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Medical Pluralism and Health Services in Ladakh

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KET WORDS Himalaya. Medical System. Cold Desert.

ABSTRACT In most parts of India, multiple therapy systems and a diversity of health behaviour patterns co-exist and Ladakh is no exception. The status, growth and evaluation of co-existing therapy systems have been influenced by cultural ideology, ecology, political patronage, changing social institutions, disenchantment with and romanticization of values represented by therapy systems (or their supporters). In the present paper an attempt has been made to describe the ways in which a common Ladakhi thinks about medicine and how these perceptions effect the utilization of alternative therapy systems. This paper examines the alternative resources and treatments utilized by various population groups in Ladakh. The study reveals a multiple and simultaneous usages of home remedies and multiple therapy systems. The multiple dimensions of health care are described in terms of medical behaviour of health sector and the practioners, and health care strategies employed by the patient. Medical pluralism may be defined as the synchronic existence in a society of more than one medicine system grounded in different principles or based on different world views. In the Indian context the important components of medical pluralism are allopathy, *ayurveda*, homeopathy, and *unani*. In the Ladakhi context components of medical pluralism are allopathy or bio-medicine, shamanism (Locally known as *Lhawaism*), lamaism, and scholarly *amchi* medicine. Among Ladakhis, choice of therapy depends on illness specific patterns of resort.

Medical plurarism may be defined as the synchronic existence in a society of more than one medicine systems grounded in different principles or based on different world views. In most parts of India, multiple therapy systems and a diversity of health behaviour patterns co-exists and Ladakh is no exception. The status, growth and evaluation of co-existing therapy systems are influenced by cultural ideiology, ecology, political patronage and changing social institutions. In the Indian context the important components of medical pluralism are allopathy, *ayurveda*, homeopathy and *unani*. In the Ladakh content components of medical pluralism are allopathy or biomedicine, shamanism (locally known as *Lhawaism*), lamaism and scholarly *amchi* medicine.

This paper examines the alternative resources and treatments utilized by people of Ladakh. An attempt has been made to describe the ways in which a common Ladakhi thinks about disease and sickness and how these perceptions effect the utilization of alternative therapy systems. The multiple dimensions of health care in terms of medical behaviour of health sector and practitioner and the health care strategies employed by the patients have been taken into account. Social structural aspects of the health sector and the control of health resources by therapy systems have been considered. In Ladakh, different health care systems co-exists but do not usually cooperate. Sporadic contact has occurred between the cosmopolitan and traditional *amchi* system. Though there is some cross system borrowing by individual practitioners, the formation of a new syncretic health care system seems unlikely. The purpose of this paper is to examine these alternative resources and strategies in coping with illness.

AREA AND PEOPLE

Ladakh is an isolated, rugged high altitude (3600 meters) cold desert in state of Jammu and Kashmir in India. It has a climate characterized by extremely low precipitation, intense and prolonged sunshine and cold winters. The average rainfall per year does not exceed 96.4 mm in the east and 600 mm in the west. Similarly snowfall in the valley of Ladakh is scanty, inspite of high altitude. The spring, summer and autumn together has little more than five months, after which the snowfall closes all the approaches to the area. There are only two seasons in Ladakh a short torrid summer and a long icy winter. In summer, the land is parched and dry, in winter it is frozen solid by a fierce unrelenting cold. The population of Ladakh is unevenly distributed in the river valleys (Indus, Dras,

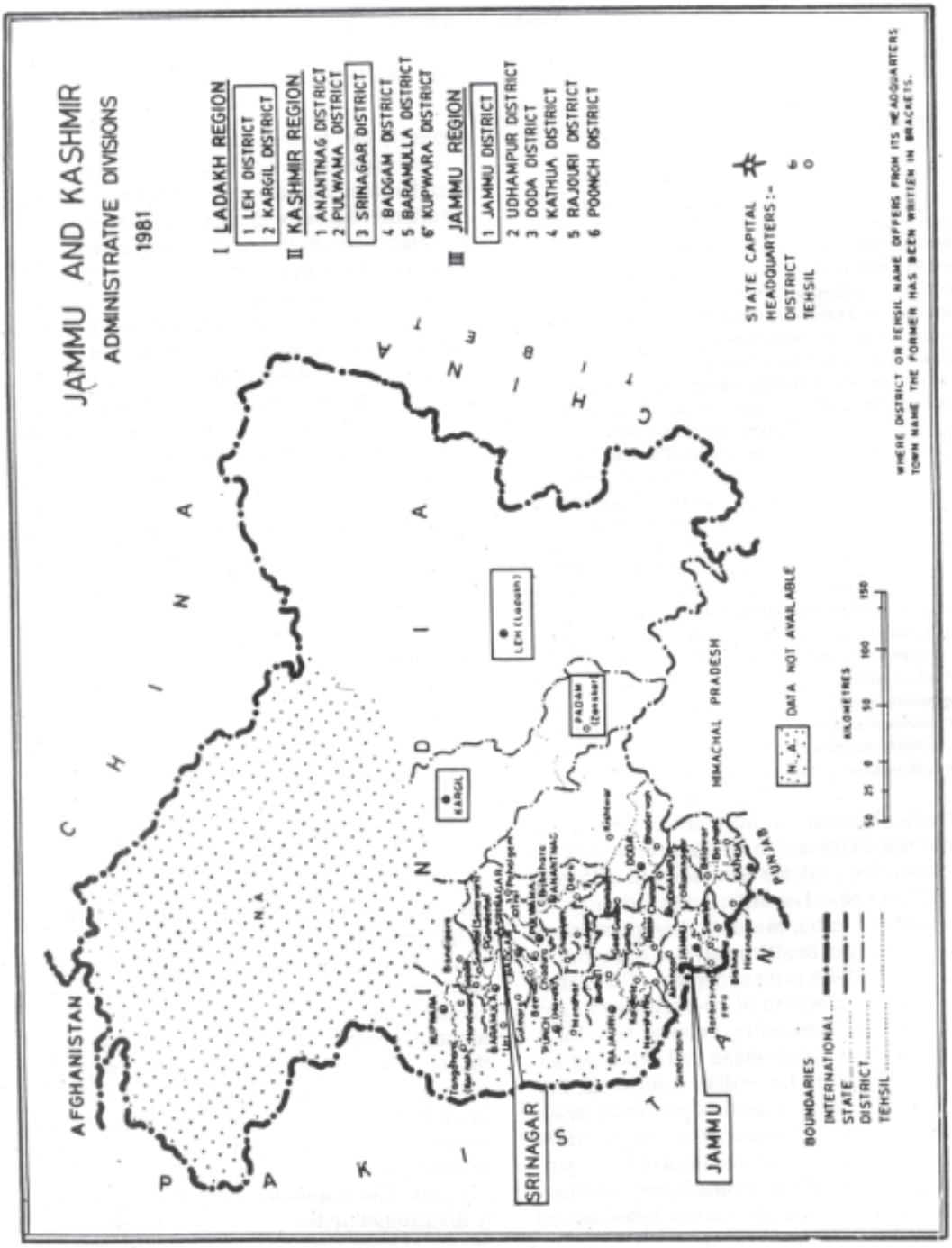

Fig. 1. Jammu and Kashmir - Administrative Divisions 1981

Suru, Nubra and Zanskar). This spatial distribution is influenced by host of environmental, historical, socio-cultural, economic, demographic and developmental factors. Ladakh is extremely poor in conventional energy sources (fossil, fuels and wood). In this barren wilderness, nothing grows wild. In Ladakh, water is a precious commodity. Glacial water from streams and rivers are laboriously brought to villages. Water is first collected in check dams and then diverted to storage tanks. Storage tanks emanate small irrigation channels for irrigating individual fields. This is done throughout the growing period *i.e.* from May to September. Ladakh mountains are almost devoid of vegetation cover. Scattered grass patches, stunted cedars and willows are found in the moist scattered strips. The willows and poplars are the only timber trees, that are regularly planted along the irrigation channels. Availability of fuel wood is an acute problem in Ladakh due to limited and inadequate forest resources and higher per capita consumption due to extremely cold and prolonged winter. There is dearth of electricity in Ladakh, so that rules out this form of energy for cooking and room heating. Dried cattle dung and local shrubs are used for fuel and room heating.

Ladakh, with an area of 97,872 square miles is inhabited by 1,34,372 persons out of which 71,857 are males and 62,515 are females. Administratively, Ladakh is divided into two districts - Leh and Kargil, inhabited by 68,380 and 65,992 person with density of population two and five per square kilometer, respectively.

The people of Ladakh are a mixture of Mongolian and the Aryan races. Tibetan nomads who practiced Bon religion were the first inhabitants of ancient Ladakh. They migrated with their flocks of sheep, goats and yaks from one pasture to another on the upland plains of Ladakh, which being too elevated for cultivation, were fit for only pastoral use as they still do. The Mons were the first immigrants. They were Buddhists and remained so. They were followed by Dards from Baltistan. They dominated the Mons and occupied the cultivated areas. The original nomads who were of Mongolian-Tibetan origin, did not resist the colonization of Ladakh by the Mons and the Dards. The last to settle in the Ladakh were the Mongols (Baltis). In 1427, Shah Hamdan came to Ladakh and was responsible for conversion to Islam. The bulk of the Muslims inhabit the town of Kargil where they constitute more than 93 per cent of the total population of town. The population groups of the Ladakh division can be classfied according to the two major religious affliation - Buddhism and Islam. In 1989, eight population groups from the Ladakh division have been declared scheduled tribes - Bodhs, Mons, Beda, Garra, Purigpa, Brokpas/Drokpas, Baltis and Changpas. 52 per cent of total population is Buddhist while 44.6 per cent are Muslims. The Baltis and Muslim Dards professing Islam and inhabiting the valleys of Suru and Dras and the tract about Pashkim are called Purig.

The topographical features of Ladakh division tend to restrict land use. The rugged, harsh climate, short working season, negligible rainfall, wide variation of temperatures and structure of soil limit agriculture mainly to river valleys and nallah plains. Animal husbandry contributes to some extent to the economy. The extent to which a family depends for its subsistence on livestock varies according to the locality. The inhabitants of Ladakh live primarily in small villages scattered over a vast region. Villages have been found where water runs down from melting snow glaciers or along the major rivers. The traditional Ladakhi economy is based on local self sufficiency for basic needs, and is characterised by low level of monetisation. The existing co-operative social organisation; co-operation in sharing water and agricultural work; settling disputed and traditional health care system has been a way of life for centuries. Villages are governed by a headman (*Goba*) and a village council chosen by the villagers. Villages are divided into groups of co-operating households, known as *'Phaspun'* that share resources for religio-cultural activities.

The field work for the study was conducted between 1989 and 1992. The data were collected through observation and interviews with the help of scheduled in villages selected from Leh and Kargil *Tehsils*. Since the study focused on human settlements and health and disease, detailed study on 22 villages nine in Leh district and 13 in Kargil district was carried out. These

villages at varying altitude are at different distances from the district headquarters. Descriptive data were collected from these and neighbouring villages.

DISEASE INCIDENCE AND ECOLOGY OF DISEASE IN LADAKH

Although endogenous factors, such as genetics, immunity, nutritional status and health redated behaviour affect the incidence and outcome of trauma and disease, the relationship between health/environment, and health/socioeconimic status can not be denied. The relationship between health and the environment has both quantitative and qualitative aspects. Economic development without environmental control can result in considerable damage to human health and great losses in environmental quality.

