

Autobiography **M.H. PANHWAR**

First Ten Years of my Life



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INTRODUCTION

This autobiography should not be considered as unusual, as people in rural Sindh are familiar with rural life and social set-up and will recollect that at least in some parts these are their own experiences and may have even many things to add. Only difference being that between 1920-1947 it was period of transition in new thinking, new socio-economic conditions, influence of education and even of primary level, a number of political movements, like Khilafat movement essentially reactionary anti-national in support of Khalif of Turkey and considered holy, the separation of Sindh from Bombay, which was main cause of development of Sindhi nationalism, Sukkur barrage, which improved agriculture economy and lot of rural people and brought rural awakening, which immediately saw disparity between urban and rural people or mercantile, commercial and agricultural communities and wrongly blamed urban trading people who mostly were Sindhi Hindus for causing rural backwardness, little realising, that this mercantile class was in competition with Gujarati, Maharashtri, Punjabi, European and other business men and were struggling to have footing in their own province and without realising that if they are gone, they will be replaced by an unsympathetic group.

All this lead to anit-separation of Sindh from Bombay by some petty minded Hindus resulting into separation of Sindh being Muslim versus Hindu movement. It was tragic and slowly caused glut between Muslim and Hindus to the disadvantage of both and final disaster in 1947. It was a time that Muslims wanted the lands mortgaged with Hindu business men during the time of great depression to be returned to them and Hindus opposed it. The land alienation act passed by orders of Governor of Punjab to stop transfer land from agriculturists to non-agriculturists was not introduced in Sindh and Hindus now in new Sindh Assembly opposed it. Hindus being given vettage in seats and some i.e., 22 against 32 of Muslims had created a position whereby Hindus could dictate formation of ministry of their choice. Having been frustrated Muslims under G.M. Syed organised Masjid Manzil Ghah agitation, knowing fully well that it will lead to Hindu-Muslim riots and many lives will be lost, but result will be popularisation of Muslim League, and he succeeded in it. It was the worst event in Hindu-Muslim relations which kept deteriorating further. Post barrage economic boom brought a large number of students from rural areas to towns for study, but by the time of independence's in 1947 not more than about 500 Muslim students were in the colleges against at least 5 times the Hindus, but Muslims were catching up fast. The Muslims, most rural had never realised that they were connected with agriculture as it was the best economic base and power over people upto mid nineteenth century, but promotion of trade, industry and

exporting the British changed the balance, cities and towns came up and leader of rural. Muslims the landed class, stuck to the land and agriculture did not progress in modern education and suppressed education and migration. This kept the whole Muslim community backward. Since 1923, British introduced some reforms and elections. The landed class found that by elections they moved into special elite class and to keep them elected they have to suppress rural Muslim voter educationally, economically and exploit religion against non-Muslims, consequences of which were apparent after independence, when Hindus were forced to leave Sindh by new immigrants and Sindh Muslim not properly educated, trained or economically sound to fill the vacuum. There was post World War-I economic depression and worst years were 1930-1940. The price of agriculture commodities has fallen to rock bottom. A good self cultivator owing ten acres of land could not earn more a net of Rs. 60 or equivalent of two tolas of gold annually, with help of at least three additional adults of the family.

This caused frustration which was easily exploited by Muslim politicians in the name of down trodden Muslims exploited by infidels, the British and Hindus. Mullas were always ready to assume leadership if some right or wrong cause was raised in name of sufferings of Muslims and Islam and they easily aroused masses. Against them some poets composed excellent poetry and result was that it was difficult for Mullas to assume leadership in the Muslim League, which became an organisation of urban elite rural landed class, Syeds, Makhdoods, Pirs and that group, but not of masses. This elite group was not all interested in involving masses as it would end their leadership.

Muslim League was dominated by urban elite and rural waderas, who could order their tenants to vote for any body or any party. There were some serious middle and poor class honest workers who joined hands with G.M. Syed to popularise Muslim League, but they were despised by the rich elite. G.M. Syed was tolerated by them only because they could not reach his level of political maneuvering thinking, expression in writing and scrupulous honesty.

In my first ten years of life, I had tried to understand Sindh, which became guide line to work on it in future. I had already shaken off many prejudices against people of other faiths, superstitions, beliefs in Bhopas, witches, giants, miracles, supernatural powers of some people and dead saints. I had also realised that knowledge had no limits and could be learnt all through the life and yet it was not the end and I have always admired Socrotes, whole said "People consider me wise, because I know nothing." I think it is true of me too.

I had realised that pen was than the sword and respected men of letters more than the rich with poor mentally. Tolerance to all others irrespective of caste,

creed and colour was another thing I picked up soon. That most of people lied was another concern. I could not figure out, why at all they lied?

My love for and with nature was out-come of my liking to learn it and got opportunity to observe it from tree to tree, bush to bush, field to field and uncultivated waste land growing wild vegetation, but this was not enough, I used to remove piles of straw or leaves and pods or berries under trees to see the insects, which I never killed and also catch butterflies but release them after examining their beautiful wings. Watching eggs of birds and their hatching looked very interesting but I never disturbed them. Effect of all this was that I did not participate in any hunting sport and have not killed a single bird or animal my self, though have taken meat and poultry.

All above has attached me to the soil of Sindh and I am a prisoner of it. Any injustice or damage to cause and interests of Sindh agitates and disturbs me. To me, any body born or buried in Sindh is Sindhi and is my equal with same rights and I have stuck to this principle all my life. During sixteen years service with the Government, I kept this as principle of recruitment and every thing was settled by merit and seniority. In return I got peace of mind.

**MY MATERNAL GRANDFATHER'S HOUSE,
MY BIRTH PLACE AND THE SPOT
WHERE I WAS BORN**

I have to describe this house and the exact spot, because I was born there. In Sindh it is customary that a woman goes to her parental house for her first delivery. Besides this, in those days all deliveries took place at homes. Lady Duffrin, wife of the Viceroy of India (1884-1891) coming to know that mothers' mortality rate in childbirth was high, promoted the cause of women and special hospitals for women under her name were established by the Government of India all over the present Pakistan, India, Bangladesh and Sri-Lanka. My mother went for delivery to her parental house and stayed on there for some time till she and I could safely go to my paternal grandfather's house with whom my father and uncle lived as joint family.

