the elite Hindu caste - the *Namboodiris* - held control. People of lower castes were banned from public markets and had to go naked above the waist - regardless of gender - to satisfy the ego of the upper caste

*Namboodiri* men. Kerala's Christians also operated a kind of caste system, Syrian Orthodox people being on a level with the Nairs and Catholic fisherfolk considered a low caste. At the very bottom of the hierarchy were the *adivasi* or indigenous people who have been in Kerala for 4000 years.

**Education**

Kerala's achievements in social development and quality of life are much ahead of the other states of India. The state has achieved a Human Development Index comparable to the developed countries of the World. However, the story was quite different till the twentieth century or so. With the rigid caste system in place it was but natural that education was denied to everyone except the *Namboodiris*. Scenario started changing slowly with the advent of Christian missionaries and the activities of social reformers of twentieth century. Now Kerala takes pride in being one of the most literate states in India.

**Culture**

Though Kerala followed a unique caste system it largely remained free of communal strife. *Brahminism* had brought along with it the caste system. Caste divisions were so strong that 'pollution by sight' was accepted and the lower castes were forbidden from appearing in front of the upper caste lest they pollute them by their sight. Lower castes were identified by their physical appearance as also their dress. Being of the poorer strata of society, the lower caste communities could afford only a simple white *mundu* which was an unstitched piece of cloth used to wrap around the lower portion of their body. Upper part was not covered. This became so much of a caste identity that even when the lower castes could afford clothing, they were prohibited from using any cloth to cover the upper part of the body. Even female members of the lower castes were prohibited from doing so. With the spread of education social reform movements also started and they greatly impacted the society. The practice continued as late as early twentieth century when the efforts of many social reformers helped in discontinuation of this social evil. At present it is a state where caste divisions are not noticeable.

**Traditional Art forms**

According to Pandeya (1961: ix) "If an art is true, it reflects the innermost ecstasies of a people in a sympathetic and symbolic but eloquent form". Present

day Kerala is devoid of caste divisions. Yet the Art forms of Kerala are a reflection of the deep rooted cultural divide based on caste system that was prevalent until last century. There are distinct art forms for different communities and castes. Music and dance are the main components of art. Music has undergone a lot of change with the evolution of Malayalam as a language. All forms of dances have their historic background of evolution. Topographic conditions, climate, language and the physical built of the people are the main guiding conditions for the development of any dance form (Pandeya 1961: 2). Dance forms of Kerala are varied and colourful. What is unique about dances in Kerala is that unlike those of other states of India, there is no concept of social dancing or mixed dancing i.e. dancing of couples or group dances where males and females dance together in celebration of social events like birth, marriage, festivals, etc. Also, the concept of impromptu dance during social events is hardly seen. All forms of traditional dances are planned. Younger generations are however now being influenced by film music and dance and the scenario may change after some time. Traditional dances of Kerala can be broadly categorised into two: Ritualistic and Folk.

## Ritualistic Dances

### 1. Kathakali

Kathakali as the name denotes is a highly stylised classical dance drama. It is famous for its elaborate, colourful and attractive make-up of characters, elaborate costumes, detailed gestures and well-defined body movements. The artists do not speak or sing but their movements are in sync with the anchor playback music and accompanying percussion. As per sources of information available, it originated in the seventeenth century and has developed over the years.

**Genesis of Kathakali** - Popular belief is that Kathakali has emerged from *Krishnattam*, the dance drama on the life and activities of Lord Krishna created by Sri Manavedan Raja during the late sixteenth and early seventeenth century. Due to some rivalry between the rulers of two native states, another form of dance drama was evolved on the life and activities of Lord Rama. While the former was in Sanskrit, the new form was in Malayalam. The latter dance drama evolved into the present day Kathakali by the seventeenth century. Being a dance form specially created, it was based on the contemporary dance forms mainly *Koodiyattam*, *Ashtapadiyattam*, *Teyyam*, *Thiyattu*, etc. Kathakali as a dance form

owes its popularity to use of Malayalam, people's language instead of Sanskrit which catered to the elite of the society. Traditionally there are 101 classical Kathakali stories, though the commonly staged among them these days total less than one-third of that number. Almost all of them were initially composed to last a whole night. Nowadays, there is increasing popularity for concise or select versions of stories. Hence the performance lasts not more than three to four hours from evening.

**Themes of Kathakali** - The most popular stories enacted are on the Mahabharata war after profiling the build-up to it. These include *Kalyanasougandhikam,* (the story of Bhima going to get flowers for his wife Panchali), *Keechakavadham* (another story of Bhima and Panchali), *Nalacharitham* (a story from the Mahabharata), *Duryodhana Vadham* (focusing on the time during the stint of Pandavas in disguise), *Kiratham* (Arjuna and Lord Shiva's fight, from the Mahabharata), and *Karnashapatham* (another story from the Mahabharata). Also staged frequently are stories like *Kuchelavrittam, Balivijayam, Dakshayagam, Rukminiswayamvaram, Poothanamoksham, Subhadraharanam, Balivadham, Narakasuravadham, Uttaraswayamvaram, Harishchanracharitam* and *Kamsavadham*, all from Mahabharata.

**Performance -** Traditionally, Kathakali is performed on stages specially set up in Temples or houses of patrons. The performance is around a *kalivilakku* or a traditional lamp. Traditional music or *geetam* and instruments like cymbal, *chenda, maddalam, edakka* (percussion instruments) accompany the performances. What is unique about this dance form is that there are no dialogues for the performers but only *mudras* (hand gestures), eye movements and body movements (**Fig. 1**). The Kathakali *mudras* are more stylised and symbolic (Nair and Paniker (eds.) 1993: 111). A Kathakali actor uses immense concentration, skill and physical stamina, gained from regimented training based on *Kalaripayattu*, the ancient martial art of Kerala, to prepare for his demanding role. The training can often last for 8–10 years, and is intensive. In Kathakali, the story is enacted purely by the movements of the hands (called *mudras* or hand gestures) and by facial expressions (*rasas*) and bodily movements. The *mudras* could be termed as per the alphabet of the hand and *mudras* in Kathakali are a fully developed language of gestures. There are more than 500 common *mudras.* However, they are never used alone but are always accompanied with gestures of limbs, face and eyes. The expressions are derived from *Natyashastra* (the treatise

that deals with the science of expressions) and dancers also undergo special practice sessions to learn control of their eye movements. The training is very arduous and takes over 10 years to achieve a level of perfection.

**Makeup for Kathakali -** Most of the Kathakali performances are done by male artists. One of the most interesting aspects of Kathakali is its elaborate makeup code. Most often, the makeup can be classified into five basic sets namely *Pachha, Kathi, Kari, Thaadi,* and *Minukku.* The differences between these sets lie in the colours that are applied on the face. *Pachcha* (meaning green) has green as the dominant colour and is used to portray noble male characters. Those having an evil streak or anti-heroes in the play are portrayed with streaks of red in a green-painted face. Excessively evil characters such as demons (totally *tamasic*) have a predominantly red make-up and a red beard. They are called Red Beard. Uncivilised hunters and woodsmen are represented with a predominantly black makeup base and a black beard and are called Black Beard. Women and ascetics have lustrous, yellowish faces and this semi-realistic category forms the fifth class. In addition, there are modifications of the five basic sets described above such as white beard used to depict *Hanuman* (the Monkey-God).

***Figure 1: Young Deepti Omcherry in Kathakali Pose and Kathakali Costume (Female Character)***

**Problems -** Kathakali as a dance form is difficult to learn and takes a long and arduous period of training. Young Keralites today like their global counterparts are computer savvy and are interested in quick methods of earning. They do not have the patience to spend a decade in learning nuances of a dance style which does not assure them of a comfortable life style. There are very few dance Gurus or teachers and not too many dance academies to teach the intricate dance style. Instead of being a dance style performed for

connoisseurs, Kathakali has become an item put up in front of foreign tourists. Though there are centres like Kerala Kalamandam teaching this dance form, in this world of globalisation it is increasingly difficult to find pupils and committed teachers who are ready to put at stake 10-12 years of their life for a profession that does not assure them of a steady income and comfortable lifestyle.

## 2. Mohiniyattam

The term Mohiniyattam comes from the words 'Mohini' meaning a woman who enchants onlookers and *aattam* meaning graceful and sensuous body movements. The word 'Mohiniyattam' literally means 'dance of the enchantress'. Mohiniyattam, as the name suggests is the dance of a female character. It is a ritualistic dance style that has been given the status of a classical dance form from Kerala, India. Believed to have originated in sixteenth century, it is considered a very graceful form of dance meant to be performed as solo recitals by women (**Fig. 2**).

***Figure 2: Mohiniyattam by Dr. Deepti Omcherry Bhalla***

**Origin -** Mohiniyattam was popularised as a popular dance form in the nineteenth century by Swathi Thirunal, the Maharaja of the state of Travancore (Southern

Kerala), and Vadivelu, one of the dancers from Thanjavur. Swathi Thirunal not only promoted the study of Mohiniyattam during his reign but also is credited with the composition of many music arrangements and vocal accompaniments that provide musical background for modern Mohiniyattam dancers. Due to the theme and style of dancing it was popular among the devdasis (temple dancers) of late nineteenth century. This was looked down by the contemporary society and so was banned in the princely state of Cochin. It was only after independence with the initiative of the noted Malayalam poet Vallathol, who established the Kerala Kalamandalam dance school in 1930 that the ban was revoked and Mohiniyattam came to be accepted in society (Massey and Jamila 1989: 67). There are two legends related to Mohiniyattam. One is that of Lord Vishnu disguised as Mohini who appeared to lure the *asuras* (demons) away from the *amrita* (nectar of immortality) obtained during the churning of the *palazhi* (ocean of milk and salt water). In the second story, Vishnu appears as Mohini to save Lord Shiva from the demon Brahmasura. The name Mohiniyattam may have been coined after Lord Vishnu but the main theme of the dance is love and devotion to God, with usually Vishnu or Krishna being the hero. *Devadasis* used to perform this in temples. It also has elements of *Koothu* and Koodiyattam. Mohiniyattam is a drama in dance and verse.

**Costume and Makeup -** The costume includes white *saree* embroidered with bright golden brocade (known as *kasavu*) at the edges. The dance follows the classical text of Hastha Lakshanadeepika, which has elaborate description of *mudras* (expressions by the hand palm and fingers). The jewellery is the typical set of 'Golden Finish Jewellery with a proper wide Golden Lakshmi belt' specially designed for Mohiniyattam**.** The footsteps are made tinkling with a good pair of *Chilanka* or Dancing bells worn by the dancer on her legs. The performer also adorns herself with fresh white Jasmine flowers which is decked to her hair bun arranged on the left side of the head pinned on to a beautiful *Jurapin* (hair pin) which makes Mohiniyattam artists distinct from artists of other dance forms of India.

### 3. Koodiyattam

Koodiyattm is a form of Sanskrit theatre traditionally performed in the state of Kerala, India. Performed in the Sanskrit language in Hindu temples, it is believed to be 2000 years old. It is officially recognised by UNESCO as a Masterpiece of the Oral and Intangible Heritage of Humanity.

**Origins -** Koodiyattam or 'combined acting' signifies Sanskrit drama presented in the traditional style in temple theatres of Kerala. It is the only surviving specimen of the ancient Sanskrit theatre. Koodiyattam and chakyar koothu were among the dramatised dance worship services in temples of ancient India, particularly modern-day Tamil Nadu and Kerala. Both koodiyattam and chakyar koothu find several mentions in ancient Sangam literature of south and also in the epigraphs belonging to subsequent Pallava, Chera, Chola periods in Tamil Nadu. Inscriptions related to the dramatised dance worship services like koodiyattam and chakyar koothu are available in temples at Tanjore, Tiruvidaimaruthur, Vedaranyam, Tiruvarur, and Omampuliyur. They were treated as an integral part of worship services alongside the singing of hymns. Several ancient kings and members of other professions are listed to have authored several works for these services. There is evidence of these services being done all over ancient subcontinent during time of Cholas and Pallavas. The themes of Koodiyattam have remained the same since then and were performed in specially designed temples called *koothambalams*.

**Costumes and Makeup -** Unlike Kathakali, the makeup of artistes in Koodiyattam is not elaborate. Their makeup is more subtle with faces of heroic characters being painted in green with white curved paper frames. Costumes are predominantly in Red, White and Black.

**Music** - *Mizhavu* (percussion instrument) is the main accompaniment to the musical rendition by Nangiyar artists. This percussion instrument has been traditionally played by Nambiar artists. As per a newspaper report, Koodiyattam artists claim that the music is more like Vedic chants and the evolution of Koodiyattam is not yet fully explored (Joseph 2012: http://www.thehindu.com/todays-paper/tp-national/tp-kerala/exploring-nuances-of-koodiyattam-music/article2948482.ece).

**Challenges -** Koodiyattam is a dying art form. Koodiyattam has been traditionally an exclusive art form performed in special venues in Hindu temples and access to these performances was highly restricted to only high caste Hindus. Also, performances are lengthy taking up to forty days to complete. The collapse of the feudal order in the nineteenth century in Kerala led to a curtailment in the patronage extended to Koodiyattam artists and they faced serious financial difficulties. Following a revival in the early twentieth century, Koodiyattam is once again facing a lack of funding, leading to a severe crisis in the profession.

UNESCO has called for the creation of a network of Koodiyattam institutions to nurture the transmission of the art form to future generations and for the development of new audiences in addition to fostering greater academic research related to it.

## Folk Dances

Folk dances are traditional dances of the masses that have been passed on through generations of various communities. These dances were identified by the castes performing them. According to G.Venu (1990), renowned dancer and scholar, "the arts of the rural folk express the dreams, hopes, joys, grief, belief and aspirations of that folk in easily intelligible and amazingly attractive forms" (1). There are a number of folk dances throughout Kerala. Many of the folk dances are synonymous with the caste names of the performers. Most of them are associated with rituals and are performed in natural surroundings in a temple or in the household of rich patrons without any stage setting. Makeup is simple using natural sources easily accessible to them. Listed below are some of the famous folk dances of Kerala. There are many more which are not mentioned here.

### 1. *Teyyam* or Kaliyattam

It is well known that among the primitive civilisations, heroes who dedicated their life for a noble cause were commemorated through folklore and ballads. The villagers' in order to commemorate their heroes organised festivals incorporating ritualism, vocal and instrumental music and dance and painting (Kurup 1973: 17). This form of folk art in Kerala is called *Teyyam*. Its origin is also linked to an ancient socio-religious ceremony and a sacred dance performance for the Goddess *Kali* or *Bhagawathi*, by which every village in Kerala was bound and had its own common shrine, in front of which the dance was performed on a regular basis. *Teyyam* is a popular ritual dance form of North Kerala, particularly in Kannur and Kasargod districts. The *Teyyam* represents a mythological, divine or heroic character. *Teyyam* is always performed by men. They also enact female roles wearing exotic make up and colourful costumes. There are over 350 *Teyyam*s performed in northern Kerala, of which *Raktha Chamundi, Kari Chamundi, Muchilottu Bhagavathi, Wayanadu Kulaveni, Gulikan* and *Pottan* (all names of various mythological stories being enacted) are the most spectacular. Unlike other dance forms of Kerala which are onstage performances, *Teyyam* is performed in front of village temples, without stage or curtains.

***Figure 3: Teyyam at Arayambath Tharavad Kalari, Kannur***

**Costume and Makeup** - Costume (**Fig. 3**) of the *Teyyam* makes it a spectacular dance form. The hierarchy of Gods, Goddesses, Heroes, Demons, Spirits and other mythical characters are personified in the plays. Different costumes like leaf dress, headdress, breast plates, arm ornaments, bangles, garland and other body decorations are to be prepared by the artists for performance. Some of the costumes are made up of tender coconut leaves, bamboo planks and they are used only for single performance. Preparation of these items of makeup and costume is a specialised art requiring skill and training. These are done by artists who have learnt the art through their family elders and the makeup is based on organic material available naturally in their surroundings like banana leaf, coconut, herbs, flowers, fruits etc. It is believed that the person performing *Teyyam* has curative powers. *Teyyam* is performed annually from October to May. It may be interesting to note that the source of light during this night long performance is basically *olachuttu* (torch made up of dried coconut leaves).

**Music** - Musical Instruments used in *Teyyam* are still the traditional ones i.e. Drum, Cymbal, *Kuzhal* (horn), *Perumbara*, Conch, *Cherututi*, *Utukku* and *Chermangalam*. The rhythm varies from one performance to another. The entire *Teyyam* is expressed in the form of singing and dancing by the same person and his companions. According to the style, the dance is classified as *Thandava* or the masculine and *Lasya* or the feminine.

## 2. Thullal

The word Thullal means ‘to leap or jump about playfully’. This art form emerged in the eighteenth century. A solo performance combining both dance and recitation, Thullal is the explication of a tale - normally drawn from the *Puranas* (ancient texts), narrated in verse. The Thullal performer sings and he is supported by another singer who repeats the verses and is accompanied by an orchestra of *mridangam*, harmonium and cymbals. The performer through the classical acting

techniques portrays the various characters in an episode and does the narration. Unlike Kathakali and Koodiyattom, the humorous and satiric mode of presentation and the use of simple Malayalam language made Thullal very popular among the ordinary people. Usually performed during festivals in the temple premises, Thullal does not require a stage or any other formal arrangement.

**Makeup -** The makeup, though simple, is very much similar to that of Kathakali. The face is painted with yellow arsenic mixed with blue. The eyes are blackened and lips reddened. The full painting of the face is retained for the expressive advantage. The dancer wears a breast-plate adorned with golden pearls, necklaces and colourful tassels. The white waist clothes resemble skirts. The head-gear is small, made of light wood, studded with bright stones and decorated with golden paper. The bracelets, amulets and waistbands with bells are almost the same as in Kathakali.

### 3. Aivar kali

This means the play of the five sets. This was a ritualistic art form performed in almost all important temples of Kerala. Today it is found in central Kerala. This is also known as *Pandavarkali*, which means the play of the *Pandavas*, (mythological heroes), and is performed by *Asari*, *Moosari*, *Karuvan*, *Thattan* and *Kallasari* communities. This ritualistic dance is performed beneath a decorated *pandal* (stage) with a traditional lamp at its centre. Five or more performers with their leader called *Kaliachan* enter the performance area after a ritualistic bath, with sandalwood paste over their foreheads, dressed in white dhoti, and with a towel wrapped around their head.

### 4. Arjuna Nritam (Mayilppili Tukkam)

Arjuna Nritam or Mayilpili Tukkam is a ritual art performed by men of Ezhava community in the Bhagawathi temples of south Kerala. The costume includes a garment made of *mayilppeeli* (peacock feathers). This garment is worn around the waist in a similar fashion as that of Kathakali. The performers have their faces painted green and wear distinctive headgears. The all night performance of the dance form is usually presented solo or in pairs.

### 5. Makachuttu

Makachuttu art is popular among Ezhavas community. In this, a group of eight performers, two each, twin around each other like serpents and rise up, battling with sticks. The techniques are repeated several times. Sandalwood paste on the forehead, a red towel round the head, red silk around the waist and bells round the ankles form the costume. This is a combination of snake worship and martial art forms of Kerala.

### 6. Parichamuttu kali

Parichamuttu kali is a martial folk-dance prevalent among the Ezhavas. It is also performed by Christians and some other Hindu communities. Its origins date back to when *Kalaripayattu*, the physical exercise of swordplay and defence, was in vogue in Kerala. The performers dance with swords and shields in their hands, following the movements of sword fight, leaping forward, stepping back and moving round, all the time striking with the swords and defending with shields.

### 7. Poorakkali

Poorakkali is a folk dance of the Ezhavas of Malabar, usually performed in Bhagavathi temples as a ritual offering during the months of March/April. Poorakkali requires specially trained and highly experienced dancers, trained in *Kalaripayattu*, a system of physical exercise formerly in vogue in Kerala. Standing round a traditional lamp, the performers dance in eighteen different stages and rhythms, each phase called a *niram*.

### 8. Thitambu Nrityam

It is pure dance, completely absorbed in, and regulated by rhythm. Surprisingly, it has not been included among the temple arts of Kerala though connoisseurs admit that this is an art, and a ritualistic one. It is believed that this dying art form came to Kerala from its neighbour Karnataka. It is performed by male members of the priestly class i.e. Namboodithiris who carry the replica of the idol on their head while dancing to the tune of drum beats.

## Challenges faced by Dance Forms of Kerala

Kerala is one of the most developed states of India. It has the highest literacy rate in the country. Due to high levels of education Kerala society has undergone remarkable change. Caste system is no longer practiced although people are aware

of caste groups. Education has opened avenues of employment for the rural folk who no longer have to depend on the professions assigned to them traditionally as part of their respective castes. However, the decline of the caste system affected many traditional art forms especially dance forms. Over the years with the advent of computers and fast paced lifestyles younger generations are not keen to take up any profession that requires years of training including dancing. This generation is not keen on taking up traditional art forms that are symbolic representations of caste groups.

**Solutions for Safeguarding Traditional Dance Forms**

Most of the traditional dance forms survived with the patronage of the ruling or upper classes/ castes. With the decline of the traditional social hierarchy and set up, the dance forms too started to decline. The traditional dance forms can only survive with active intervention of the government. While the governments at the Centre and State levels have created academies to monitor and support art forms, much more is required. The senior artists need to be identified and they need to be supported monetarily. This would be an encouragement to take up new students under their fold and pass on their art to the next generation. Also, these art forms need to be popularised throughout the country for which there could be periodic interactive workshops among the artists of various states or within one state. Also India has some of the richest industrial/ business houses. They may be encouraged to take up sponsorship of some of these dying art forms. Many of these dying art forms could be showcased as part of our traditional culture in tourism promotion programmes. Though this may draw flak from the conservative groups of artists, at least the dance forms will be kept alive for future. Efforts to document these dying art forms which may be lying scattered in different places may also be sponsored by these business/industrial houses.

What is of utmost importance is to ensure that the future generations know of these dance forms which were once the most popular sources of entertainment for their ancestors. It is also important to share and preserve this traditional knowledge.

## Glossary

| | |
|---|---|
| *Brahmins*<br>*Kshatriyas*<br>*Vaisyas*<br>*Shudras* | Names of four caste groups among Hindus in India |
| *Ezhavas* | A backward community in Kerala |
| *Kari* | Denotes Black facial colour used in Kathakali |
| *Kathi* | Denotes red facial colour used in Kathakali |
| *Pachha* | Denotes Green facial colour used in Kathakali |

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# Baliphonics: Adaptation of Sri Lankan, Low Country, *Bali* Ritual Music on to the Concert Stage

*Sumuditha Suraweera*

## Abstract

*Reviving local interest in a diminishing form of traditional music can be achieved through musical collaboration. Commercially-oriented collaborations do impose the risk of demeaning the traditional music involved. However, with careful consideration, it is possible to effectively adapt traditional music on to the concert stage within a collaborative ensemble framework. Such attempts can also provide opportunities to expose and create interest in traditional music on a more global level. The Baliphonics is one such ensemble that adapts Sri Lankan, Low-Country, bali ritual music of the Raigama region on to a musical context that includes elements of Contemporary Improvisation, Modern Jazz and Sound Art. This paper discusses issues and challenges faced during the Baliphonics collaborative process, focusing on musical analyses of the bali ritual music in its original context as well as the Baliphonics ensemble.*

The Low-Country tradition of music geographically represents the Western and Southern provinces of Sri Lanka. It is one of three distinctive musical traditions that are identified with the Sinhala Buddhist community of the island. Of the other two, Up-Country represents the central hill areas and Sabaragamuwa is named after a province that is in the central region between the Low-Country and Up-Country. The music of all three traditions was essentially developed and nurtured within the framework of the Sri Lankan ritual. Rituals are identified under three categories:

1. *Bali*- Smaller rituals, usually intended for an individual, where the deities associated with *graha* (planets) are invoked and pacified, in order to ward off their evil influences,
2. *Tovil*- Rituals carried out to ward off evil influences inflicted by demons and
3. *Maḍu*- Larger rituals, carried out with the intention of bringing prosperity for the entire village and community.

The ritual and music in focus here is the *bali* ritual, particularly, its version from a

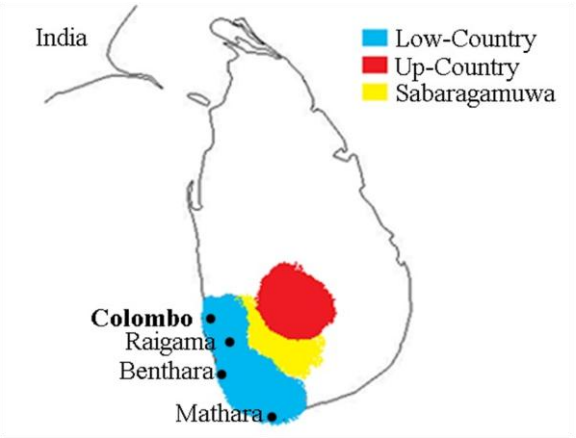


***Figure 1: Map of Sri Lanka and the Regions of Traditional Music***

region within the Low-Country, known as Raigama (**Fig. 1**).

The current trends of the Low-Country *bali* ritual suggest that its practice is diminishing. This is particularly true within the Raigama tradition, where the number of *bali* rituals performed by its expert practitioners has steadily decreased, even within the past five years. It is also becoming more common to exclude important musical aspects of the performance such as the drumming within the performance of private rituals.[1] With such a trend, it seems unlikely that the ritual will continue to provide a healthy nurturing performance context for the Low-Country music in the future.

Having studied the *bali* ritual in-depth and being an experienced musician in contemporary Jazz musical forms, the author of this paper finds himself to be in a unique position to proactively engage in a means to keep the *bali* ritual music alive. Most importantly, he believes that music of this ritual deserves to be kept alive outside of the ritual context. The author believes that music can be effectively adapted on to the concert stage within the framework of a collaborative ensemble, which in turn can expose and create interest for the original ritual music locally and internationally.

This paper examines such an initiation by the author, a collaborative ensemble known as the Baliphonics. The Baliphonics adapts the music of the *bali* ritual in the Raigama region of the Low-Country tradition into a musical context that includes elements of Contemporary Improvisation, Modern Jazz and Sound Art. The collaborative process of such an ensemble needs careful consideration, if the essence of the traditional music involved is to be effectively transformed into the new setting. The paper highlights the issues and challenges faced during the collaborative process, both musical and non-musical.