The state of health in population groups of Ladakh Division has been affected by ecological and socio-cultural factors. The factors affecting the health of these population groups can be divided into two categories – those factors which are responsible for spreading diseases in the people; those factors which affect the health of the people in an indirect way (attitudes and customs of the people and the demographic structure). Factors responsible for causing diseases are (i) settlement pattern (housing) and state of cleanliness; (ii) personal hygiene; (iii) consumption pattern; and (iv) addiction. Factors which affect health indirectly are (i) religion and family out look on health; and (ii) health care system.

Physical environment as well as socio-economic conditions and constraints have affected the spatial pattern of diseases in Ladakh. Ladakh's geographical position with extreme environmental constraints of high altitude and harsh climatic conditions are the factor which determine the nature and type of diseases. Incidence of disease among Buddhists and Muslims in the study area has been given in table 1. Ethnically, the Buddhists live at higher altitude generally on the alluvial fans than the Muslims who are settled in the lower altitudes generally along the river basins. Gastroenteritis and acute respiratory infections are the greatest killers in children. Infections and nutritional deficiencies cause major health problems in the adult population.

Chest Diseases : There is high prevalence of chest diseases. Tuberculosis, chronic bronchitis and corpalmonal are common. The prevalence of tuberculosis (*Lo-chong*) was unknown in Ladakh, but has become a major problem in the recent years. During the period 1982-83,

Table 1 : Incidence of disease among Buddhists and Muslims of Ladakh

S. No.	*Type of disease*	*Incidence of Disease (in percentage)*					
		Buddhists		*Muslims*		*Ladakh (Total)*	
		M	*F*	*M*	*F*	*M*	*F*
1.	Infectious diseases	44.4	9.4	32.4	10.1	36.5	9.9
2.	Benign and Malignant Cancer (Neoplasm)	–	–	–	0.9	–	0.6
3.	Disease of Sensory Organs (Eye, Ear, Nose, Skin, Tongue)		2.3	2.9	1.2	1.9	1.6
4.	Disease of Endocrine System and Metabolic and Nutritional Diseases	5.6	2.3	–	0.9	1.9	1.4
5.	Diseases of Circulatory System	11.1	31.0	11.8	26.6	11.5	28.1
6.	Diseases of Digestive System	16.7	8.2	5.9	10.1	9.6	9.5
7.	Diseases of Respiratory System	–	7.6	17.6	13.7	11.5	11.7
8.	Diseases of Skeletal and Muscular System	5.6	15.2	11.8	9.6	9.6	11.5
9.	Diseases of CNS; Congential Malformations, Mental, Psychoneurotic and Personality Disorder	11.1	0.6	2.9	0.9	5.8	0.8
10.	Diseases of Genito-Urinary System	–	4.1	–	6.6	–	5.7
11.	Others	5.6	5.8	11.8	6.3	9.6	6.1
12.	Diseases involving more than One System or Organ	–	13.5	2.9	13.1	1.9	13.2
	Afflicted with Any or All of the Above (as percentage of total population)	2.1	20.9	2.0	20.5	2.0	20.6

1,500 cases were registered in the district T.B. hospitals in the Leh and Kargil districts. The prevalence of tuberculosis is more in Muslim dominated areas. The majority of the cases were from Kargil, a Muslim dominated district, and Chuchot, a Muslim dominated village in Leh District. Even among Muslims, it is more common among Baltis, belonging to Shia sect. Tuberculosis was also reported among Aryan Brokpas of Da-Hanu. 11 cases were reported from Skurbachan Health Centre, the nearest health center to Da-Hanu.

Most of the tuberculosis cases come from a belt of villages along the Indus river. The most possible cause is the environmental dust. The ecological conditions – desert with little vegetation, high winds particularly in spring and autumn prevailing in the area – produce dust storms in Indus valley. Small and invisible dust particles present in the atmosphere due to the inversion of temperature, injure the lungs which reduces resistance to fight against tuberculosis. A strong relationship is found between families having high number of livestock and number of family members suffering from tuberculosis.

Health hazards associated with air pollution are further compounded by the burning of biomass fuels (wood, dung and crop wastes) for cooking and heating. As the climate is cold, keeping warm has always been a major problem. Traditionally, Ladakhis spend most of the winter in ground floor winter kitchen. Cowdung and brush wood burning in the traditional *Chulah* (stove) produces smoke. The ventilation of winter kitchen is kept at a minimum to avoid heat loss. The smoke of the stove is supplemented by an open fire of smouldering cowdung. This causes carbon monoxide pollution leading to various respiratory diseases.

Another reason for the chest diseases is considered to be the cigarette smoking which is a recently acquired habit and its frequency is increasing. Tobacco use has long been present in the forms of *hookah*, *sotakh* (oral tobacco) and *santak* (nasal tobacco). The effect of cigarette smoking on chronic obstructive lung diseases is well known and it is even more marked in the presence of smoky kitchen and environmental dust. Acute respiratory infection is common in children where one or both parents smoke. During winters as the fire keeps burning, the general atmosphere of the house is smoky. In addition the people are heavy smokers; lengths of straw and lumps of cowdung inside the house make the atmosphere congenial for proliferation of lung diseases.

Dunby (Joint Pains) : It is common among Lamas above 40 years of age. This is due to sitting the whole day and night on the floor cross legged for meditation in the *gompa*. Joint is generally aggrevated because of extreme cold. In the Thiksey *gompa*, 31 out of 57 Lamas had joint pains. In Likir *gompa*, out of 38 Lamas, 16 complained of suffering from joint pains. In Spituk *gompa*, only 12 Lamas had joint pain as these Lamas are living in better conditions. The Likir *gompa* has 24 hours electricity supply from military station, and an easy access to kerosene and other fuel from military station. Thirdly being nearer to Leh, the *gompa* has access to clinical facilities.

Eye Problems : Eye problems are common in Ladakh and type of eye ailment differ from one ecological zone to other. The problem is attributed to people living in smoky rooms and dusty environment. In Changthang plateau the semi-desert and sandy topography causes sand reflection rays that are harmful for the eyes. In Zanskar region, the eye problems are due to reflected rays of snow, as the region remains snow bound for many months.

Thag-shed (Hypertension): Several studies in high altitude areas have shown that high attitude inhabitants tend to have lower blood pressure than those at sea level. In contrast, some reports from Ladakh and one from Lhasa in Tibet have suggested a high prevalence of hypertension. It has been suggested that *gur-gur* (tea), containing salt and butter could be a cause of high blood pressure. The relation of salt consumption to hypertension remains controversial. A study has been carried out by an international agency with one study center at Stok village to study the hypothesis that average blood pressure and prevalence of hypertension are linearly related to average levels of sodium potassium intake ratio. Study of Norboo and Yahya (1988) showed prevalence of definite hypertension (Blood pressure both greater than/equal to 160/95 mm Hg W.H.O. criteria

1962) 9 per cent. If borderline hypertension cases (B.P. both greater than/equal to 140/90 mm Hg and less than 160/95 mm Hg) and definite Hypertension cases are combined it comes to around 16 per cent which is quite high.

Hypertension causes stroke (cerebrovascular accidents) which is a major killing disease in Ladakh among the people in the age group of 40-50 years.

Cancer : Stomach cancer is most prevalent one. Cancer among Ladakhis is on the increase. There are number of available studies showing the relationship between stroke, stomach cancer and salt intake especially in Belgium, Japan and Switzerland. From the probable risk factors of stroke and stomach cancer it appears that salt could be the common factor responsible for prevalence of these diseases.

Acute mountain sickness, *hapo* (high altitude pulmonary oedema) and cerebral oedema are common among Ladakhis. The early travellers on the silk trade route suffered from *londgu* (the illness of passes). The symptoms of acute mountain sickness consists of headache, insomnia, nausea, giddiness and excessive shortness of breadth. While no records of any death as a result of acute mountain sickness leading to pulmonary oedema (HAB) or cerebral oedema exist among the locals, this is common feature among tourists.

Deficiency Diseases in Ladakhi Children: According to a study made by Leh Nutrition Project, nutritional anaemia among Ladakhi children was significant. There is general dietary iron deficiency in Ladakh. Incidence of chronic protein-calories malnutrition, nutritional anaemia and mild Vitamin B deficiency are high. Due to shortage of manpower, females also work in the fields and children are either left back at home or carried to the fields, where they eat dirt and are exposed to environmental pollution. Children thus suffer from various diseases.

Stomach Diseases: Because of the contaminated water supply in the villages around Leh, diarrhoea and gastroentritis are still the major killers. The incidence of stomach diseases varies with the seasons. All the villages situated along the Indus river as well as on alluvial region have high incidence of diarrhoea at the time of thaw in spring and autumn. In Leh, diarrhoea is common among children in summer, as they are exposed to large influx of tourists, labourers and food item like green vegetables and semi-ripe fruits. Contaminated water supply is responsible for high incidence of jaundice in summer time.

The other common diseases in the area are digestive disorders like dyspepsia, indigestion and stomach pains caused by their eating habits and social practices. Doctors and *amchis* attribute this to drinking of *chaang* (local beer) and eating of cold food outdoor during the sowing and harvesting periods.

Tetanus: The clinical tetanus in neonates and adults is absent among Ladakhis. It is surprising trend in agricultural community where hygiene is generally poor and animal dung is much in use. Ladakhis think that probably they have got natural immunity against tetanus or it is acquired through the habit of keeping the new-born baby in *tsa-nu*. *Tsa-nu* is a woollen sack made-up of sheep or goat skin. This sack is filled with powdered sieved dung and made warm by placing a hot stone on it. To keep the children warm this practice is followed at least for six months. The same dung powder is used repeatedly after drying.

Health and Personal Hygiene: The concept of health and hygiene among people of Ladakh is not of a high order. As already mentioned that villages are devoid of any specific dumping ground for refuge. The ventilation and drainage system are extremely poor and in winter animals and human beings live side by side. There are no preventive health care measures as such which are taken by population groups to avoid illness. The only preventive measure being taken by them is periodic village and family rituals to ward off evil spirits.

The majority of the people in Ladakh have no idea about causation and prevention of diseases. The belief in the interference of a supernatural agency is strong in the context of health and disease. Different spirits and deities are believed to be connected with different types of diseases. All deities have their own respective departments and areas of influence. However, they have started to realize the efficacy of scientific methods of treatments and prevention as

evident by the number of people who have been immunized. 43.2 per cent of the Ladakhi people have been immunized out of which 42.2 per cent are from rural and 44.9 per cent from urban background. Out of the total Ladakhis who have been immunized in the study area, 46.6 per cent are Buddhists (53.2 per cent rural and 32.6 per cent urban) and 41.4 per cent are Muslims (53.5 per cent rural and 50.5 per cent urban).

The state of personal hygiene were found to be poor almost amongst all the population groups. People do not take bath regularly. Most of them are extremely reluctant to change and clean their clothes. The state of personal hygiene and difficulties in getting drinking water may be partly responsible for the present state of health of the community. A bath is a luxury although it is a common practice to perform elementary toilet by washing the face and hands.

Though Ladakhis keep their houses clean, but low frequency of bathing, washing and changing of clothes generally creates a feeling of uncleanliness. During winter when temperature remains below freezing point, all family members sleep in the smoky kitchen close to each other thus increasing the incidence of infectious diseases. 12.4 per cent of Ladakhis in the studied areas suffer from infectious diseases.

Ladakhis grease themselves all over instead of washing as they think this to be the best protection against the mid-winter Himalayan cold. Ladakhis kill lice by kerosene.