It was a house built between 1910-1912, before birth of my maternal uncle Muhammad Saleh (d. August 2000). The mason named Saleh was from village Thahakann, but later on he left Thahakann and settled in our village. The original house where I was born was a three storeyed building with three rooms each about ten by twenty feet in area, one above the other and each about 9 feet high. In front of them to the south, was a hall twenty feet square, the ceiling of which was at the same level as the ceiling of the second storey room. Its roof was at the same level as floor of the third storey room. This hall had Kashi (glazed) tiles, beautiful in light and dark brown colours, as ceiling. When I opened my eyes, this is what I must have witnessed, because I was born on the floor of that hall. Each of its tiles was one foot square, and was laid on T-irons, which in turn were laid on one-foot deep girders. Tiles were made in village Dur Muhammad. The Kashi tile workshops were scattered all over Sindh those days, as tiles were standard interior decorative material in fashion in the mediaeval Sindh. Even the floor of the hall had Kashi tiles, which quickly chipped off during movement of furniture and under heels of shoes. I saw a few remnants of them when I was about 6 years old. Later on I heard different versions of the origin of the Kashi art. Hindus used to say that it was originally a Hindu art and came from Kashi or Benares in UP, India, whereas Muslims used to say that it came from Kashghar in Sinkiang, a province of China having 80% Muslim population and Kashi workers in Kashghar. In my opinion Kashi is from Kach, which means glass and the Kashigar gives glass like glaze to the tile or any other object by applying various finely powdered metallic compounds, suspended in water, to its surface. On heating these compounds melt and form glaze of the intended pattern and

colour. The art is quite ancient going back to more than four thousand years, when either Kashi or Benares and Kashghar cities did not exist.

The hall of the house had other features like a modern fire place and chimney, which were constructed very scientifically so that it narrowed in flue gas passage, had lantern type top with four outlets to allow gases to escape and did not allow smoke or rain-water to get inside hall. The hall had a balcony too, some 6 feet wide projecting out from the ceiling of first storey and its top flush with floor of second storey. It was secured by steel bars and wooden railings. One could enter it from second storey room and watch down in the hall. The hall had two doors to the east. It was some six feet from the northern door and inside the hall, wherefrom I saw this world for the first time in my life. Outside the hall was ten feet wide veranda at the end of which ran a three feet wide staircase leading to the two upper storeys. The ceiling of the veranda was at nine feet and so was a ten feet long landing and passage way between stairs. The foundations were reported to be five to six feet deep and six feet wide tapering up to two feet near the ground and on it stood the building walls two feet thick - thick enough to allow chimney flue to be part of the wall without any damage by heat, to interior or exterior of the wall. The carpenter who did the Dayal-wood work was Allah Bakhsh, who later on built a cradle for us. Today rural carpenters are not as crafty or competent. In those days rural carpenters also met the urban needs, but today situation has reversed and even the urban carpenters are not as competent. Allah Bakhsh's workmanship in his young age was superb, as I could see in this house. The veranda and the hall had six feet high parapet walls with holes in form of cross (†) surrounded by crabbed type arches to give them beauty, usually common in weaving cots, cradles and carpets.

When built, there was no such house from Khairpur Nathan Shah to Dadu and many people came to see it. There was one defect in the house - the arches were semi-circular but doors and windows frames were four inches square and space between them was filled with single brick kept on edge. No one knew the defect. The house was copied by Wadero Ishaque, some 18 years later and his son Allah Warayo must have known it. My maternal uncle Muhammad Saleh was supporting me financially for my education in the NED Engineering College at Karachi. Allah Warayo who had become jealous, as his four sons were not bright enough to study in the high school, organised theft by entering from this weak point over the window. In May 1945 when everybody was sleeping outside the house in open, as is common in rural Sindh, they successfully entered from this point and removed silver and gold ornaments of not only his own family but also of his other relatives, who had left them in his house for safe custody. When accused of theft, Allah Warayo went to Makhdoom Bilawal's mosque at Baghban and swore an oath with Quran in his hands that he was not a party to it, but seven years later he publicly admitted it, as his Kamdar, who himself was

involved in the act, revealed the story. The house still survives in 2003 though the ceiling of bottom storey of the room had been removed some 40 years earlier. It had stood two floods of 1942 and 1956, without walls cracking. Each time a two feet deep water stood inside it. The average level of the village has risen by two feet in the century due to continuous rebuilding of mud wall houses and debris of old buildings, pottery and in-decomposable materials. The floor level has been raised and my exact birthplace is two feet below the present floor of the house, which stands as it originally was.

LOOKING AT SKIES AT NIGHT

At sunset, like all other villages, our village plunged into darkness until mid seventies of twentieth century, when electric power lines were installed. The only light visible in the houses before this was from burning wood in kitchens or hearth, which also acted as fire place in winter and family members sat on mats of date tree leaves around it to warm themselves and eat food with help of this light. In summer everybody slept out doors and in arid clear sky one had to depend on light of moon so long it was visible. Since nothing else could be done at night it was usual to lie down on rope-strung beds and watch stars. It was very early in my life that I was shown Northern Polar Star and to locate it I was explained that four other stars formed four legs of a cot, two legs of which if extended five times would pass through the Polar Star. In addition there were other groups of stars too, called 'scorpion' and many other names known to the village folks. I also learnt about Venus, Mars and Mercury. The villagers could tell time nearly accurately within fifteen minutes by watching position of stars, based on a few days observation and comparing it with timings of trains passing in front of our village, which usually passed within a few minutes of schedule, before World War-II. Mullas also gave early morning call to prayers by watching stars. Since earth moves around the sun in elliptical path as well inclined to its axis from season to season, position of stars vis-à-vis earth changes and so does the timings of their rising and setting, but these amateurs knew their job to find time at night irrespective of length of night. This became my early lesson in astronomy. I never believed in astrology, as their predictions would fail most of the time as did water diviners. I have always argued with astrologers that they depend on satellites of sun to predict future of persons at their birth and why not billions of stars each of which is an independent sun with its own satellites or earth. I also had observed that twins born within minutes of each other and head of one touching the legs of the other do not lead identical life. In my investigations of ground water, I have found that water diviners' predictions fail 95% of the time.

Watching the stars at night led me to study astronomy and great faith in "Big Bang and evolution".