The content of this paper is drawn primarily from the author’s own research

over the past eight years. In particular, the content of musical aspects of the *bali* ritual in its original setting is derived from the author's doctoral dissertation (Suraweera 2009). This includes field-work carried out between 2006-2009 with extensive research interviews and discussions with the late Sandhoris Jayantha.[2] From 2007 to date, further research was carried out, attending rituals performed by a family of ritual experts in the Raigama region (introduced in Section 2). The content on the Baliphonics ensemble is drawn from an ongoing project, currently involving two ritual experts, two Western musicians and the author. In terms of transliteration, Sinhala terms in this article use diacritical marks according the system presented in *A Dictionary of the Sinhalese Language* (Geiger 1935: i). The musical analysis is supplemented with transcriptions that use a Western-based notation system devised by the author.

The topic of transforming the *Bali* ritual music of Sri Lanka for the concert stage is organised under the following sections: 1) *Bali* Ritual Background 2) Ritual Experts in this Study 3) Musical Aspects of the *Bali* 4) Baliphonics Ensemble and its Musical Aspects 6) Non-Musical Issues and Challenges of Baliphonics.

## 1. *Bali* Ritual: Background

The term *bali* refers to an offering of a gift or oblation (Kariyawasam 1986: 13). The *bali* ritual stems from a belief in the benevolent and malevolent influences of the nine *graha deviyo* (planetary deities) on humans. It is often intended for a particular individual. During this ritual, the planetary deities are invoked and pacified in order to ward off their evil influences. The deities are *Ravi* (sun), *Candra* (moon), *Kuja* (Mars), *Budha* (Mercury), *Guru* (Jupiter), *Sukra* (Venus), *Sani* (Saturn) and *Kētu*, the ascending and descending modes of the moon. Each planetary deity, among other things, has its own particular form, colour, vehicles, weapons and preferred foods (De Silva 2000: 23-24). Though the *bali* ritual contains some demonic references, it is not regarded as a demonic ritual per se.

It is believed that from birth to death, an individual passes through periods over which certain planets have authority. The duration of these periods can be known in advance by referring to a horoscope that charts relevant planetary movements. A horoscope is cast at one's birth, and is often consulted at times of crisis or illness. If it is ascertained that an individual is under a planetary

combination with a harmful influence, a *bali* ritual may be recommended to weaken these influences (De Silva 2000: 15-22).

Scholars agree that the present version of the *bali* practiced in Sri Lanka originated in the Kotte period[3]. Prior to this period, there had been an established practice of Indian Brahmins visiting Sri Lanka to conduct *bali* rituals for royals and other privileged people in exchange for considerable amounts of money. One story[4] revolves around one such Brahmin in the ritual trade, known as Pandit Ramachandra, and Sri Rahula of Totagamuva, a popular nationalistic monk at the time, who was determined to reduce the power of the Brahmins. The monk invites the Brahmin to perform a *bali* ritual at his temple. Without the Brahmin's knowledge, the monk instructs his skilled disciple, Vidagama Maitree Thero, to transcribe the whole ritual as it is carried out. At the end of the ritual, the monk Rahula claims that he recalled a similar ritual to the one just performed stored in the collection of palm leaf texts at his temple. When the Brahmin is shown the text, he realises that he has been tricked. He feels embarrassed and leaves, vowing never to return again. De Silva states that "Rahula deliberately stole the knowledge of the *bali* ritual from the Brahmin and gave (it) a Buddhist appearance by placing it under the Buddha" (De Silva 2000: 38).

The physical set up of the rituals witnessed during this study consists of one main altar dedicated to the planetary deities. This is made from plantain stems and coconut leaves, often using a chair as a base. The backdrop of this main altar displays pictures of the planetary deities. A decorated tray placed inside this altar is used to place the offerings of food to the deities during the ritual. A number of ceremonial objects are placed on a tray in front of the altar. The patient sits on a mat directly opposite the main altar. At the start of the ritual, a white curtain is held in front of the patient, which is later removed during the ritual.

## 2. Rituals of the Contemporary Experts

The rituals witnessed by the author during the research period were conducted by a highly respected family of three ritual artists from the *Raigama* region: Daniel Rupathilaka and his two sons Prasantha and Susantha.

Daniel, currently 70 years of age, is one of the most respected dancers of the tradition and he actively engaged in ritual performances till recently. Being born into a family lineage of traditional Low-Country arts practitioners, Daniel learnt Low-Country drumming, dance, painting, sculpture and astrology from his father

Simon Fernando, who was a respected artist during his time. For Daniel, Low-Country performance has become an intuitive art form as a result of years of experience performing in a countless number of rituals. In recognition of this service to the Low-Country arts, Daniel was awarded a Presidential Award in 1996.

Prasantha (born in 1972), the youngest son of Daniel, is a rare exponent of traditional drumming, as he is equally experienced and established in both the contemporary music scene as well as the rituals. His ritual experience began from the age of fifteen, when he started accompanying his father. His experience as a contemporary musician began in 1989 when he worked as an artist for the International Peace Council of Sri Lanka for seven years.[5] Prasantha has a collaborative nature and this is evident from his career; he has designed and built a drum which has Sri Lankan and Japanese influences, performed at the WOMAD (World of Music Arts and Dance) Festival in Singapore and Sri Lanka, and conducted a drum orchestra of 350 drummers, which was commissioned by the International Cricket Council. Currently Prasantha is a member of the Sri Lankan State Dance Ensemble and has become a respected teacher with a wide community of students.

Susantha (born in 1970), the elder son of Daniel, is also a well established traditional artist in Sri Lanka. Susantha, too, was exposed to ritual performances at a young age, where most of his learning occurred through his father and grandfather. Like Prasantha, Susantha has also been a member of the State Dance Ensemble. Susantha is currently the only permanent musician in the area of traditional music at the Sri Lanka Broadcasting Cooperation. His collaborative nature is also apparent throughout his career, where he has performed with a number of leading dance ensembles and artists in Sri Lanka: Chithrasena Dance Ensemble, Budhawatta Dance Ensemble, Ravibandu Vidyapathi and Panibaratha.[6]

## 3. Musical Aspects of the *Bali*

Most ritual experts believe that there are 35 types of *bali* (De Silva 2000: 30). However, the most commonly practiced *bali* performed by the ritual artists above is known as the *graha tovile*.[7] The following detailed chronology shows the overall structure of the *graha tovile* and how the music is accommodated.

1. Invite the patient to sit and light oil lamps.
2. *Magul bera* (ceremonial drumming, discussed in Section 3.2) and the observance of the five precepts.
3. Recitation of verses in salutation to the Three Refuges, various deities including the deity of the land.
4. Verses of *bali* ritual inception. These are introduced with *āṣirvāda kavi* (verses of blessing). The inception story mentioned is the one that revolves around Vijaya, believed to be the first King of Sri Lanka, and Kuveni, a demon Queen (Kariyawasam 1986: 19-28).
5. Verses of inceptions of the ceremonial objects are placed on the patient's feet. The objects include a coconut, some rice, *mōl gaha* (pole used to crush grains), and two medicinal plants known as *tolabō* (*crinum asiaticum*) (n.a. 2006) and *sīrässa* (*cissus quadrangularis*) (Bambaradeniya et al 2006: 26).
6. *Pirit huya* (chanting of the thread with *pirit*, a Buddhist chanting ceremony).
7. The curtain blocking the view of the altars is unveiled and offerings are made to the deities.
8. *Graha kavi* (verses for the planetary deities). These verses mention the weapons and qualities of the deities. The segment includes invitations and healing songs.
9. Blessings with oil lamp threads using verses known as *set kiyaman* or *sirasapāda*.
10. Requesting the deities to leave with the offerings and warding off the malevolent spirits.
11. Giving thanks. The ritual concludes with *pūjā bera* (a solo drumming pattern dedicated to give thanks).

The two main musical components of the ritual are drumming and singing. Dance is also a performance aspect that is inseparable from the music. The following musical analysis will mostly be limited to the drumming, with some references to the singing, as serious analysis of the latter is considered beyond the scope of this

paper. The musical transcriptions intend to give some insight into how the patterns are originally played on the Low-Country drum. For example, the notes on either side of the line represent different sides of the drum. *Akṣara* (drum syllables) that make up the drum patterns are written above the notation.

### 3.1 Segment 1

All segments of the ritual consist of singing and chanting delivered in a number of different styles, depending on the content and type of text. Microtonal intervals are a primary feature of the singing. During the ritual performance, artists generally sing in a 'call and response' style, alternating the lines of a verse between each other. Performers also have the freedom to shift the pitch or tonal centre of a given verse depending on the atmosphere and energy of a given moment. An overview of the singing is shown in (**Table 1**) with the different singing styles identified.

| **Vocal delivery style** | **Text** | **Range** | **Drums** | **Dance** |
|---|---|---|---|---|
| Pitched Recitation A (PR-A) | text set to the musical metre of a repetitive pattern | 3-4 semitones | Yes | most occasions |
| Pitched Recitation B (PR-B) | lines of verses are short, these are lengthened to fit the musical metre of a repetitive pattern, recognized as *keṭi kavi* | 3-4 semitones | Yes | Yes |
| Pitched Recitation C (PR-C) | no text, melody is sung using sounds of *tā* and *nā,* set to musical metre of repetitive pattern, identified as *tānam* singing | 3-4 semitones | Yes | Yes |
| Pitched Recitation D (PR-D) | no text, melody is sung using sounds of *tā* and *nā,* set to longer patterns with an irregular beat | 3-4 semitones | Yes | Yes |
| Pitched Recitation E (PR-E) | not set to a metrical metre, texts generally are in honour of the Three Refuges | 3-4 semitones | None | None |

| | | | | |
|---|---|---|---|---|
| Pitched Recitation F (PR-F) | text set to musical metre of repetitive pattern, only occurs in *bali* ritual | 10 semitones | Yes | Yes |
| Un-pitched Recitation A (UPR-A) | Un-metrical. Text recited with attack, only in offerings in *tovil* and *bali* rituals | None | Yes | None |
| **Table 1: Vocal Delivery Styles in Low-Country Rituals** | | | | |

### 3.2 Segment 2

*Magul bera*, a solo drumming piece, is considered to be essential knowledge for every professional drummer. In Sinhala culture, the *magul bera* pattern is performed at most events that are considered to be auspicious. Older artists believe that the particular combinations of *akṣara* groups in the *magul bera* contain the power to create such an environment. The *magul bera* demonstrates the expressive qualities of free and stretched timing in Low-Country drumming to the highest standard. It is one of two Low-Country drumming patterns which do not accompany the voice or dance[8]. Drummers regard the pattern to be one of the most important in the drumming repertoire. The piece consists of three *vaṭṭams* (movements) which are dedicated to the Three Refuges. Each *vaṭṭama* includes drumming phrases that are strung together with *akṣara* sequences free of a regular beat or measure. The first *vaṭṭama* of the *magul bera* is shown below (**Fig. 2**).

### 3.3 Segment 3

Unaccompanied verses are sung in the style of PR-E.

### 3.4 Segments 4, 5, 6, 8 and 9

Verses in these segments are accompanied using a collection of drumming patterns. The pattern below (**Fig. 3**) is used only to accompany verses known as *keṭi kavi* (sung in the style of PR-B) at the beginning of a segment.

On the contrary, the following patterns are played more frequently and accompany most of the verses sung in meter. For the purpose of analysis, the patterns are labelled pattern A (**Fig. 4**), pattern B (**Fig. 5**), Pattern C (**Fig. 6**), Pattern D (**Fig. 7**) and pattern E (**Fig. 8**).

In addition to the above, there are a number of patterns that are played exclusively in segments 8 and 9. One particular pattern is one that is in 7 beats (**Fig. 9**).

Patterns A to E feature heavy embellishment and improvisation depending on the skill of the performer. There are also a number of transitional patterns and endings (codas) known as *iratti* that provide a sense of arrangement to the performance. Each pattern has several *iraṭṭi* associated with it and their performance depends on the skill of the dancer and availability of time. Typically, when a similar pattern is performed on more than one occasion, a different *iraṭṭi* would be performed during its second performance.

Two examples of codas for pattern A and pattern C are shown in **Figs. 10 and 11** below.

Ritual artists have the ability and freedom to sing a particular set of verses phrased in a number of different ways. This allows any given verse to be performed with one of many patterns listed above. For example, the verses that mention the inception story of the *bali* can either be sung to the accompaniment of pattern A, pattern B or pattern C. Within the ritual context, the choice of pattern used within these segments is generally dictated by the enthusiasm of the audience, availability of time and energy of the performers. The experienced artist, who knows each corresponding transitional pattern and coda by heart, follows the singer freely without difficulty. This important feature of the music introduces a strong element of spontaneity and improvisation to the performance.

### 3.5 Segment 7

Musically these segments contain no new material.

### 3.6 Segment 10

A very intense, high-energy version of pattern B is performed during this segment, as the drumming accompanies the act of warding off malevolent sprits of the ritual space.

### 3.7 Segment 11

The final segment of the ritual features the thanks giving pattern known as the *pūjā bera,* which is shorter but of a similar nature to the *magul bera* in segment 2.

The content of the paper up to this point presented the music of the *bali* ritual in its original context. The intention of this background material is to provide the reader with some appreciation of the depth of musical understanding required of this traditional music, if it is to be effectively adapted into a new musical setting within a collaborative ensemble.

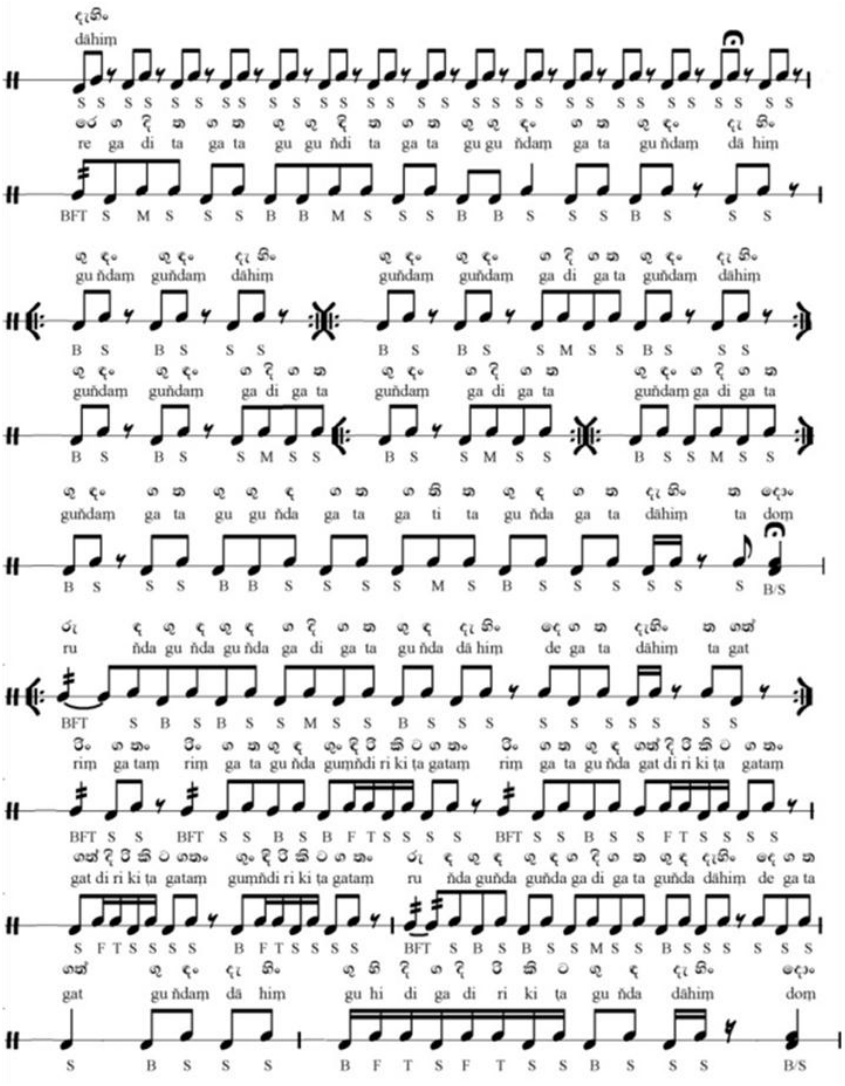


***Figure 2: First Vaṭṭama (Movement) of the Magul Bera***

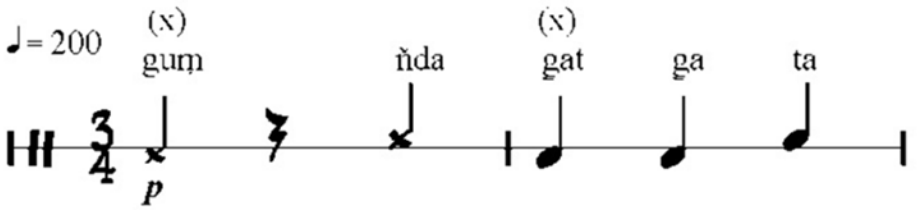


***Figure 3: Pattern Used for Keṭi Kavi***

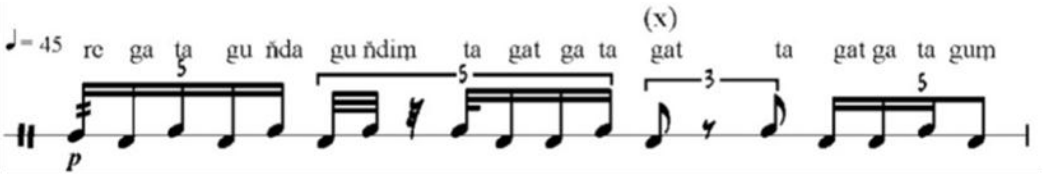


***Figure 4: Pattern A***

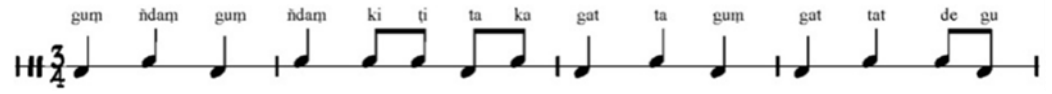


***Figure 5: Pattern B***

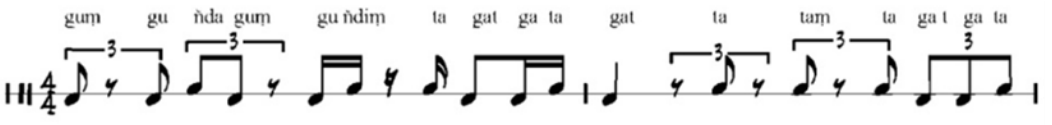


***Figure 6: Pattern C***

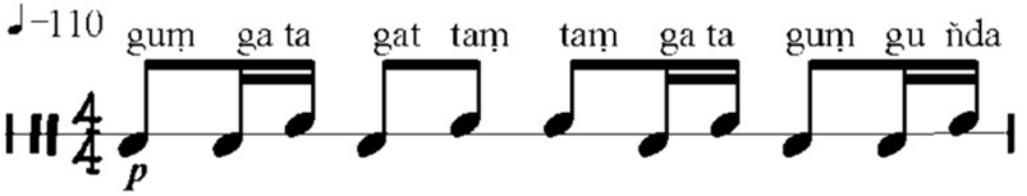


***Figure 7: Pattern D***

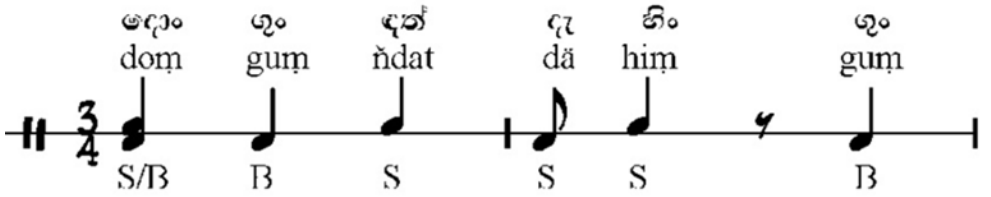


***Figure 8: Pattern E***

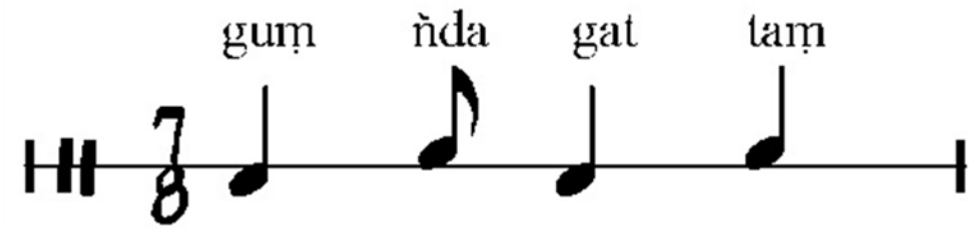


***Figure 9: Pattern F***

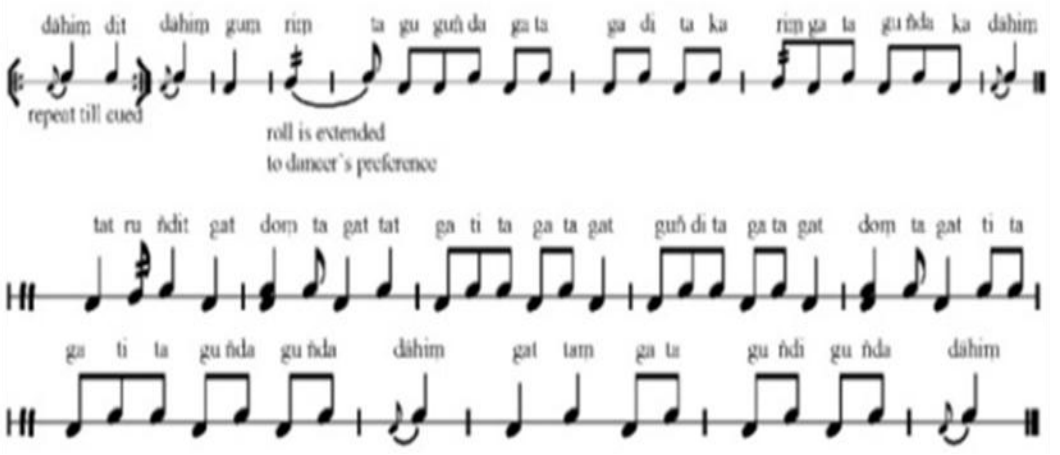


***Figure 10: Coda (Pattern A)***

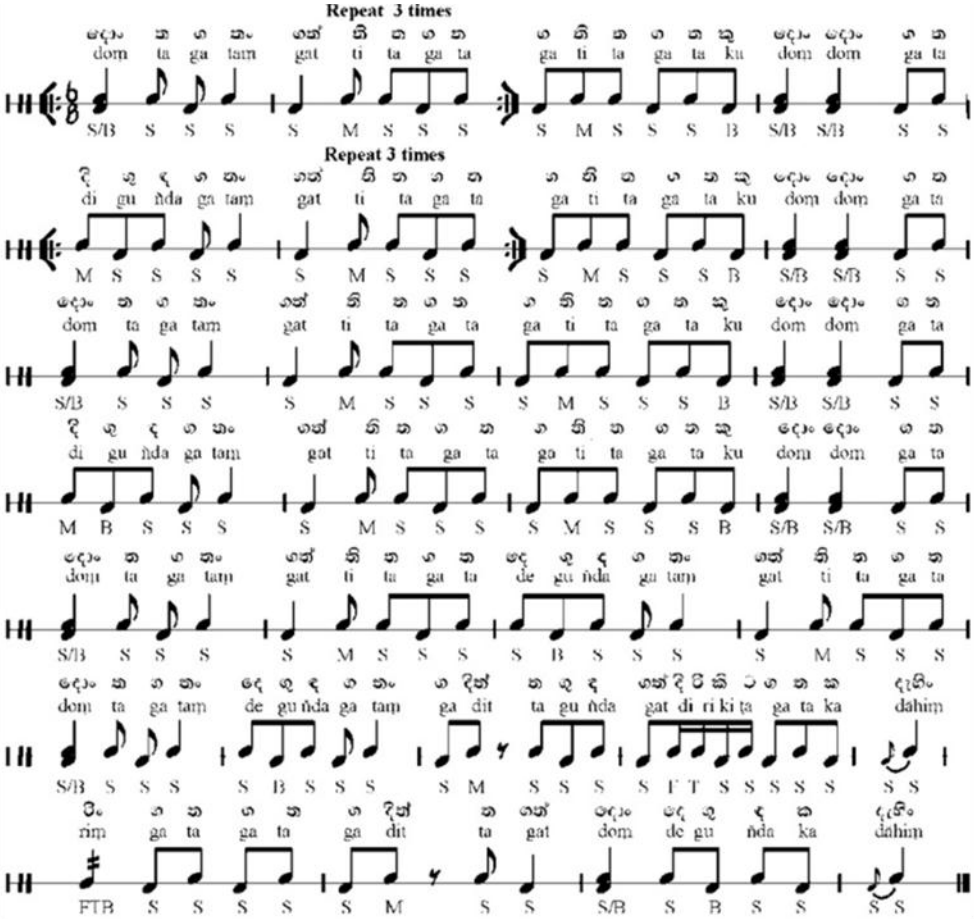


***Figure 11: Coda (Pattern B)***

## 4. Baliphonics Ensemble and its musical aspects

Baliphonics, being an experimental ensemble, adapts the music of the *bali* ritual into a musical context that includes elements of Contemporary Improvisation, Modern Jazz and Sound Art. Since the groups' establishment by the author in 2008, the Baliphonics has evolved in terms of personnel, ensemble size and instrumentation. The author considers these experimentations to be essential as a collaboration of this nature requires constant re-evaluation and refinement.

Initially, the ensemble consisted of the three ritual artists in this study, three musicians from New Zealand (Reuben Derrick, Misha Marks and Isaac Smith) and the author. The instrumentation at this initial stage included the saxophone, guitar, double bass, drum set, Low-Country drum and voices. The role of the New Zealand musicians was to find a collective approach in order to musically respond to the ritual music within the contemporary Sound Art framework. The drum set which was starting to adapt the Low-Country drumming characteristics, acted as the bridge between the two groups of musicians. Due to impracticalities of managing such a large group and the challenge of committing all the members to gain an in-depth knowledge of the ritual music, the number of members in Baliphonics was reduced to three in 2011.