Nutrition and Health: Population growth, food supply, health, mortality and nutrition are closely related with one another. Population growth increases demand for basic needs of food and shelter. If the demand is met it may not affect people's health and nutrition; otherwise it will have negative impact on the health, nutrition and the mortality level of the community.

The Ladakhi traditional diet come from unrefined cereal, such as *tsampa*. The staple food of Ladakhis is *tsampa* which is prepared by lightly roasting barely. For roasting, barely is mixed with sand to prevent the barely catching alight in a large metal pan. The barely is then sieved to remove the sand and the roasted grain is ground in a *ranthak* (water mill). Fat content is less in Ladakhi food. Only 15 per cent of calories consumed are in the form of fat. Most of the energy (calories) from the traditional Ladakhi diet comes from *tsampa. Tasmpa* is precooked and an ideal form of nourishment for winters and long journeys when fuel is not available. The Ladakhis mix it with salt-butter-tea to form a tasty and sustaining dough.

The diet of Ladakhis is generally nutritious and wholesome. Three meals a day are taken by Ladakhis. The first consists of *gur-gur* tea. The second one is of *tsampa* and tea; and the third one of meat, rice, vegetables and bread by the upper class; and soup, *tsampa* and bread by the lower classes.

At mid-day meal those who can afford tea, take it again along with wheat cakes, and a paste of wheat flour, butter and sugar served hot. The poor people, instead of tea go for a drink prepared by boiling three parts of barley flour with one part of water, or meat broth seasoned with salt until it becomes thick like porridge.

The evening meal of upper class consists of some preparation of the flesh of sheep, goat or yaks and eaten with rice, vegetables and wheaten cakes leavened or unleavened. The poor classes eat at night the same barely porridge as at noon, or a soup made of fresh vegetable, if procurable or of dried turnips, radish and cabbages, boiled with salt and pepper in water, along with pieces of stiff dough of wheat flour.

Few common dishes of Ladakhis are *pava* (peas and barely flour boiled in water for a long time until the peas are hard), *cholak* (a mixture of tea, butter, sugar and *tasmpa*), *khambish* (bread made from wheat flour), *thukpa* (water and wheat flour made into noodles and dropped into boiling water and then served with a flavoured meat sauce), *moe-moe* (steamed *tsampa* dough, usually with meat in the middle like dumplings, small round bread, sometimes sweet).

A weighed food intake survey on rural Ladakhis diet showed that food intake is adequate in terms of energy, protein, fat and some water soluble vitamins. It is inadequate with regard to iron, calcium, vitamin B 12 and vitamin A, and it contains an excess quantity of sodium. Low family income, lack of nutritional education and prevailing dietary habits and ecological conditions of the area are some of the factors

responsible for poor nutritional status of people in rural Ladakh. In the urban areas, dietary habits of the people are changing and are heading towards western type. They consume food rich in fats, meats, salt and sugar and low in fiber, fruits and vegetables. Cakes, biscuits, sweets and chocolate have been added on in daily diets of some of the families. Rice has also entered the Ladakhis kitchen. Both rural and urban Ladakhis consume large quantities of *gur-gur* (butter salty) tea. Change to richer diet, refined cereals and processed or fast foods, lead to an increase in death rate from coronary heart diseases.

The consumption pattern of Ladakhis show that expenditure on meat is higher than that on vegetables, indicating higher dependence on non-vegetarian food. Goats are raised for their meat and used in sacrifice. Besides playing an important role in the socio-religious life, animals provide a source of food of nutritious value. The excess meat is preserved by drying in the sun to be used in winter. Ladakhis use few condiments like chillies, coriander seeds, cumin seeds, etc. Consumption of pulses is not common among Ladakhis.

The diet of a good proportion of the population is inadequate in terms of the accepted standards. Malnutrition, being a reflection of unfulfilled dietary demands, occurs during the three most demanding periods of human life; (i) growing age, (ii) pregnancy, and (iii) the period of lactation.

People suffering from malnutrition may fall easy prey to intercurrent ailments. In addition to diseases directly attributable to malnutrition, it is now known that it aggravates the clinical course of many infectious diseases. Thus directly or indirectly, it accounts for a considerable part of the ill health. Variations in nutrient intake, environmental hygiene and life style cause variation in the degree of malnutrition. *Ghee* or apricot oil is used as fat. Apricot oil is extracted from the kernel of wild apricot seeds. These are pounded and then squeezed through a thick coarse cloth. Since the animals are hillbread, the yield of milk is very low, which restricts the production of *ghee*. People have started using hydrogenated vegetable oils.

The Ladakhis are fond of consuming *gur-gur* tea. It is made by boiling green tea leaves (*zancha*) in water with one tea spoon of *sodal* (soda from Nubra). This mixture is brewed for quite sometime till it is pinkish in colour. Whenever tea has to be taken, the brewed stock (*chathang*) is diluted to drinkable strength and put in a butter churn (*gur-gur*), a wooden vessel about 15 cm in diameter and 80 cm long with brass at the top, bottom and middle. A spoonful of butter and salt is added and churned vigorously with the help of churner (*gyalo*), a wooden rod with a brass plate, till it becomes a smooth, oily and brown liquid and then it is transferred to a tea-pot. The tea is taken in large quantities by Ladakhis in place of water. Though it is supposed to cause high blood pressure, its butter content helps to supply the needed carbohydrates which Ladakhis rarely take in the form of sugar. Ladakhis are particular that the butter must be fresh, never melted previously and without strong smell.

The per capita consumption of food grain was about 0.51 kg per day. Compared with the Indian average of about 0.50 kg per day, the standard of food grains consumption in Ladakh appears to be little higher. Because of the terrain and cold climate, the people require more number of calories for sustenance and physical work in comparison to other parts of India. But these figures may not be true for whole of the Ladakh, as agriculture in Ladakh is at subsistence level and channels for the flow of surplus are not organized. This can lead to surplus in some villages, while shortage exists in others. Per capita consumption of food grain appears to be a little higher than the Indian average, and when skinfold data was analyzed for centiles, it was found that a sizable portion of the present population show higher skinfolds for subscapular and calf skinfolds. Anthropometric and physiological variables among Bodhs and Baltis were examined among 1009 male subjects who were between eight and fifty years of age. The subject were studied for 23 anthropometric and three respiratory variables. Bodhs showed higher values of various anthropometric variables whereas a mixed trend was observed for respiratory functions. Poor growth spurt was observed in both the population groups (Bhasin and Singh, 1992 : 27).

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Social Science and Social Reality : A Quest[1]

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KEY WORDS Social Reality. Social Science. Organization of Produciton. Dialectics. Empericism. Realism. Materialism.

ABSTRACT In social history thought processes reflect the changes in organization of production. The quest for reality is an ongoing phenomenon. How social science comprehends this complex social knowledge? In this context rigid cross-cultural theories and mechanistic models need scrutiny. Besides it is also essential to probe into pilosophical and methodological under-pinnings in social sciences. Precisely as social reality is both objective and subjective and therefore any theoretical perspective demands the cognizance of this dialectical process. For concepts and constructs do not occur in vaccum. Accordingly social science not only owns the responsibility of contemplating and projected the intricate social processes but also finding possible means of change.

Human thought has been under a constant flux of change and been in progress along with the changes in the human organization of production and the struggles to replace the absolete forms for a better future society. Accordingly both theoretical issues and politico-ideological struggles have become integral parts of the democratic process. Throughout human civilization all cultures contained an inherent potential for dynamics as per the social laws and customs. Inter and intra drifts eventually become near universal processes and these structural mechanisms depend on economy, polity and historical conditions. Rigid cross-cultural frames of references, tight taxonomic systems and incipient periodic tables only cramp the social reality. The quest for reality *vs.* myth, essence *vs.* existence and matter *vs.* mind has been subjecting the human intellect for critical probings, dates back to the invention of fire, the beginings of human civilization.

What is reality and how social science helps understand the complex social knowledge and how it mystifies and also reproduces according to variations in the historical conditions? These trivial issues necessiate for philosophical probings and methodological underpinnings in the social sciences. Precisely as knowledge is attained and reproduced not only through contemplation but also through activity (labour) and interaction with the people (social relations). Therefore we maintain that people and their ideas in the material production and the experience to praxis is very imperative, not being merely reflective, ultimately enriches the understanding of social reality through the social science. Social reality is both objective and subjective and thus any theoretical analysis requires the cognizance of this process which is an ongoing dialectical mechanism. In other words to be a member in the society is invariably to participate in its dialectic, the production and reproduction processes (This view is in juxtaposition with the individual perfection notion of knowledge inferred on self-evident premises of the seventeenth century classical thinkers like, Galileo, Descrates, Newton, Locke, Darwin, etc.). The apparent dialectical structures maintain balance with the environment and contain the internal dynamics of change. For, time is not an unitary flow the subsumes all epoches, rather is ultimately governed by the movement of history itself. This movment essentially is that of peoples and their control over nature, *i.e.* their environ and themselves.

From this social background the responsibility before the social science is to project conscientization and contemplation not only of the present but also of the possibilities inherent in the present for the future. In other words to provide a demystification of the social world in order to reveal the historically emergent and socio-culturally constituted bases of the present. Conceptualizations and constructions do not take place in a social vaccum as mere descriptions and abstractions but they are part of

1. Revised version of a paper persented in the National Seminar, "Perspectives on Understanding Social Reality", held at Bhopal University, Bhopal, 17-19 March, 1990

primarily produce the forms and distribution of sickness in society.

Disease-illness scheme by Frankenberg and Young explains that disease retains its original meaning (organic pathologies and abnormalities) and illness refers to how disease and sickness are brought into the individual consciousness. However, sickness is no longer blanket term referring to disease and/or illness. Sickness is redefined as the process through which worrisome behavioural and biological signs, particularly ones originating in disease, are given socially recognizable meanings, *i.e.* they are made into symptoms and socially significant outcomes. Every culture has rules for translating signs into symptoms for linking symptomatologies to etiologies and interventions, and for using the evidence provided by intervention to confirm translations and legitimize outcomes (Comaroff, 1982; Lock, 1982; Nichter, 1980). Sickness is a process for socializing disease and illness.

1. In "pluralistic" medical systems, a single set of signs can designate more than one sickness and social forces help to determine which people get which sicknesses.

2. In western society, the right to translate signs into socially important symptoms is dominated by a single kind of practitioner and a more or less unified set of etiologies.

3. Symbols of healing are simultaneously symbols of power. Specific views of social order are embedded in medical beliefs, where they are often encoded in etiologies and beliefs about the sources of healing power.

Supernaturalism : Religion has been held responsible for many differences and norms affecting the fundamental values and behavioural pattern in life including health behaviour. Two major religions, *i.e.* Buddhism and Islam, are practiced by different population groups of Ladakh. The form of Buddhism prevalent here is not of spiritual type and the people practicing Islam are converts from Buddhist strata. The popular religion both of the Buddhists and the Muslims is based on demonolatory and in this there is no deep cleavage between the two sects. Buddhism of Ladakh is a mixture of Bon, the old religion of Tibet, *Tantrism, Mahayana* and *Lamaism.*

In Ladakh, there are cultural, social and psychological conditions that produce and maintain supernaturalism. For Buddhists, the origin of suffering is not found in desire, craving and clinging. The origin of suffering, in this generic sense, does not explain the cause of personal existential suffering. In Buddhism illness, loss of one's crop, one's cattle, the death of dear one, are attributed to one's *karma* or one's past sin. It may be satisfying intellectually, but not emotionally. Supernaturalism provides the needed explanation as the cause of suffering and is emotionally satisfying. According to the supernaturalist explanation, suffering is caused by evil spirits, evil eye, even good spirits if not kept in good mood or neglected or offended unwittingly. The Ladakhis believe in basic principles of merit and sin. They also believe in a vast array of gods and spirits who must be propitiated at the appropriate time for the general welfare of the society.