**THE LAST JOURNEY OF SALEH, THE FATHER OF MY
MATERNAL GRANDFATHER AHMED**

Saleh was a successful farmer and at one time some years before 1878, he had become a railway contractor. A bridge on railway line over a water channel leading to our village was constructed by him and since more than one and quarter century it is still called Saleh's bridge. He was not well versed in accounts and Ahmed kept accounts, prepared bills and received payments from Railway Company. He bought land from the Government and soon became moneyed person. His last wish was to go for Hajj to Mecca to have all his sins of lifetime is written off. In those days pilgrims' ships for Jeddah sailed from Bombay, but Bombay was not connected with Sindh by railway, so he left by train for Kotri or Karachi. Nobody knew his exact route. Probably he took boat for Bombay, wherefrom he sailed for Mecca. No word was heard of him. He could not have been robbed and killed in India, such was the state of security in the last quarter of the nineteenth century that a woman could travel alone unmolested from Karachi to Calcutta. If he took a country boat from Kotri, it could perish but chances were remote as country boats sailing down stream were reliable up to the delta. Country boats also coasted to Bombay and the sea was mild in winter. Since the month of Zil-Hajj from 1877 to 1880 was in October, he must have travelled before April to September monsoon winds and he could have reached Bombay safely. Steamers were safest between Bombay to Jeddah. It appears that he must have reached Mecca also safely as Hajjis travelled in caravans and Bedouins' targets were individual pilgrims or small groups, specially those who took land routes via Gulf countries. Some later reports from Hajjis, who met him in Mecca and then in Madina, state that he reached there and probably died before returning back from Madina.

This was a type of death most Sindhi Muslims of pre-independence era had yearned for, but rarely earned, specially after the whole of Sindh was connected to Karachi by railways and ships sailed directly from Karachi to Jeddah and even Europe.

Adaptation of this way of life goes back to Aryan religion, which divided the life of a man into four equal periods of; learning, raising family, professional involvement like teaching and training others and final self-exile for meditation. The last involved leaving the house, living by alms in mountains, caves, forests and praying to the gods. In practice only Brahmans did it and many times their meditation involved magic tricks, some difficult to perform yoga exercises,

snake-charming, curing by mantras and miracle performance; and thus preying upon ignorance of masses they lived a comfortable life in the last days of their life. Since Aryans had absorbed many ideas from the Indus Civilisation, all or most of them may even have originated four thousands and five hundred years ago. The Indus Civilisation has its roots in Mehrgarh Culture (9000 years ago) and is continuation of it. We can thus assume its influences going back to that era. One thousand years before Mehrgarh there was no agriculture and for millions of year's people lived by hunting and food gathering; men killing wild animals and women harvesting wild fruits, grains and plant roots for their starch. The hunters' band was always on the move in search of food. A stage came in a person's life, when due to old age or sickness, he or she no longer could cope up with the fast movements of the band of thirty to fifty people and then one day they would decide to stay behind to be starved to death or be preyed upon by wolves, tigers, lions, leopards, hyena and finally be devoured by dogs, jackals, wolves, vultures and etc. This was considered an honourable death. Buddha, around two thousand and five hundred years ago, preached renunciation of the world as great virtue. In his disposition, opposed to Brahmanism, neither age was a factor for renunciation nor the caste or sex. Most Sindhis were Buddhists before they became Ismailis in the tenth century and later on were absorbed into Sunnism in the thirteenth and fourteenth centuries. Yet, Buddhist influence lingered on in the society and poverty, starvation, abhorrence of luxuries of life and rich food remained virtue in the rural society up to nineteenth century. Saleh was just an example of such virtuous persons. Those who returned from pilgrimage (Hajj) have invariably been respected in Sindhi society, irrespective of remaining virtuous or not. They acquired title of Haji prefixed to their name and were categorised among the religious elite like Maulvi, Hafiz, Waiz etc. What I had observed before even an early age of ten was that of the Hajis and Hajanis of our village, only a few were straightforward and loved their fellow beings. Most of them were ignorant, jealous and cunning and were using the title Haji to suppress and hide their otherwise indifference, even hatred, towards fellow beings.

With oil prosperity in Saudi Arabia many Hajis now are interested in smuggling electronic goods and domestic appliances and are thoroughly exposed. Hajis usually bring water from Zam-Zam spring near Mecca. In twenties and thirties it was packed in small sheet iron bottles, properly sealed by soldering. We had a few iron bottles each carrying no more than 50 ml of water. A few drops were usually put in the mouth of the dying person. Some people also like-wise gave it to sick people. The custom may have come from Hindus who use the Ganges (Ganga) water instead.

USE OF LEFT HAND FOR EATING FOOD

From the very childhood I did every thing with both hands. May be, I did so as I was physically weak due to gluten sensitivity. I invariably took food with both hands, a thing highly disliked in the whole South Asia, where left hand is never used for eating; it being reserved for toilet purposes. It is understandable that unless amoebae and other bacteria are washed off with detergents from the left hand after every visit to bathroom, it is unhygienic to eat with it. My mother was too particular. She made me wash hands with bentonite powder mixed with washing soda, both available in the house for bathing or washing clothes respectively and only rarely with soap, which was used for washing costly clothes. Culturally it was frowned upon to eat with left hand and having been disturbed, my grandfather told me in Sindhi slang words, (*Khabay hath khay khani mut*) or urinate on left hand, meaning thereby never and never use that hand for eating. Small though, I was at the age of three to four years, but I had observed my father, uncle, mother, uncle's wife and my father's sister all were very obedient to my grandfather. I therefore, obeyed the orders in letter and spirit, went outside the house, urinated on the left hand and came and happily showed it to him saying, "I have urinated on left hand" (*Baba khabay hath tay mutio atham*). That day gone, nobody in the house asked me which hand I use and not even in the boarding school or college mess. However, whenever I was some body's guest, they raised eye brows, sometimes with comments and at other times winking an eye to others on the table. I still use both of my hands for eating. There is no taboo to use of left hand in the West. The British and Europeans hold fork in left hand and use the same for putting morsel in the mouth. I have never considered it un-mannerly to eat with both hands, as I do even today.

HUBBLE-BUBBLE

Hubble-bubble or Chilm is most economical method of smoking tobacco and a group of about a dozen person share it. It is also considered more hygienic than cigarettes or Beris, as the tobacco gases and carbon dioxide are filtered in water. It is unhygienic that the same pipe goes from mouth to mouth spreading viral diseases, tuberculosis and throat and mouth infections etc. There were two hubble-bubbles in the village; one at my maternal uncle's Autaq, where majority of smokers and non-smokers collected every day usually twice, in the early afternoon and evening. Expenses of tobacco and device were paid by my maternal uncle as per tradition.