The second rendition of the ensemble consisted of the author on the drum set, Isaac Smith on double bass and Eshantha Peiris on viola. The approach at this stage was to perform the ritual music instrumentally, without the element of voice. Although the reduced number of members made it much easier for the group to immerse itself in the ritual music, communicating the original style of the singing on the viola proved extremely difficult. The omission of the Low-Country drum during this stage allowed the author to further develop his own style of adapting the ritual drumming on to the drum set.

The instrumentation of the current rendition of Baliphonics consists of piano, double bass, drums and two voices. The members in the ensemble include two of the ritual artists Prasantha and Susantha Rupathilaka, Eshantha Peris, Isaac Smith and the author.

### 4.1 Members of the Current Ensemble

The calibre and experience of the ritual artists in the current ensemble was already established during the initial sections of this paper. Backgrounds of the other musicians, including the author, are as follows.

Eshantha Peiris, a Sri Lankan based musician, completed his diploma in Piano Performance from the Associated Board of the Royal Schools of Music. From 2003-2008, Eshantha attended New York University's Steinhardt School, where he earned Bachelor's and Master's degrees in Music Performance and Composition. While at NYU, he also served as assistant conductor of the NYU Orchestra and as an adjunct instructor in the piano department. Eshantha is currently a conductor of the Symphony Orchestra of Sri Lanka, director of a

number of active local choirs such as the Old Joes Choir, Contempo Choir and the Senior Choir of Wesley College.

Isaac Smith graduated from the New Zealand School of Music Jazz Programme with a major in Double Bass in 2007. Smith currently resides in Sri Lanka, engaging in musical activities and voluntary music teaching. Prior to his voluntary work in Sri Lanka, Smith was an established and active member of the New Zealand creative and improvised music scene, frequently performing in venues and festivals around the country. In 2004, he was awarded best overall bass player at the Palmerston North Youth Jazz Combo competitions at the Manawatu Jazz Festival. Among his professional experience, Smith has worked extensively both as a musician and director for New Zealand theatre companies Indian ink and Ake Ake Theatre Company.

The author attained his doctorate in ethnomusicology in 2010 from the University of Canterbury in New Zealand. His research focused on Sri Lankan Low-Country traditional drumming. Prior to this, in 2005, he completed a Bachelor of Music in jazz, majoring in drums, with first-class honours. Suraweera has been a performing jazz musician in New Zealand for around ten years and has performed in some of the major Arts and Jazz Festivals in New Zealand. His own ensembles tend to focus on experimentation with Sri Lankan traditional musical material. Aside from the Baliphonics, he has initiated a number of other collaborative groups including the Serendib Sextet and the Music Matters Collective.

### 4.2 Baliphonics Performance Structure

The duration of a typical Baliphonics performance varies between 40 to 50 minutes. The musical content for this programme is drawn from material presented previously in the Musical Aspects of the *Bali* section. As the focus of Baliphonics is to adapt purely the musical elements of the ritual, the programme can be structured keeping musical interest and variety as a primary objective. The structure of a typical Baliphonics performance is organised as follows:

1. *Magul bera*: The solo drum piece provides a very strong introduction to the performance and exposes the expressive nature of Low-Country drumming immediately.

2. Verses from segments 4 and 5 of the ritual: This segment in the programme allows the ensemble to explore music based in various drumming patterns along with their transitional segments.
3. Verses from segment 8, dedicated to planetary deities: The music from this segment showcases a drum pattern in 7 beats.
4. Verses from segment 10 of the ritual: the intensity of this music allows the performance to reach a climax just before its conclusion.
5. *Pūjā bera:* This short solo drum piece, along with the *magul bera* at the start of the programme, acts as an effective frame for the programme.

In item 2 above, the ensemble retains the element of improvisation in the structure of the verses, similar to a ritual performance, giving each Baliphonics performance an exciting live-edge. This element of spontaneity demands a thorough understanding of the drum vocabulary and singing style from all members involved.

### 4.3 Instrumentation

The two voices and their singing styles are essentially uncompromised with the current instrumentation and their specific roles. Recitations are presented in the original style, retaining the microtonal elements, while the artists are encouraged not to restrict their voices by agreeing upon a tonal centre for a particular set of verses. Retaining this element required a lot of preparation from the pianist and the bassist as they need to be able to instantly adapt to new pitch centres when following the singing.

Continuing with the approach of the previous Baliphonics rendition, the current ensemble does not include a traditional Low-Country drum. Instead, the author adapts the ritual drum language to the Western drum set. This is an in-depth study of its own right which has taken a number of years to develop, where inspiration and guidance was sought from international musicians of high calibre who have taken similar approaches with different traditional musics.[9] While this shows that the Low-Country drum language is worthy enough to be learnt on another instrument, it also provides the local listener with some intense familiarity within a new experimental ensemble.

The role of the piano in the current ensemble is to communicate with the singers, using scales and harmonic clusters that extend to the melodic content of

the singing. The pianist also draws upon the rhythmic structures of the drum patterns. An approach that is intentionally avoided is to provide a harmonic backing to the singing in accordance with the Western ear[10], as this would compromise the raw quality of the singing style. The pianist is also prepared to shift pitch centres spontaneously so that the ritual musicians feel unconstrained, similar to the ritual.

The double bass in the current ensemble adds tonal depth by providing melodic content on the lower registers. In addition, it contributes to the group's sound by providing sonic and sound art textures using special effects pedals. This adds a completely new modern dimension to the music and presents an element which is familiar to the contemporary music listener.

## 5. Non-musical Issues and Challenges of Baliphonics

A significant challenge when attempting to promote and revive the *bali* ritual music to a local audience, is overcoming the response of the music being dismissed as irrelevant and old. An ensemble of the nature of Baliphonics faces this challenge by presenting some of the essential elements of the *bali* ritual music within a new musical context. Adaptation of the drumming language on to the Western drum set can be recognised as a significant contributing factor that would help towards gaining acceptance and new interest for the *bali* ritual music locally. The Baliphonics, in their performances, consciously attempt to break any old, negative conceptions and affiliations to the ritual music. For instance, currently during a performance, the singers wear a plain white costume as opposed to the fully blown ritual costumes. This also reduces the risk of the concerts being perceived as cultural exhibitions. The ensemble also exposes the rituals' music to an audience that is different from the public who currently follow traditional dance and drum concerts. Baliphonics performances are more likely to attract a contemporary audience interested in art and modernity, unlike the traditional ritual audiences who have little appreciation for the rituals' music.

Including the element of dance which is inseparable to the ritual music within a Baliphonics performance is believed to attract the most criticism locally. Being aware of this, the traditional artists of Baliphonics are weary of dancing on the Baliphonics stage locally. However, the author sees this as being detrimental to the development of the music as the artists naturally move and dance during the

rehearsal process. It is the author's belief that such unconsidered criticism halts development of the traditional arts.

A collaboration of the nature of Baliphonics would be hardly possible without a collective of serious and expert musicians who are open to experimentation. The relationships among the musicians must be built on long-standing trust and sincerity. It is imperative that the traditional artists involved have an attitude and urge to push the boundaries of their tradition. This attitude alone can attract a lot of criticism by conservative groups who do not encourage experimentation.

As the initiator of the Baliphonics ensemble, it is the author's sincere hope that each Baliphonics performance strives to achieve the spirit and embody the ritual so that the audiences locally and internationally would get a glimpse of how the ritual music would have been in its original setting.

## End Notes

[1]The Low-Country drum, known as the *yak beraya*, is a double sided cylindrical drum, covered with cow intestines on both sides. Drumming in private rituals is mostly requested to be excluded or kept to a minimum due to noise restrictions in urban areas.

[2] Sandhoris Jayantha (1930-2008) was one of the most respected ritual drummers from the Raigama tradition.

[3]"Kotte refers to a southwesterly Kingdom, 1371 – 1597" (Sheeran 2000: 959).

[4] The story given here is based on an interview with Sandhoris Jayantha conducted by the author.

[5] During these years Prasantha performed extensively in many countries throughout Asia, Australasia and the United States.

[6] With these ensembles Susantha, like his brother, has toured extensively in Europe, Asia, Australasia and North America.

[7] Even though the artist included the term *tovile* (*tovil*), it is clearly a ritual stemming from the *bali* ritual and does not belong in the category of *tovil* rituals.

[8] The other pattern is *pūjā bera* introduced in Section 3.7.

[9] Simon Barker is an Australian musician who has adapted Korean traditional drumming into his playing. Dan Weiss is an American drummer who takes a similar approach but with Hindustani Tabla playing.

[10]Intentionally avoiding harmonic structures that evoke Western chord progressions.

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# Tradition amidst the Challenge of Change: The Dance Ritual of the Eighteen Vannams in the Twenty First Century

*SinhaRaja Tammita-Delgoda*

## Abstract

*The theme of this paper is preservation and safeguarding of traditional knowledge and cultural expressions in the face of change and modernity. The established attitude towards the preservation of traditional culture is to record and document. There is another, more proactive approach; to keep the tradition in place while it is still alive, to nourish and sustain these forms of knowledge and expressions before they die out, to give them a place and a value in modern society. This article studies the performance of a traditional dance ritual conceived in this spirit.*

The most famous indigenous dance form in Sri Lanka, Kandyan dance derives its name from Kandy, the last bastion of the Sinhala Kings. The expression of an ancient tradition, the culture which sustained this dance form was founded on ritual, religion, custom, service and history. As these foundations have eroded, the nature of this art form has changed. Like all traditional forms of cultural expression, it is in danger of losing its identity and perhaps its very essence.

Traditional Knowledge generally refers to knowledge systems embedded in the cultural traditions of regional, indigenous, or local communities. Some forms of traditional knowledge are expressed through stories, legends, folklore, rituals, songs and even laws. In many cases, traditional knowledge has been passed for generations from person to person purely by word of mouth. Dance is one of these forms.

The theme of this volume focuses on the preservation and safeguarding of traditional knowledge and cultural expressions in the face of change and modernity. The established attitude towards the preservation of traditional culture is to record and document. "We must document it before it dies out- so that we will know what it is" (Garg 2011). Even if it does die out, we will at least remember. What we are left with is a study, a monument to the past. At times this is all we can do. However, this is only a reactive measure. The question I ask, is this enough?

There is another, more proactive approach; to attempt to keep the tradition in place while it is still alive, to nourish and sustain these forms of knowledge and expressions before they die out, to give them and their practitioners a place and a value in modern society. This presentation studies the performance of a traditional dance ritual conceived in this spirit.

**Patrons, Practitioners, Practice, Place, Purpose and Public**

These factors lie at the very heart of the challenges which traditional cultural expression faces in our societies. If we can understand and recognise their importance, their role and their place, perhaps we can help safeguard tradition and cultural expression as a living force for the future. As a task it presents a much greater challenge, requiring a multifaceted approach grounded in tradition, learning and knowledge, which is at the same time aware of the changing patterns of society.

The *Vannama* is the most recent of the great Kandyan dance rituals. The word *vannam* comes from the Sinhala word *varnana*, meaning descriptive praise (Mantilleke 2010). According to traditional knowledge, the *Vannam* dates back to the eighteenth century, to the reign of the Kandyan King Narendrasinghe (1707-39 CE), who was renowned as a great lover and patron of the art.

There are 18 *Vannams* in the Kandyan Dance tradition. Each *vannama* is a kind of recitation. Inspired by nature, history, legend, folklore, art and religion, they can be considered a repository of traditional knowledge and belief.

The eighteen classical *vannams* are the *Gajaga*, the dance of the Elephant, the *Thuranga*, dance of the Horse, the *Mayura*, dance of Peacock, the *Gahaka*, dance of the Conchshell, the *Uranga*, dance of the Reptiles, the *Musaladi*, dance of the Hare, the *Ukusa*, dance of the Eagle, the *Vairodi*, dance of the Precious Stone, the *Hanuma*, dance of the Monkey, the *Savula*, dance of the Cock, the *Sinharaja*, dance of the Lion King, the *Naiyadi*, dance of the Cobra, the *Kirala* dance of the Red-wattled lapwing, the *Iradi*, dance of the Arrow, the *Surapathi*, in praise of the goddess Surapathi, the *Ganapathi*, in praise of the god Ganapathi, the *Udara* expressing the pomp and majesty of the king and the *Asadhrusa*, extolling the merit of Buddha and the Triple Gem.

Each dance is composed and interpreted in a certain mood (*rasaya*) or expression of sentiment and involves several dancers, drummers, cymbal players

and one or two singers. The dancers take the centre stage while the drummers, cymbal players and singers stand to a side.

These rituals were usually enacted within the grounds of the Buddhist temple or *vihare,* in the presence of symbols associated with the Buddha, like the Bo Tree or the *Chaitya.* They were performed by hereditary families of drummers and dancers who were endowed with lands in return for their service. Although the society which once sustained them has disappeared, many of these families still survive to this day and are considered the master practitioners and teachers of this art form.

There remains a strong connection between Kandyan dance and Buddhist culture. During the Medieval period, at the order of the King, it was the duty of dancers and drummers to perform for the temple. In return, they were provided with land to cultivate and a house to live. In other words, Kandyan dance was patronised by temple which also helped to maintain the families of the dancers. Today, although feudalism no longer exists, traditional dance families like the *Amunugama* and the *Tittapajjala* remain highly dedicated to the traditions of Kandyan dance (Mantilleke 2010).

Over the last hundred years these foundations have been almost entirely eroded with the result that modern performances have become barely recognisable. Today the Patron is usually the state, a foreign academic or tourist organization, consequently the social dynamics are entirely different. So is the relationship between patron and performer. The Practitioners too, the drummers, the dancers, singers and cymbal players, often have very little historic or social connection with the ritual. For many it is merely part of a learned repertoire. Performed whenever, wherever and for whomever, it has little meaning and even less relevance. The Practice or ritual too is often shortened or adulterated for reasons of time, space and money. The result is that sometimes key ritual aspects are left out, ignored and even forgotten. The temple, the traditional space, is no longer The Place where these rituals are performed; it usually takes place in hotels and auditoriums. This cannot fail to have an effect on the nature of the ritual itself, the performers and the manner of their performance. As the Patron changes so the Purpose too must change. Instead of a being ritual enacted for the sake of it, it becomes a show or a spectacle, designed to entertain foreign visitors, generate funds or public support. The Public too in these cases is now very different. Instead of being the local community, it would now be an urban or foreign

audience with very little connection to the ritual, for whom this would be yet another form of entertainment.

On 30th January, 27th February and 27th March 2010, or Vannams were re-enacted under the stars, at the historic royal temple of Degaldoruwa, near Kandy. The intention was to re-enact the full performance of the *Vannam* ritual in the traditional setting in the traditional manner. The dances were performed in the same setting and same manner as in the heyday of the Kandyan Kingdom, by the descendents of some of the same families who once danced for the Kings.

Today the dancer is no longer given the opportunity to perform in the traditional manner and he has been forced to adapt himself and his art form to conform to the demands of space, time and place. The objective was to revive the traditional form of Kandyan dance and purify it of the influences which have been forced on it by modern society: to show how the ritual should be performed and to provide a proper stage and a model for masters, practitioners and students of Sinhala dance and drumming which will enable the art to continue

The key people associated with this undertaking embody the balance which must be maintained between the past and the present, the ancient and the modern. At many levels it represents a marriage between Modern Knowledge and Traditional Knowledge. One of the key figures was Sudesh Mantillake, a Lecturer at the Department of Fine Arts, Faculty of Arts, University of Peradeniya. A researcher, dancer and experimental choreographer, he is trained in Kandyan dance, Kathak and contemporary dance and is an authority on the theoretical and practical aspects of dance.

The drummers and the dancers were organised by Vaidyavathie Rajapaksha, whose family has danced for the Kandyan Kings for hundreds of years. Vaidyavathie is the daughter of the great dance master and drummer Amunugama Suramba and still maintains her family dance school in Amunugama, Kandy. Degaldoruwa is the temple where her ancestors were accustomed to perform.

The other principal element was the priests of the historic temple of Degaldoruwa (Delgaldoruwa Raja Maha Vihare, Sirimalwatte, Kandy, Sri Lanka), the High Priest, Ven. Amunugama Dhammarathana and its Chief Teacher, Ven. Ananda Thero. Both were conscious of the cultural and historic role played by the temple in the traditional patronage of dance and went to great lengths to support the event.

This ritual was held over three days over a period of three months. This was to enable all the participants to commit themselves fully and to ensure as far as possible that the whole ritual was fully enacted. The re-enaction of such a ritual on such a scale in such a venue raised many issues which will interest all those involved in keeping traditional knowledge and its art forms alive.

## Historic and Traditional Venue

The royal temple of Degaldoruwa was a venue where the dancers were accustomed to performing in historic times up till very recently. Not only did it have historic value, it still remains the centre of cultural and religious life in the village. Many of the dancers and drummers were from traditional families in the area who would once have performed for the king and the temple. For many Degaldoruwa was their ancestral village and the temple its centre, so it was here that their ancestors would have danced. They were performing in the setting they felt they were entitled to. Renewing their sense of history, it reinforced their sense of identity and place, imbuing them with pride and giving meaning to the traditional practice. Some troupes had never performed in a traditional setting before and for them this was a new experience; even they however recognised the dimension which this gave to the meaning of their art.

The Rural Location, in the heart of the village of Degaldoruwa, made a considerable difference. Here in the village, these rituals were not merely a show, but were part of a living memory and still had meaning. In some places they are still a part of daily life. In the case of the local drummers and dancers it clearly helped enhance their status in their own communities.

## Traditional Space

*Ves* dance was customarily performed inside the temple courtyard, in the shadow of the Bodhi Tree or the *Dagaba* (*chaitya*). This courtyard was usually a sanded space- as a space it was sacred, communal and informal. There was no distinction here between the Performer and Audience, who seated themselves in a wide in a semi-circle around the drummers and dancers.

**Modern Space *vs.* Traditional Setting**

Today most of these performances take place in a Theatre or Auditorium. A lot of the time this is more practical and more convenient. It is easy to arrange, easy to organise and easy to control. The main drawback is the lack of context. This cannot but help to undermine the sense of meaning and significance. More often as not it is just another performance.

The temple courtyard in which such recitals were enacted was usually a sanded space. Sand affords freedom of movement, rotation and flexibility. It is also easier on the limbs. In an auditorium however, space and movement tend to be more restricted and performers would only find themselves facing the front. The audience too was set back in rows and was usually located much further away from the performance, making the whole arrangement much more distant and formalised.

A Traditional Venue however**,** is much more complex. As a ritual or religious space it is governed by customary rituals which cannot always be changed or moved. Arrangement and organisation can be complex and involved. There are certain things which cannot be done at certain times. It is a completely different atmosphere to the stage or theatre where everything takes second place to the needs of the performance. Being in the open air, it is also vulnerable to the vagaries of weather.

The open air setting of the temple courtyard also had the effect of highlighting the Traditional Decoration and Lighting which was normally used on these occasions. Woven from coconut flowers and fronds, it was simple, minimalistic and participatory. The dancers, the villagers and their children all involved themselves in weaving and twisting the complex patterns into shape; an act of worship and participation by the whole community. Interwoven with Local environment and culture many of these traditional forms and motifs would not have featured in a modern production in an auditorium, for there would have been no need. What is Ritually and Culturally Significant in Traditional Context would clearly not have mattered in another environment.

In a theatre performance lighting is easy to arrange and control. Not only is it consistent and more reliable, it is also cheaper. The use of traditional methods like coconut lamps and torches lit by coconut oil creates a very different effect. Lacking the sharpness and clarity of artificial light, it is natural and soft.

Illuminating and reflective, its effect is gentle, bringing out the forms and shadows in flickering hues and tones. However it is far more labour intensive and much more costly. Unlike artificial light it is also irregular-for it is subject to the fluctuations of the weather, and exposed to the wind and the rain.

When an event takes place in a temple, the element of ritual and worship is an integral part of the recital. Although it is rendered meaningless in a theatre, it is important to remember that all the great 'Kandyan dances' are fundamentally rooted in the Buddhist tradition. The lighting of lamps is customary, so is the element of worship. There is also the sense of participation-something which the whole community joins in, to ensure the successful performance of the ritual and to make sure that the fullest benefit is received by all. Grounded as it is in the Buddhist tradition, the question that one must ask is what will happen to ritual and meaning when it moves away from its foundation. When tradition is tied to ritual and worship, these forces help it to keep it alive and vital. How much does tradition mean when it no longer has this foundation? Can it survive without it? Or will Kandyan dance, like ballet or tap dancing in the west, merely become another form of entertainment.

**People: Village *vs* Town, Community vs Audience.**

The nature of the audience is also a key factor. It is they who will decide and it is their faces which will reveal whether they are watching a Spectacle, a Ritual or Show? If the audience feels part of the ritual, identifies with it and understands it, then it will have meaning as a living ritual. If the audience is unfamiliar and uninvolved, what they see will be novel and exciting but it will remain a show.

These are some of the questions which are faced by any lover of traditional culture and any practitioner of traditional knowledge. Re-enaction is always fraught by complexity and it raises issues of many kinds, some of them political, some of them intellectual. To attempt to restore and to resuscitate is an ambitious undertaking**.** How can we be sure that we are achieving Authenticity? As Master drummer Ravi Bandu (2013) warns, "How can we be sure that we are not perpetuating folklorica?"

May be the best answer lies in the words of our keynote speaker, distinguished environmentalist Professor Sarath Kotagama. "We try to preserve through the law, we can do it through recognition and place" (Kotagama 2013).

If we seek to attempt to keep a tradition in place while it is still alive, perhaps this is the best we can do.

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# The Rickshaw and Rickshaw Painting in Dhaka City

*Firoz Mahmud*

**Abstract**

*The rickshaw is a human-propelled mode of transport on three wheels. Rickshaw painting is the embodiment of the rickshaw as it is seen all over its body. Dhaka City's rickshaw painting is the most enthralling representation of transport art in the world. The moving rickshaws are viewed as a roving exhibition of paintings—a mobile panorama which is seen nowhere else in the world. The rickshaws with their paintings create such a pervasive and emblematic feature of urban life in Dhaka City that it has given birth to social practices, rituals and festive events. To the general public, rickshaw painting, being colourful and stunning, is eye-catching. Its thematic pictures tell stories of Bangladesh, of everyday life, of what the rickshaw artists treasure as a kaleidoscopic view of their imagination. New rickshaws are always a blaze of colours and paintings in Dhaka City, which is rightly called the Rickshaw Capital of the World.*

Invented in Japan at the end of the nineteenth century (Gallagher 1992: 27) the rickshaw (*Ricksha* in Bangla) is a human-propelled mode of transport on three wheels for carrying both people and goods. It can accommodate two persons in comfort, even a whole family, or a heap of goods with a man holding it tightly.

Rickshaw painting is an integral part of the rickshaw. Rickshaw painting is a dynamic form of urban folk art in Dhaka City. We can assign it to traditional art since it has remained in fashion for a long time and has already acquired the trait of traditionalism by the prolonged use of it. This living tradition will survive until the rickshaw is totally discarded as a form of transport under the pressure of modern technology.

The rickshaw came into use in Dhaka City in 1938 when there were only six rickshaws (Rashid 1986: 2). In 1941, Dhaka City had only 37 rickshaws. In course of time Dhaka became known as the city of rickshaws. Dhaka City is the Capital of Bangladesh. Bangladesh, located in South Asia between India and Myanmar, consists of 64 districts. The rickshaw appears in all cities, towns and suburbs of every district. Even though the geographical range of the rickshaw and rickshaw painting is the whole of Bangladesh, the most prolific and predominant

centre of the rickshaw and rickshaw painting is Dhaka City where rickshaws are now most numerous in the world. The rickshaws of Dhaka City, apart from being most decorative and dazzling, depict all the known themes of rickshaw painting. More importantly, Dhaka City represents the best specimens of rickshaw painting in Bangladesh.

Being efficient and convenient as a mode of transport for short distances and highly decorative with thematic pictures, the rickshaws have become noteworthy and eye-catching. As the rickshaw is a slow-moving vehicle, the paintings that it carries are easily visible to the onlookers who can enjoy them fairly well even in the movement. The moving rickshaws are viewed as a roving exhibition of paintings—a mobile panorama which is seen nowhere else in the world. Joanna Kirkpatrick (2003: CD ROM), an anthropologist from the United States, who studied rickshaw painting extensively, refers to these rickshaws as 'transports of delight.'

Dhaka City's rickshaw painting is the most enthralling representation of transport art in the world. Transport Art is a worldwide phenomenon. But no other example of transport art can aesthetically be compared with rickshaw painting in Dhaka City. It is only in Dhaka City that every part of the rickshaw is decorated. Painted tassels, tinsel and twirling bits hang from its different parts. Painted plastic flowers sprout in the front and on the sides. Part of the aluminum sheathing and the entire rectangular plate of corrugated iron, both appearing at the rickshaw's back, have pictures elegantly painted (**Fig. 1**). The overall effect is spectacular. It is, however, not for overall decoration but specifically for paintings that this transport art of Dhaka City has become so significant and attractive and, therefore, is more appropriately called rickshaw painting.


***Figure 1: A Rickshaw with its Elaborate Paintings in Dhaka City***

Rickshaw artists fall into three groups. Rickshaw artists (**Fig. 2**) of the first group paint exquisite floral motifs and pictures of movie stars on plastic sheets, rickshaw artists of the second group paint thematic pictures on plates of corrugated iron, and rickshaw artists of the third group paint birds and floral motifs. Rickshaw artists of the first and second groups, commissioned by a master rickshaw mistri, work at home, as they do not paint anything on a rickshaw body.

***Figure 2: Rickshaw Artists***

They deliver their paintings to the atelier of the master rickshaw mistri. The master rickshaw mistri then selects a few painted plastic sheets and one painted plate. He sizes the painted plastic sheets. His equipment is a sewing machine. He sews the painted plastic sheets. He also uses scissors and templates to cut patterns of plastic tacks. Once the plate with a thematic picture is placed above the rickshaw's bumpers and all the painted plastic sheets and patterns of plastic tacks are used to embellish the rickshaw's hood, the final product is a gorgeously decorated and painted rickshaw (**Fig. 3**).

***Figure 3: Decorating the Rickshaw's Hood***

The rickshaw artists transmit their knowledge and skills to the apprentices by applying the hands-on-training method. Acquisition of the required knowledge and skills by the apprentices is largely based on a teacher-pupil relationship and is mostly dependent on imitation and incorporation of gestures.

Creativity is achieved by the apprentices through enjoyment and devotion to work. The rickshaw artists usually pass on their knowledge and skills to their children and close relatives.