The main characteristics of the Ladakhi religion are divination, possession, exorcism, propitiation and expiation. The Ladakhis belief in spiritual beings have withstood the test of time as the main function of these was to ward off the misfortunes and illness caused by devils and environmental factors. Spirits are propitiated by animal sacrifices and direct communication through trance with them. There are different types of supernatural beings but their functions are similar. They all have powers greater than man's and are either harmful or potentially harmful. They are believed to cause human misery. According to the Ladakhis, the cause of human suffering is mainly supernatural intervention —an explanation which is entirely different from that of Lamaism – where the cause of suffering is physical need, sensuous desires and the natural tendency to develop attachment to things and persons. These supernaturally caused illnesses are treated by exorcism and the appeasements of the spirits.

The main function of religion in this society is to help people to cope with the problems of suffering and provide means for getting relief from the suffering. That which cannot be explained pragmatically is considered the action of supernatural and people's viability to cope with such acts forms the basis of religious systems.

The Ladakhi rituals primarily serve to ensure that a person will have a long and healthy life and suffer few misfortunes. Ladakhis perform curing and purification rites and maintain similar beliefs about the supernatural and man's responsibility to it. The rites are held to produce a harmonious relationship between man and the supernatural. They also serve as social occasions where large number of people come together for conversation, drinking and general gaiety. Rituals are social events with supernatural overtones. Ritual generates a given view of the work, and engender commitment to existing institutional structures and modes of social relationship. They restore equilibrium in an unstable or antagonistic situation or validate the status quo.

The Ladakhi's supernaturalism, must be explained by reference to its unique context and its universal processes and functions. The Ladakhis adaptation to its diverse ecological and historical contexts has given rise to culture, which has persisted and transmitted through generations. Culture is the indispensable instrument by which men, both individually and collectively, adapt to physical environment, their fellow men and themselves. "Man is not only a rational animal, but also a biological and social animal; culture is the means *par excellence* for controlling the non-rational and irrational forces inherent in biology and society" (Sprio, 1967 : 7). Since suffering poses an intellectual problem and is experienced as an existential condition, Ladakhis supernatural explanations give meaning to their problems of suffering and enable to cope with it.

Cause of Sickness: It is believed by Ladakhis that sickness is caused by social offenses against dead or living of the natural or celestial world; from negligence, accidents and *karma* which disrupts the body; and internal imbalance. Ladakhis beliefs about the nature of sickness and its cure suggest a tripartite conception of self as social, physical and mental. Sickness is believed to arise from tensions between 1) individual and social self and 2) within the individual between mental and physical being. The cause of these tensions being outer demons appearing as real (offended or neglected spirits, weather, astrology, bacteria, viruses or food poisoning); inner demons released through faulty actions and secret demons that arise from imbalance of three "principles" or "humors" [wind (*rlung*), bile (*mkhris pa*) and mucus *(badkan*)]. The boundaries between social and personal lives are maintained in daily ritual acts. The Ladakhis believe that one has to regularly balance being part of the group and at the same time be independent of it. Failing to maintain a balance between the extreme of a continum between self and other causes health disorders.

Spirits and ghosts cause various kinds of suffering and are agents of illness and death. These include *Lha* (gods) of 1) mountains associated with *Pha-spun* ancestors, 2) house gods *(Lha-Khang*), and 3) earthy gods of trees, rocks rivers and mountain passes. It also includes *Shrindi* (spirits), *Norpa* (ghosts), and *Lu, Tsen* and *Tu*, spirits of places of nature. These deities and spirits cause sickness if they are neglected or offended and sometimes if they develop special attachment to certain humans with whom they came in contact.

Malicious earth spirits (*Sa-bdag*) and their leader the old earth mother (*Ama-Kon-Ma*) are considered to be responsible for sickness. The most feared earth spirits are the *Nyan*, which wander around the mountains, valleys and villages. If they are provoked even unintentionally, they cause sickness and death. Demons *(Nardag)* are believed to be the cause of sickness and *Tselen* is considered to be the messangers of the god of death

The house gods are angered by enterance of some one impure such as a non-Buddhist, a Gara, a Beda or a Mon. Evil spirits follow such an impure person and if such an impure person sit near hearth and pollute it the house-god is angered. These evil spirits have to be expelled, with a fire offering. All kinds of food left-overs, bread crumbs, flour, rice, bones, onions and salt are put in a hot pan iron and glowing charcoal and hot ashes are placed on top, so the house is filled with a thick stinking smoke. All the inhabitants of the house go down through the stable to the front door which the Lama open and then throw out part of the smoking contents of the pan over the threshold.

The importance of agriculture in the Ladakhi society is crucial, therefore the spirits of

water and earth are important. A variety of taboos and rituals in relation to these are practiced in connection with the agricultural cycle. If the spirits of water and earth are offended the wrath of these cause suffering for human beings, *Shinde* a malevolent spirit having three forms *chan, gypo* and *timo* is most mischievous and harmful. These spirits are invisible and supposed to be roaming in the atmosphere. Some people, reported to have seen them riding a horse wearing red clothes. People under the influence of *Shinde* consult *on-po* (astrologer) who suggests for a remedial worship. People make and throw dough figures to ward off evil spirits. The image of *Chhoskong Shungma* is kept in the *chotkaang* (worship room) of the house for protection against ghosts. When a person dies suddenly or accidentally, he assumes the form of *Shinde*, because he died without fulfilling many of his wishes. To rectify the effect Lamas perform *zinshak*. A sketch of *Shinde* is drawn on a paper and is burnt by *Onpo* to ward off evil effects.

Sickness by Magic: Ladakhis surmise that sickness by magic is possible. To make enemy sick or to kill, pills containing extracts from poisonous plants and "five unclean things" which come from human body are mixed with the food of the enemy. After its administration the enemy falls sick.

Another method of wishing a person sickness is by drawing a rough sketch of the person who should fall sick on a piece of paper along with a spell written in Tibetan or Sanskrit.

This piece of paper is inserted in a goat horn which is hidden under the door step of the house of the person. The person concerned who unknowingly steps on this falls sick.

In Ladakhi culture, disease is not linked to notion of sin or morality. The violation of the Buddhist moral code has inevitable *karmic* consequences, which may include illness, but *karmic* illness in any particular birth is believed to be the consequence of immortality in a previous, not in one's present birth – a belief which protects the patient from public blame or censure, and which precludes the confession of sins as a therapeutic technique. Ladakhis do believe that if one's deeds are good, one has longer life and if bad, one has a short life.

Ladakhi's believe that malevolent supernatural usually reside in stones, hillocks, trees and water sources especially springs. *Lhu* (a malevolent spirit) is believed to be residing in the river and on a tree called *Lharchong*. Ladakhis regards this tree as sacred and is respected like *Mane* and *Chorten*. These trees are neither cut nor burnt. Another abode of *Lhu is sabdakch* (small species of lizard). The objects which are believed to be the abode of the *Lhu*, are not disturbed or shifted. If the abode of the *Lhu* is disturbed or shifted, the *Lhu* gets annoyed and causes sickness. To appease *Lhu* Lama performs *Lhustor. Chanspa* (Lama) gives amulets to victims as *amchi (lardshe/herbalist)* fails in curing such illness. All Ladakhi household would invite Lamas to perform *lhustor*, once a year as a preventive measure. A dough figure of *Lhu* is made and kept in *chotkhang*, where worship is performed. At the completion of the worship, the dough figure is immersed in river. *Chasum* (a worship) is organized to get rid off eye trouble. Only Lama does it for about an hour.

The ritual neglect may affect agricultural productivity, but this economic consequence is a by-product rather than the intent of the spirit's punitiveness, Malevolence of the supernatural is primarily expressed in desire causation. Supernatural causation of disease is of course a widely distributed belief, cross culturally, and it is not surprising that it is found among almost all the people, primitive and civilized, Buddhists and non-Buddhists (Hackett, 1953: 558; Carstairs, 1957 : 83; de Young, 1955: 144; Sprio, 1967 and Gorer, 1943).

HEALTH CARE AMONG LADAKHIS

One of the most striking characterstics of health care in Ladakh is its pluralistic nature. The various resources and practitioners, represent a combination of different healing traditions. The various practitioners are folk curers, spiritists (*Lhama/Lhapa*), Lamas and traditional herbalists (*Amchi*) and Public health practitioners. For last seventy years, Ladakh also has had bio-medicine in Leh and Kargil. The acceptance of any or a combination of these forms of therapeutic help depends on a variety of factors. It

is a matter of life and death in a case of a critical disease and range of action pattern is limited. It is a crisis response rather than a calculated response. There is a change in the overt behaviour of the people, but it does not necessarily explain or mean changes in the belief system.

Both natural and supernatural means are employed for the recovery of the patient. The determination of the cause of illness whether physical or due to spiritism is most often purely pragmatic. If one is sure that the illness is physical or spiritual, one may immediately consult an *Amchi* or a western medical practitioner or *Lhama/Lhapa*. Before doing this however one may tie a charmed thread for one cannot be always certain of the physical etiology of the illness. Trying a charmed thread serves two purposes:

(i) If the disease is caused by external agents, then the charm protects the individual against demonic interference.

(ii) The patient is immunized against future spiritual interference.

Ladakhis act pragmatically, basing their action on the advice of the specialists they consult. In theory, the curative rituals have no limit; by their performance the disease is cured for all time. In fact every one knows that a final cure may require more than one ritual; therefore many types of rituals may be performed for serious illness. Once again these decision are based on pragmatic consideration, often on the advice of the ritual specialists consulted. If one ritual fails it is because the cause of illness is different. For this fresh diagnosis and different ritual is required.

It can be said theoretically that ritual serves three purposes, firstly the aim of the ritual is that of banishing, propitiating, placating or incarcerating the being that caused the disease. Secondly, the humors balance that has been unsettled by the demonic influence/interference has to be ritually ratified to restore homeostasis. Thirdly as the prevention is better than cure, the patient has to be immunized against the demonic influence or further attacks from the same source. This is achieved through protective charm or protective ritual performance .

Depending on what he thinks is the nature of his sickness, a Ladakhi makes a choice of consulting medical practitioner, choosing between a Lama (religious man), a *Lhama/Lhapa* (faith healer, oracle), an *Amchi* (traditional healer) or Allopathic doctor. However, this choice is not decisive, *i.e.* a person may consult one or more medical practitioners at the same time depending upon the nature of the sickness.

If a Ladakhi initially believes his illness to be supernaturally caused, he will never consult a physician, but will turn at once to one of the three types (Lama, *Lhama/Lhapa, Amchi*) of indigenous practitioners. Once the diagnosis of supernatural causation is made, various kinds of therapeutic procedures can be initiated, depending on the nature of the illness and type of practitioner who treats the case.

Self Treatment

Self or home treatment is usually the first step in medical care, consisting primarily of herbs. Many of the herbs are commonly known. Some grow wild in the area, some are cultivated in home gardens, and others are bought in the market. Herbs are assigned a hot, cool or cold quality and are incorporated into the local hot-cold classification system relevent to illness causation and treatment. Table 2 illustrates the diseases and their homely treatments in Ladakh division. These treatments are known to elders in the house or are suggested by folk curers.