It was a curious mechanical device and by air bubbling through water inside filter chamber made curious noise. At an age of four to five I wanted to taste it. My father told me it is bad and will make me sick, but I became obstinate, so he agreed and taught me how to inhale deep. Then he told me to open mouth, hold pipe inside, close mouth and suck in as fast and as deep as possible. I did exactly as he tutored me and on sucking my lungs, throat and mouth were synchronously on fire. I started coughing badly for a minute or two. Then he told me: "It is very bad and once a person gets the habit, he cannot give it up. Now that you have known, how damaging it is, you will never touch it." That day gone, I have hated not only to smoke tobacco or other material like snuff (ground tobacco powder), pan and any products directly or indirectly connected with smoking of any material, but I also avoid sitting in presence of smokers.

This childhood experience was long forgotten by me, but my father narrated this story to my first wife one year before his death in 1962. When I was told of it, I thought, it was an odd but successful experiment that has given such positive results in my lifetime but it could misfire too and I could have become chain smoker.

MY VILLAGE

I was born in village Ibrahim Kachhi; Taluka and district Dadu. It was founded in 1857 AD, by four young rebel Panhwars who in 1857 Mutiny against the British had fired on the Government troops marching northwards along the present National Highway near Dadu. The Government troops killed a few rebels and the rest escaped. Of them these four men took shelter midway between the River Indus and road from Baghban to Kakar, in a thick forest by clearing land and using lumber and thorny branches for fences for compound walls and temporary wooden shelters from Laee shrub. They were afraid of wolves and kept entrances of compounds closed by thorny bushes and branches. I saw one of the lumber fences from Neem tree wood still intact 75 years after it was first built by the father of my grandfather named Haji, a name that repeated in our family and at least five of my ancestors had the same name in two centuries before my father named Haji was born. The other immigrants were Bachal from Jhalo, who brought his cousins later on, Ibrahim from Pirghunio, the unofficial Mulla of village and the fourth was father of Hafiz Musa from village Ghalu.

Environments existing after the British conquest of Sindh were favourable for settlement of people. The rulers ignored the isolated rebels and had conciliatory attitude. The Viceroy of India in 1859 had announced sale of Government lands to cultivators at nominal prices: one-and-half to three rupees. In Sindh, Mr. Haig (later Major General) who was a liberal of the era, was appointed Director Survey and Settlement in 1859 and held that position for more than twenty-two years. He knew Sindh, Sindhi language and Sindhi people very well and due to his outright sympathies with poor, whom he sold land and the three Collectors of Karachi, Shikarpur and Hyderabad had asked for his transfer out of Sindh, but due to his efficiency and hard work, Bombay Government had retained him. He was anti-big landowners and large farmers and was convinced that owner-farmers will do better. The Irrigation Department under Fife was also renovating old canals since 1855 and new lands were coming under cultivation.

The Ibrahim Kachhi settlement had limited irrigation water supply from Marui Wah which in it-self was getting water from Western Nara canal. They lived on livestock and limited agriculture, but soon the Government constructed Prichard Wah to feed Nara canal near Kakar directly from the Indus. This improved water supply by 1,600 cusecs and area around it prospered. A new canal taking from the Indus near Nasrani was constructed by the British and merged into old Nur Wah which branched, from Western Nara canal two miles north of Dadu. The

new canal called Nur Wah brought great fertility and prosperity not to the above settlement but to the whole Dadu Taluka, which subsequently for the same reason became very advanced in education. The Scinde (Sindh) Railway, which extended from Kotri to Ruk, was opened in 1878. Haig himself camped at Dadu, allotted some lands to these settlers and soon the settlement turned into a sizeable village. Before long, woods were cleared, wolves, hyena, foxes, jackals, porcupines, pigs and Pharhos (hog deers) retreated and yet but for irrigation, it was a true desert. Initially they cleared the land, cultivated it and paid no taxes, but later on land was confirmed on them by the Government and taxes recovered.

In my childhood I observed inundation canals flowing from mid-June to mid-October, harvest of Sugdasi paddy in November one month after Kangni, an earlier variety, threshing and winnowing in October-November and sale of crop in December. Rice was mono-culture from Jacobabad to Sehwan but Jawar and Bajri were grown in vast areas, where irrigation water was available only for shorter periods of one or two months or at tail end of watercourse. As no water was available after mid-October, only Dubari crops of peas, horse beans, oil-seeds and occasionally wheat grew. Some vegetables like spinach were also raised. In summer they raised some cucurbitae family vegetables like Kadoo and Tooryon on embankments of rice fields. The harvest of the Dubari crops was completed in February and March and that of wheat in early April, but without water in winter yields were poor. These crops provided pulses, oil, oil cake and animal feed from residues. From March to July the barren land gave a look of terrifying desert. Added to this was burning heat and blinding glare of summer sun. Absence of water was marked by reduction in bird populations and varieties of species. Flora disappeared, soil fauna reduced to negligible and even insects, rats, beetles, mosquitoes and flies reduced. It gave a feeling of being in the middle of hyper desert.

In summer if due to shortage of water, rice could not be raised, they grew Jawar (sorghum) and Bajri the short season crops, but though yields were poor, both Jawar and Bajri have better nutritive value in terms of protein than rice and their stalks were used as fodder.

Surviving birds in desperation came and sat on earthen jars closed with lids in hope of getting water by miracle. Ground water around the village was brackish. Only one well in the village had fresh or sweet water. The whole village collected there, men with animals to water them and women with pitchers to carry water home. It was not unusual that a woman carried 2-3 pitchers on head and one in each arm and occasionally a child in one arm and pitcher in other. Animals were watered every morning and evening. The well had a Persian Wheel or Nar, also known as Sindhi Wheel to the Arab World in twelfth century. It worked for four

hours in the morning and another three in the afternoon. Bullocks to operate Persian Wheel were supplied by the whole village by rotation. From mid-March onwards to end-September, heat scorched, glare blinded, street floors heated up, dry low humidity burnt the skin, fair coloured people turned dark and as there was no wind or no breeze people spread smell of perspiration all over, as they moved. Thanks to the British, Sukkur Barrage brought prosperity along with changes in the environments and socio-economics from 12th January 1932. The summers have become less harsh and winters less frosty. Before Sukkur Barrage, there were about seven nights a year, when water left outside the house froze and many times this was done deliberately to have ice for eating, drinking and fun.