Alinoor, Ahmed Hussain, Alauddin Ahmed, R. K. Das and Abdul Latif were icons in rickshaw painting in the past. They are a source of inspiration to the succeeding rickshaw artists. At present Syed Ahmed Hossain, S. M. Samsu, Dherendra Chandra Das, Rafiqul Islam (**Fig. 4**), Tapan Das and Saleh Mohammed are icons in rickshaw painting. They have visualised new themes to paint thematic pictures. Consequently rickshaw painting has been enriched. They are now using better enamel paints and superior brushes. The new generation of rickshaw artists is emerging under their leadership. The rickshaw artists are proud of their heritage and creativity.

***Figure 4: Rafiqul Islam***

Because of the writings of foreign scholars like Rob Gallagher (1992), Joanna Kirkpatrick[1] (2003) and Henry Glassie (2000) rickshaw painting is being appreciated beyond Bangladesh. An exhibition of rickshaw painting was held at the British Museum in London in the beginning of 1988. Rickshaw panels and hoods from Dhaka City are now in the collections of the Museum of International Folk Art, Santa Fe, New Mexico. Since the 1980s foreign residents in Bangladesh and tourists have been buying thematic pictures of rickshaw painting from the rickshaw artists. The rickshaw artists are being inspired beyond measure to carry on the established tradition, and they have earned respect for cultural diversity and human creativity.

Thematically rickshaw painting is repetitive. On a careful study we have found a typology of rickshaw painting based on its recurring themes, which are movie stars, animal scenes, rural scenes, urban scenes, religious similes, and historical events. In other words, all images of rickshaw painting fall under these

six broad categories. Floral designs and written words are subsidiary to the recurring themes. Within each theme there are many images, and these images persist for quite a while. How long an image will last depends on its popularity or the circumstance that has influenced its depiction, or on the whim of the artist who has introduced it. We can elucidate the following typology and the following trends of rickshaw painting:

**Movie Stars**

Rickshaw painting began with pictures of movie stars in the 1950s. While this theme recurs, movie stars constantly change. We all know that movie stars are not lasting figures. As a particular movie becomes popular, its hero or heroine, sometimes both, will appear on rickshaws. If a movie star becomes an icon, s/he will dominate the repertoire of the rickshaw artist as long as s/he does not fall out of favour or is replaced by another icon. During our fieldwork in November 2006, we found the pictures of the same movie stars on many rickshaws. They were then the most popular movie stars. We noticed that some of them were the current superstars of Indian Hindi films. Shabnur of Bangladesh and Karina Kapur of India were very common among the movie stars appearing frequently on rickshaws in 2006. When we talked to the rickshaw pullers, we found them quite familiar with these two movie stars, and some of them were their great fans. Female movie stars are more common in rickshaw painting. In 2013 Apu Biswas, Anika Kabir, Shaina Amin, Purnima and Borsha are the most popular movie stars.

Joanna Kirkpatrick emphatically holds that rickshaw art belongs to male public culture, even though she recognises Henry Glassie's discovery of women participating in rickshaw painting in Old Dhaka (Glassie and Mahmud 2000: 31). One of the strongest arguments that Kirkpatrick puts forward in support of her assertion comes from the recurrence of images of beautiful film stars with their "huge, alluring eyes," which are meant to excite the male public values of gazing, seeing, and longing (Glassie and Mahmud 2000: 31). In fact, she has chosen this female imagery as a "fitting overall visual metaphor" for her study of the rickshaw art of Bangladesh (Glassie and Mahmud 2000:31).

## Animal Scenes

Animal scenes (**Fig. 5**) are prolific in rickshaw painting. Birds or beasts are painted in different modes and postures or in combination of other scenes. Sometimes two parrots flank a flower or the Taj Mahal. Sometimes two peacocks flank the head of a lion. The animal scenes that are fascinating and frequently seen include a lion in the act of gripping a deer with its gruesome claws, a peacock confronting a placid cow with her calf, and birds flocking in colorful abundance. Huge animals in combat, such as an elephant and a tiger wrapped in a lethal embrace, are also found. In the middle of the 1990s, the rickshaw's most usual image of animals showed a pair of peacocks facing a white cow with her calf before her. There were also humorous depictions of animals such as animals performing civilised acts like marching in a traditional wedding procession. One picture, described by the artist as "The Wedding of Uncle Lion," showed the majestic lion seated in a palanquin which was being carried by two tigers. A deer was leading the wedding procession. Another deer was just behind the rear tiger-bearer. Dressed like a musician, this deer was playing a large wind instrument. A small animal, probably a rabbit, was seen in the center of the moving palanquin. Two peacocks, standing apart, were watching the wedding procession. The floor, upon which this ceremonial event was taking place, was painted in an *alpana*-like fashion with a large central lotus.

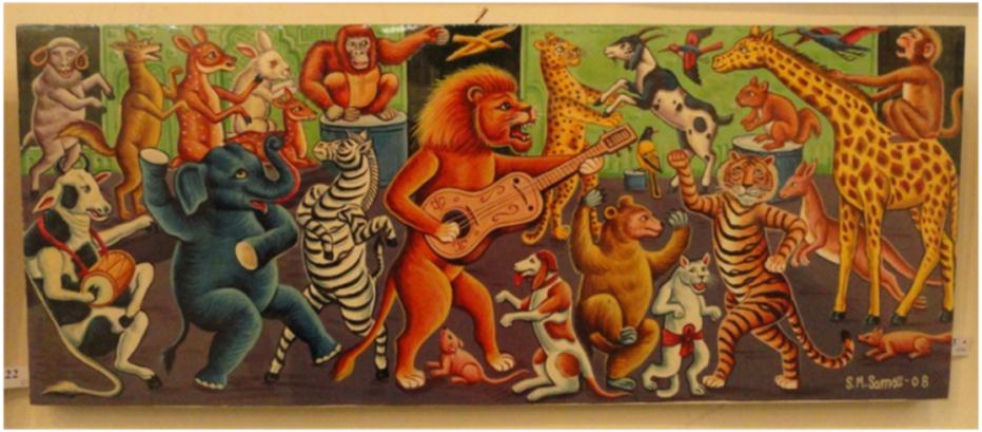

***Figure 5: Animal Imagery in a Rickshaw Painting***

A special feature of animal scenes is the representation of satirical animals. Satirical animals were popular with artists in Kalighat paintings of Kolkata in the mid-nineteenth century. It appears that the rickshaw artists of Dhaka began to depict animals as humans (as they are in folklore) sometime between the assassination of Bangabandhu Sheikh Mujibur Rahman on 15 August 1975 and Major-General Ziaur Rahman's accession to presidency as a result of the coup on 21 April 1977.

Joanna Kirkpatrick (2003), who studied the rickshaw art of Bangladesh extensively, writes:

> I began my first year of fieldwork in Bangladesh in September of 1975, shortly after the death of Sheikh Mujib. I was able to return to Bangladesh in the winter of 1978 for a shorter stint of fieldwork, but it was time enough to photograph and study some unusual shifts in Dhaka's ricksha art images. Two of the most notable thematic changes as compared to what I saw during my first visit were the appearance of many sorts of animal fable images, and birds—fantastically designed and feathered, often depicted in courtship poses—billing and cooing on rickshas all over the city (Kirkpatrick 2003: 7)

She (2003) further writes: "Animal fables had become common during a time of increasing Islamisation within the country" (Kirkpatrick 2003: 7). Kirkpatrick (2003) observed that Ziaur Rahman

> … had begun to ally his foreign policy closer to Bangladesh's former ruler, Pakistan (a nation which was then moving toward instituting Islamic religious law as the law of the land), and away from former liberation war helper India. He also adopted public relations strategies of portraying himself in newspaper photos as a pious man in prayerful poses while he actively wooed support from Bangladesh's Islamist political elites, positioning himself to run for the presidency in the 1977 elections (Kirkpatrick 2003: 7)

The article on secularism in the preamble of the constitution of Bangladesh was abolished under pressure from Muslim fundamentalist parties. Coincidentally, rickshaw painting, "which hitherto had included riotous celebrations on painted panels of movies and movie stars, sexy women and violent men, moved into restricted modes of expression which avoided depicting human figures, substituting animals" (Kirkpatrick 2003: 7).

Joanna Kirkpatrick also noticed the complete elimination of pictures from the rickshaw painting of Dhaka City. She (2003) writes:

> In the late seventies, the ruling powers in Dhaka were turning back toward emulating their former enemy Pakistan, because General Ziaur Rahman, who was then president of the country, perceived that it would benefit his hold on power to play up to the Islamic political parties and forces. Thus, an old law on the books since Pakistan days (1964) which proclaimed that people should not "paste up pictures on the back of rickshas" was re-invoked both in Dhaka and in Rajshahi by municipal authorities. (I have no information on the policy in Chittagong). This meant that "people pictures" were effectively suppressed (Kirkpatrick 2003: 8)

Even though human imagery returned in full vigour in rickshaw painting in 1983 satirical animals continued to be depicted as before. Satirical animal representation has remained popular in rickshaw painting since 1977.

## Rural Scenes

***Figure 6: A Rural Scene in a Rickshaw Painting***

While rural scenes (**Fig. 6**) continue as a theme, different rickshaw artists visualise them in their own ways. A rural scene could be a sprawling village or simply a cluster of houses with domestic animals around, it could be thatched huts near a river or simply a river flowing with crows flying in the sky, or it could be a boat gliding through the river toward the sunset or a heap of straw in front of a

hut. In 1995, while conducting fieldwork in Dhaka, Henry Glassie (1997: 436) photographed a rickshaw seatback showing three people—the driver with a stick in his hand and two passengers—in a bullock cart on a road with a thatched village in the background. The two passengers appear to be the husband and the wife. Interestingly enough, a peacock standing nearby is watching them.

## Urban Scenes

To the rural view, rickshaw artists add progressive urban images: towering buildings, crisscrossing aerial roadways, and visions of swift, mechanical transport. However, when a train thunders through the jungle or an airplane flies above a placid, thatched village, the urban scene becomes contemporaneous with the rural scene.

## Religious Similes

Religious beliefs of the majority of the population are often reflected in rickshaw painting. A mosque with its ablution pool, the holy Ka'bah with a little boy praying before a Quran stand or a blessing written in Arabic are among the most favourite religious similes. For many years, the Taj Mahal has been the favourite theme of the rickshaw artist. Most of the rickshaw artists and rickshaw pullers call it a mosque, some identifying it as a particular mosque in Dhaka. On the rickshaw, the Taj Mahal stands out from a unified field of colour and rises from a pink lotus in an image that captures the syncretistic qualities of culture in Bangladesh (Glassie 1997: 430). A mosque, as the Taj Mahal is believed to be, replaces the Hindu deity upon the lotus seat. This painting was found on many rickshaws in 2006, and it recurs in 2013. One can easily find differences in its presentation. There exist different images of the Taj Mahal. Why does it persist? Henry Glassie (1997) has explained it adequately. He has written:

> The Taj Mahal might be taken as a sign of general pride in the culture of the Indian subcontinent, but when I ask among the rickshaw pullers and artists, I find its connotations to be specifically religious. Some men know that the Taj Mahal is a tomb in India; they call it a "symbol of our Islamic heritage." More men identify it as a mosque, some even specifying it as their own mosque. Their interpretation entails a symbolic reading, rather than a literal one. For them the dome and minarets mean a mosque, so that the picture becomes

> capable of representing the mosque where they pray. (Glassie and Mahmud 2000: 29)

## Historical Events

Rickshaw painting flows with the time, and what we see on many rickshaws often reflects past or current events, which we would like to refer to as historical events. Such events constitute a recurring theme in the sense that the rickshaw artist may be inclined to choose any event or any figure in the context of a situation that once prevailed, existed in the immediate past, or is likely to receive our attention. Here are a few examples:

1. Immediately after the emergence of Bangladesh, rickshaws portrayed battle scenes or freedom fighters in action (**Fig. 7**), scenes of air or sea combat, or the new Bangladeshi flag. A common scene on many rickshaws was a Pakistani soldier being blown up by freedom fighters hiding nearby. Bangabandhu Sheikh Mujibur Rahman's portrait was also seen on rickshaws. Alinoor, a master rickshaw artist, depicted these images more frequently than others. As time went by, these images receded into the past. However, freedom fighters in action are reappearing in view of the current political situation, especially because of the trial of war criminals of 1971.

***Figure 7: Battle Scenes in a Rickshaw Painting***

2. Khudiram, a Bengali hero, who was hanged by the British in 1908, appeared in rickshaw paintings in 1982.

Phulan Devi, India's bandit queen appeared in rickshaw paintings in 1987. Phulan Devi was depicted as holding an AK 47. Saddam Hussein's portrait became common in rickshaw paintings in the 1990s, for he became a hero among the urban folk after the Gulf War. In some pictures, Saddam Hussein's hands lifted in prayer in the midst of a rocket burning an arc in the air.

In 2013, as in the preceding years of the twenty-first century, we found no heroic image on rickshaws. It appears that no one worthy of depiction caught the attention of the rickshaw artist.

## Floral Designs and Written Words

Floral designs and written words appear on rickshaws as general features of rickshaw decoration. Floral designs proliferate as more and more artists are involved in rickshaw painting. In 2006, we found some written words appearing on rickshaws. These written words give simple messages: *Ma* (mother), *Mayer Doa* (blessing from mother), *Allah Bharasa* (have faith in God), and *Namaj Kayem Karun* (perform your prayer). Either *Ma* or *Mayer Doa* appears almost on all rickshaws. A peacock is sometimes flanked by the word "Ma" on either side. Another message in Bangla is: "Plant trees, save the country." An ethnographer needs to watch how long these written words, especially *Ma* and *Mayer Doa*, recur on rickshaws.

## Conclusion

The rickshaw and rickshaw painting characterise Dhaka City and its residents' identity. Rickshaw painting is the embodiment of the rickshaw as it is seen all over its body. As the element has been practiced and transmitted with spontaneous zeal and visceral passion, it has become an established part of this city's cultural tradition. As a key part of the urban landscape in Dhaka City, gorgeously painted rickshaws have been the subject of films and other artwork. With heroes or movie stars, birds and animals, natural imagery, creative depictions of historical events, fables, colorful floral patterns, and words of precept, rickshaw painting provides the bearers and practitioners of the element with a sense of identity and continuity. To the general public, rickshaw painting, being colourful and stunning, is alluring. Its thematic pictures tell stories of Bangladesh, of everyday life, of what the rickshaw artists treasure as a kaleidoscopic view of their imagination. The rickshaws spread colours all around

***Figure 8: Rickshaws in Dhaka City***

and add a notch of vibrancy to the otherwise mundane streets. The brilliance of rickshaw painting lies in its innocence and in the manifestation of imaginative power.

The rickshaws with their paintings create a pervasive and emblematic feature of urban life in Dhaka City (**Fig. 8**). In fact, the rickshaw and rickshaw painting are at the centre of many social and cultural practices, rituals and events, namely, musical performances, exhibitions, seminars, workshops, fairs, festivals, sports, and awards. Inscription of the element on the Representative List of the Intangible Cultural Heritage of Humanity would assure a reinforcement of the international awareness of the importance of cultural diversity and human creativity. New rickshaws are always a blaze of colours and paintings in Dhaka City, which is rightly called the Rickshaw Capital of the World.

## End Notes

[1]Joanna Kirkpatrick documented the evolution of Bangladesh's rickshaw painting from 1975 to 1987 fairly in depth, and thereafter she brought her study up to date until 2002, relying on her last visit in 1998 and Kevin Bubrisk's pictures and notes of 2002. Her CD-ROM on *Transports of Delight: The Ricksha Arts of Bangladesh***,** (Bloomington and Indianapolis: Indiana University Press, 2003) contains the results of her extensive study. Combining more than 1,000 brilliantly coloured photographs with video clips, music, natural sound, and text, this CD-ROM is an ethnographical study of one of the major components of Bangladesh's folk art in particular and of South Asian folk art in general. A neatly printed eight-page folder, provided with the CD-ROM, explains how the text and images can be viewed and how the music can be turned off or on as desired. Those who are interested in South Asian folklore, especially in South Asian folk art, will find this work exhilarating.

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# A Language of Symbols: *Rangoli* Art of India

*Nayana Tadvalkar*

## Abstract

*Rangavali or Rangoli is an ephemeral floor art practiced in India since ancient times. The sources of the rangoli diagram lie in the protection sought by Homo sapiens in the magical drawings, which were believed to prevent the auras of bad spirits from coming into the house. This tradition continues down the history of man till date.*

*Rangoli, essentially a woman's art, carries connotations of anonymity, collective wisdom, spontaneity and simplicity. It reflects the larger philosophy of life through patterns of memory and an extensive visual and geometric vocabulary.*

*The art of rangoli is a storehouse of symbols. Beginning with the auspicious dot, the symbols go on expanding to form a line and the basic geometrical shapes like the circle, triangle, square and so on, each having its own significance. The geometrical figures as the point, line, circle, triangle and square, have a symbolic value in representing the basic energies of the universe.*

*The survival of rangoli symbols through space and time and their facility for absorption in new environments can be attributed to their simplicity, flexibility and elemental appeal and most importantly to the beliefs of the people.*

*This paper attempts to trace the meaning of symbols hidden in the rangoli diagrams.*

*Rangoli* or *Rangavali* in Sanskrit - *rang* (colour) and *aavali* (row), is an ancient Indian folk art created on the floor. Literally, it means creepers drawn in colours. In India, traditional place to draw *rangolis* is the threshold of the house, a zone of passage from the known – the house, to the unknown outer world. It is also drawn in places of worship and around the holy plant of *tulsi* and sometimes eating places as well. The drawing of *rangoli* patterns is often combined with rituals associated with auspicious occasions like weddings and naming ceremonies and major festivals like *Deepavali.*

The women of India have kept the art of *rangoli* alive. The tradition is passed down in families from mother to daughter thus maintaining continuity. No brush or tool of any kind intervenes between the hand of the artist and the ground. This direct contact of the finger, powder or paste and ground allows the direct translation from her inner vision and experience into visible form. The designs drawn range from geometrical diagrams to curvilinear patterns or those inspired by nature. These spell binding configurations are known under many names, such as *Sathiya* in Gujarat, *Kolam* in Tamilnadu, *Muggulu* in Andhra Pradesh, *Rangavali* in Karnataka, *Chowkpurana* in Northern India, *Mandana* in Rajasthan, *Aripana* in Bihar, *Alpana* in Bengal, *Chita* or *Osa* in Orissa, *Aipan* in the Himalayan region and so on. In fact the term *rangoli*, as the art is known in Maharashtra, is a synonym for any kind of Indian floor art.

The creation of *rangoli* patterns in ritualistic and domestic settings are layered with meanings rooted deeply in culture. The significance of *rangoli* is much wider than the aesthetic and decorative purpose. Besides being a symbol of auspiciousness, it is often described as magic diagrams for rituals, to ward off evil, to invoke the deity, to fulfill the wishes when taking a vow, for meditative purposes, to create a sacred space within the confines of home and many more. These are to be drawn every morning or in the evening and at each sacrament of life, from birth to death.

The main aspect of any *rangoli* pattern is the use of symbols. All of these motifs depicted naturally or symbolically represent particular forces or qualities embodied in some aspect of creation, evolution or dissolution and are considered to be sacred.

## Basic Geometrical Symbols

Basic geometrical figures as the point, straight line, circle, triangle and square, have a symbolic value in representing the basic energies of the universe.

**Dot**: The most comprehensive and minimal symbolic expression, the dot is the point of origin and end, all beginnings and all dissolutions. It denotes seed which has the power of recreation. The central point representing zero dimensions is the fundamental point of repose from which emerges transformation and evolution. It signifies the starting point in the unfolding of inner space, as well as the furthest

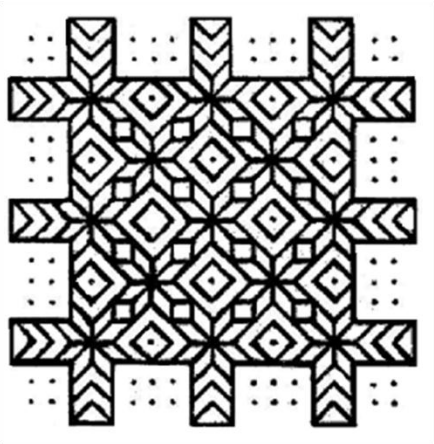

***Figure 1: Straight Line Pattern joining the Dots***

point of ultimate integration. It is the point-limit from which inner and outer space take their origin, and in which they become one again.

Dot forms the base of geometric *rangoli* designs. A grid made of calculated dots serve as the guideline for the design. Just as the tree, flowers and fruits proliferate from the seed and sprout, the *rangoli* begins with a dot.

Each movement of the dot takes on a new graphic significance, forming line, spiral, triangle, square and so on, unfolding new vistas for visual vibration and evolution.

**Line**: The dot moving with length without breadth forms a line. The straight line signifies development and growth. Linear patterns suggest sound vibrations or dimensions of space. In *rangoli* the dots are joined together forming lines so as to create beautiful patterns. The lines may be drawn straight (**Fig. 1**) or curvy (**Fig.2**).

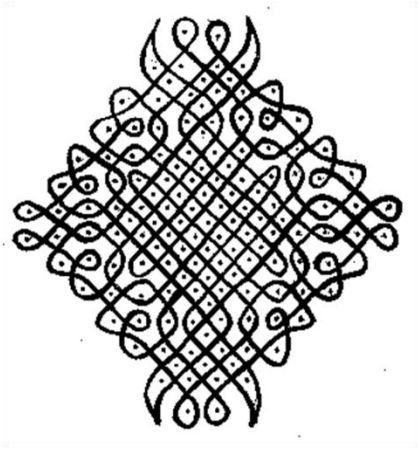

***Figure 2: Curvy Line Pattern Around the Dots***

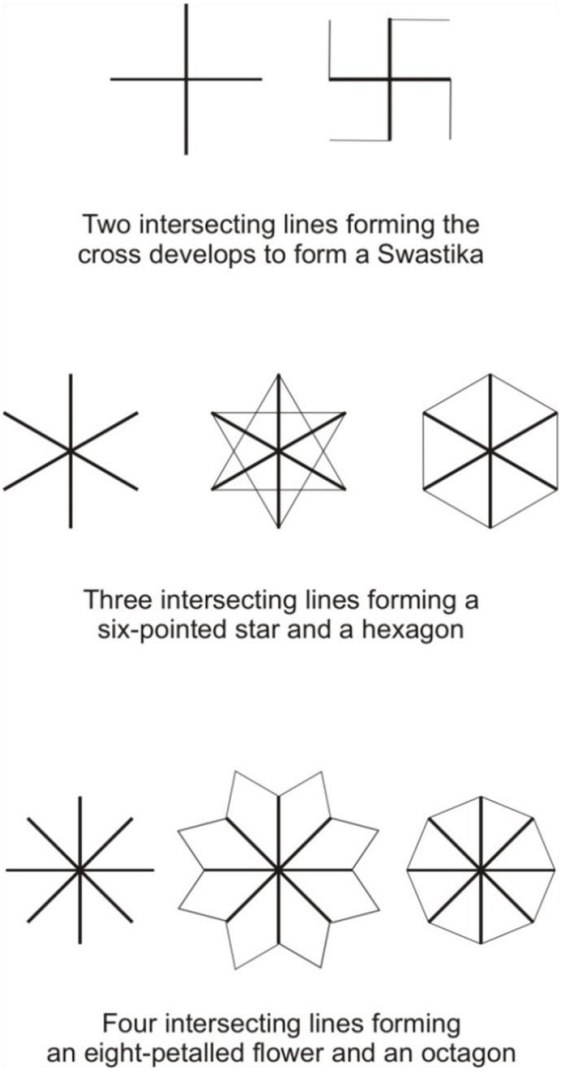


***Figure 3: Intersecting Lines forming Patterns***

Intersecting lines (**Fig. 3**) lie at the base of some important auspicious symbols like the *Swastika*, six-pointed star or the hexagon and eight-pointed star or the octagon.

The arrangement of three intersecting lines is also known as *hagal-rune*, a Germanic letter, symbolising protection and procreation (Diringer 1949: 514-16).

Four intersecting lines symbolise the eight cardinal points, each having its own guardian or *dikpala*. These cardinal points with the centre are also identified with the nine planets.

In the representation of the *Panchamahabhutas*, or the five elements, the circle symbolises- the water, the square- the earth, the triangle-the fire, the air is represented by a crescent. The ether which is endless space is present in all the forms. Thus the geometric shapes drawn in *rangoli* symbolise the worship of the five basic elements of nature.

**Symbolism of some common *rangoli* motifs:**

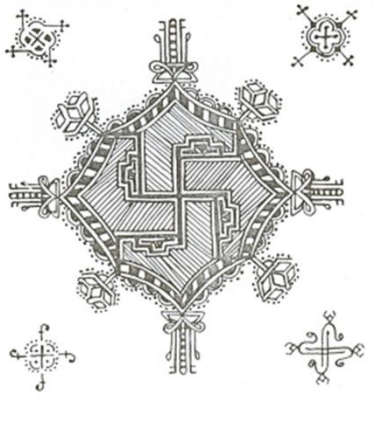

***Figure 4: Swastika***

***Swastika*:** The term *Swastika* (**Fig. 4**) is believed to be a fusion of the two Sanskrit words *Su* (good) and *Asati* (to exist), which when combined means 'May Good Prevail'. Thus the symbol implies auspiciousness and good fortune. The Hindus, along with Jains, Parsis and Buddhists regard it as an auspicious symbol or *mangala- chinha.* It is believed that the *Swastika* is much in favour with the gods as a seat or couch, and as soon as it is drawn it is immediately occupied by some deity. It is therefore customary to draw the *Swastika* on most auspicious and festive occasions such as marriage and thread ceremonies, *Diwali* festival and fulfillment of vows.

**Foot-print**: Foot-prints (**Fig. 5**), a very popular motif in *rangoli* are drawn at the entrance of the house indicating the arrival of Goddess *Lakshmi*. If the foot marks are pointed in the right direction, i.e. towards the house, they are considered auspicious and a symbol of goddess *Lakshmi*. But the upturned feet are considered inauspicious and indicative of goddess *Alakshmi*- the negative aspect of *Lakshmi*. In another custom followed in South India at the time of *Janamashtami*- the birthday of Lord *Krishna*, small footprints are drawn with rice flour, from the altar of the house to the kitchen suggesting that baby *Krishna* after taking birth has entered their kitchen to steal butter. Thus the presence of the divine being indicated through footprints is considered to bring prosperity to the household.