Supernatural Healing

When self treatment does not help Ladakhis seek the help of supernatural healers and through their ministrations gain confidence. Though focused mainly on the psyche, supernatural healing has physiological effects. This is specially true of bodily ailments that originate in fears and tensions. Where anxiety is the whole or primary factor, supernatural healing is helpful. In Ladakh, illness and misforunes are attributed to a variety of supernatural forces such as attack by witches, sorcerer, forest divinitics, spiritis of disceased individuals and angry gods or godesses. To those who believe in spirit possession it provides a manifest function or 'emic' explanation of the causes and effect of illness.

Table 2 : The diseases and their homely treatments in Ladakh Division

Name of the Disease	*Treatment*
Cough, Common cold	: The *tsampa/sattu* is dissolved in water. To this light liquid, one piece of garlic and salt is added and boiled. One cup of this decoction is taken before going to bed. Decoction of *arura, parura, skurura* (Local herbs), *elaichi* (cardamum), *darchini* (cinamum) and *jeeroo* (cloves) is administered.
Backache	: Massage with mustard oil; fomentation with heated lump of salt wrapped in old cloth.
Stomach-ache	: A half tea spoon full of *Brakspot*, a grass like *zeera* (cumin seeds) is boiled in a cup of water, till it is reduced to half. After straining it, the prepared liquid is administered one or two spoons at a time according to the age of the patient. Decocation of powdered carom seeds, aniseeds, salt and sugar is given to patient.
Pneumonia (*Grano*)	: One piece of *Brazuba* or *Shilajit* is dissolved in glass of milk along with a teaspoon full of local ghee (*Marh*) and sugar. This decoction helps in curing respiratory problems.
Headache (*Yama*)	: Massage with *nagman* (mustard oil); decoction of *makshog* (a herb found near Zojila) is taken.
Toothache	: Decoction of *chyoto* (a garden zeera type) is taken. It helps in curing pus in the gum. For pain and swelling in face and head region, mustard oil message helps.
Fever	: Decoction of green cardamums and carom seeds is administered to patients.
Jaundice (*Tserpo*)	: Two tea spoon of full *khantee sonma* (bitter vegetables from hills) juice are taken every morning.
Drunkard behaviour (*Rumboo*)	: Ash (*Thalba*) from the hearth is given.
Chilbirth	: For uterus contraction pain (*Pheyogzor*), the concentrate of *shormendok* flowers boiled in a cup of water is administered. *Shilajit* boiled in a glass of milk, a teaspoonful of *ghee* and sugar is administered for strength.
Severe heartburn	: Decoction of aniseed, ground black pepper, bicarbonate of soda (from Nubra) cardamum, ground ginger and some other unidentifiable seeds, powders and spices.
Lack of vitality and vigour	: *Moniai* is given as a medicine for sex energy. It is found naturally in Ladakh. It is a dark colour paste like thing found on the high rocks and is formed from the black substance which oozes out of the stone due to extreme heat during daytime. It burns like petrol and gives a black smoke. It has got all the ingredients needed for vitality and vigour, a drug is made from poplar which acts as a tonic.
Difficulty in urination	: The bark of poplar is useful in strangury.
Skin diseases	: Poplar is used for purifying the blood and in curing skin diseases.
Dysentery	: Decoction of opium fruits is given to patient.
Fracture (*Shimrags*)	: The broken bones are set in position and firmly held by two inches pieces of bark of *zherba*. A bandage is rolled on this. After one week one piece is taken out. In two weeks, the bone is set.

In case of illness, first Lama is consulted, who determines the cause of illness and usually describes a propitiatory offering by which offended spirits are appeased and induced to cure illness. First *puja* is performed, then saffron dissolved "holy water" is sprinkled on the patient, accompanied by chanting of *mantras*. The determination of the cause of disease is purely pragmatic. Once the cause is decided, he may consult the practitioner accordingly. Before doing this however one may tie charmed amulet for one cannot be always certain of a physical etiology of the illness. Tying a eharmed amulet is common preliminary act which serves two purposes (i) If the disease is caused by external agents, then the amulet may cure the disease. The efficacy of the amulet is generally for a limited period. If disease is not cured a bigger ritual may be required; (ii) an amulet may act as a protection even if the cause is physical manifestation, for spirits can attack a person in a physically weak state. Hence while a physical remedy is necessary for the immediate relief from illness, ritual curing is necessary for eliminating the deeper cause. In case of illness where cause is physical as well as non-physical, both physical and ritual cures are necessary. Lamas claim to conquer, control and eventually destroy the demons and prove capable of obtaining ultimate health through

enlightment. Moreover, Lamas show themselves to be more successful than shamans or *lhas* in the mundane sphere. Large sums of money are donated to *gompas* by devotees with which Lamas are able to support construction of *gompas*, reproducing books, commissioning art work and supporting expensive robes.

If a disease is not easily cured through worship, the head Lama is consulted. He would suggest some *amchi* or *lhardshe* (medicine man), who with the blessings of the head Lama starts the treatment. Sometime the head Lama suggests for white-washing of *chorten* or donation of a particular *thanka* (a religious painting) to the *gompa* to get rid of the disease. The *thanka* are made by an expert, *spon*.

Other preventive or precautionary measures are various kinds of paintings – *chan*. *Chan* are made on the outer surface of the walls of the house. These paintings are made of bright and striking colours. Most of these paintings are figures of animals, crosses, squares and rectangles or human figures carrying a swords dotted with red ocher. The paintings are made after the house construction. These *chan* serves as protection against evil spirits. These *chan* are redone periodically.

People hang skulls of a goat on the outer wall of the house, framed in small sticks tied together by twine which is *torma* obtained at the *Losar* festival. These are hanged as insurance against sickness. The corners of the houses are painted red, which effectively bars the entry of evil spirits.

To invite good spirits to reside in their houses, people print white sickle-shaped smudges all over the walls. In some houses, a high pole is erected in the courtyard to which a thin strip of muslin about twelve inches (30 cm) broad and running the length of the flagstaff is attached and is surmounted by the black bushy tail of the holy yak. Large number of prayers and drawings of tiger, lion, garuda and dragon are printed on the flag. All these being mystical signs ensure safety against enemies, earthly and celestial, insuring fertility and increase in wealth, in short achieving the entire health and happiness of the household. Flag flutters with the wind and the necessary forces are set in action which bring good luck.

There are curing ceremonies which destroy effigies: the effigies can be personification of the disease or even a representation of an individual who is believed to have infected the donor of the ceremony with some disease.

In some areas, during *Losar* (new year) festival the chief feature is celebration of *Dosmoche*, the great festival of the scape goat. *Torma* (effigies made in various sizes to represent men and demons, *torma* are replacement for human sacrifice which was offered to the gods and demons in pre-Buddhist time) are carried in procession to open area where a huge creation made of sticks, tied together by threads has already been prepared. At a given moment all the *torma* are thrown into flames and with their burning, the sins and diseases of the place are consumed. After this the erection of the twigs is knocked over and every man makes a mad rush to obtain even a small piece if he can, which is carried home in triumph and placed on one of the outer walls of the house, thus protecting its inmates from disease and death, or if it is kept in store-room, the agriculture production is blessed.

The idea of the scape goat is practised in some form or other everywhere in Ladakh and Tibet. In some places living goat is sent into the wilderness. Sometimes, even a man is chosen, who has to leave his village and live elsewhere for a year, to bear the sin of the village.

In case of epidemic, the prosperous farmers have the Lamas made *dosmoche* (thread crosses and stars) to keep off the fever bearing demons. These are put on the paths and roads, where they are supposed to entangle the demons. Poor people put up twigs of thorne and hope for similar protection. Magic paper with black print of two human figures chained by hand and foot with charms painted round the middle of the picture are considered good to keep off disease spirits. These figures are considered to be the spirits of the disease. Sikkimese Buddhists also employ complicated mast like structures consisting of sticks, thread and tuffs of wool. These structures are known as thread crosses and act as contraptions for catching demons. These contraptions are renewed and the old ones are destroyed after they have served the purpose for which they were

erected or when they become saturated over time with evil spirits (Bhasin, 1990 :245).

Ceremonial therapy, in comparison to other forms of therapy, is mainly based on the belief system and although it is socially restrictive, it has a tendancy to accommodate other forms of ceremonies which help in curing process.

Lhama/Lhapa (Faith Healers, Oracles): Another type of medico-religious specialist and healer is *Lhama/Lhapa*, who performs curing rites. According to Ladakhis the world is peopled by good spirits and evil spirits. If a good spirit is angered, it appears in malicious guise and may be then referred to as a demon. All catastrophes occurring in the area are believed to be the action of spirits. Typically a spirit causes illness as retaliation for having been ritually neglected or insulted. The bad spirits or ghosts, on the other hand cause illness either from sheer malevolence or because they have been insulted or frustrated by the victims. The Ladakhis believe that trees, rivers, rocks and other natural objects are homes of these spirits. So only the spirits are propitiated and not the natural objects.

However, it is impossible for an ordinary man to deal directly with the spirit world and to know the exact cause of their trouble. They may know about minor illnesses, but will not know the exact way of appeasing the evil causing devil. Diagnosis and propitiation are carried out by special practitioners *Lhama* (female)/ *Lhapa* (male). *Lhama/Lhapa* is a spirit medium who performs curing rites. Ladakhis call specialists in trance *Lha* or gods and *Lhama/Lhapa* god women and men. *Lhama/Lhapa* are asked to diagnose sickness and perform cures. Those who work in *gompas* are best known for their prophecies on the future. These specialists have been called by different terms by different authors, Shamans (Eliade, 1964); Mediums (Stein, 1972); Oracles (Prince, 1963; Nebesky-wojkowitz, 1975; Fürer Haimendorf, 1964).

In the literature, the terms 'Shaman' is generally applied to an individual who resemble priest but who achieves his status primarily through 'possession', 'ectasy' or the 'trance'. Shaman is a person who either become possessed by a 'tutelary spirit' (controlled possession) or who are capable of 'magical flight' or 'soul journey' (a term used by Eliade, 1964; 498-502). Shamans differ primarily from oracle mediums or reincarnate Lamas on the basis of time and space, they are not confined to a scared space or an institution such as a temple or monastry. Although possession is the source of power for all three types, where and when possession occurs differ considerably sociologically.

The *Lhama/Lhapa* is not a shaman in the classical Siberian sense. She/He does not ascend to the spirit world, nor does she perform other types of supernatural feats. She/He does, however, display other shamanistic characteristics, She/He is an oracle, a medium, a diviner who is believed to cure illness. She/He performs her/his role in a state of spirit possession. There are few villages in Ladakh without *Lhama/Lhapa*, but some of them are more famous than others. The *Lhama* of Saboo is one such woman. *Lhama* visualize themselves as deities with supernatural powers and destory the lesser deities and demons through combat. For layman the performer has to rely on a widespread symbolic paraphernalia which put the meaning of the ritual into lay person terms. Tantric Buddhist practice involved mediation on the so called tantric "deities". These were not deities in a conventional external sense. The Tibetan referred to them by the same word, *Ldha,* as they used for real deities thought to exist within the material world and in various heavens of the Indian and Tibetan cosmology (the term is used to translate Sanskrit *Deva*). However, the tantric deities were not so much forces external to the individual as potentialities within the individual as within everything that exists (Samuel, 1990 :128-9).