Since ground water was brackish, no trees were planted inside the settlement. Some trees grew from chance seedlings in the fields and if they were on embankments of agriculture plots, they were allowed to grow for timber or fuel wood and occasional shade for farmers and their cattle. *Zizyphus rountifolia* or common Ber was only fruit tree growing wild on embankments. *Acacia nilotica* or Senegal (Babur) and *prosopis* (Kandi) were other trees growing on the field embankments. The wasteland with brackish ground water was supporting salt tolerant trees and shrubs like salt bush (Khabar), tamarisk (Lae) and Kirir. There were no shade trees other than these chance trees. Cattle and their keepers usually sheltered under these trees during hot hours of the day.

There was no entertainment in the village save the mosque or Wadera's Autaq. In the mosque people collected for at least one hour before midday after dinner and talked about the worldly affairs namely; rice nurseries, transplanting, harvesting, travelling, marketing, loan repayments, children, marriages, festivals and etc. It was the same in Autaq, except they talked about sex and women in addition. Mosque was scantily populated and they talked about roasting of sex sinners and others alive in permanent fire of hell. Autaq was invariably more populated than mosque and attendants were mostly farmers, who laboured in the field all day and did not offer prayers, as prayer timings clashed with those of field operations and besides strict cleanness of body and dress, required for prayers, could not be maintained by the poor hard working farmers. They collected there to smoke hubble-bubble. Both groups hated each other and ridiculed each other at respective places of gathering.

In general, visitors to Autaq were happy-go-lucky people, extroverts, successful farmers, whereas mosque goers were introverts, frustrated and jealous of Autaq goers and useless farmers. They usually did not smoke tobacco, but some of them put snuff (powdered tobacco) in the noses. Snuff is more dangerous than smoking as it surely will lead to earlier throat cancer. The mosque going group did not make good farmers.

The Mullas who dominated village as a whole, were very orthodox and no singers, musicians and dancers were welcomed in the village. Occasionally Mullas would sing Mauluds and Madahs, but with total lack of sweetness of sound and rhythm, compared to some contemporary urban professionals of the same category. Their singing was boring to witness and hear.

Our village consisted of some eighty houses, of which forty were Panhwars and forty Machhis with total population of 429 souls according to 1931 census. Machhis of our village originally were Chuhras or Ballas or Baleshahis, who were known to eat meat of animals, which die due to diseases. They also ate meat of animals forbidden in Islam. They collected hides of dead animals, salted them and sent them to Karachi for export. They also collected bones and horns of slaughtered animals, as well as those which died due to natural causes and also wild animals. These were exported to England for processing and various uses. These Machhis the lowest caste of Hindu untouchables had become Muslims in name of, therefore were not despised upon. Before coming to our village their women prostituted themselves and some were settled in brothels of Hyderabad and Khairpur Nathan Shah. Their close relatives were proud of them, as sometimes they sent them gifts or money. Their women folk bestowed their favours to any Panhwar with guts and gifts. Out of such liaison a cousin of my father Pir Bakhsh was successful in eloping a young married woman. All Panhwars of the village condemned him. I was seven to eight years old then and did not join them and thought that the man was hand-some, the woman was beautiful and they have accepted each other, so why these villagers were opposing. Today I can see that seed of rebellion for women's rights existed in my mind even at that young age. I now know that I preferred my mother to my father.

Machhis of our village should not be mixed with Machhis or fishermen who catch fish and socially were different from Balla Machhis of our village. One aspect of the impact of their social life in the village was easy availability of their girls to young men of Panhwar community, who therefore were not looking for any illicit relation within their own community, as it was not free from dangers. The Machhi women had equal rights as their men, a traditional outcome of Hunter-Food-Gatherer societies. Their men-folk never questioned their women's sexual liaisons. Panhwar community therefore was able to reassure themselves of their own women's chaste life and there was no case of Karo-Kari (murder of man and woman involved in illicit sex) in the village in the hundred years of its existence. No other village could boast of chastity of Panhwar women up to 1950. Thanks to Machhi women of our village.

HEALTH CARE IN THE VILLAGE

Like all villages in Sindh there was little awareness or care for the community health. Even if some people knew, they were totally indifferent as convincing the community needed special efforts and training. There were three depressions right within the village formed by borrowing of clay for constructing mud houses and floors. Two of them used to get filled by seepage from rice fields and rainwater and the third was filled by irrigation water from adjoining fields in summer. As the last had fresh water it produced some fish in autumn, but thereafter, lack of fresh water spoiled fish game and water became equally smelly for couple of months before it dried out. Some people also threw all kinds of kitchen and domestic rubbish in the first two of them and anaerobic digestion of them produced methane, hydrogen sulphide and other smelly odours. By the end of November all of them became fertile ground for mosquitoes and flies. This coincided with the time of break up of malaria in its epidemic form. Although many people knew the cause, but nobody took any initiative to fill the pits. Domestic animals resided next to human houses or within the houses. It facilitated in feeding and milking them and protecting them from thieves, but it also made every house smelly and source of diseases. There was no joint or co-operative effort to make common shed for animals of the whole village away from residential area. This situation had started at Mehrgarh 8,500 years ago, with little or no improvement in many a millennia.

Luckily ground water was brackish and there were no hand pumps. Every such pump or well would have been polluted by seepage of animal and human excrete to this source. People threw their rubbish in nearest streets and invariably along the walls leaving narrow depression in between which became drainage line during rains. When rainwater fell on this rubbish, it produced odours like those of rotten eggs or rotten meat of dead animals. Smell came from anaerobic digestion of organic matter in the rubbish. It also attracted flies and mosquitoes. After rains, breaking up of one or other epidemic was certain and it invariably took place repeating year after year. The filth left along the outside wall included dust, broken clay pottery pieces and organic matter like straw, wooden pieces, kitchen ashes, pieces of clothes and children's excrete. Since it was thrown along the walls, streets became narrower. Originally designed for bullock carts to pass, they could hardly do so, when I saw them first. While constructing houses earth from excavation of foundation was also left in the streets. Thus no street was at proper level to drain rainwater out from the village. There was lack of initiative and leadership to motivate the villagers to clean living. The collective effort to

keep the village healthy was missing and individuals were trapped into problems of streets in the frontage and back. Joint efforts could refill three depressions in the village in a maximum of two years, simply by throwing rubbish in them, but petty-mindedness, individual household jealousies and quarrels and lack of sensible leadership, led to unhealthy environments. Even in villages where a single Wadera was all powerful, at the best he kept his house clean and left rest of the people to rot exactly in the same manner, as our village.