***Figure 5: Footprints***

Some footprints like those of a tiger are drawn out of fear and

reverence. These are believed to be especially powerful in scaring away the evil spirits and are found in the *rangoli,* tattoo as well as embroidery designs in South India.

**Knot or loop motif:** A knot is a complex symbol embracing several important meanings mainly related to the idea of tightly closed link. It expresses the idea of binding, of creating an enclosure and of protection. In the broadest sense, loops and knots represent the idea of binding. Mircea Eliade has made a special study of the symbols of knots and notes that in magic cults there are two types of knots and bonds: (a) those which are beneficent and a protection against wild animals, illness and sorcery and against demons and death and (b) those employed as a form of 'attack' against human enemies (Cirlot 1962: 182). The first type applies to the knots drawn in *rangoli*, especially in the *kolam* (**Fig. 6**) of Tamilnadu. *Kolam* is believed to be a labyrinth to ensnare harmful spirits and prevent them from causing harm.

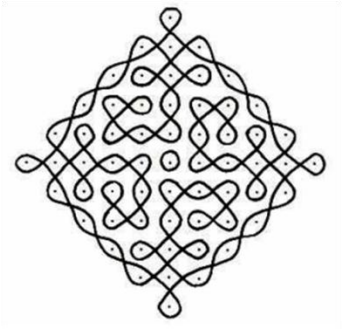

***Figure 6: Kolam***

The knot used in *kolam* designs is believed to be a universal symbol of protection which originated thousands of years ago. It is seen on the seal of Mohenjo-daro in the remains of the Indus Valley and also on the shields of the Celtic people, the ancient people of Europe. It was used to ward off evil spirits. Similar patterns are common in Egypt and in the Sumerian civilisation where they are known to have had a talismanic significance.

**Animal motifs:**

***Naga* or cobra**: The *naga* has the power to bestow fertility, to dispel sterility and to heal sickness. They also operate as donors of prosperity and opulence, grantors of wishes, owners and guardians of valuable treasures (Bosch 1960: 136). The *nagas* or serpents are believed to bestow all the boons of earthly happiness – abundance of crops and cattle, prosperity, offspring, health and long life on mankind. Women invoke the *naga's* blessings of prosperity and fertility when they draw it in their *rangoli.* The polyvalent characteristics of the snake have not only led to its association with cure, life, rebirth and immortality but also with disease, death and destruction (Vogel 1972: 277). Due to its casting of its skin it

symbolises rejuvenation and as such it is worshipped as a tutelary deity. The annual rites for the *nagas* are performed for two specific reasons - for honouring and seeking blessing from them and warding off any evil from them. Besides the diagrams made by women, huge *naga-mandalas* (**Fig. 7**) in coloured powders are drawn by the priests in South India and Bengal to propitiate the *nagas* (**Fig. 8**).

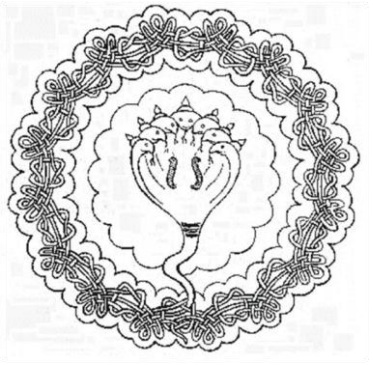

***Figure 7: Nagamandala with Sixteen Knots***

***Figure 8: Naga***

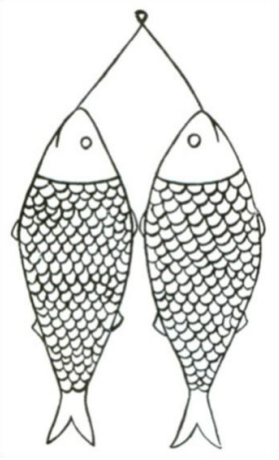

***Figure 9: Fish Alpana, Bengal***

**Fish** - Fish (**Fig. 9**) is one of the naturalistic positive symbols of fertility, abundance, conjugal happiness, providence and a charm against the evil eye.

Fish are the easily gained food of all nations. As creatures of boundless liberty, not threatened by the flood, they appear as saviours in Indian myth, *avatars* of *Vishnu* and *Varuna*. The fish is considered as a symbol of good fortune among the Hindus and finds mention in the description of 108 auspicious signs in the *Harivamsa*. The *Matsya-yugma* is regarded as one of the *Ashthamangala chinha* or eight auspicious signs by the *Svetambara* Jains. The fish is also one of the auspicious symbols on the palm of Buddha in the *Lalitavistara*. The antiquity of this symbol cannot be doubted as we get representation of a fish in faience at Harappa and in ivory at Mohenjo-daro besides their representation on pottery and the seals.

Fish is a common motif drawn in *rangoli* all over India. It finds a place of prominence in the Bengal *alpanas* and the *rangoli* of the Parsis.

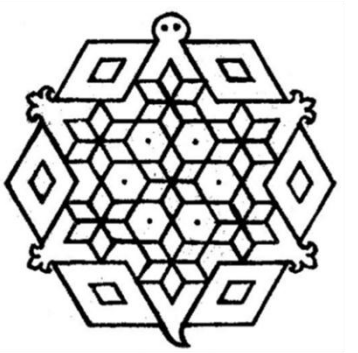

***Figure 10: Tortoise***

***Kurma* (tortoise)** - In *rangoli*, the tortoise is commonly depicted in a hexagonal shape. In Indian mythology, it is one of the *avatars* of *Vishnu*, a mount of river goddess *Yamuna* and also a *lanchana* (cognizance) of certain Jain *Yakshas* and *Tirthankaras*. The tortoise is the Lord of creation in Vedic mythology. Because of its shape, the tortoise is regarded as a symbol of the three worlds; its lower shell is this terrestrial world, upper shell the sky and in between is the atmosphere. This concept is also seen in Chinese cosmology (Desai 2008: 36).

The tortoise (**Fig. 10**) is believed to carry the world on its back and its long life no doubt account for its appeal as longevity symbol. It is able to withdraw its limbs within its shell. This imagery gives rise to the concept of tortoise as a model of self-restrained man, who has command over his *indriyas* (senses) and withdraws from sense objects (Desai 2008: 41). *Kurma* being an emblem of stability is placed in the form of *Kurma-shila* in the foundation of buildings at the time of *Vastu pooja* or worship of the deity of the site. Due to its support the building remains firm (Desai 2008: 41). This belief is also prevalent among the Gond tribals who draw a tortoise on the floor of the house to ensure that the building will be secure (Elwin 1951:102).

**Peacock** – A beautiful bird that can eat snakes and therefore associated with power. In Hindu mythology, the patterns on its wings, resembling innumerable eyes, are taken to represent the starry firmament (Cirlot 1962: 239). It signifies love and beauty. It is the vehicle of *Kartikeya* and *Saraswati*. The peacock (**Fig. 11**) is not only held to be efficacious against poison but on account of its plumage, is believed to protect a person from the evil eye.

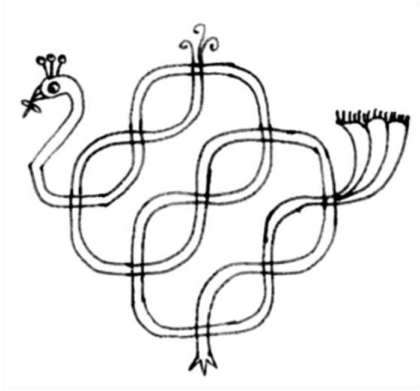

***Figure 11: Peacock***

**Owl** - The owl is a bird of ill omen and does not seem to be associated with auspiciousness except in Bengal where it is depicted as Goddess *Lakshmi's* vehicle. The owl associated with *Lakshmi* is known as *Pechaka* and is worshipped in Bengal during *Lakshmi Pooja* (worship of Goddess *Lakshmi*). Owl is a nocturnal bird and eats rodents in the field. Thus it protects the crops and therefore must have gained importance and acquired the status of being *Lakshmi's* vehicle. It also symbolises wisdom and intelligence because of its ability to foretell events. An owl is an indispensable part of the *Lakshmi Pooja alpana* (**Fig. 12**) of Bengal.

***Figure 12: Lakshmi Pooja Alpana***

***Figure 13: Prajapati Padma***

**Butterfly** – Butterfly is a symbol of fertility. The fact that the butterfly lays large number of eggs and also the belief that the butterfly brings children supports its symbolism. In Bengal and Assam, the butterfly is called as *Prajapati.* In Indian mythology Brahma, the Lord of creation, is also called as *Prajapati*. Probably because of this association, the butterfly is also believed to be the creator of the universe. It is considered to be a good omen for marriage in Bengal. In the invitation letters for marriages the picture of a butterfly is usually printed at the top. It is considered a good fortune if a butterfly enters the room of a bridegroom

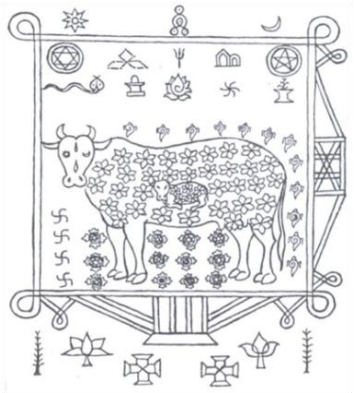

***Figure 14: Vasu-baras Rangoli***

or the bride before their marriage. *Prajapati Padma alpana* (**Fig. 13**) is executed on the floor on the day of finalisation of a proposal of marriage.

**Cow** - The sanctity of the cow is perhaps the foremost sentiment of Hindus. It is natural that in a predominantly agricultural and pastoral country like India, cows were and to some extent still are, considered to be the real wealth of the people. In the Hindu world view, to donate a cow or *gau daan* is considered the highest act of piety.

No *havan* or fire ritual is complete without the presence of *panchgavya* or the five gifts of the cow, namely milk, curds, melted butter, cow-dung and urine. In Maharashtra, on the day of *Vasu-baras*, a *rangoli* with a cow and its calf with the many auspicious symbols is drawn traditionally (**Fig. 14**). Similarly, in Andhra Pradesh and Tamilnadu cow is depicted in the *rangoli* and worshipped on *Sankranti* festival corresponding to *Pongal*.

The foot-prints of the Holy cow (**Fig. 15**) are also commonly marked in the *rangolis* at the entrance and in front of the Gods. These are made by the women as an acknowledgement of the unconditional services provided by the cow and also as a request for the continuation of those services for the well-being of their family.

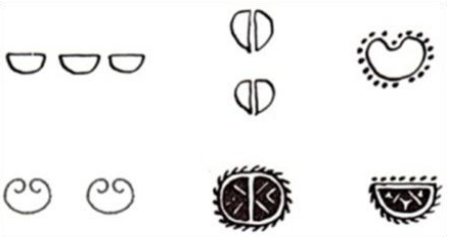

***Figure 15: Foot-prints of Cow***

***Figure 16: Parrot***

**Parrot** – It is a vehicle of *Kamadeva,* deity of love and sex. Parrot (**Fig. 16**) sensual desires and forms an important part of marriage decorations. The parrot is a love bird, and has special value as a charm in tattoos.

**Rooster** – Parsi ladies draw a *rangoli* of white rooster on the day holy to the *Yazata Srosh* (a divine being). A white rooster is the protective bird associated with the *Yazata Srosh*. The crowning of the rooster is said to frighten away the Evil spirit. The cock is held sacred to *Yazata Srosh* and is never killed or eaten after it has begun to crow. The widespread belief is that the crow of the cock scares evil spirits (Seervai and Patel (eds.) 1898: 25). Orthodox Zoroastrian would never kill a cock of any colour since he is the bird of *Srosh*, who crows to put an end to demon-haunted night and to bring in God's new day; and white being the Zoroastrian colour, a white cock is especially holy (Boyce 1977: 257).

**Plant motifs:**

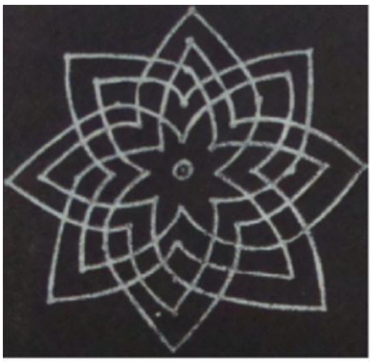

***Figure 17: Hridav Kamal***

***Kamal*/*Padma* (Lotus)** - The Lotus is considered to be the most sacred flower and has great religious significance and many symbolic meanings. Rooted in the dark mud, the lotus plant grow up through the murky water to leaf and flower in the air and light, this growth represents the journey of the soul from the mud of materialism, through the waters of experience, to the arrival at enlightenment.

The faculty of bestowing life, fertility and wealth is attributed to the lotus-plant and its vital points (Bosch 1960: 49). The lotus has much importance in Hindu, Buddhist and Jaina pantheons. It symbolises self-creation; hence Brahma sits on a lotus (Srivastava 1998: 21). In the *aripan* of Mithila, the *Hridav kamal* (**Fig. 17**), the centralised lotus motif or the *Sahasradala padma*, the thousand-petalled lotus signifies the universal life-force and the opening of the consciousness of the divine. *Padma* is also a significant *yantra* or *mandala* in the Tantric doctrine, on which all the magical creations are built upon.

The multi-layered petal structure of lotus with one layer opening into the other resembles the Sun who emanates brilliant rays from its central core. Here the resemblance or correspondence to the form or shape makes the lotus flower a potent symbol capable of representing certain aspects of the Sun, which in this case is its radiating nature. *Divakarvrata* is performed by drawing twelve-petalled lotus with the names of sun written on each petal. This lotus is worshipped with

Vedic *mantras* for gaining knowledge and prosperity (Joshi and Padmaja 1967: 374).

***Tulsi*** or *Ocimum basilicum* or *Ocimum sanctum* – Since time immemorial, *tulsi* has remained an integral part of Hindu way of life and is considered to be one of the holiest and most useful plants. It is planted on a little mound of sand or on a square pillar of about four feet in height, hollow at the top with its four sides facing the four points of the compass. This structure is called the *Tulsi Vrindavan.* Hindus, especially *Vaishnavaites* consider it a peculiarly meritorious act to carefully watch and cultivate the plant. It is praised as destroying all the evils and it is considered sinful to break its branches. Hindu women worship *tulsi* every morning and evening and draw *rangoli* around it.

***Figure 18: Tulsi Vrindavan***

*Tulsi Mahimamritya* records that if a dying person gets *tulsi* water he goes to Vishnu *Loka*. It is popularly believed that *tulsi* even wards off the messengers of *Yama*, the ruler of the dead, who would not enter a house containing a sprig of *tulsi*.

However, *tulsi* worship is not limited to man's theosophical aspirations alone as *tulsi's* curative effect has been widely acknowledged by the *Ayurvedic* system of medicine, based on the *Atharvaveda*. *Tulsi* leaves are considered as a potential preventive medicine. It has a sweet aromatic scent and act as a cough elixir. One or two leaves swallowed after meals helps digestion. Since long there is a practice among Hindus to put leaves in cooked food to prevent germination and in stored water to prevent bacteria formation during solar or lunar eclipse. The *tulsi* plant possesses many curative properties and is an antidote to snake-venom. It is acknowledged as a great destroyer of mosquitoes and other pests.

On the day of *Tulasi-vivaha*, an image of *Hari* and *Tulsi* plant are worshipped and then married. A *rangoli* of *Tulsi Vrindavan* (**Fig. 18**) is drawn.

**Creeper pattern**: Signifies fertility, growth and progress. In *alpana* patterns, *shankha-lata* or the conch-shell creeper and *champa-lata*, creeper of *champa* flowers are drawn. Man-made objects are also depicted in growing on creepers such as shovel or *khunti-lata*, bangles or *banti-lata*, pearls or *mukta-lata*. Sometimes the creeper patterns (**Fig. 19**) are referred to as *vansha-vel*, i.e. creepers of progeny or heir, symbolising continuity of family lineage.

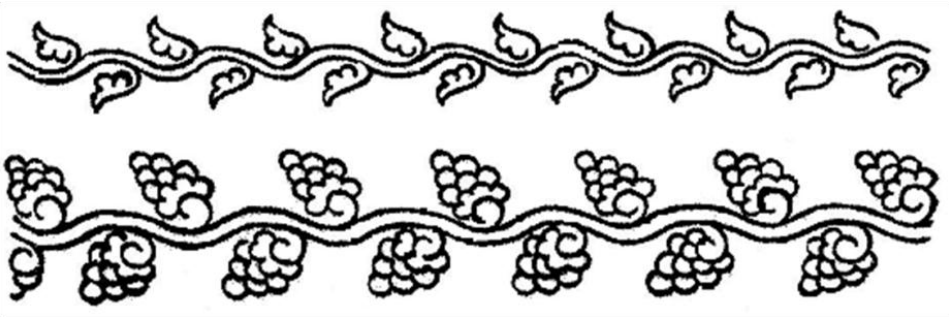

***Figure 19: Creeper Patterns***

**Thorny or prickly plants**: Prickly plants are useful guardians against evil in many regions around the world. Depiction of thorny or prickly plants is believed to ward off evil spirits. Thus we see such plants drawn in *rangolis* in various parts of India. In the *mandanas* of Rajasthan, motifs like *Baingan ka binta* (stem of brinjal) (**Fig. 20**) and *Singhada ka chowk* (water chest-nuts) (**Fig. 21**) are drawn.

***Figure 20: Baingan ka Binta***

***Figure 21: Singhada ka Chowk***

Similarly *Nimbu ki dali* (stem of lemon plant) *aipan* is made in the Kumaon region. The pineapple finds a special place in the *kolam* drawn during *Pongal* festival. *Rangoli* using thorny motifs are generally made on the occasions of marriage and welcoming the bride. These are not drawn in a natural realistic manner. Rather they are drawn in such abstract and symbolic form that it is possible to identity these motifs only through minute and repeated observations. Many times it is the name of the design which gives clue about its form.

Thus we see the symbolic ideas behind the use of various geometric and natural motifs in *rangoli* art. The understanding and interpretation of this symbolism leads to the conclusion that these motifs were employed in this ancient art of *rangoli* to denote an indirect or figurative representation of a significant idea, conflict or wish. These are symbols of fertility and procreation or the cosmic life force and regeneration and all of them are in one way or the other, 'symbols of life' and therefore highly auspicious.

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# The Jamdani Sari: An Exquisite Female Costume of Bangladesh

*Shahida Khatun*

## Abstract

*The Jamdani sari is an exquisite female costume of Bangladesh. The distinguishing hallmark of the Jamdani sari is that its designs are neither embroidered nor printed but created directly on the loom in the process of weaving. Its exquisiteness and splendour lie in its woven designs of an infinite variety. Bengali women feel extremely delighted to buy a wide variety of Jamdani saris and are deeply proud of the heritage associated with the adornment and novelty of this fabric as an exquisite female costume. They wear more charming or elaborately designed Jamdani saris during festivities and on formal occasions. The Jamdani sari represents Bangladesh's rich textile heritage and contains significant historic value. This paper has established that the Jamdani sari has become an exquisite female costume of Bangladesh due to the technical marvel of Jamdani weaving with creativity and ingenuity.*

The sari is the common dress as well as the principal costume of the Bengali women of Bangladesh. It is a long flowing piece of cloth. Part of it is wrapped around the waist and the remaining climbs and flows over the left shoulder. A typical sari is about five to seven yards long in order to wrap around the body.

***Figure 1: A Jamdani Sari***

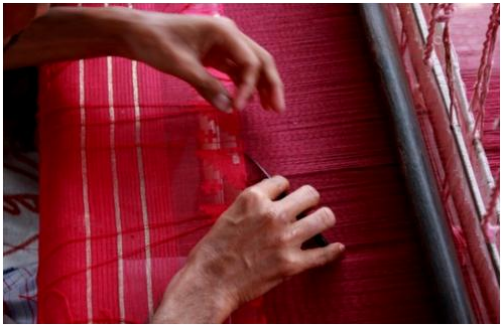
The Bengali women of Bangladesh wear a variety of saris, of which the Jamdani sari (**Fig. 1**), the Tangail sari, the Banarasi sari, and the Katan sari are most outstanding. Of all the saris in use the Jamdani sari is the most popular one.

The distinguishing hallmark of the Jamdani sari (**Fig. 2a**) is that its designs are neither embroidered nor printed but created directly on the loom in the process of weaving. Jamdani weaving is a time-consuming and labour-intensive

form of fabric production by hand on a traditional loom built with wood and bamboo and with little use of metal. Jamdani weaving is based on the traditional knowledge and skills dating back to the fourth century BCE. As the Jamdani is fabulously rich in motifs, it has been spoken of as the most artistic fabric of the Bangladeshi weaver. At present the Jamdani sari is woven (**Figs. 3a and b**) in and around Dhaka. By Dhaka is meant the original Dacca district, which now consists of four districts. The region that has been renowned for Jamdani weaving is now located in Narayanganj district.

***Figure 2a: Colourful Jamdani Saris on Display***

***Figure 2b: Jamdani Designs***



***Figures 3a and b: Weaving Jamdani Saris***

The origin of the Jamdani is shrouded in obscurity. Megasthenes, Greek ambassador in Chandragupta's court, speaking of the costumes of the people of India, writes: "their robes are worked in gold, and ornamented with various stones, and they wear also flowered garments of the finest muslin" (Birdwood, 1988: 235). "No conventional ornament is probably more ancient than the coloured stripes and patterns we find on Indian cotton cloths," says G.C.M. Birdwood (1988: 235). Birdwood (1988: 235) also holds that the "dominant feature of those art fabrics is unquestionably designs that are commonly accepted as Persian in origin." On the testimony of Megasthenes we may conclude that the flowered garments of the finest muslin, which came to be known as the Jamdani in the Mughal period, can be traced far back to the ancient period. Since the early fourth century BCE the figured or flowered cotton fabric (originally the figured or flowered muslin and later called the Jamdani) has been in existence through vicissitudes of history. The *Arthasastra* of Kautilya, composed between the early fourth century BCE and the second century CE, refers to *karpasika*, a cotton fabric of Vanga (Majumdar 2006: 654-5). The Periplus of the Erythraean Sea, which is supposed to have been written by an Egyptian Greek in the middle of the first century CE, includes muslins of the finest sorts among the exports of Bengal (Majumadar 2006: 655). In this work, mention is made of several kinds of muslins, which are distinguished by commercial names. "Dacca has long been celebrated for its muslins," says James Taylor (2010: 121). These fabrics were known in Europe in the first century, and according to some writers they constituted the 'serioe vestes' which were highly prized by the ladies of Imperial Rome in the days of its luxury and refinement (Taylor 2010: 121). Pliny, in enumerating the imports from Egypt and Arabia, mentions the Bengal muslins, and the author of The Periplus of the Erythraean Sea bears testimony to their extreme fineness and transparency. The word 'Carpassus' which is employed to designate the fine Bengal muslins, is obviously derived from the Sanskrit word *Kurpass* (Taylor 2010: 121).

> In the accounts of India and China by two Mohomeddan travellers in the 9th century, mention is also made of the fine cotton cloths, and from the notice of certain circumstances connected with the country in which they were manufactured, it is very evident that the Dacca muslins are the fabrics that are alluded to. (Taylor 2010: 121)

During the reign of the Mughal Emperor Jahangir (1605-27 CE), if not earlier, the plain muslin, being decorated with a wide range of floral designs, came to be known as Jamdani. Long before Jahangir's reign, as Arrian and the Egyptian traders confirmed, the seat of figured or flowered muslin (Jamdani) weaving was Capassia (Kapasia) in the Dhaka region of Bangladesh, the country from where "these muslins" were exported (Taylor 2010: 121). Sonargaon became the principal seat of muslin and Jamdani weaving in the fourteenth century. Ibn Battuta (1304-1368 CE or 1369 CE), a Moroccan explorer, profusely praised the high quality of cotton fabrics produced in Sonargaon (Dani 2009: 228). Toward the end of the sixteenth century the English traveller Ralph Fitch and the great historian Abul Fazl Allami also abundantly admired the superiority of Sonargaon's cotton fabrics (Dani 2009: 228). Our knowledge of the muslin and the Jamdani becomes much clearer and more extensive after the establishment of Dhaka as the capital of the Mughal province of Bengal in 1608. Ibrahim Khan, who was the brother of Queen Nur Jahan, was the governor of Bengal from November 1617 to November 1623. The period of his governorship was marked by peace and tranquility unknown before. Sir Jadunath Sarkar writes:

> For the first time since the Mughal conquest, Bengal now settled down to enjoy the blessings of the Mughal peace. Agriculture and commerce were encouraged, and the manufactures were carried to a degree of perfection they had never attained before. The delicate muslins of Dacca and the silks of Maldah constituted the chief part of the dress of the imperial court, and these industries received an impetus unknown before. (2006:299)

Throughout the Mughal period merchants came from Persia, Iraq, Turkey and Arabia to Dhaka to buy fine and delicate muslins and exquisite Jamdanis. As a result, Dhakai muslins and Jamdanis were carried across the world through commerce. According to Manrique, who came to Dhaka in 1640 CE "Most of the cloth is made of cotton and manufactured with a delicacy and propriety not met with elsewhere" (1927: 56-57).

Forbes Watson in his most valuable work entitled Textile Manufactures and Costumes of the People of India holds that the figured muslins, because of their complicated designs, were always considered the most expensive productions of the Dhaka looms. Watson writes:

> Those manufactured for the Emperor Aurangzeb are stated to have cost £31 whilst some manufactured in 1776 reached the extravagant price of £56 per piece. The manufacture of the finer *Jamdanis* was long retained a monopoly of the Government, the weavers, as stated by Raynal, being forbidden, under pecuniary and corporal penalties, to sell to any person a piece exceeding the value of 72 livres, or about three guineas. (Quoted in Watt 1903: 283)

It admits, with no doubt that Dhaka became the greatest centre of the Jamdani. Jamdani production, after reaching its peak during the Mughal period (1608-1764) in Dhaka, began declining because of the loss of patronage resulting from the fall of the Mughal Empire and on account of the British colonial policy favouring the import of England's machine-made cloth into Bengal. Bishop Heber, who paid a visit to Dhaka in 1824, wrote:

> The cotton produced in this district is mostly sent to England raw, and the manufactures of England are preferred by the people of Dacca for their cheapness. (Quoted in Dani 2009: 91)

The truth is that the Bengalis were forced to become suppliers of raw cotton and consumers of imported cloth. The English textile mills could not weave a fabric as fine as the Dhakai muslin or as exquisite as the Jamdani. While the Dhakai muslin was on the verge of collapse, the weaving of the Jamdani, beyond the reach of British mercantilism, continued, though its production was sharply on the decline. Eventually Jamdani weaving survived as the weavers, instead of producing sashes, turbans, handkerchiefs, bedcovers and pillow-covers, concentrated on weaving saris for women. As the Jamdani sari is the common dress of women in Bengal, a steady market was available to support the continuity of jamdani weaving (**Figs. 3a and b**) with the knowledge and skills of the past.