They have their own paraphernalia, seven brass offering bowls (*ting*), four of them filled with water, one with *tsampa* (parched barley), one with *nas* (wheat) or *kar* (peeled barley), one with *chaang* (wine), Juniper twigs and berries and an iron girdle, *Phospkhor* or pan filled with glowing coals. They have a papier-mache crown (*ring-Nga*) with five faces, each painted with a picture of the one of the five synanibudhas, magic bell and daggers. They use *gupda*, a bamboo or iron rod with or without hole, to suck out the disease poison.

The *Lhama/ Lhapa* when consulted by a client invokes the protective spirits who possess her/him. After calling the protective spirits she/ he falls into ecstatic trance, with staring eyes and foaming mouth. With shrill screams she/he jumps up and dance round wildly. The spirit causing disease speaks through the *Lhama/ Lhapa* and various rites and ceremonies are advised. If still nothing happens, then the *Lhama/Lhapa* suck out the poison from the patient's body with the half a meter long wooden or iron pipe. This is placed on the suffering part of the patient's body and sucked hard, a sticky green blue substance comes out of it, the considered cause of sickness.

The *Lhama/Lhapa* are part time religious specialists. They have the same social and economic responsibilities as the other members of the society, *i.e.* they can marry, have children, can participate in all types of economic activities. Because of their special capabilities, they have an elevated status but are lower than other religious practitioners like Lamas. They are paid for their services and are in demand throughout the year.

These *Lhama/Lhapa* are few in numbers as compared to the number of Lamas in Ladakh and are directly subordinated to the *gompas*. They are examined by Lamas –"every village oracle in Ladakh has been partly diagnosed, cured, trained and validated from the monastery" (Sophie Day). In other Tibetan-speaking areas, oracular institutions are equally dependent upon monastery. For example the *Mun* (equivalent to the Ladakhi *Lhama/Lhapa*) among Lepchas and the *Paw/Nejohum* among the Bhutias of Lachen and Lachung in North Sikkim are validated by the Lamas (Gorer, 1967 :219; Bhasin, 1990).

Lhama/Lhapa in general rank low in ritual hierarchy because they practice an uncontrolled ecstatic trance and because the gods or spirits that possess them rank low in the pantheon. Village oracles in general rank below the *gompa* oracles for the same reasons, their gods rank lower and their trance practice is even less controlled. *Gompa* oracles appear annually at a number of dance dramas or *cham*, while village *Lhama/Lhapa* may be consulted throughout the year, when and where the need arises. In Ladakh the Lamas of the *gompas* are called to participate in all the rituals of the households, while *Lhama/ Lhapa* are consulted for exorcism rites, to suck out poison or pollution from the people. Among Lepchas and Bhutias of Sikkim the *Mun* and *Paw/Nejohum* are commonly needed at birth of the child, when a child is named, for marriage ceremonies, at funerals and at times to cure illness and prevent misfortunes (Bhasin, 1990 :244).

The senior *Lhama/Lhapa* trains new *Lhama /Lhapa*. The teacher/pupil bond is close and life long. Men and women become village *Lhama/Lhapa* in approximately equal numbers. They mostly belong to Bhoto households. Buddhists are more susceptible than other religious groups. There are no *Lhama/Lhapa* from aristocratic (*skutrag*) class of Ladakhis indicating both the low status of practitioners and the intrinsic protection that aristocrats have against undesirable intrusion. There are few *Mon* and *Beda Lhama/Lhapa* but such low status practitioners are not popular because of the fear that the god, blessing a client by bellowing or spitting might be mixed up with the person, whose touch is polluting. Religious affiliation training is closely connected with the *gompa*, in particular with rimpoche and monks, and also with sacred places and practices known through pilgrimage and prayer.

These *Lhama/Lhapa* are recruited through the traditional means of having suffered and been cured of a serious illness/ and or having had unusual disturbing dreams or visions or violent loss of control or fits for sometime. These are interpreted by another specislists as signs and messages from God of their divine calling.

The first step is to reach a diagnosis. It is generally seen that such individuals are not encouraged to keep the spirits or domesticate them. The first step is to diagnose the cause of the fits. General attributed causes may fall in two categories: (i) intrusion of spirits; or (ii) by human intervention. Every one is not encouraged to become the repository of the spirits. Only certain individuals are allowed to become *Lhama/Lhapa*. Those who pursue have to undergo certain rites in which gods and demons are separated. Once the proper spirits are installed

in the body, the person has to undergo further training for curing the sickness, for extracting poison and exorcising the demons. For this He/She has to pay substantial sum of money to the senior *Lhama/Lhapa*, and feasts and grain to *gompa*. All the paraphernalia of *Lhama/Lhapa* are taken to Lamas periodically for blessings and *rhapras* (to keep the power permanently).

Among Muslims of Ladakh *Akhun* is priest-cum-medicineman, almost a counterpart of Buddhist *Lhama/Lhapa. Akhun's* position in the priestly group is not high as a Sheikh or an Agha. They are also part time specialists and rate higher in the village stratification. An *Akhun* has a deep knowledge of supernatural spirits and demons (*Ilm-e-ramal*). At times like *Lhama/Lhapa*, he acts as a shaman and cures patients by invoking the assistance of a *Djinn*, who according to Islamic philosophy, are persons looking like men but can change their form and shape or can disguise themselves in the form of lion, dog or cat. An *Akhun* recites number of incantations and these prayers are considered to have therapeutic and magical powers to control epidemics and natural disasters. These prayers are written on small piece of paper and are incased in small silver boxes to be worn either as necklace or bracelet. These acts as charms against evil spirits and evil eye. In the absence of a metallic container the charms are sewn in red cloth. These charms are given according to the nature of illness. The different charms are (i) *thangmita* given in case of suffering from body and toothache, (ii) *hardpoqita* charm is given in case of opthalmic disease. It is burnt and its ashes are applied to eyes; and (iii) *Taaptita* is worn as a necklace or armlet for evil spirits and evil eye. *Akhun* also supervises all the life cycle rituals in the village. His profound knowledge of herbs helps him in curing patients with *dwa* (medicine) and *dua* (prayer).

In case of illness neighbours visit and help by doing some odd jobs. More than this, they offer emotional support and practical suggestion to them as how to cope with illness. These services are free of charge and persons concerned are the members of one's *phaspun*. These are groups of villagers, who traditionally support one another at the time of trouble.

Building strong and supportive relationship between caregivers and patients is important. Support does not mean giving advice or telling someone what to do or how they should feel. It often means just listening.

Traditional Medicine in Ladakh

From earliest times the *gompas* have been at pain to preserve traditional methods of healing. Therefore, there is no shortage of "doctors" (*Lhardshe*) in Ladakh. Their medical knowledge is derived from the commentaries on Tibetan sacred scriptures, amounting to 108 volumes. Indian and Chinese ideas exerted their influence on Tibetan medicine, giving it a specific character. Above all Pre-Buddhists influences such as the ancient Tibetan Bon-religion and shamanism can be seen in Tibetan medicine.

The fundamental element of Tibetan medicine is a three parts division. If the three "principles" or "*humors*" – wind (*rlung*), bile (*mkhris pa*), and mucus *(badkan)* – remain in equilibrium, the body remains healthy. Change in any one of these may cause disease. Thus, healing is effected by restoring the lost equilibrium and not by the symptomatic treatment of a particular organ. The system of Tibetan medicine always depends upon the equilibrium of these three humors. Without the knowledge of these three diagnosis and treatment are impossible. In Ladakh the traditional medicine is called *Amchi* medicine. The theoretical side of the *Amchi* medicine, the religious background, particularly the belief in fear of evil spirits, the influence of shamanism, healing performed according to Bon rites, means of protecting against evil spirits, amulets thread-crosses, etc. makes *Amchi* medicine colourful and multifarious.

The medical system which flourishes in Ladakh (called the *Amchi* system) was taught by the enlightened Buddha more than 2530 years ago. Not all Ladakhi doctors were Buddhists Lamas or trained in the *gompas*, but their practices were all based on Buddhists knowledge. The word *Amchi* refers to the medical practitioner or doctor. The *Amchis* (*Lhardshe*) do not have advanced equipment like X-ray machines, yet they can diagnose a sick person by examining their pulse, urine, stool, etc. In this form of medicine the individual's faith is of equal importance and

so there are prayer books devoted to Bhaishajay-aguru, the Buddha of medicine. In Buddhist medical system, the words of Buddha, the medical practitioner, and the powers of gods all play equal roles, and each of these objects needs careful research. In *Amchi* medicine, the body as an object was exposed and elaborated en route to transceding it in order to obtain enlightenment. The regulation of circulation of its humors, together with the balanced functioning of its organs and most importantly the moderation of its mental dispositions, were articulated by practitioners in texts written for instructing intervening on behalf of others, or for exercise by patients themselves..... Finally, the practice of good health require the integration of the body with the natural universe around it not onyl through careful ingestion and altering conditions of climate, but also through acts of cultivation and productivity which translated into sponsorship of ceremonies by monks and Lamas, who believe that ultimately benefits of their own may help others through a principle of compassion (Adams, 1992:173).

The examination of tongue and pulse is important method of diagnosis because it supplies information about functions of the organs. The pulse diagnosis is based on the stability of the function of the organs. In *Amchi* medicine the organs are classified in two groups: (1) the five solid organs (*don*): (2) and the six hollow organs (*snad*).

Amchi examines the function of these organs at 12 points on the hands (six on each hand). Whereas a western physician looks for the single one, *Amchi's* look for six pulses, three on each hand, one for heart, one for stomach and third one for lung, liver, kidney and spleen. *Amchi's* treatment mostly consists of cautery which is a strong counter-irritant. Some powder is also given with specific instructions of how it is to be administered either with cold, hot or luke-warm water. All sorts of food and drink have positive or negative effects on the body and great importance is given to dietary habits. Many food combination which do not go well together should be avoided. Various forms of medicine are administered to patients according to their body constitution (*i.e.* wind type, bile type or mucus type). Different types of sedating decoctions and cleansing medicines are given to different types of body constitution. External treatment is given by inunction with massage, cauterization, production of sweat, blood letting, the magic wheel (a sort of hydropathic treatment), heat treatment and burning. Surgery plays a relatively minor role; operations are performed only in terminal cases.

Tibetan knowledge of anatomy is elementary because Tibetan doctors do not carry out dissections. They acquire their knowledge of internal organs of the human body by comparing them with those of slaughtered animals. Mostly they have acquired their knowledge of anatomy from the Chinese along with the same errors and deficiencies. The main purpose of the Tibetan anatomical charts is to indicate the places on the body best for bleeding and branding with red-hot irons.

Amchi make use of variety of local plants to make powder and pills. They also use metals such as gold, silver, copper, iron, brass, quick silver (cure for syphilis) as well as stones and minerals such as turquoises, corals, cooking salt, rock soda, salt-petre, sulphur and snail shells. Parts of the animal bodies are also used in the treatment. The bile of the ox is good against eye disease; the blood, if drunk while fresh, pulls the poison out of the blood. The tongue of the dog is good for healing wounds; a dog's brain is good for cataract and its liver for leprosy. The ashes form burnt dog's hair cure ulcers. Crushed dragon's tooth smooth toothache. *Amche* are supposed to extract arrow heads from wounds with the aid of magnets. Patients with fever are forbidden to sleep. Cupping, the raising of blisters, and venesection are other methods of curing all sorts of complaints.

Amchis are skilled in setting the bones of broken limbs. For broken ribs they wind a broad strip of cloth tightly round the chest and then dub it with glue, thus making a bandage when the glue cools. They practice art of massage with notable skill. *Amchis* do not possess dentist's forceps in their equipment. For toothache or extraction of the teeth Ladakhis have to go to the smith, because he has the required pair of tongs. The patient lies on the ground and two men hold him down. Then the smith kneels over him and graps the bad tooth with his tongs and

pulls out.