There was no light after sunset. Wood fired kitchen hearth provided light to the women cooking food. Hurricane lanterns were a few and kerosene was costly. Everybody had some vegetable oils from Sarenha and Jambho. Their use was limited to applying it to skin, face and hair and if surplus, it was fed to animals by putting directly down their throats with discarded whiskey bottles. Occasionally it was also used in clay wick lamps but only in utter necessity. Life in the village usually came to an end after sunset, except the presence of a few Mullas who invariably prayed to God to make the sunrise regularly.

Glare of the sun was too excessive and blinding, throughout the summer. It had depressing effect on me. I preferred to remain in door in dark spot as even looking outside the door to sunshine was dis-comfortable. The climate was harsh. From June to September humidity along with temperatures was high, perspiration was continuous and sweat would not dry. Bathing in canal water was comfortable in the mornings after sunrise and before sunset, but rest of the day even canal water got warmed up. In winter humidity was low and it dried the body, and the worst affected were lips and heels of feet which cracked up. The villagers applied vegetable oil to them but it was no solution. I found that by early February, if I came out in sun, skin of my legs started cracking so badly that I had to run under the shade. It was low humidity and increase in temperatures which had dried the skin.

The streets were smelly with animal excrete and urine scattered everywhere and when collected in heaps, which were not far from houses, methane and hydrogen sulphide gases coming from them, smelt all over the village. Children were excreting in the streets and so were the animals. The thorny fences around the houses were also being digested slowly at ground level by contact with ground, which was moist due to high water table in winter and waterlogging caused by rice cultivation. Decaying organic material of fences was also abode of insects, on which thrived snakes, scorpions, rats, lizards, wasps, flies and mosquitoes. One or other thorny fence would catch fire every two or three years burning up houses and movable property. High heat of summer and consequent perspiration to keep body at low temperature, caused loss of salts in body resulting in low blood pressure in me. It also caused headaches, body pains, exhaustion and lethargy.

There was no concept of building houses to counteract heat. In my childhood I saw three houses and two Autaqs having a single room built on the top floor to be used against the summer heat, but I found that rooms below this room on the ground floor were cooler than them. Jhali or Pankha was first invented by a European clerk of Warren Hastings (Governor General of India 1773-1774) office, around 1783 and in next 100 years every government office and every Wadera's Autaq had one, but nothing in the house. Some houses had one cradle which could move and create breeze but only one or two members of family could sleep in it. Another trouble with cradles throughout Sindh was that they were not long for the height of person. In summer from first April to end September, everyone slept outside the house building, in open under the sky. High heat was not without casualties. Sunstroke deaths in July-August were well known although hottest month in whole Sindh was May. Delayed strokes probably were caused by body's gradual loss of stamina as summer advanced. Winter too was not comfortable. People had no woollen clothes, sweaters, coats and shoes, but winter kills were less known. Unfortunately again, mild weather from October to March in Dadu Taluka was plagued with mosquitoes and malaria. High heat of summer caused severe mortality of mosquitoes but not their eggs. This was the village and life, not worth envying and country life was not sweet as in Europe.

VISITORS TO THE VILLAGE

If any outsider came to the village as guest of some body, most of people of the village went to meet him. They sat to listen to the tales he had to tell about his village, it's folk and neighbourhood. It was new information, entertainment and something to tell others. Occasional visit of petty Government officials like Tapedar, Police constable, Inspector Education, Agriculture Assistant, Veterinary officer, Vaccinator etc., collected men and children of the whole village. Mukhtiarkar was considered as highest government officer who visited the village. His visit was preceded by arrival of folding tables, chairs, file boxes and racks and other furniture brought on camel backs. This was the British innovation and it simply separated ruling class from the ruled, who sat on cots, Manjis (low chairs and low stools) and floor. Mukhtiarkar had the powers of Third Class Magistrate and conducted cases, fined and imprisoned culprits. These powers gave him enough prestige to recover land revenue and irrigation water charges from the landholders easily. The Mukhtiarkars who visited our village in my childhood were Hindus, but were without any prejudice to Muslims. When crops failed they gave remissions liberally to the deserving landholders.

Life in the village thus passed without too many incidents in the words of an Urdu poet: "*Subah hoti hai, sham hot hai - zindagi yoon hee tamam hoti hai*" (Comes the morning, the evening and thus ends the life).

I hated this life from the childhood and was determined to get away from it, some day to smell fresh air. When I did not have to read, I got away from the house in the uncultivated fields and a feel of healthy environments gave me freshness.

MY ANCESTORS

The word Panhwar means shepherd, but Panhwars also raised goats and buffaloes. Animal husbandry was their occupation before they became farmers and continued both side-by-side. Reportedly they belonged to a branch of Parmar Rajputs from the Great Indian Desert, which includes Thar of Sindh. The shepherds and goatherds are also called Maru or Maruada. Maru is a district in Rajasthan. Like other Tharis they were Hindus. Panhwars also called Pawars, Panhwars, Parhiars and Panhiyars etc., resided along peripheral districts of Rajasthan and also were found in Utter Pradesh, East Punjab, Madhya Pradesh, Gujarat, Kutch, Kathiawar and Maharashtra of India, Bahawalpur, Bikanir (India) and Thar of Sindh. They may not have been blood relatives, but only of the same occupation.. During Soomras' rule (1011-1351 AD) they were already settled as farmers along the eastern branch of the Indus called Dhoro Puran and had taken to irrigated agriculture. Just before 1333 and soon after 1300 AD, the River Indus changed its course from Puran to the central course from Nasarpur to Shaikh Bhirkyo, Tando Muhammad Khan and Badin. The irrigation system was destroyed and they were dislocated. Under Soomras they may have become Ismailis (a Muslim sect) like rulers. It is a general law that rulers must convert the public to their faith or accept their faith. Being most affected, they joined Sammas' rebellion against Soomras and thus they probably became the former's favourite tribe and were settled on the Western Nara from Kambar to the Manchar Lake, as well as a new branch of Indus starting near Radhan and re-entering river near Talti. This concentrated them near these channels in Dadu, Johi and Sehwan Talukas. They probably became Sunnis (a Muslim sect) during Samma rule. Under the rulers influence Panhwars in the Punjab and Bahawalpur also became Muslims at an unknown date, while in Utter Pradesh they are both Hindus and Muslims. In Madhya Pradesh, Rajasthan, Kutch, Kathiawar, Gujarat and Maharashtra they still are Hindus. This is only to show that they were not outsiders but after fall of Mohenjo Daro they became herdsmen and shepherds and desert dwellers in hyper-aridity of post-Jhukar era (1300 BC) or Jhangar Culture. Some of them became farmers in irrigated Sindh and time and again, changed from farmers to herdsmen and vice-versa.