What we have discussed above suggests that the jamdani sari is a highly designed cotton fabric which owes its origin to the Dhakai muslin, the finest and most transparent cotton cloth ever woven by human hand. Actually the flowered muslin is known as the Jamdani. While the plain muslin became extinct, the Jamdani has survived because of the increasing use of this fabric as a sari by all classes of Bengali women.

Of classic beauty, the Jamdani sari effectively combines intricacy of design with muted or vibrant colours. Its exquisiteness and splendour lie in its woven designs of an infinite variety. The weavers need not use any drawing. They weave

designs smoothly out of the patterns stored in their minds. There are numerous designs which they have imitated from nature. Any design that the weavers want to replicate fuses readily into the fabric as their hands move gracefully upon the loom. They concentrate on the task of the moment, blending the knowledge of the past with their hopes for the future. As women feel extremely delighted to buy a wide variety of Jamdani saris and are deeply proud of the heritage associated with the adornment and novelty of this fabric as an exquisite female costume, the Jamdani weavers have remained in the weaving profession from generation to generation as a mode of livelihood.

The Jamdani sari is also a highly breathable cotton cloth which brings relief to its users in the hot and humid climatic condition of Bangladesh. Women wear more charming or elaborately designed Jamdani saris during festivities and on formal occasions. The jamdani sari represents Bangladesh's rich textile heritage, contains significant historic value and has been designated as a unique element of the intangible cultural heritage of the country. Keeping in view the long history of Jamdani weaving and the use of this skillfully woven fabric as the sari with a variety of patterns and designs in a wide range of colours, scholars, fashion-lovers and connoisseurs hold that this female attire is an exquisite female costume of Bangladesh and that it deserves to rank among the most decorative hand-woven attires of the world.

During the Mughal period the patterns/ motifs for Jamdani weaving were borrowed from the traditional carpets of Persia, Iraq and Turkistan. Most of the designs were of Persian origin. According to scholars, the external patterns/ motifs often became blended with the designs that the local weavers could best imagine or replicate from the natural and animal world of their habitat. Some of the Persian motifs, which survived till 1971 and beyond, are *golab buti*, *chameli buti*, *gul daudi buti*, *buti jhardar*, *toradar*, *butidar*, *tercha*, *jalar*, *phuldar*, *turanj*, *jamewar-buti*, and *panna hazar*. However, after the emergence of Bangladesh the weavers became almost completely independent of external influence. Since the 1970s the weavers have been weaving Jamdani saris in a wide variety of indigenous designs. The characteristic feature of Jamdani weaving today is a wide variety of patterns woven on its ground, expanse and border in cotton threads of different colours. Jamdani patterns are mostly of geometric, plant, and floral designs. At present the weavers think that the jamdani motifs belong exclusively to them. They have derived their motifs from the environment. Each motif has its

name. During the Mughal period the most popular Jamdani was the one which was woven on a white ground with motifs in white threads. This kind of Jamdani is preserved in the Victoria and Albert Museum in London. Nowadays the ground of a Jamdani is usually grey, blackish blue, *tasar*, red, deep blue, rose-coloured, sky blue, blue, violet, green, deep green, deep violet, light violet, peacock-blue, white, yellow, light yellow, light purple, black, ash, kohl, turquoise, mustard or sweet rose-hued.

A Jamdani sari is named on the basis of the designs (**Fig. 2b**) that embellish its ground, expanse and border. Now the popular trees, flowers, fruits, creepers, foliage, herbs, vegetables, birds, and animals appear on the ground, expanse and border of the fabric in an explicit manner. That the weavers are capable of depicting these motifs in the process of weaving speaks of their profound insight and a high degree of skill. The designs meant for the ground fall into three principal categories: *buti*, *jal* and *tesri*. Within these three basic patterns the weavers insert a wide variety of designs based on trees, flowers, fruits, creepers, foliage, herbs, vegetables, birds, and animals. A Jamdani sari that has a design woven in threads of a single colour lacks brightness. An example is a Jamdani sari with *dalim naksha* (the pomegranate design). When the pomegranate design is woven in threads of three colours, it becomes more ornamental. Similarly *baghnali naksha* may be woven in threads of either a single colour or three/ four colours. Two popular designs for a Jamdani sari are *karalla* and *puilata*. These two designs are so popular that a Jamdani sari with either of these two motifs is easily identifiable. Comparably it is less time-consuming and less expensive to weave either of these two designs; therefore, the weavers prefer to produce more Jamdani saris with these motifs. They make Jamdani saris exquisitely beautiful and varied by using threads of a wide range of colours. Sometimes the weavers set the *buti* pattern or any other pattern on the blackish blue ground after weaving the border in red, green and yellow threads. The weavers often set a different tone by weaving the *sandesh phul* and *pona* designs on the ground. The weavers have named various designs or motifs in their local dialects. Here are the names of some designs or motifs that the weavers fancifully or minutely create on the ground, expanse or border: *angurlata, kalka, kach, karalla, dalim, hapai, maḍuli, dooring, batpata, sandesh, chand, kachulata, inchi, hazar moti*, ring, *baghnali, panpata, kajallata, pona, mayur, pachh, dokla, anaras, panphul*, and so on.

Some ateliers regularly fill orders from whole-sellers in Bangladesh. Jamdani saris are also exported to foreign countries. But most of the Jamdani saris woven weekly until Thursday go to market at Demra near Dhaka City on Friday. Both retailers and whole-sellers throng there to buy the Jamdani saris directly from the weavers, who abstain from working on Friday.

## Conclusion

The Jamdani sari reflects its own charm and regal beauty, thus becoming the most favourite outfit of every Bengali woman. It has proved to be the iconic wear as well as an asset to cherish in the wardrobe. Bengali women love to buy at least one Jamdani sari annually and enhance their collection. Be it a wedding ceremony, a festival, a party or a special occasion, women consider the Jamdani sari to be the only costume that has the enigma to stand apart from any other kind of attire. The enigma lies in the very process of Jamdani weaving.

## Glossary

| | |
|---|---|
| *Anaras* | The pineapple |
| *Angurlata* | The vine of grape |
| *Baghnali* | The tiger's nail |
| *Baghnali naksha* | A design similar to the tiger's nail |
| *Batpata* | A banyan leaf |
| *Buti* | Flowered pattern |
| *Butidar* | The blossom of flowered patterns |
| *Buti jhardar* | The blossom of bunches of flowered patterns |
| *Chameli buti* | Blossomed jasmine |
| *Chand* | Moon |
| *Dalim* | The pomegranate |
| *Dalim naksha* | A design resembling the pomegranate |
| *Dokla* | Two |

| | |
|---|---|
| *Dooring* | An oil lamp |
| *Golab buti* | Blossomed rose |
| *Gul daudi buti* | Blossomed chrysanthemum |
| *Hazar moti* | Thousand pearls |
| *Hapai* | A zigzag design |
| *Jal* | Network |
| *Jalar* | An ornamental fringe |
| *Jamewar-buti* | Exquisite floral designs characteristic of the Kashmiri *jamewar* |
| *Kach* | A transparent design similar to a vessel of glass |
| *Kajallata* | Vine as black as kohl |
| *Kachulata* | Vine of the esculent root |
| *Kalka* | Cone-shaped design |
| *Karalla* | A kind of vegetable |
| *Maḍuli* | An amulet |
| *Mayur* | The peacock |
| *Pachh* | Back part |
| *Panpata* | Betel-leaf |
| *Panphul* | An aquatic flower |
| *Panna hazar* | Emeralds in thousands |
| *Phuldar* | Full of flowers |
| *Pona* | A fish of the species of rui |
| *Puilata* | A creeper used as pot-herb |
| *Sandesh* | Delicious sweetmeat made of posset |
| *Sandesh phul* | A flower akin to *sandesh* |

| | |
|---|---|
| *Tasar* | Fawn-coloured |
| *Tercha* | An oblique or crooked line |
| *Tesri* | Having three strands or folds |
| *Toradar* | The string in a bunch |
| *Turani* | Anything of Tehran |

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# Traditional Costumes of the Kalasha Kafirs of Chitral, Pakistan

*Shabnam Bahar Malik*

## Abstract

*The Kalasha Kafirs sometimes referred to as Siah-Posh (the black-robed) Kafirs in relation to their traditional black dress, inhabit the three remote and isolated valleys of Chitral District in the militancy-hit Khyber Pakhtunkhwa (KPK) Province of Pakistan. An endangered living culture, at the verge of extinction, there are only 3,000 to 4,000 left in the three Kalasha Valleys according to a recent estimate (Ali 2013:2).*

*A most distinguishing feature of the Kalasha ethnicity and their unique cultural identity is the elaborate costumes (Cew and Piran) adorned with belts (patti) worn by Kalasha women, their unique and ornate headdresses (kupas and shushut) and heavy beaded jewellery (sulki, mahik, lish, kapaban and gadu'lay). The traditional Kalasha clothing bears meaning to its wearers and reflects skill, creativity, status, wealth, celebration and mourning.*

*My study indicates that both Kalasha men and women have almost abandoned their traditional woolen costumes and switched over to the Pakistani dress for men and women i.e. the new version of the traditional black-robe dress piran. The newly established Kalasa Dur Museum and Cultural Center in Bumburet Valley provides a unique opportunity for the study and documentation of the traditional costumes of the Kalasha Kafirs, and to preserve their rich material cultural heritage through pictorial archives and digitisation for future generations.*

## Introduction and Background

The Kalasha Kafirs sometimes referred to as *Siah-Posh* (the black-robed kafirs) in relation to their traditional black dress, inhabit the three remote and isolated valleys (Bumburet, Birir, and Rambur) of Chitral District. The meaning of the word Kalash is controversial, but according to a recent study the most commonly accepted meaning of the word Kalash is wearer of black (Sheikh 2013: 29). Also it is commonly believed that the word *kawer* (kafir or kapher from Arabic) means unbeliever (in God) (Trail and Cooper 1999:154).

Their dwindling numbers and endangered ancient culture along with unique costumes and body adornment practices have placed Kalasha Kafirs in a unique

local and global spotlight to preserve their fast disappearing culture and to revive their ancient cultural practices. Every year, huge crowds of tourists are drawn from around the globe to the three Kalasha Valleys to observe the major Kalasha festivals *Chillim Jusht* or *Joshi*, *Uchal* and *Chaumos*, and to have a glimpse of their exotic culture and in particular the captivating colourful costumes of the Kalasha women.

The increasing interest in Kalasha Kafirs as an endangered living culture is also evident from the Folk Festival of 2012 in Islamabad, where for the first time two Kalasha booths run by the Kalasha men and women were set up by the sponsors of this very popular yearly Folk Festival held during April and May. On these booths Kalasha headdresses (*kupas* and *shushut)* and the new dress (*piran)* were on display and sale. Also one shop had a pair of traditional Kalasha soft leather moccasins called *kalun* for sale (Rs 3,000) not worn anymore in the Kalasha Valleys. Unfortunately during this year's Folk Festival in Islamabad (2013) not a single Kalasha booth was setup. The National Institute of Folk and Traditional Heritage, Islamabad, had also arranged a one day workshop in March 2012, on dossier preparation for inscription of the Kalasha Valley culture on the World Heritage List for safeguarding Kalasha people and their ancient heritage (Ali 2013:2).

Coming to the traditional costumes of the Kalasha Kafirs, the study indicates that over the period of time, Kalasha men have adopted to the usual Pakistani dress for men (*shalwar qameez*) and are rarely seen wearing the old traditional dress, handspun woolen baggy pants, upper garment and leather moccasins (*kalun*), other than on major Kalasha festivals in extremely small numbers. The Kalsaha women, on the other hand, have clung on to the old customs and continue to wear traditional-style clothing in black, which seems to be an extension of the old and traditional black-robe, (**Figs. 1a** and **1b** for a comparison) but with more elaborate decorations and embellishments, using their acute sense of fashion, beauty and personal identity, as Kalasha women.

The analysis indicate that the traditional woolen dresses *cheo* in black (for women) and shades of beige and white (for men) which involved months of labour of spinning and weaving by hand from pure wool of the local sheep and goat varieties have almost disappeared and replaced with lighter cotton and synthetic materials readily available from the nearby markets.

***Figure 1a: A Kalasha Family in their Traditional Costumes***

***Figure 1b: A Young Kalasha Couple in Rambur Valley, Dressed in their Fineries and Flower and Feather Accessories during Joshi Festival***

What one observes in costumes today in all the three Kalasha Valleys is what I would like to call the extension of the traditional woolen black-robe of the Kalasha women, with much more variation in material, style, embroidery and decorations. But for men, one hardly sees any man wearing an old traditional

woolen costume or footwear other than a woolen Chitrali cap and some of the accessories, as the subsequent sections of the paper will highlight**.**

This is my third paper since my first visit to the Kalasha Valleys in May 2011, to attend spring festival *joshi*. The other two papers deal with Kalasa Dur Museum, (Malik 2013) and the role of Silk Route Trade in constructing the Kalasha identity in reference to their dress and body adornment practices, presented at the International Conference on Rediscovering the Silk Route held in the Hazara University, Mansehra (from 4-7 September, 2012).

Given the lack of resources on traditional costumes of Kalasha Kafirs, I have heavily relied on earlier researches on Kalasha as a major source for the present analysis and comparison, using visuals and old photographs, following Schuyler Jones lead on the research value of the old photographs (Jones 1996: 105-107).

Two important studies that extensively deal with Kalasha dress and body adornment practices are by Sperber (1996) and Maggi (2001). Also Darling's (1979) study of Merit Feasting among the Kalasha Kafirs, gives very important clues to the system of meaning attached to various dress practices among the Kalasha Kafirs. In fact I found Darling's work to be most useful in terms of coverage for men's traditional costumes, because references and especially visuals for men's dresses are not found in any other studies that I have consulted so far. Robertson's study (2001) 'The Kafirs of the Hindukush' also provides elaborate details on some aspects of dress practices for both men and women that I have found extremely useful for analysing traditional dresses of pre-Nuristan (1891-1892) Kafiristan. Also a review of Morgenstierne's trip contributions of 1929 and the wealth of information and diverse documentation including 3000 photographs, moving images and audio of Kalasha culture as discussed by Wlodek (2005: 50) were useful for the study.

The traditional costume collection at the newly established Kalasa Dur Museum, at Bumburet Valley, and Folk Heritage Museum in Islamabad has also been utilised for the current analysis.

Traditional Kalasha costumes for both men and women were elaborated in the previous section as shown in **Fig. 1** and a lot needs to be written about each aspect of the unique style of dressing of the Kalasha Kafirs, especially women, but I would not go into much details. I would discuss the costumes under two separate categories, costumes for women and costumes for men.

## Traditional Costumes of Kalasha Women

Kalasha women's traditional costume will be discussed under three major categories:

- Dress(es),
- Headdress(es) and
- Beaded jewellery and Accessories.

### 1. The Old Dress of Kalasha Women *Cheo* (Cew)

The traditional dress of Kalasha women *cheo* was a black woolen robe-like garment, tucked around the waist with a long woolen belt or *paTi*, with almost no or little decorations at the neck, sleeves or hem, as shown in **Figs. 1** to **6**. Interestingly about the use of colour black in their dress, Sheikh notes,

> Black is also a symbol of equality that is practiced in Kalash society. It is an egalitarian society without any social stratification on the basis of lineage, dress, status or economic prosperity. (2013: 97)

Similar black woolen dresses for women are also reported among some other mountain communities like Merag in Bhutan (Karchung 2011: 23).

Talking about old Kalasha women's dress, Maggi (2001) notes, twenty years ago, women wore heavy woven woolen dresses that they made from the wool of black sheep, carded and spun over the long winters, called *cheo*, then a dramatic change in women's dress came in the late 1970s when a group of young Kalasha women were taken to Karachi to dance in a folk festival, and due to the heat felt in their heavy woolen dresses, they bought lighter cotton material and sewed replicas of this lighter material (108). On their return they continued wearing these very comfortable dresses and soon they became popular throughout the valleys and according to Maggi (2001) only two to three women were 'keeping up custom,' by wearing woolen dress in Rumbur Valley at the time of her research (1973-77). Not a single Kalasha woman was seen wearing a traditional woolen dress, during my visit to Kalasha Valleys on *joshi* festival of May 2011. It has almost disappeared from the Kalasha Valleys and has become a collection piece.

***Figure 2: Old Traditional Costume of Kalasha Women Cheo (cew) with Accessories, Metal Neck Ring Gringa, Waist Chains Shagay and Headdress Kupas***

***Figure 3: A Kalasha Woman in her Heavy Woolen Traditional Costume Cheo and Headdress Shushut Weaving a Belt Shuman***

***Figure 4: Traditional Kalasha Woman's Woolen Dress Cheo in Folk Heritage Museum, Islamabad***

***Figure 5: A Traditional Kalasha Woman's Dress Cheo with Waist Belt Patti in Folk Heritage Museum, Islamabad***

***Figure 6: The Bottom of a Traditional Kalasha Woman's Dress Cheo with Little Embroidery at the Hem in Folk Heritage Museum, Islamabad***

Sperber's study also supports this change in dress. But she states that the woolen dress "… is still considered special and very beautiful," (Sperber 1996: 385). And in 1983 she notes many of the old and a few of the young women were still wearing the woolen dress in the summer time, and about 80 percent during winter festival (*chaumos*) whereas in 1987 winter festival only about 20 percent of the women were wearing the woolen dress (Sperber 1996:385). The woolen dress *cheo* was very simple and had almost no or little decoration at the hem neck or shoulders. The dresses worn by the Kalasha women in the 1960s show almost no decoration at hems, shoulders or necks as is clear from the photographs by Graziosi (1964) and the dress collections at the Kalasa Dur Museum and the Folk Heritage Museum in Islamabad (**Figs. 1-7**).

About the labour involved in weaving of the woolen dress, Sperber (1996) notes, the woolen dress due to spinning and weaving, needed six huge balls of fine dark woolen yarn and two to three months of work, but it could also survive at least two years of hard daily use (383-4).

Unfortunately at present, due to total abandonment of the old dress, specimens of traditional black woolen dress of Kalasha women are only found in the museum collections for further study and documentation. To observe women wearing *cheo* in reality in the Kalasha Valleys cannot be envisioned any more.

***Figure 7: A Kalasa Dur Museum Exhibit Showing Old Traditional Dress of Kalasha Women with Jewellery, Minor Headdress Shushut and Traditional Woolen Shawl Charusti with Sumac Borders***

## 2. The New Dress of Kalasha Women: *Piran*

The new cotton and mixed material dresses called *piran* are in vogue now and worn by almost all Kalasha women; older, younger and even little girls. *Pirans*, like the old woolen dress *cheo* have always been black as well, as noted by Sperber. The word *Piran* probably derived from the Persian word for dress *perahan* and is very colourful and elaborate having decorated hems of ten inches and more of *chot* (*cot*) or decoration. According to Maggi this trend started in 1993, when on spring festival *joshi* two of her respondents, who claimed to be the first one, decorated the hems of their dresses with a solid ten inches or so of decoration (Maggie 2001: 9). The decorative patterns (floral or geometrical) on a *piran*, are primarily embroidered designs in bright colours using knitting yarn, available in valley shops, made by hand on manual sewing machines. *Piran* takes a lot more yarn and skill to make exquisite designs and motifs with expense on various cloth materials, hence shows a woman's creativity, skill and wealth, highly prized among the Kalasha Kafirs.

As noted by Sperber (1996), with some initial criticism the new style of dress *piran* became very popular throughout the valleys (383-4), and looks like the trend is on the rise, with more and more innovations and embellishments added each passing year, observed on major festivals. After the first use of the *piran* dress in 1974 it swept across the valleys and has almost taken over the place of

the traditional woolen dress *cheo* completely. A May 2011 participation in *joshi* festival showed almost every woman was wearing a *piran* with beautifully designed floral and geometrical hems, necks and shoulders in brilliant colours, as shown in **Figs. 8-14**.

***Figure 8: Kalasha Women's New Dress Pirans during a Dance at the Spring Festival Joshi***

***Figure 9: Kalasha Women in Piran Dress with Heavily Decorated Hems (Chot) Necks and Shoulders Dancing at Joshi Festival***

***Figure 10: Back View of Kalasha Woman's Dress Piran showing Various Cloth Material used***

***Figure 11: Front Decoration Chot of a New Kalasha Dress Piran worn by a Kalasha Woman during a Conference in Hazara University, Mansehra***

***Figure 12: Front Decoration Chot of a New Kalasha Dress Piran worn by a Kalasha Woman during a Conference in Hazara University, Mansehra***

***Figure 13: Back View of a Piran showing Shoulder Decoration and use of Two Waist Belts SpaTi on top of each other***

***Figure 14: A Colourfully Embroidered Sleeve of a Piran Dress using Knitting Yarn***

When compared the durability of the *piran* as a dress with the old dress *cheo,* it is not very durable. According to Sperber (1996), *pirans* are less heavy and more comfortable during the hot summers (384-7). They can be much more heavily decorated, and are made in only three to five days, but after about four months of daily use, they need to be renewed-perhaps with other decorations. That way *piran* as a new dress promotes changes, and reinforces new fashion sensibilities among Kalasha women than the simple *cheo* dress of the bygone times. *Pirans* cost more money, so they give higher status to their owners than the old home made woolen dress of the past (Sperber 1996: 383). Earlier, following local custom, Kalasha women would only make a new dress before *Joshi* festival, now many women make new *pirans* also for the other big festivals, like *Uchao* and *Chaumos*. A two piece *piran* dress; a loose black-robe with baggy pants, requires five to six meters of cloth in any material, readily available from the nearest market in Chitral town.

The changes in traditional Kalasha women's woolen dress *cheo* and the newly added decorations on *piran* dress are truly indicative of more opportunities that are brought to the valleys with increased accessibility to all-season roads, education, economic opportunities, tourism and effects of globalisation. I would

like to quote Sperber, who traces the complete history of how the new dress *piran* came into existence:

> The *piran* has always been black. The first of them were decorated with thin machine borders in red and green cotton thread. six or seven years ago, skeins of fine synthetic yarn in vivid colors came to the shops in the valleys, and they were very soon used, as bottom thread, because the synthetic thread repels dirt and does not absorb dye from the cotton cloth. She further notes, recently, colour-fast polyester cloth has come into use. Five or six years ago various ribbons reached the shops and began to be used as decorations on the *pirans*. Then two to three years ago, thick knitting yarn reached the shops. It was machine-stitched onto the material with fine thread. The introduction of this soft thick thread inspired the women to make more gently curved designs, like flowers above the hem (Sperber 1996: 385)

The loose and heavy *piran* like *cheo* dress is tucked at the waist with beautiful ornate coloured *paTi* or belts of cotton or wool, hand-woven by the Kalasha women (about 360 cm in length and 13-16 cm in width, plus 2 x 45 cm lish-bound fringes at the ends) (Sperber 1996: 387), as seen in **Figs. 5**, **11**, and **13**.

## Headdress(es) of Kalasha Women

### 1. The major Headdress: *Kupas*

Kalasha women wear one of the most elaborate and ornate serpent style headdresses called *kupas*. *Kupas* is the major headdress of women. *Kupas* is a woolen headdress hanging down the back, covered with eight to ten rows of cowrie shells or *chakash* (*cakas)*, with two rows folded upward on each side of the *Kupas*, and other tail decorations, as shown in **Fig. 15**. It is similar to the *perak* headdress worn by women in the Ladakh region, as documented by Aggarwal in her very interesting article, *The Turquoise Headdress of Ladakh* (2005:57). As noted by the late curator Haberlandt in 1906 (Gerlach 1971: vii) the Kalasha adornment is also thoroughly a jewellery of nature, produced and collected from natural surroundings and species of animals, trees, birds and flowers. Put together by women using high level of skill and labour over days and months using bone, feathers, seeds, plant materials, sea shells, coral beads and local cloth material from spinning and weaving from hair of the local goat and sheep.

***Figure 15: Women Wearing Walking Shoes under their Beautiful Piran Dresses***

*Kupas* is an ornate headdress very heavily decorated with cowrie shells, beads, bells, buttons, metal ornament *chamas*, feathers, flowers (*gamburi*) and with mountain pheasant feather plumes called *cheish. Kupas* holds an important position in Kalasha culture, worn on all important ceremonies, festivals and during periods of mourning. The little girls get their first *kupas* in a ceremony during the winter festival *chaumos*. Its front corners are named *singoiak*, from *sing* meaning horn, which may have some relation to the horned cap worn by women in Bashgal Valley in Nuristan before their conversion in 1895-96. The earlier *kupas* had no folds on the sides, as shown in **Fig. 21**, **22**, and **23**, but in 1956 one Kalasha woman had the idea of rolling the edges of her *kupas* upward to rest it more firmly on the head and soon it became a fashion and part of the tradition (Sperber 1996: 378-9), as shown in **Figs. 16-20**.

Sperber (1996) notes that the character of the *kupas* is ceremonial and solemn (378-9). Generally every woman makes her own *kupas*. A woman can only weave a new *kupas* before *joshi* (the spring festival) in the month of May. Sperber (1996) has also pointed out the use of *kupas* during death of close relatives, and further states, if a person dies, all women of the same clan take off their *susut*, and only wear *kupas* until the end of the mourning period, two days before the next festival (378-9). During the death of a close relative, females also take off the *kupas* for three days to bare their heads as a sign of deep grief. On death of her husband a

widow removes everything from her *kupas* other than cowries. And when a woman dies most of the decorations are removed from her *kupas* other than cowries and distributed among other women. A woman is also buried with her *kupas*. Perhaps that is the reason the Kalasha coffins lying open in the burial grounds had cowrie shells in many of them, observed during a May 2011 visit to Bumburet Valley.