The *Amchi* have a thorough knowledge of the herbs, which they collect themselves on the hills during the spring and summer months, and the remaining ingredients are brought from the market and government agencies. Under the supervision of the chief *Amchi*, drugs are purchased and distributed in raw form. 40 *Amchis* are on government pay roll. They receive Rs.300/- per month and Rs. 1,500/- for drugs. Previously, *Amchis* were supposed to give performa bill, now drugs are given straight away to *Amchis*. Though *Amchis* practice privately but they have to submit report periodically. Government wants to promote the traditional *Amchi* system, as it is effective and Ladakhis believe in it. During last four years a change was noticed in the attitude of people towards allopathic medicine. Table 3 shows the change in attitude of people towards the medical system.

It can be seen from the table 3 that there is substantial increase in the number of patients being treated at allopathic centers during 1988-1991. There is a change in overt behaviour of people, but it does not necessarily explain or mean change in the belief system. People are remarkably pragmatic in testing and evaluating new alternatives. In case of health behaviour, the cost-benefit mode of analysis and the empirical evidence help in deciding, whether it is to their advantage or not. People are skillful in reconciling new practices with old beliefs. "Folk beliefs in themselves are offering no resistance to modern medical practices in so far as these practices may be judged by the folk on an empirical basis" (Erasmus, 1952:418).

Table 3: Change of attidute of people towards Medical System

Medical System	*Number of Patients Treated*		
	1988-89	*1989-90*	*1990-91*
Amchi System	7,905	6,875	7,554
Allopathic System	1,52,575	88,163	1,64,204

Source : Chief Medical Officer, Leh

There is no recognized institution in Ladakh for the training of *Amchis*. The students take training from any recognized *Amchi* for some time. When teacher is satisfied with the progress of the student a type of *viva-voce* is arranged. A student invites four-five recognized *Amchis*. The *Amchis* cross-examine the student's knowledge about the symptoms and treatments of some of the ailments. If they are satisfied with the answers, then he is given permission for practice, Then all the villagers come with gifts like *chaang, and khataks* and this is followed by a feast. It is this recognition which counts.

There is a Tibetan Medical Institute in Dharamshala in Himachal Pradesh, where Tibetan doctors are trained. They study under recognized certificate course for five years. Ladakhis who can afford to pay are going over their for study.

In the traditional health care system medicinal plants use is high. Many plants species are used in traditional medicine system in Ladakhi villages, though, the frequency of use varies depending upon the species and ailment. Many species are used for disorders relating to digestive system, joint pains, wound healing, and skin diseases. A good number of plants are also used to cure animal diseases. The knowledge as how to use and make ingredients of each dose with different parts is known to traditional medical practitioners (Table 4).

Allopathic Health Care System

For safeguarding the population from diseases, more emphasis is being given to medical facilities, specially on increasing the availability of these facilities in the rural areas. A number of hospitals, allopathic dispensaries and primary health centres are being set up in different districts. In Ladakh, greater importance is given to curative measures instead of preventive ones. Most of Ladakh's health problems are related to harsh environment, unhygienic and insanitary conditions and lack of education. They are preventable by public health measures. The difficulty in making progress in preventive medicine is compounded by a number of cultural and traditional habits and beliefs surrounding dietary practice, childbirth, illness and hygiene. Erasmus found that preventive medicine was resisted because its comprehension is essentially theoretical, not lending itself

Table 4 : List of medicinal plants used in ailments in Ladakh

S. No.	*Local Name*	*Botanical name*	*Body ailment for which it is used*	*Parts of plant used*	*Mode of application*
1.	Valaiti of Santin (Warm wood)	*Artemisia Brevifolia* Linn.	Stomach troubles and circulatory disorders	Stems and Leaves	Drinking decoction of the essential parts
2.	Kirmala (Wormseed/ Santonica)	*A. Maritima* Linn.	Worms, fever, dropsy	Stems, branches with flowers heads not fully matured	Decoction made of crushed parts for expelling worms from stomach and for fever breaking, in dropsy as stimulant.
3.	Shimajira (caraway)	*Carim carvi* Linn.	Mouth odour	Branch, fruits	Contains essential oil. Used as condiment and carminative oil from fruits is used for mouth wash and perfumes.
4.	Bathus (Chenopadiaceae Pigweed/Lambs quarters)	*Chenopodium album*	Worms	Branches and leaves	The plant contains essential oil, carotene and Vitamin C. The branches and leaves are used as vegetables.
5.	Chenopadiaceae (American worm seed)	*C. Ambrasioides* Linn.	Worms	Branches, leaves dried fruits	Used as anthelmintic, leaves and tender twigs are used as vegetable and fodder.
6.	Dhatura (Thorn-apple/Jomsor-weed)	*Datura stramonium* Linn.	Toothache travel sickness	Branches, leaves, flowers	Essential oil extracted from the leaves is used.
7.	Ratalu, Gaithi (Potato yam)	*Discorea Detoidea wallex Kunth*	Joint pains, Lice poison killer	Stems, leaves, tubers	Contains essential oils. Used in preparation of cartisone and other steroid hormones, Effective treatment of rheumatoid arthritis, Powered tubers are used in killing lice and as poison. Diosgen in obtained from its tubers is used in host of medicine for treatment of heart disease and blood pressure.
8.	Pudina (Field Mint)	*Mentha arvensis* Linn.	Headache, Rheumatic pains, Mouth odour, Cough	Twigs,leaves	The leaves with sweet smelling nature are source of essential oil or pepperment oil. It is used for cough, mouth odour, headache, rheumatic pains, or as cough drops or as mouth wash.
9.	Papra (Podophyllum)	*Podophyllum hexandrum* Royle	Skin disease, cancer, tumers	Roots, Rhizome	Produces essential oil, Contains a resign podophylslum, used in skin diseases, tumerous and cancerous growth, roots yield medicinal oil.
10.	Kuth (Costus)	*Saussurea lappa.* C.B. Clarke		Root	Medicinal herb. The roots are used in woolen for insect repelling, has antiseptic and disinfectant properties.

to easy empirical observation (Erasmus, 1952).

In 1987-88 there were two hospitals in Ladakh, one in Leh district and one in Kargil district. The hospitals in Leh and Kargil are well equipped. There are six and five Primary Health Centers in Leh and Kargil, respectively. In Leh there are eight allopathic dispensaries and 36 subcentres while in Kargil there are 12 allopathic dispensaries.

The position of the availability of medical amenities upto 1987 in the Leh district indicates that, though the Leh town boasts of satisfactory health and family welfare department, only 48.8 per cent of total villages are provided with medical facilities within the village itself. However, the position of population in terms of coverage by medical care is more encouraging (63.9 per cent) than what came out in the terms of the proportion of villages. As many as 63 villages have no medical facilities available locally. Most of their inhabitants have to avail of this facility at a distance of more than 10 km. It was noticed that as the distance from the nearest town increases, the proportion of villages covered under the facility decreases. Also, less populated villages receive lesser attention in terms of health care. Different types of medical institution which are present in the district are : District Hospital, six Primary Health Centres, nine Allopathic Dispensaries, three Family Welfare Subcentres, eight Health Subcentres, 62 Medical Aid Centres, Leprosy Centres, Mobile Dispensary and Mobile Vaccination Squad. The District Hospital situated at Leh town provides the following specialized facilities:

1. Medical Speciality
2. Surgical Speciality
3. Ophthalmological Speciality
4. Gynecological Speciality

In addition to the above, facilities in respect of Family Welfare, Child Care, Blood Transfusions and Immunization against small pox, tuberculosis, tetanus, diptheria are also available in the district.

Due to the hard efforts of the vaccinating staff, the smallpox has been fully eradicated and not a single such case has been reported recently.

Under the tuberculosis control programme in the Leh district the Health Department has undertaken the immunization programme in big way. During the 1986-87 as many as 1,317 children were given BCG vaccines while 22 T B. patients were rendered full treatment. The district T.B. Center, Leh in house-to-house survey has also detected 64 new T.B. cases who have been registered with the center for treatment and rehabilitation. At present, there are 155 patients in the district undergoing treatment for the disease. To detect the new cases the centre has also done 990 sputum examination and 241 X-rays.

There are adequate arrangements for tubectomy and vasectomy operations in the District Hospital, Leh and at other P.H.C.s of the district. During the year 1986-87 as many as 741 sterilizations were performed by the Health and Family Welfare Department in the Leh district. These include 374 tubectomy and 20 vasectomy operations and 2,621 UCD insertions. In order to achieve the targets fixed for the district with regard to sterlization and extension of other medical facilities the department also organized medical camps in remote areas of the district.

Besides, an indigenous system of medicine based on herbs and other natural substances administered by *Amchis* is also being promoted by the department which is an accepted form of medical system there. There are 33 *Amchi* centres in Leh District.

It appears that network of these various institutions is adequate for a population of 68,380, but most of these institutions are not functioning or so poorly manned that these are not able to provide required services as per programme. 89 posts are lying vacant; out of which one is of Chief *Amchi*, two X-ray Assistants, two Lab Assistants; nine Medical Assistants, 27 ANM, one Health Educator, one Extension Educator, 27 Class IV, and one *Safaiwala.*

The services are clinic oriented. The district has eight vehicles, out of which six were unfit and only two in working conditions. Four refrigerators in working conditions along with two thermocole boxes and 70 carriers were being used by hospital staff. But there was always the problem of electricity as it is supplied for only three hours in a day (from 8 p.m. to 11 p.m. daily).

to Keynesian macroeconomics to political maternization paradigm to deterrance studies in criminology. According to empiricism truth flows primarily "upwards" from particular observation = statements to the general statements... while for the rationalists it has flowed "downwards" from general laws and principles to the particular...." (Toulmin, 1972 : 68). Subsequently empiricism treats social relations between people as things reducing them to roles the objects. For social behaviour is analyzed from ontological point of view, assuming the existence of the world outside the mind. For them the world is governed by rules and the task of the social science is to discover this order. The notion at the outset is a historical and deterministic, simply because we cannot indulge in perfect prediction for inferring laws to generalizations in social contexts.

Overusage of Statistical Analysis

Prediction does not necessarily lead to causation or explanatory knowledge as social relations are not simple functional equations that can be conveniently convoluted into statistical multivariates. Thus the world view followed is akin to architect plan with arrays of correlated phenomena, while rationalism, search for concrete events or abstract units. Here comes the overusage of statistical analysis and mathematical models in a bid to get over empirical irregularities. More often, the customary statistical usage in social science finally results in minimization of theory and as well as empirical complexity, by reducing theoretical issues to mere relations and variables. It is little wonder at times categories and variables seldom bear statistical relationship to other variables. In the process statistical models are reduced to mere empirical resumes to explain the complex social reality; for statistical tools in themselves cannot describe the complex structures. In the context of formal methodology, rationalism is viewed by empiricists as informed guess work, speculations and metaphysical devoid of scientific method of social reality (Sorokin, 1928). It it a truism that econometric models look impressive and elegent in their mathematical precision (like multiple regressing, multivariate analysis of variance, structural equations, canomical correlation, etc.) and if appropriate caution is not taken, there is a risk of opaque analysis (Sechrest, 1985). However, this is not to deny the importance of statistics in social sciences rather what is required is the assessment of the quality of social statistics and the context. Precisely as social reality is far from quantitative diagrams and the number reflections, sometimes the elegance of these models are projected at the cost of unrealistic and conservative simplifying assumptions in the context of policy relevance (Pettigrew, 1985). The frequent hallowed economic indicator GNP continues long after policy decision based on the then available data on GNP with the long gap of time factor, eventually one is confused whether GNP is up or down (Morgenstern, 1963). Per capita estimate the relative inequality of the societies indifferent geographic societies, with different organizations of production and the like. Therefore what is needed is the degree of reliance an statistics and mathematical models for policy purposes. Because social science on the whole can influence either covertly the nature and direction of social policy and can promote social justice (of course without manipulation and misrepresentation of social reality) *al beit* limitations.