In the fifth century after Huns destroyed most of northern parts of undivided India, the war-like nomadic tribes collected in the Great Indian Desert, called them Rajputs or sons of Rajas/kings and took to the occupation of Khatri or warriors. It was then that the herdsmen tribe of Panhwars joined the above

ranks, whether they lived in Rajasthan or not or whether they became soldiers or not.

In 1525 AD, Arghoons and Tarkhans conquered Sindh from Sammas and the whole Sindh rebelled. Mughals captured the whole Sindh by 1591 AD. Mughals had come to rule and all government functionaries were managed by them. Definition of the Mughal was; fair coloured, immigrant from the Central Asia or Iran, not knowing local languages and not married to local woman. All local tribes were considered inferior and treated as such. They were to toil and pay taxes, failure to which was punishable by chopping of heads of the whole tribe en masse. The Panhwar tribe did not support the Samma tribes in the rebellion, but paid taxes to Mughals, lived as peaceful people and declared themselves as descent of Halima, the nurse of Prophet Hazrat Muhammad (PBUH) to isolate themselves from Sindhi tribes. They also adopted Arab names like Issa, Musa, Bahauddin, Jalal, and Daud etc. Many other tribes also changed their descent from outsiders to please Mughal masters.

However Mughal governor of Sehwan maltreated them and under leadership of Issa, Daud, Jalal and Musa Panhwars they rose against him and defeated him around 1633 AD. By about 1675 when anti-Mughal rebellions in the remote areas of Empire became eminent, they occupied areas from Kambar to Sehwan and paid nominal taxes to the governor of Multan, Aurangzeb's son who was to succeed him in 1707 AD, as Bahadur Shah. In 1701 AD, in a popular uprising against Mughals, Panhwars were thrown out by Kalhoras, who stood for a cause of improving irrigation system and settling farmers on lands so reclaimed. The Arghoons, Tarkhans and Mughal governors could not understand fully the irrigation requirements of the arid Lower Indus Valley. Canals were neglected and choked up and consequently land was abandoned, but yet Mughal officers were forcibly collecting taxes. In case of failure a bullock cart loads of chopped heads of the rebel males (tax evaders) was presented to the governor daily and their women and children sold as slaves.

Panhwars did not restore irrigation on the scale of Kalhoras, their successors and their scattered attempts are known from Panhwarki minor in Taluka Nasirabad and Kambar. They were thrown out from Kambar by Mian Nasir and Din Muhammad Kalhoras. Mian Nasir again threw them out from Garhi, which was burnt by Mughals a few years later, but their mosque in depleted condition still survives. Yar Muhammad Kalhora threw them out from their strong hold and capital Shikarpur and re-named it as Khudabad, a town which was burnt by Madad Khan Pathan in 1781 as he did to whole Sindh. Samtani, a sub-capital has survived to this day with its old mosque.

Kalhoras promised land to their supporters and construction of new canals and thereby irrigation water and many tribes joined hands. After defeat of Panhwars, Kalhoras like all other conquerors of the era, occupied their towns, usurped most of their lands but small holders were left undisturbed. Kalhoras constructed many canals from the River Indus but none south of Nasrani to Mondar, a distance of some 23 miles as it would benefit only the Panhwars, but nor had Panhwars done so, during the period they were in power.

In 1890s, the British started survey of tribes and races of Sindh. Panhwars who for two-and-half centuries had claimed to be Arab descendents, reported to Sadik Ali Ansari that they are descendents of one Haris, an Arab. Later on they claimed to be descendents of Hazrat Haris, uncle of Prophet Hazrat Muhammad (PBUH). A group of members of Panhwar Association came to me and asked me if they were not Arabs? I told them, "you already have become Quresh and it would not take too long to declare yourself elder brothers of Syeds, but your ancestry goes back to Mohenjo Daro times. Your skulls are similar to those of Jatts of Sindh, Jutts and Sikhs of the Punjab and they are similar to majority of skulls from Mohenjo Daro. You were cultivators in Indus times (2350-1800 BC), but due to severe aridity you resorted to animal husbandry. Around 450 AD, when Huns destroyed the whole of undivided northern India, you organised yourselves into soldiery to fight wars for governing people, booty and compensation. Panhwars of Rajasthan adopted Rajput profession, but elsewhere they were common cultivators, shepherds, goatherds and even buffalo herds but rarely soldiers. With exception to a few Panhwars in Madhya Pradesh and eastern Rajasthan of India they are present in most of Greater Indus Civilisation area. They adopted different religions, dresses and local languages. Genetically they are not different from local Sindhis. There is no pure Panhwar blood and this is why I do not find justification in joining Panhwar Association, which segregates Panhwars from other Sindhis. As a group and under party discipline, they are bound to be exploited, but if the aim is only the social work for the community, I see no objection."

"In the same manner as above Soomras, Sammas and Kalhoras are not Sumerians, Zoroastrians and of Abbasid descent. They are local tribes and when they rose to power they tried to sanctify their rule, as general public would only accept rulers of royal descent.

Panhwars of Dadu were settled there by Sammas, most probably as they helped the latter in overthrow of Soomras. Somewhere in the fifteenth century the River Indus changed its course, now represented by a series of its abandoned channel lakes Maha, Daun, Sanhari, Sutiario, Jakhpari, Pirghunio Dhoru, Kakar Dhoru, Talti and Manchar. The western branch of the Indus, which started north of Kashmore passed near Thul and had Soomras' beautiful town Janani on its bank,

also entered this new branch of Indus. Panhwars were settled on the new branch in Kambar and Warah Talukas. They were thrown out by Kalhoras from Kambar and Warah around 1680-1690 and by Mian Nasir from Garhi in Khairpur Nathan Shah Taluka after 1690. A large number of Mirbahars (boats-men and fishermen) were also settled along the new course of river by the Sammas. They were masters of the river and Panhwars by harnessing its waters had become cultivators. Some Panhwars still raise goats. Panhwars and Mirbahars still are good neighbours. Mirbahars also called Machhis became disciples of Makhdoom Bilawal and Panhwars too have great reverence for this saint. In their hierarchy, Mirbahars catch fish with boats and large nets called Rachh and sell it to Solangis, who are business men marketing fish and do not trap it. Machhis are small-scale fishermen, who use Kurhi to catch fish usually from swamps. Machhis of our village were Baleshahis who ate wild animals and also those which die due to natural causes.