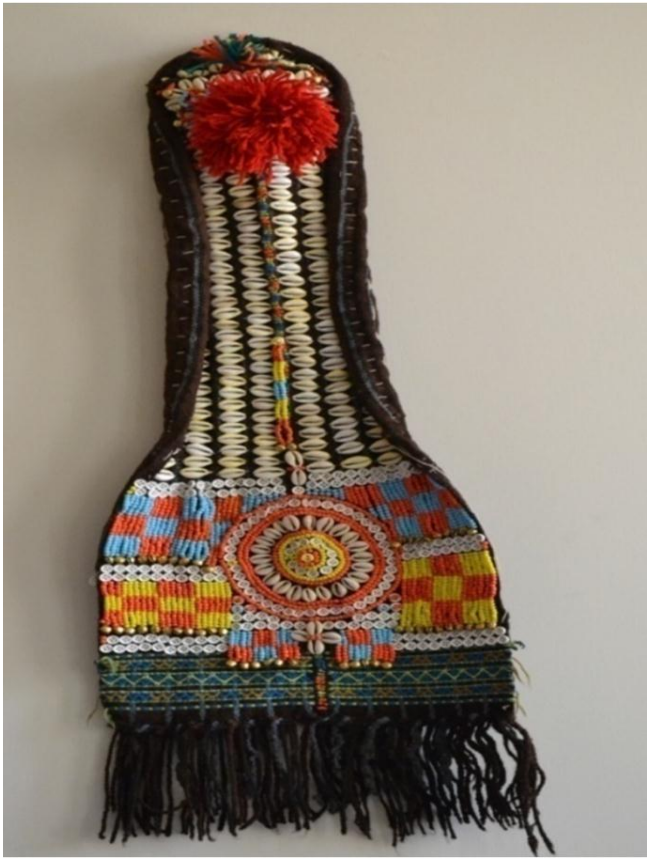

***Figure 16: Kalasha Women's Headdress Kupas with Cowrie Shells and other Decorations***

***Figure 17: A Kalasha Mother and a Baby Girl in their Kupas all set for Joshi Festival***

***Figure 18: The Decorations at the Back of a Kupas with a Shield Design Kera in the Middle***

***Figure 19: A Specimen of an Ornate Kupas worn by a Kalasha Woman in Rambur Valley***

***Figure 20: A Kalasha Woman Wearing Kupas showing Folded Sides***

***Figure 21: The Traditional Kupas with Unfolded Corners***

***Figure 22: The Traditional Kupas with Unfolded Corners***

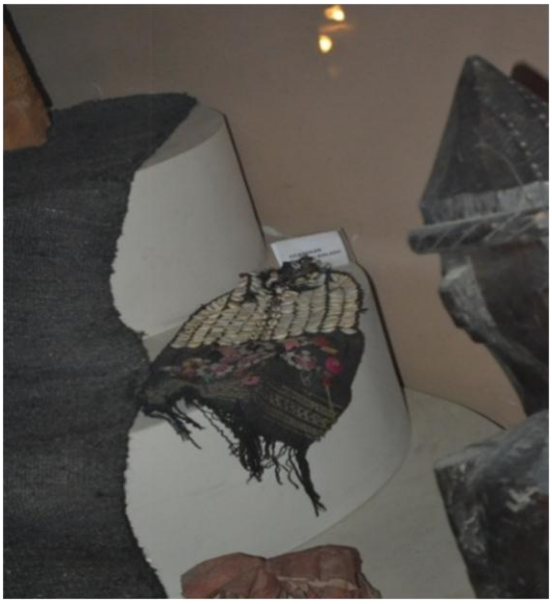

***Figure 23: An Old Kupas exhibited at the Folk Heritage Museum, Islamabad. It Shows No Folds on the Sides.***

As mentioned earlier, the tail end of a *kupas* headdress has multiple decorations, including a shield design sewn in the middle of the decorations called *kera*, as shown in **Fig. 20**. Darling notes that traditionally shield design was reserved for '*ley moch'* or man-killer rank, in Bashgal Valley. Later this was given to a woman in Bumburet Valley who killed a bad spirit and achieved the rank of 'man-killer.' She was the first *ja.mi.li* (clan daughter) permitted to wear the shield symbol on her *kupas* (Darling 1979: 178). Sperber also notes that only the daughter of a big man could wear the *kera* or shield design or *chish* on her *kupas* in the past. At present all women wear them irrespective of their father's status, as shown in various photographs. This trend started more recently, as noted by Sperber, quoting one of her respondents (interviewed in 1990) who said that it started ten years ago, "Our customs are disappearing" (Sperber 1996: 380).

## 2. The Minor Headdress: *Shushut* (*Susut*)

*Shushut* (*susut*) is also called minor headdress, because it is just a head band with a tail at the back called *tagalak* decorated heavily with cowrie shells, red and

other multicolour beads, buttons and colourful bead patterns and flowers, worn underneath the major headdress *kupas*, as shown in **Figs. 24** and **25**.

***Figure 24: Minor Kalasha Headdress Shushut with Tagalak, the Horizontal Piece with Cowrie Shell Flowers and Elaborate Bead Work Patterns, and Buttons, seen during Joshi Festival***

***Figure 25: Minor Headdress Shushut shown beneath the Major Headdress Kupas. The Woman Second from Right is wearing an Embroidered Cloth to Cover Her Head instead of Shushut***

*Shushut* is worn all the time by Kalasha women. The only time a woman takes off her *shushut* is when she is going to bed at night. *Susuts* also have *tagalak* (Trail and Cooper 1999: 295), the horizontal section on women's headband consisting of buttons, beads and bells. These decorated sections are on the tail piece of the *shushut* and vary in number and patterns depending on the length of the piece. Studies indicate that both *kupas* and *shushut* have become much more elaborate and ornate with the passage of time. An old specimen of *shushut* displayed at the Folk Heritage Museum, Islamabad, is shown in **Fig. 26**, and the new *shushut* in **Fig. 24**, showing tremendous change in decorations of the *tagalak* or the horizontal section of a *shushut* overtime.

Sperber, while talking about making *susut* (*shushut)* states "fringes stitched together transversely with big needles bought from the Nursitani smiths" (1996:382). Those produced for selling to tourists are much lower in quality and decorations as compared to those worn by the Kalasha women themselves, made with lot of labour, skill and passion for special occasions and major festivals.


***Figure 26: An Early Specimen of Shushut Displayed at Folk Heritage Museum, Islamabad with No Tagalak and Back Tail Piece Bead Decorations***

## 3. Beaded Jewellery and Accessories

One of the most striking features of the Kalasha dressing is the lavish use of beaded neck jewellery, especially red oblong coral beads used in the recent past, brought from Iran, Afghanistan and other countries through Silk Route Trade in

the historic Chitral town. Now these are available as synthetic beads in various colours of red, yellow, orange, white and shades of blue. Glass beads are also now more frequently used by Kalasha women. A girl child is first given a bead necklace (s) at a tender age of two to three years in a formal ceremony called *gostnik*. Her bead collection grows as the time goes and as noted by Maggi, "A woman's bead collection may weigh as much as fifteen pounds" (Maggi 2001: 97-98).

The old photographs show that the use of beaded necklaces was very limited among Kalasha women as compared to the one observed today. To make a comparison, I have used the old photographs from the Italian Mission's study of the Kalasha Kafirs in the early 1950s, by anthropologist Paolo Graziosi (1964), as shown in **Figs. 27** and **28**, and photographs by Darling (1979) for the comparison of beaded jewellery use, as shown in **Fig. 31**, and other more recent (May 2011) photographs from my own visit as shown in **Figs. 29- 30**.

***Figure 27: An Old Photograph of a Kalasaha Woman, showing use of Buttons and Coins Strung with Round Beads. It also shows her wearing a Gadu'lay with Simple Round Beads instead of Classic Red Oblong Beads***

***Figure 28: An Old Photograph of a Kalasha Woman with Big Round Bead Necklaces***

***Figure 29: Young Kalasha Women with Bead Hanks Lish and Sulki in Colours other than Traditional Red Oblong Beads***

***Figure 30: A Young Kalasha Woman Wearing Multiple Hanks of beads Lish and Sulki, a Choker called Kapaban, and Eight-strand Garland Gadu'lay***

***Figure 31: Kalasha Women in their Traditional Costumes and Pricy Accessories, including Feather Plume Cheish, Neck Ring Gringa, Silver Waist Chain Ornament Shagay (Sagay) and Big Red Oblong Bead Necklace Gadul'ay, during a Merit Feast Biramor***

A study of Kalasha costumes show a gradual but considerable increase in embellishment of the dress *piran,* of headdresses both *kupas* and *shushut* and a lavish use of beaded neck jewellery pieces and various types of accessories. **Fig. 31** shows women wearing heavy beaded jewellery, dressed for a merit feast *biramor* (Darling 1979: 166).

This picture shows all signs of wealth and status shown in their dresses; *cis* (*chish)* with multiple feathers, silver chains on the waist *shagay,* silver neck piece *gringa* or torque jewellery, small necklaces *lish*, *mahik, sulki*, and choker *kapaban* and the big eight-strand red oblong bead necklaces *gadul'ay*. It is very interesting to note that as per Darling's work on Kalasha *Kafirs,* many of these jewellery items in the past "were reserved for the highest ranking warriors in Bashgal Valley (now in Nuristan, Afghanistan) which are slowly adopted widely by Kalasha women at present (Darling 1979:166).

Robertson in his study also mentions about dress and accessories of dance of Kalasha men and women during a three day ceremony, in connection with the erection of two wooden effigies to deceased people-one to a man, and other to a woman, in Birir Valley. While describing dancing women's dress and jewellery, he notes, "Of these during the dance, about two dozen, including little girls, the seniors wearing horned headdresses…All the women and little girls were shockingly dirty and unkempt, their garments being much torn. The women wore the large serpentine earrings, and two or three had on silver blinkers also," (Robertson 2001: 220).

## Traditional Costumes of Kalasha Men

Kalasha men's traditional costumes will be discussed under three major categories:

- Traditional Dress of Men
- Jewellery and Accessories
- Traditional Footwear of Men (*kalun*)

### 1. The Traditional Dress of Kalasha Men

The traditional costume of a Kalasha man of rank *namusi moch,* as shown in **Fig. 32**, using Darling's descriptions, consisted of various pieces denoting various

symbols of rank. The woolen Chitrali Cap with plume or *cheish* (a symbol of leopard or man-killer); the loose white sheep's wool pants, called *bhut* or *boot* (a symbol of his membership in the *growei* (sacred male community of the Kalasha)); bands called *shumans* around his chest, a symbol of honour, and apricot seed garlands called *jajey ghu* around his neck (the symbols of prestige); markhor hide moccasins (*shara kandali kalun*) only worn by men of rank who have given merit feasts (like *biramor*); and *puttees* around his calves are woven with symbols of horns of the sacred male goats (Darling 1979: 186).

The traditional woolen dress of men consisted of three pieces. A woolen baggy pant called *bhut* or *boot,* as shown in **Figs. 32** and **33**, a woolen upper garment as shown in **Fig. 1**, and a Chitrali cap. Woolen pants *sualak* (*shuala*k) and goat hair cloak called *ghui* or *walghui* were also worn by goatherders. Silk and brocade robes as signs of rank were and are still worn on important occasions as shown in **Figs. 34** and **38**. Belts or *pattis* of various types, length and colours were also used by men, as shown in **Figs. 35**, **36** and **37**. Different studies give different terms for various pieces of traditional dress for men (Sheikh 2013: 115) but I have tried to consult the Kalasha Dictionary (Trail and Cooper 1999) to find out the proper use of the Kalasha dress terms as far as possible.

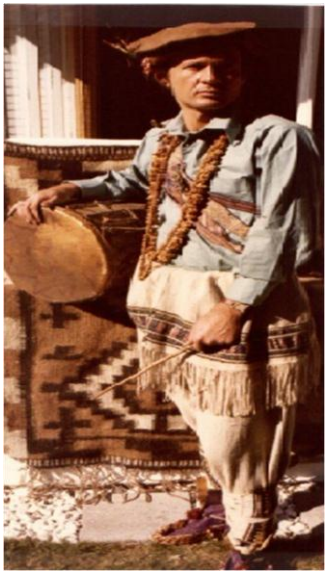

***Figure 32: Traditional Costume Worn by a Kalasha Namusi Moch (Man of Rank)***

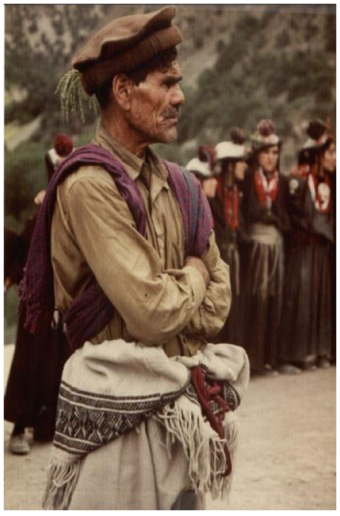

***Figure 33: A Kalasha Shaman, in Traditional Woolen Pants Boot (Bhut)***

***Figure 34: Traditional Orator Qazi during Joshi Festival, wearing Brocade Robe, a sign of Rank and Bands in his neck called Shuman given to honour a person. Money in his cap is given by the Audience as he narrates Traditional Stories***

***Figure 35: A Kalasha Dur Museum Exhibit showing Men's Dress and Accessories***

***Figure 36: Traditional Leather Moccasins for Men in Kalasha Dur Museum***

***Figure 37: A Successful Aspirant for the Rank of Birmor (a Type of Merit Feast) Kata Singh, wearing Multiple Garlands of Apricot Seed called Jajeyghu, given by ja mi li or (Clan Daughter/ Sisters) to honour the Ranked Men, as shown in the background***

***Figure 38: The 1977 Biramor hosted by Kata Singh, in Rumbur Valley, dedicated to his father Buda, who is mounted on horseback. A privilege for those who have hosted Biramor, he is wearing Symbols of Rank; a Silk Robe, Neck Bands and Garlands, and a Mountain Pheasant Feathered Cap Plume Chish (Cis)***

## 2. Jewellery and Accessories

Although, Robertson (2001) mentions the use of jewellery pieces and ornaments by Kalasha men, a May 2011 visit in all three Kalasha Valleys revealed that it was not observed by men anymore. Almost all young and old men, however, were wearing *Chitrali* woolen cap, some decorated with mountain pheasant feather plume *cheish* and also many with ordinary feathers from various other types of local birds dyed in beautiful colours. The *cheish* with multiple feathers of the mountain pheasant is a pricy dress item for men nowadays, costing three to four thousand rupees for a small 3-to-4-feather *cheish.* The more the number of feathers in a *cheish* the more pricy it gets.

It is very interesting to note here, that in the past the *cheish* was a symbol used only by high ranking men. If a man was a leopard killer, the *cheish* had 3-feathers or stalks, or if the victim was a man, then the plume, called *asemal* had nine feathers (Darling 1979: 179). At present, men wear it frequently more as a decoration piece on their caps. Only few men were spotted wearing small *cheish* with only few feathers during 2011 *joshi* festival. In fact, more Kalasha women were observed wearing very heavy *cheish* as compared to Kalasha men.

Robertson's study gives further clues into men's accessories, and notes during a dance of celebration:

> While their male relations in the dancing crowd were distinguished from the others by wearing bright-coloured clothes and all the bravery they possessed, and by each carrying a dancing-axe. They wore gorgeous sham kinkob chappans or long robes [of honor worn on special occasions] and white cloth turbans … In the ears they wore long silver earrings … while the neck was frequently circled by a silver, or what looked like a silver ornament, solid and heavy, such as those worn by Hindu women. If an individual were the proud possessor of two chappans, he wore them both, exposing some of the glory of the one underneath by slipping an arm out of a sleeve of the one above. The waist was girded by a narrow shawl, or the usual metal-studded leather belt of the country, supporting a dagger. (Robertson 2001: 220-21)

## 3. Traditional Footwear of Men (*kalun)*

The traditional soft leather moccasins *kalun* were part of the traditional Kalasha footwear for men, worn on various important and ceremonial occasions. The traditional ornate leather moccasins called *kalun,* were used about 50 years from

now (Personal communication: Farman, April 2012). No use of *kalun* was observed during my May 2011 visit to Kalasha Valleys.

A good brand was *shara* (*sara) kandali kalun*, as seen in **Fig. 39**, the decorative moccasins made from markhor leather (Trail and Cooper 1999: 147-287). During death rituals a male dead body is dressed with *kalun* as well. At present, both men and women use sandals and sneakers, as shown in **Fig. 15**. Ordinary *kalun* were told to be used inside as well as outside as they were carefully made using layers of raw leather as a base or sole. The moccasins were tied with colourful thin woven tape with colourful pompoms at the ends. Various studies indicate that moccasins were of different colours including red leather *watsas* (Robertson 2001: 221), prepared in Kamdesh by slaves and some in natural beige and browns with woolen embroidery around the shoes, as shown in **Fig. 36**.

***Figure 39: Shara Kandali Kalun, the Traditional Markhor Hide and Hair Moccasins of Kalasha Men of Rank***

A literature review shows that there were many types of soft leather moccasins, having different names, as indicated by Robertson and Darling (Robertson 2001: 220-1, Darling 1979: 176). While talking about men's shoes and dress in a dancing ceremony Robertson notes:

> The feet were covered with curiously worked dancing-boots… and that almost everybody wore "*watsas*" the soft reddish leather boot of the country with red woolen rosettes on the instep while from the long, soft drab-coloured uppers, which reached nearly half-way to the knee, there depended a long fringe of white goat's hair, dyed red at the tips. The boots were secured to the legs and ankles by narrow tapes of list. Above them appeared Chitrali stockings, into the tops of which the loose, baggy trousers of coarse white cotton cloth were carefully tucked. This, with a dancing-axe, completed the full dress of a swell, but there were all gradations in attire, according to the wealth or position of the wearer. (2001: 220-1)

There is even a mention of *mochost* (*mocost*) or moccasins made of human skin (Trail and Cooper 199: 202). The *KAL'AS'A DUR* Museum has some very fine specimens of various types of *kaluns* at display, as shown in **Fig. 36**.

## Conclusion

In conclusion I would like to infer that the traditional Kalasha costumes for men and women were elaborate as my review shows from Robertson's study of 1891-92 to my own visit to all three Kalasha Valleys in May of 2011. The changing time has taken its toll on Kalasha costume traditions and the study indicates a total disappearance of men's traditional costumes. Kalasha women's traditional woolen dress *cheo* is also almost replaced by the new dress *piran*. There is an urgent need of documentation of the traditional costumes of the Kalash Kafirs, a living endangered culture, using collections of the Kalasa Dur Museum. Creating a pictorial archive and digitising the collections for preserving them for future generations needs to be done on priority basis, given the precarious security situation of the militancy-hit environment of the KPK Province, where the Museum is located.

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# Overview of Traditional Weaving (Thagzo*)* in Bhutan

*Sonam Yudon*

## Abstract

*Thagzo, literally meaning the art of textile or handloom weaving, is one of the Zo rig chu sum, thirteen traditional arts and crafts of Bhutan which have played a very important role in shaping Bhutan's unique cultural identity.*

*The practice of weaving had existed since the earliest recorded history of the country, and the knowledge and skills attributed to it have been passed down from one generation to the next. Weaving is an individual work of art and textiles produced are mainly for the Bhutanese. In recent times, however, Indian-made cloth featuring Bhutanese designs, which are machine-woven, is becoming increasingly popular in Bhutan. In addition, with the seeping in of westernisation, globalisation and modernisation in the country, there is a huge concern for the continuity of this beautiful and time-honoured tradition of weaving.*

*In light of the above mentioned facts, this paper examines the features of traditional weaving in Bhutan with particular attention to traditional ways of dyeing, traditional raw material and other aspects of Bhutanese textile production. Furthermore, this paper tries to find out whether there exists any relationship between the easy access to raw material and factory produced textiles from neighbouring countries, and the decline in traditional weaving that may cause it to disappear.*

## Introduction

Bhutan, 'the land of the thunder dragon' is a treasure house of beautiful and colourful arts and crafts. The Cambridge Advanced Learner's Dictionary (2008) defines arts and crafts as 'the skills of making objects such as decorations, furniture, and pottery (objects made from clay) by hand'. In Bhutan, the arts and crafts together are locally termed as *Zo Rig Chu Sum*. *Zo* means to make, *rig* means science, and *chusum* means thirteen thus translating to 'the thirteen arts and crafts'. The thirteen arts and crafts of Bhutan were first introduced to Bhutan in the seventeenth Century during Zhabdrung's (Father and unifier of Medieval Bhutan) time (1594-1651) and those are as follows:

1. Painting (*lhazo, lhadri or Debri*);
2. Wood, slate and stone carving (*Par zo*);
3. Sculpting or clay arts (*jimzo*);
4. Woodworking or Carpentry (*shingzo*);
5. Gold, silver and blacksmithing (*serzo, nguzo, Garzo*);
6. Cane and bamboo weaving or basketry (*Tsharzo*);
7. Weaving/textile work (*thagzo*);
8. Embroidery/needlework (*Tshemzo*);
9. Bronze/Metal Casting (*lugzo*);
10. Wood-turning (*Shagzo);*
11. Masonry (*Dozo* or *Tsigzo*);
12. Paper-making (*Shokzo, dezo*); and
13. Calligraphy (*yigzo*).

Arts and crafts of Bhutan are not only eye-catching and decorative but also subjective and symbolic. Buddhism being the principal religion of Bhutan, every aspect of arts and crafts is generally influenced by Buddhist beliefs, teachings and practices. Most, if not all Bhutanese arts and crafts are used to convey spiritual values and messages. Thus, one cannot find Bhutanese arts and crafts that are devoid of any religious significance and symbolism. As pointed out by Robin Smillie (2007), the three main characteristics of Bhutanese art are: its anonymity, spirituality and having no aesthetic function by itself (12). The artist does not work to create a work of art but a labour of faith that produces something as beautifully as one possibly can.

The incredible skills and knowledge of artisans and craftsmen have been passed down from generation to generation especially from father to sons/ daughters, mother to daughters/ sons and master to the students. Until the recent past, this culture was kept alive even in the new environment of rising technical developments to which the Bhutanese adapted in a practical and open-minded way. Even to this day, these arts and crafts can be studied at the training institute of *Zorig Chusum*. Currently, there are two institutes of *Zorig Chusum* in the

country: Institute of *Zorig Chusum* in Thimphu (capital of Bhutan) and another in Tashiyangste in eastern Bhutan, set up in 1971 and 1997 respectively with the aim to provide training and to preserve traditional arts and crafts, and also to create job opportunities for the youth of the country.

All the arts and crafts, although being significantly rooted in Buddhism and history are mostly used in everyday life. All thirteen arts and crafts of Bhutan can be seen functioning in all the *Dzongs* (fortresses), temples and monasteries throughout the country regularly, if not on a daily basis. Murals and frescoes are seen inside the temples and monasteries that tell stories of religious figures, and symbolic items like statues of the great Buddhist saints are placed on altars in temples/ monasteries and in every *choesham* (altar room) of an ordinary household. Some of the products like masks are worn during religious festivals by mask dancers showcasing the expensive clothes with intricate designs. These are mostly performed during the auspicious days or festivals.

## ***Thagzo* – Textile/ Traditional Cloth Making**

Weaving in Bhutan today has come to represent its unique cultural and national identity in the eyes of the people of the world. The Bhutanese weavers have excelled in an old tradition of producing not only woven strips of cotton, but also of yaks' hair and sheep's wool, which is rain-and-wind proof. The textile works has been popular in the country for a very long time.

Weaving is very much part of the Bhutanese way of life. Nearly every house has a loom, often in a special room used mainly for weaving. Bartholomew (1985) states that in the past almost all the girls would begin playing with looms at an early age and start their apprenticeship at ten or eleven years of age (90). They were considered to be experts by the time they reached twenty two. Almost all the girls would be weaving by the time they reach their 20s. Although weaving task is part of their lives, it is carried out intermittently, in-between looking after children, cooking, washing and working in the fields.

Bhutanese textiles have been considered as one of the highest forms of artistic expression and the most important art in the country. Moreover, it has played a central role in maintaining the unique culture of Bhutan. Bhutanese weavers have been able to bring up a highly advanced and sophisticated weaving culture, developed and evolved over a significant period of time. Weaving is more

than a pastime for the weavers in Bhutan as it is one of the sources of income among rural women, especially in eastern Bhutan. Thus, weaving in Bhutan may be regarded as a cottage industry and the textile produced are used mainly for household purposes although some of the cloth may also be sold. In the past, before the monetised economy, a part of the fabrics people produced were used to pay government taxes. Some fabrics were redistributed as state payments to common people, and also offered to officials in return for favours. While weaving is closely associated with women, few men are also seen to be weaving.

The types of clothes the Bhutanese weavers wove depended on the availability of the raw material. People from eastern Bhutan are known to be the best weavers in Bhutan with every valley boasting its own designs and patterns. For example, the specialty of Bumthang, central Bhutan, is its famous production of beautifully-dyed woolen pieces such as *yattah, martah,* and *sertah* whereas the high altitude settlements, such as Merak and Sakteng on the eastern border are known for their woolen weavings and natural dyes. In many parts of eastern Bhutan, people cultivated cotton as an annual crop and thus made cotton clothes. Kurtoe in Luntse *Dzongkhag* (district) in eastern Bhutan boasts the most sophisticated *kira – Kishuthara* (women's dress), and Tashigang is famously known for the striped, multicoloured design of dress pieces known as *mensi mattah, aikapur and lungserma as well as the chaksi pankhep* (royal lap cover) and the *kara* (*belt piece*). Silk worms were raised to produce raw silk from which cloth called *bura* was made in Samdrup Jongkhar, South East Bhutan.

The entire process of weaving includes preparation of yarn, dyeing and final weaving to produce designs ranging from simple to beautiful and intricate designs.

## Looms (*thagshing)* for Weaving

In Bhutan, Fabrics are woven by hand using three types of looms:

i. Back-strap loom (*pangthag*)
ii. Treadle/pedal loom (*thrithag*)
iii. Card loom

## Back-strap Loom

In the olden days, textiles were woven only on the back-strap loom (*pangthag).* It is operated by just one person who creates tension in the warp threads by leaning back against the wide leather strap which holds the thread taut (**Figs. 1a&1b**). As pointed out by Adams (1984), the weaver sits on the ground or floor, leans against a wide leather strap and deftly maneuvers a dizzying number of seemingly extraneous threads into the background cloth as it is being woven, thus producing the infinitely varied embroidery-like designs which can be seen on both ritual and utilitarian textiles all over Bhutan (5).