Empasis on Fidelity to Truth of Life

Besides the above mentioned methods of social comprehension, realism presupposes historically concrete reflection of reality in progression which has originated in the twentieth century capitalist times. Here the epmhasis is on the fidelity to the truth of life and humanism. In brief it is the being of things as opposed to nonbeing. Reality is viewed as being of something essential in a given thing, matter (Rosenthal and Yudin, 1967). It is argued that "the ideal is nothing but the material world reflected in the mind of men, and translated into the forms of thought" (Marx, 1971 ; 102). Matter is a philosophical category denoting the objective reality, which exists independently reflecting in consciousness "which is copied, photographed and reflected by our sensations, while existing independenly of thought" (Lenin, 1947 : 116). In other words matter is the infinite plurality of existing phenomena, objects, systems and

medical system. Although the economic status of the households differ, they show certain similar patterns of illness behaviour. They employ pluralistic strategies not perceiving conflict among thse alternatives, nor do they seem to perceive them as different systems, but rather as a variety of options, among which they can choose.

Most usuage is sequential but some is simultaneous. For example, an infant who is being given perscribed medicine for diarrhoea, may also be taken concurrently to a Lama for the evil eye. Although certain illnesses such as evil eye, are thought to be cured only by folk curers, this does not proclude the use of modern medicine to treat the symptoms. Gonzales (1966) reports that in Guatemalan, the symptoms are treated with modern medicine, while the cause of illness is dealt with through a folk specialist. Traditional or folk theories of illness etiology are often multifactorial and multilevel (*e.g.* immediate and ultimate levels of causation), which permits the use of different treatment resources for the different causal factors and levels (Cosminsky, 1977). As reported by Cosminsky (1980) for Guatemalan plantation, pluarlistic behaviour among Ladakhi population groups is pragmatic, often based on trial and error, perceived effectiveness, uncertainty of illness causation and expection of quick results. In addition to this empirical and pragmatic behaviour, however, is the role played by faith in the supernatural or spiritual in curing. As a person is simultaneously a body (his *soma*), a self (his *psyche*) and a social being (his *polis*), so are healers corresponding to three different realms of individual functioning. In other words, a person is simultaneously a body, a self and a social being. Ladakhi Shamanism "pursued a dialogic, relational remedy for its patients through reciprocal relationships that encouraged community, such as in gift giving to spirits and etiologies based on real social conflicts" (Adams, 1992 : 154). Ladakhi shaman attempts to resolve sickness caused by disorder of the "Social self". Lamas and *Amchis* on the other hand claim to cure the diseases which arise from disorders of body and mind originating from individual actions and desires in craving and clinging. Excessive anger, greed and lack of discipline in attachment to the physical and social world result in body disorders. Lamas cure with prayers and rituals while *Amchis* cure through the site of the physical body by means of an elaborate diagnostic system and pharamacopeia. The Ladakhi healers emphasize different aspects of Ladakhis self: social (*lhawaism/lhapaism*), mental (lamaism) and physical (*amchis*). Bio-medical systems as a rule stand in sharp contrast to the indigenous ones, although a study done in Kerala and Punjab has suggested that there are numerous indigenous medical practitioners who used western medicine, including penicillin injections (Neumann, 1971 :140-141). Among Ladakhis, no such practioners exist as *Lhama/Lhapa* are spiritual healers and *Amchis* are traditional herbal doctors,who do not use biomedicine.

The pluralistic medical situation in Ladakh provides flexibility and fills different needs of the population. The folk systems are open one, as manifested by the electicism of both the clients and practitioners, who adopt and adapt aspects from the array of coexisting medical traditions. This openness of the folk systems, as Press (1978) point out is manifested by the acceptance of inputs from other/alternative health systems, and also inputs from institutional sectors such as religion and the family. According to Landy (1974) the traditional healer role stands at the interstices of religion, magic and the social system and gain its power from this position. This contrast sharply with the closedness of cosmopolitan medicine, which is "discontinuous from ordinary social process (Press, 1978; Manning and Fabrega, 1973) and is unaccomodating to alternative systems.

A general quntitative survey on the utilization of multiple therapy systems among Ladakhis gave an impression that they have inclination towards indigeneous type. In Ladakh, there are multiple medical systems available to people and the options available to any specific group are many. The acceptance of any or a combination of these forms of therapeutic help depends on a variety of factors.

With their age-old folk medical system, people have been able to survive and maintain the ecological balance. With the advent of western medicine a new system has been introduced and people always react differently to this transplant system. Traditional type of system, which does

not allow any scientific exploration, is obviously based on myths and powers that are not within human control, *i.e.* for such things a supernatural element may be responsible. Consequently the treatment of the ailment also reflects appeasement of the supernatural powers which are extraneous to the individual (patient). In such a society adoption of new medical therapy obviously will be challenged by the existing system and hence, unless the new system is capable of replacing the traditional values by its efficacy and acceptability, it will not be a success.

From the interviews, which were carried out in the health centre, one thing was clear that the patients were coming to health centre only after they had received treatment from their own practitioners. Disease as an area of inquiry and the attitude to curing disease has its special importance *vis-a-vis* other areas like status, political power, because of the personal equation and time factor involved. It is a matter of life and death in case of a critical disease and their range of action pattern is limited. It is a crisis response rather than a calculated response. When the human system is out of order, all types of irrationalities come into play. Since the responses to critical disease are *ad-hoc*, they do reflect the traditional cultural norms.

People modify pre-existing practices if the economic costs are within their reach. People are remarkable pragmatic in trying and evaluating new alternatives. In case of health behaviour, the cost-benefit mode of analysis and the empirical evidence help in deciding, whether it is to their advantage or not. There is a change in overt behaviour of the people, but it does not necessarily explain or mean changes in the belief system. Among Ladakhis, it was found that although the traditional beliefs about fertility, pregnancy and abortion have remained unchanged, many births in the study area took place in the health centre or government hospital. Ladakhis have their own traditional-folk medical system with traditional beliefs and practices. But when they were offered the western or government sponsored medical services they accepted them and put them to the test even if as a last resort. They do not in all cases continue to use western medical services, but they show open mindedness in trying them out. Among Ladakhis, the situation is like what Wagner found among Navaho. Wagner found that Navaho "have a very open, pragmatic, and nondiscriminating attitude towards various medico-religious options available in time of need. White medicine, traditional chantways, peyotism and even various Christian sects on reservation tend to merge in their minds into alternative and somewhat interchangeable avenues for being used" (Wagner, 1978 : 4-5). Ladakhis have a open pragmatic and non-discriminatory attitude towards the multiple medical system available to them and acceptance of any or combination of these depend on the individual or household decision. As far as curative medical services are concerned, these are embraced more readily than preventive services, as was seen in the case of immunization. All were not ready to immunize their children as only 43.2 per cent children were immunized in study area, out of which 46.6 per cent were Buddhists and 41.4 per cent were Muslims. The reason for this is that the result of the scientific curative medicine are much more easily demonstrated than the results of preventive medicine. "Cause and effect are easily comprehended when serious illness gives way to no illness in a few hours or days, cause and effect are less easily seen when, in the case of immunization and environmental sanitation programmes, no disease is followed by no disease" (Foster and Anderson, 1978:245-46). As there are multiple medical systems available to Ladakhis to opt for, the course of action to follow depends on the situation and condition of the sick. The stratigies that underline these decision-making process have come to be called the "hierarchy of resort in curative practice" (Schwartz, 1969). The ways in which people structure their personal hierarchies of resort tell us about their preferences.

Among Ladakhis, a sequence of resort does not seem to exist, although the trend is to begin with home remedies to Lama to *Lhama/Lhapa* to *Amchi* as the course of the illness proceeds and become more serious. However, there is also a back and forth movement between resources, or a short-gun approach, often based on referrals and advice from relatives and neighbours and other practitioners, which

circumstances directly encountered, given and transmitted from the past" (Marx 1971:31). In other words any contemplation of social reality consciously or unconsciously, scientific or lay, treating people as objects of history and simple transmitters of knowledge than active participators is not only misleading but also misrepresenting the actuality. Precisely as subject — object relationship lies on equivalent horizontal plane. However, contemplating social phenomena is not a simple question of analyzing practices and concepts, but has a material dimension. This framework of analysis requires not merely amassing empirical data but also philosophical basis for "understanding concepts in society and how they change therefore requires an understanding of the material practices and circumstances associated with them" (Sayer, 1984 : 35-36). The interdependency between subjects and objects, the conceptual and the empirical, praxis and prognosis of knowledge is very intricate. No doubt the social world can be understood through conceptual frameworks, but certainly concepts alone do not determine the structure of social reality. Societies are structures of social relations in the production and reproduction process. The functioning of these structures as entities maintaining themselves in their relation both with the outside environment (human and nature) and the symbiotic relations between the two explains how societies change and transform.

Philosophical Premises of Materialism

Therefore the application of the mechanical models cannot explain this intricate social dynamics, rather only simplify the historical changes. The distinctions, forms and appearances of these structures retain their significance, for the analysis and explanation of these realities are historically specific. For instance under capitalism the exchange value and the social relations take a different turn as the workers produce not for direct consumption. It is this commodity form responsible for the enigma (Marx, 1971 : I). Thus the relation between people takes place on the illusory appearance in commodity production, a specificity of capitalist relations. The objective forms in capitalism (the relation between objects) are nothing but specific social realities, *i.e.* "if ... we bear in mind that the value of commodities has a purely social reality, and that they acquire this reality only in so far as they are expressions or embodiments of one identical social substance, *viz.* human labour, it follows as a matter of course, that value can only manifest itself in the social relations of commodity to commodity" (Marx, 1971:47). Thus each relationship is an appearence whose reality is only articulated by integrating it theoretically within its social structure. The philosophical premises of materialism seeks for the liberation of human kind and therefore materialist dialectics is inseparable from humanism.

The main thrust of this present paper is that materialist premises possess the potential to contemplate social reality specially in the context of the third world countries with alarming inequalities and domination of national and international forces, if used systematically and contextually, shelling out dogma. This necessarily implies to abandon simplistic and monoistic assumptions and indulging in an ongoing quest for praxis and theory. Of recently the issue "crisis in social science" (be it Marxist or *vice-versa*) in itself speaks volumes regarding various theoretical and methodologicai debates, promises a positive future. Subsequently cognitive scientists are working with ingenious research designs and computer programmes in a bid to solve human problems while issues regarding subjectivism, objectivism, relativism, positicism, metaphysics, etc. and the theories like ethnomethodology and phenomenology (also Marxist phenomenology) are being revisited, which cannot be dispensed simply as pedantic. As is known, the literature in this regards has reached to mammoth heights. We find the proliferation of different approaches in social thought like, phenomenology, hermeneutics, critical theory, ethnomethodology, while on the other hand attempts have been made to review symbolic interactionism, structuralism and poststructuralism. Space and scope of the paper simply does not permit us to delve on these critical approaches.

II

In its concreteness structural reality in the

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