***Figures 1a&1b: Weaver on Back-strap Loom***

## Card loom

Card loom functions in a similar fashion to backstrap loom where the weaver leans against the wide leather strap holding the thread taut but the heddles are different. Instead of using the loops, cards are used to lift a part of the warp. The cards that used to be traditionally made of sheets of sturdy animal hides are often being made of x-ray film or cardboard today. Each card has four holes in each corner for the warp to pass through (**Fig. 2**). A set of warp units consists of four cards with eight warps. As the weaver weaves to make a belt, cards are rotated by quarter turns to open and close each shed, and the weft is beaten down with a wooden sword (*thagchung*).Card loom is used to produce narrow textile such as belts (*kera*), garters for securing boots, and ties for binding religious text.

***Figure 2: Cards used in the Card Loom to make Belts***

## Treadle/ Pedal Loom *(Thrithag)*

Treadle or pedal loom is a horizontal farm loom that functions with pedals (**Fig. 3**). The loom does not use a circular warp instead the warp is wound around the narrow rods laid parallel to the floor. As the winding proceeds at one end of the

warp, yarns are inserted through the heddles that control the ground weave. It usually has four shafts or heddles. Unlike the backstrap and card loom, supplementary pattern warps are not used in this type of loom. It is usually used to weave checkered textiles by using stripes in the warp and stripes in the weft.

***Figure 3: Treadle /Pedal Loom***

## Fibers/ Yarn or Material used

Most materials used in weaving were available locally. The yarn and dyes, which were used to make the cloth and the wood and bamboo for the looms, are also found within Bhutan. Traditionally, the Bhutanese weavers' material had been natural fibers like raw cotton, wool, and thread derived from nettle plants, raw silk and dyes that were produced locally. They used to cultivate cotton and silk worm and processed the yarn locally (**Fig. 4**). Gradually commercial fibers like commercial cotton, silk, synthetic dyes and rayon and dyes from India came into use as they were much cheaper and easier to use compared to indigenous materials. Today, Bhutanese weavers have access to fibers like silk-like acrylic yarn, machine spun woolen yarn, acrylic yarn, mercerised cotton, polyester from India, Hong Kong, Japan, and buy the best they can afford (**Fig. 5**). In addition, over the years rearing of silk worm and cotton cultivation have become labour

extensive and easy access to machine made yarn has lead to substitution of the local yarn with imported yarn. This has also led to the disappearance of traditional yarn processing tools. With this easy access to machine made yarn in the market, the tools that were used to make the traditional yarn are almost diminished in the country.

***Figure 4: Locally Processed Cotton Yarn***

***Figure 5: Machine Spun Woolen Yarn***

## Dyeing

Bhutanese weavers consider pleasing colour coordination to be more important than the designs of the fabrics. Bhutanese have a natural ability to excel in the dyeing process and manage to obtain every colour. Traditionally, fine yarn was dyed in many colours by the locally available dye (plant/ vegetable dyes). Since the country is generally rich in flora and fauna, Bhutanese cultivated indigo in household gardens along with wild madder, and other wild plants. However, it is very difficult to learn the specific formulae of dyeing as there is a strong taboo guiding the dyeing process. Bhutanese are very secretive about dyeing formulas, even amongst themselves. According to Bartholomew (1985), Bhutanese are very superstitious about dyes and they believe only the most qualified people will ever attempt the dyeing process (95). They believe that certain weather conditions, strangers and even a pregnant woman who come near the dyeing area or during the time of the dyeing process can ruin the impact of dyes. Therefore, in addition to good mood, dyeing of yarn is done in secret in the early mornings behind closed doors.

In the past, the traditional colours used for weaving were primarily red and blue, which are believed to be spiritually symbolic of the two complementary forces of the universe. For example, to make the white yarn into red colour, yarn is soaked in the boiled solution of wild madder (*lani ngang ru* in **Fig. 7**), and shades of green and blue colours are obtained from the indigo plants (*yang shaba* (**Fig. 6**). The colour varies according to the dye-to-yarn ratio used and the steeping time.

***Figure 6: Indigo Plant***

Today, very little dyeing with natural dyes is done due to easy access to commercial dyes or aniline dyes which are cheaper to buy and easier to use. Weavers sometimes add synthetic dyes to a natural dye to enhance the colour and luster of the yarns.

***Figure 7: Wild Madder***

## Textiles pattern

Every valley has it own colourful pattern, where they have high levels of technical sophistication and unique designs. Each textile has its own spiritual relevance, importance and daily usage. It usually takes an artist from several days to years to finish a weaving depending on the complexity of the designs and patterns of the cloth. One would identify the district from where it came from by the very look of the fabric.

*Sharchops,* the people of eastern Bhutan where the maximum weaving is done, is famous for producing several distinct patterns and designs such as striped fabric, single faced or both side fabrics. Plain weave fabrics are relatively simple striped clothes with double-sided designs like *thara* and *serthra* woven for everyday wear, in contrast to those fabrics woven for special or ceremonial occasions. Supplementary-weft-patterned fabrics are usually obtained by adding coloured thread that is thicker than the base fabric, to the weft. These coloured threads can show on one side of the fabric or on both sides. If they show on one side, they are called single faced, and when they show on both sides, they are called two-faced or double faced. Kurtoe in Lhuntse *Dzongkhag* is famous for producing brocaded dresses (*kushuthara*). *Khushuthara* is characterised by its high silk content and also by the lavish use of *timah* and *sammah* brocade-work

finely executed on a white background. The *Timah* technique is believed to be very complex and requires great skills by the weavers to make sure that there are no supplementary brocade threads shown on the back while producing a fine pattern on the surface of the fabric.

Other patterns include the brocade motifs on both sides of the fabric like *lungserma, aikapur* and *mensi mattah.*These are made by adding coloured thread to the warp. These fabrics have extra warp threads manipulated to create double faced warp patterns. Those are called Supplementary-warp-patterned fabrics**.**

Apart from weaving the most intricate, creative and technically unique textiles, Bhutanese designs are primarily of geometric nature. The geometric symbols used in the textiles have a deep religious significance. The most common geometric symbols used by the Bhutanese are *yurung* (Swastikas), *phub* (triangular pattern), *dramee* (eternal knot) and *dorji* (thunderbolt). These symbols have their own significance. For example, the motif *phub* is believed to bring long life. Today, the work in modern pieces has become increasingly more dense and complicated, and the Buddhist influences seem to disappear in the overall pattern. Animal designs, once a common motif, are no longer being used.

## Products

Different styles of fabrics can be distinguished according to the combination of motifs and colours produced in different parts of the country. There are many subtly varying utilitarian and ceremonial weavings particularly in relation to custom and usage. Each fabric has a name like *kira, Gho, kera, rachu, Kabney, yattah, denkhep, charkhab, bhundi, khamar, chaksi pankhep, Tikhep* and *tego.* Utilitarian textiles like ropes and bags from yak hair and blankets and clothing from sheep wool are also produced in Merak and Sakteng on the eastern border.

### *Kira*

The *kira* is the national dress for women in Bhutan (**Fig. 8**). It is a rectangular piece, usually made from three lengths of cloth woven on the backstrap loom, or ten to fourteen narrow panels of fabrics made on the treadle loom. The *kira* is worn ankle-length, wrapped around the body, fastened at each shoulder with a *koma* (brooch - *Koma* is a distinctive piece of jewellery made of silver or gold, and often accented with turquoise to fasten the *kira*) and secured at the waist by

the *kera* (belt) (**Fig. 9**). However, the full *kira* is worn mostly by the older generation. The younger generation of Bhutanese women prefers to wear half *kira* made up of two lengths of cloth woven instead of three lengths of cloth. In recent times, factory made fabrics featuring Bhutanese designs that are actually from India have hit the Bhutanese markets and have become very popular. As it is cheap and easily available in the market, many women prefer to wear the factory made fabrics.

***Figure 8: Kira Hung up for Sale***

***Figure 9: A Woman in Kira***

### *Gho*

The *gho* is the national dress of men in Bhutan. This coat like garment is worn tightly belted with a narrow *kera* (belt) so that upper portion forms a sort of loose pouch or pocket. *Gho* is worn knee length over a white cotton shirt *tego* which has extra-long sleeves whose cuffs and collar are turned back to show touches of white at the wrist and neck (**Fig. 10**).

***Figure 10: Men in Gho***

### *Kera*

*Kera* is a belt, woven on card loom with traditional designs for women and plain for man's belt with stripes and is fringed at both ends (**Fig. 11**). It is used to secure the *kira* and *gho* at the waist. It is folded thrice, wrapped tightly around the waist and held in place with the fringed end which is tucked into the top of the belt.


***Figure 11: Traditional Designs of Kera for Women and Plain Stripes for Men: Fringed at both ends***

### *Rhachu*

The *rachu* is a ceremonial sash worn by women during the festivals while entering temples, fortresses, monasteries, and flagged offices. It is fringed at both ends. It is worn folded and draped over the left shoulder when welcoming important officials (**Fig. 12**). When paying respect to a lama or prostrating in the temple and monasteries, it is worn loose over both the shoulders (**Fig. 13**).

***Figure 12: Rhachu folded and Draped over the Left Shoulder***

***Figure 13: Rhachu Worn Loose over Shoulder***

### *Kabney*

*Kabney* is a ceremonial scarf worn by men, and is much broader than those worn by women. It is intricately draped and wrapped around the shoulders so that they can ceremonially unfurl for the traditional respectful bow to the king or other high officials. It is also worn while visiting temples, fortresses and monasteries.

Different colours of the *kabney* are used according to the rank of the man wearing it. For example, a commoner without official rank wears white scarf or

cotton or raw silk. Court judges wear green colour and ministers wear orange (**Fig. 14**).

***Figure 14: Kabney (Ceremonial Scarf)***

## Conclusion

Modernisation and globalisation have certainly brought major changes to the traditional weavers of Bhutan and Bhutanese textile, and these present great challenges, especially losing their significance in the modern world. The natural fibers are being replaced by commercial fibers, and the weaving tools and rich characters of the Bhutanese textile are rapidly impoverished with the flood of cultural influences and modernisation. Traditional Bhutanese designs are changing. In recent years synthetic fibers have steadily gained popularity, perhaps they are easy to wash and care for. Not many women are seen to be weaving compared to a century ago as young girls who should be learning to weave are now attending school. Machine woven clothes featuring Bhutanese designs made in India have gained popularity in recent times.

In spite of the stiff competition from cheaper factory-made cloth, and easily available commercial yarns and dyes, traditional hand-woven cloth still enjoys the pride of being unique and has maintained its great popularity throughout the country. The Bhutanese have been able to keep this culture alive even in a new

environment of rising technical developments by adapting themselves in a practical and unprejudiced way. Even today, traditional weaving forms the integral part of the rich cultural heritage of Bhutan and Bhutanese textiles are still considered to be one of the highest forms of Bhutanese artistic expressions.

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# Caste, Craft and Traditional Knowledge in Sri Lanka

*Kalinga Tudor Silva*

## Abstract

*Arts and crafts of drummer caste (Nakati), mat weaver caste (Kinnara) and smith caste (Navandanna) play a significant role in Traditional Cultural Expressions in Sinhala society in the forms of dance, art, temple paintings and rituals of various kinds. However, these are encountering multiple problems due to external threats such as globalisation, cultural homogenisation and increased competition from mass production of artifacts on the one hand and internal problems such as younger generations moving away from these crafts primarily due to status considerations on the other. In spite of these difficulties, some of the traditional crafts such as pottery, brass work and wood carving have achieved a degree of momentum and revival due to tourism and state patronage. Similarly, some of the traditional art forms have achieved a new lease of life due to electronic media, political patronage and integration with educational and training programmes. This in turn calls for a systematic assessment of the determinants of preservation and conservation of traditional knowledge systems in Sri Lanka.*

*This paper examines the role of the caste structure in the inhibition of the preservation/conservation of traditional knowledge systems and the role of tourism, globalization, electronic/print media and state policies in the promotion/preservation of such knowledge and cultural expressions.*

*It argues for a policy framework that is equally sensitive to cultural dynamics of the craft communities and, at the same time, opportunities and openings offered by the market forces and globalisation.*

## Introduction

A good deal of traditional knowledge in Sri Lankan society rests with the lowest castes in the Sinhala caste hierarchy. A bulk of the traditional knowledge relating to pottery, cane craft, Dumbara mat weaving, making of different types of drums, jewellery making, brass work, stonework, making of whisks, astrology and occult practices continue to be possessed by respective caste groups which are typically at the lower end of the caste hierarchy (Ryan 1993: 96-137).

Similarly arts and crafts of drummer caste (*Nakati),* mat weaver caste (*Kinnara*) and smith caste (*Navandanna*) play a significant role in Traditional Cultural Expressions in Sinhala society in the forms of dance, art, temple paintings and various rituals (Coomaraswami 1908, Ariyapala 1956: 291).

Using findings of a SAARC Cultural Centre funded research project on Arts, Crafts and Identity and Cultural Dynamics of three depressed caste groups in the Sinhala society, Sri Lanka, namely *Nakathi, Kinnara* and *Rodiya*, this paper examines the following issues.

- How far has the historically low caste status of the relevant bearers of traditional knowledge and traditional cultural expressions inhibited the preservation and conservation of the relevant knowledge systems.
- The role of tourism, international travel and globalisation in the promotion of some of the traditional art forms.
- The role of education in popularisation of some of the art forms.
- The role of electronic and printed media in the dissemination of relevant knowledge systems.
- The role of state policies and programmes in relation to preservation and conservation of traditional knowledge and traditional cultural expressions.

The villages covered in this study were Weldambala, Kalapuraya and Menikhinna. Subsequently the study was extended to three *Rodiya* villages in the Kurunegala district, namely Manawa, Kurulupaluwa and Waduressa. .

## Traditional Knowledge and Traditional Cultural Expressions in the Selected Castes

Each of the three caste groups covered by this study had some traditional knowledge which they considered as their distinctive cultural heritage. This included orally transmitted knowledge relating to crafts, rituals, myths of origin and magical and occult practices. They also possessed some traditional cultural expressions that have achieved an iconic significance for identifying and displaying the Sinhala or even Sri Lankan culture. This section describes these traditional knowledge and cultural expressions in each of the three castes.

### *Nakati* Caste

In the Kandyan areas this caste controlled a good deal of the hereditary knowledge in astrology, handloom weaving incorporating Dumbara motifs in some remote villages in the Dumbara valley, planetary rituals (*bali*), drumming and dancing and rituals such as *kohombakankariya* and *suvisi vivarana*. Many of their arts, Kandyan dance and drumming in particular, have emerged as traditional cultural expressions in annual pageants such as Kandy Asala Perahera, political rituals, weddings and tourist shows.

The term 'Kandyan dance' itself has been coined as a colonial construct used for mapping of local cultures in characterising Kandyan social formation and Sri Lankan culture in a broader sense. A dance form that began as a ritual act performed by drummers and dancers representing a particular caste (*Berava/ Nakati*) in Sinhala society became identified as a distinctive marker of Sinhala Buddhist culture during the nationalist upsurge from the nineteenth century onwards. The value of Kandyan dance from the angle of cultural heritage has been highlighted in a number of writings on art and culture (See Sederaman 1968, Makulloluwa 1976). There are references to Kandyan dance in important anthropological works on Sri Lanka such as Precept and Practice by Richard Gombrich (1971), Rituals of the Kandyan State by H.L. Seneviratne (1978), and The Cult of Goddess Pattini by Gananath Obeyesekere (1984). Dance and the Nation: Performance, Ritual and Politics in Sri Lanka by Susan A. Reed (2010) can be seen as the first full scale ethnographic and historical account of Kandyan dance.

Traditionally, young people were trained in drumming and dancing through the pupillary succession system. Since 1950s, a more formal system of *kalayathana* (art schools) was established in many of the drummer caste villages under the leadership of well known drummers and dancers who belonged to different dance lineages (*gurukulas*). There were specific dance lineages in different drummer caste villages with a body of knowledge jealously guarded as part of their heritage. These art schools were registered and sponsored by the Ministry of Cultural Affairs giving them a degree of official recognition. Both boys and girls were trained in these schools with *Ves Banduma* marking the initiation of a Kandyan dancer that marks the commencement of their career as a professional dancer.

Describing *Kohomba Kankariya* as the bedrock of Kandyan dance Reed made the following remarks.

> Dancing is so central to the kankariya that yakdessa- who also recite texts, sing and perform dramas in the ritual typically speak of their performance as "dancing a kankariya" (Kankariyak natanava). The success of kankariya is judged largely by the aesthetic quality of the performance of dancers as well as drummers. Since the goal of kankariya is to please the gods and human audience, performers try to dance beautifully. (Reed 2010: 35)

Kandyan aristocracy has been the traditional patrons of Kandyan dance. Among other things they sponsored are rituals such as *kohomba kankariya* and *suvisi vivarana*. They themselves had considerable knowledge about Kandyan dance and some of them actually learned and practiced Kandyan dance (Reed 2010: 84). In the colonial era, Kandyan dance became a traditional cultural expression as some Kandy aristocrats deployed Kandyan dance as a means to express the Kandyan cultural identity to British colonial masters and visiting dignitaries. Dance tours to Europe were also arranged for some of the leading Kandyan dancers and drummers in the colonial period. The significance of Kandyan dance as a signifier of Sinhala culture was enhanced due to the emergence of the Sinhala Buddhist identity as a basis of national identity in the post-1956 era.

As evident from Weldambala, several factors have contributed to the preservation of Kandyan dance as an art form.

1. The continuation of Kandy Perahera as an annual cultural pageantry. Many performers still find it important to participate in the Perahera as an aspect of their cultural heritage.
2. Introduction of Kandyan dance to the curriculum in state schools, institutes of aesthetic studies and the universities since 1950s. This has opened up this profession beyond the limits of the caste but some members of Dance lineages have also benefitted from opening up of opportunities for teaching positions in these government institutions.

> In the 1940s and 1950s, many of the Impoverished *berava* dancers have eagerly embraced their new found status as prime bearers of Sinhala culture. For many of these dancers, becoming a teacher in a public school …. was an enormous boost for their esteem and status. (Reed 2010: 156)

3. Growth of tourism has had a beneficial effect on popularisation of Kandyan dance as Kandyan dance shows have become a common sight in tourist hotels and special tourist shows organised by particular tour organizers.
4. There are also some new developments such as development of circus troops from among members of the drummer caste families in villages such as Weldambala. One such instance is the rise of Pinah the Redcoud as an acrobat who developed his skills in traditional acrobatics (*pinum*) learned through Kandyan dance.
5. State patronage for staging some politically important rituals such as *Kohomba kankariya* and other performances in television channels.

There are, however, many challenges for Kandyan dance as an embodiment of traditional knowledge and traditional cultural expressions in the modern era.

1. Many of the sons of the ritual performers do not wish to continue their fathers' occupation due to indignities associated with the caste idiom in which Kandyan dancers perform. For instance after the death of the famous Kandyan dancer Gunaya his son is supposed to have destroyed all evidence of his father's profession, even burning in an act of desecration, the most prized possession, the sacred *ves* headdress, that had been conferred on Gunaya at his initiation ceremony (Reed 2010: 151).
2. Appropriation of Kandyan dance by elite performers in Colombo in ways that serve as a barrier for the advancement of traditional practitioners.
3. The increased role of cultural brokers in organising dance shows, dance tours and dance performances for tourists.
4. There is no continuous support for maintaining *kalayathana* in the villages and young people or their families are not willing to pay for this training due to their limited resources and negative attitudes towards children learning the relevant skills and acquiring the relevant knowledge.

As a consequence many of the remaining performers in the villages belong to the older generation who tends to identify such knowledge and skills as part of their distinctive cultural heritage.

### ***Rodiya*** **Caste**

The traditional knowledge of *Rodiya* caste comes under four categories.

1. Folklore relating to the origin of *Rodiya* caste, mainly the Ratnavali story. This is in the form of folklore and folk songs.
2. Occult sciences, spells and black magic. *Rodiyas* were traditionally known for their mastery of black magic and their widely feared ability to cast spells on others.
3. A knowledge base relating to several arts and crafts.
4. Beggars' lore. Songs that attract sympathy and contributions from the donors.

Their traditional arts and crafts included the following:

1. Manufacture of string hopper trays (*inidappa tati*), coconut milk strainer (*kirigotta*) and winnowing instrument (*kulla*).
2. Collection and processing of cane from the wild for making cane products.
3. Making of drums of various kinds for the use of Kandyan drummers and dancers and various other people who use drums.
4. Making of brooms (*kosu*) and ground sweeping instruments (*idal*) using coconut fibre and coconut spines (*iratu*).
5. Playing (turning) of rabanas (*raban karakavima*) seen as a female artistic skill
6. Setting of traps for wild animals.
7. Catching and training of monkeys and snakes for performances.

Most of these traditional arts and crafts of the *Rodiya*s are on the decline due to a combination of factors, including difficulty of obtaining raw material, competition from cheaper mass produced items in the market, reluctance on the part of the youth to continue these crafts mainly for status and income reasons and continuing social stigma against the *Rodiya* caste. Only older men and women continue some of the crafts. For instance in the village of Manawa out of 160 households only about 30 continued traditional crafts as one of the livelihoods in the households.

There is, however, an interesting development of charms, ritual protection and occult practices (*yantra mantra gurukam*) in some of the *Rodiya* villages. One feature of this explicit claim of hereditary occult knowledge is the use of mass media advertisements to attract customers, openly identifying the practitioners as *hulavali charmers* in an unprecedented trend towards ownership of this traditional knowledge by the relevant caste. The village of Kurgandeniya in Menikhinna has become famous for these charms and occult practices, with some making substantial fortunes from this process. The reasons for the rise of this occult economy (Cameroff and Cameroff 1999: 283) largely relate to insecurities generated by the process of globalisation whereby many Sri Lankans go abroad for work and their family members in Sri Lanka face uncertainties about their family members abroad (Silva 2011: 108). Another domain where the services of occult practitioners are sought is family problems and the desire to win the hearts of current or potential lovers.

There are also some other developments in *Rodiya* communities which indicate some continuity with their traditional skills and knowledge base. For instance, long distance trade in some commodities such as mattresses, mats and carpets and collection of recyclable scrap material including metal, plastics and bottles have become important and profitable activities for some entrepreneurs in these communities. Some such entrepreneurs have become very big operators owning multiple trucks used in this business. Even though these are successful adaptations to the new market economy it appears that the members of the *Rodiya* caste have had a head start in these operations because of their background in begging, collection of garbage and scrap material as part of their cultural and occupational heritages.

The *Rodiya* people tend to consider their occult practices, Ratanavali story, and the art of turning raban as a cultural expression of their identity. Most of them do not want to identify with begging as part of their traditional occupations due to the low dignity it conveys. On the other hand, it is interesting that occult knowledge and practices have been identified and promoted as heritage and a source of empowerment of the *Rodiya* caste in a society where caste is otherwise rarely mentioned in public.

### *Kinnara* Caste

Traditional knowledge of *Kinnara* caste consists of folklore about the origin of caste, traditional designs in making of artistic mats and knowledge relating to making of ropes using raw materials collected in the jungle. The Kinnarayas are famous for making artistic Dumbara mats (*kalalaya*) and wall hangings using the refined fiber extracted from a locally available hemp called *hana* or *niyanda* (*Sansevieria zelanica*). As evident in the village of Kalasirigama, the older generation continue mat making for markets in Kandy. Part of their traditional knowledge has already disappeared due to the demise of old craft persons. Some of the positive influences that have helped maintain their traditional craft are as follows:

1. The opening of a new market for tourists.
2. The establishment of a government marketing channel through Laksala and a number of private sector agencies purchasing their products.
3. The establishment of a new housing scheme (Udagama) by the government in Kalasirigama for the persons engaged in traditional craft making which has made it easy for them to supply their products to Kandy.

Much of the craft knowledge however has declined due to the younger generations not taking up this craft occupation. In Kalasirigama it was noted that they had nearly 150 motifs used in mat weaving and by now they are reduced to only a handful of motifs due to the disappearance of some of the master craftsmen. Lack and difficulty of securing raw materials for this craft has also posed problems about continuing the craft of weaving. Another problem is competition from cheaper products (mats and carpets) from other countries. The craft persons also mentioned that they do not get paid until their products are sold in Laksala and other outlets. Hence the producers have to wait for long periods in order to get paid for their products.

## Conclusion

A considerable section of traditional knowledge and traditional cultural expressions in Sri Lanka is held by some of the lowest castes in the Sinhala caste hierarchy. Traditionally this knowledge was transmitted orally from within each caste, each caste thus holding a significant part of the traditional knowledge in

society. The sustainability of this system of traditional knowledge preservation has run into serious problems due to erosion of the caste system, younger generations not taking up the relevant arts and crafts and difficulties in obtaining required raw materials and increased competition from mass products available locally.

These elements of traditional knowledge and traditional cultural expressions are encountering multiple problems due to external threats such as globalisation and related push of cultural homogenization and increased competition from mass production of artifacts on the one hand and internal problems such as moving away from these crafts and cultural expressions by young generations in the relevant castes primarily due to status considerations on the other. In spite of these difficulties, some of the traditional arts and crafts such as mat making, Kandyan dance and cane products have achieved a degree of momentum and revival due to tourism and state patronage. Similarly some of the traditional art forms have achieved a new lease of life due to electronic media, political patronage and integration with educational and training programmes. Also increased popularity of caste specific occult knowledge in the wake of globalisation, increased mobility of people and rapid social change reveal some new adaptations of traditional knowledge to suit new circumstances. This in turn calls for a systematic assessment of the determinants of preservation and conservation of traditional knowledge systems in Sri Lanka.

The study found that while some traditional arts and crafts have gradually declined due to the adverse impact of globalisation and the low dignity conferred to hereditary practitioners of these arts and crafts, other arts, crafts and traditional cultural expressions have displayed a considerable revival through electronic and printed media, state patronage and new opportunities offered by global market forces. In conclusion the paper argues for a policy framework that is equally sensitive to cultural dynamics of the craft communities and, at the same time, opportunities and openings offered by the market forces and the globalisation processes.

Some unresolved policy issues relating to preservation of traditional knowledge include how far the preservation of this knowledge must be limited to traditional bearers of such knowledge, how to integrate such knowledge with educational curricula in schools, technical colleges, art schools and universities and how to promote the dignity and honour of the members of the lowest castes

who possess this knowledge while making efforts to preserve their cultural heritages and what role the state should play in promoting and sustaining cultural heritages and knowledge systems dispersed in various population groups.

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