MY GREAT GRANDMOTHER

My great grandfather Haji could not get a bride from Panhwar families as he had no sister to barter. He was educated and had also read some Persian texts. He bought a bride from Solangis of Nau Goth (near Radhan in riverain area). His in-laws were uneducated. The bride price was two buffaloes, which they sold, bought one seer (15/16 kilogram) of silver, a bed and three dresses for the bride. All these were packed and sent along with her. This great grandmother of mine Sonee lived to an old age and died in 1930, when my grandfather was seventy-two and I was five. She must have been 90 then. She gave genes to her descendants having low blood pressure, low cholesterol, low body temperature, low fat and low sugar, slim ness and long life. My grandfather and his daughter auntie Safooran lived to be 84 and 90 years. Auntie Safooran's daughter Sabhai was 91 when she died in 1999 and son Muhammad Saleh died in 2000 at age of 89. Sonee's other two sons lived to be over 80 and one daughter over 90, but all of them died before 1960 in an age when there were no doctors or medicines available in the rural Sindh. One factor in the long life of Sonee's descendents was rural living, physical work, long daily walks connected with day-to-day jobs, plenty of milk, cholesterol free fish and chicken, less fried and roasted products, less sugar in diet and clean environment in the fields (not the village). Although Panhwars of our village considered her as fisherwoman (Machhani) and therefore low in caste hierarchy, but her love for every village child made her exceptional and therefore acceptable. Her family owned boats, which they sailed for river trade and her parents and brother always brought small gifts from far off, which she distributed free to various households and was liked by women folk. With her wrinkled face, I had no liking for her. I even did not know that she was mother of my grandfather until my uncle Muhammad Saleh told me when I was sixty-five. He said that intermarriages outside close family were uncommon and therefore transmission of hereditary diseases was very common.

MY GRANDFATHER

My grandfather Allah Bakhsh was eldest of four brothers and one sister. Born in 1858, he was sent to Mulla Maktab at Taga when 8 years old. He studied Quran, a few of Persian books, Duayo (Persian vocabulary of frequently used words, along with Sindhi equivalents), Duayo, Karima etc. After four years studies he started to help his father to farm. In the Maktab Sindhi standard alphabet introduced under Bartle Frere in 1853 was taught to him and he became fluent in reading Sindhi language. In 1883 he was married from the family of Panhwars who were shepherds by profession. Somewhere in 1878, his father was allotted ten acres of land, which he was already cultivating on Yaksalo grant (renewable year after year) basis. His first child, a daughter was born five years later and another daughter in 1889 (who lived up to 1973). Subsequently he had eight other daughters, before my father was born in 1906. In 1907 he had another daughter and in 1909 my uncle Ibrahim was born. Of all his thirteen children, five had survived when I was born and all the rest except one had died young. The sixth young girl had perished in delivery complications a few years before my birth.

It must have been heavy burden to support his family and he must have toiled hard. The two-and-half acres of land he inherited was one fourth of what his father had owned, the rest went to his two brothers and a cousin. Like his father he kept buffaloes. The crop raised was rice. It needs huge quantities of water, which saturates soil and ground water table reached the surface by about end-July to mid-August. In my grandfather's times water came from inundation canals taking off from the River Indus. In every five years, there was one bumper crop, two average crops and two crops would fail as in these years water in the canals would either come too late in the season to grow crops successfully or would recede too early when crop was not yet mature, depending upon, snow melt in Himalayas and rainfall in the east and west Punjabs, Kashmir and northern hills of present Pakistan. The fields would not absorb any water after mid-August and surplus water was diverted into wastelands, which grew wild grasses. The farmers also drained their field regularly after mid-August and filled them with fresh water to provide renewed supply of oxygen dissolved in water and the Indus silt rich in nutrients.

The wastelands were abundant and they formed huge pastures for animals. Pasturelands were open to all villagers as common property. After rice they grew peas, horse beans and oil-seed crops on preserved moisture. All these were

used as fodder as well as grain crops. Rice straw was used as animal feed and was usually mixed with green grasses. Bulk of wild growth was weeds, which were harvested by women for cattle feed. Animals grazed in open fields during day and were stall fed at night. Oil cake from oil-seeds was mixed with other feed and given only to animals in milk. Women's role was to harvest wild or cultivated grasses and fodders, milk animals, and turn milk into yoghurt, from which butter was extracted by centrifugal force of wooden churns. It was cumbersome process and women had to toil three hours of morning to separate butter. Hand operated centrifuges were unknown even in urban Sindh until 1930s. Even today very few herdsmen know about them. The butter so extracted was sold and fetched good prices. Of the milk produced by five buffaloes, that of one or one-and-half animals was consumed by the family, the rest was converted into butter, which fetched us two to three times, as much money as from rice on two-and-half acres of land.

Grandpa Allah Bakhsh was very hard working. After my father took over as farmer, he cultivated two-and-half acres of his own father's land and about twice this, of my maternal uncle's land, on fifty percent share cropping. This gave him net return from five acres of land. It brought him two hundred maunds of paddy for use of family and sale for cash or loan taken from village shopkeeper. Butter bought most of domestic needs, utensils, purchase of meat or fish, women clothes and ornaments, kitchenware and cash etc. It may be pointed out that no woman of the whole village observed seclusion then and all of them were working in the fields on operations like; transplanting of rice, harvesting of it and cutting grasses and weeds from field, feeding it to cattle, milking animals, making yoghurt and butter, in addition to cooking for the family, stitching clothes and taking care of children.

From the time I was born until his death at age of 84 years in 1942, he concentrated on raising buffaloes and invariably engaged one young boy at a time to help in grazing animals in the wastelands. He knew animal behaviour too well and his theory of feeding buffaloes with rich diet two months before delivery and again two months of post-delivery for highest milk production, is now supported scientifically.

He was a religious person, but not a fanatic Mulla. He used to read Tafsir-ul-Quran in Sindhi by Maulvi Usman, every morning . This Tafsir, had elaborate explanation of stories from Old and New Testaments, while references to them, in the Holy Quran were only casual or scanty. Occasionally he led prayers and read Khutbah in Friday congregation, when Mulla Habibullah was not present, but did it only if nobody else was available for it. He told me "Nothing in the World is 'sin' except telling lie. Its very difficult to practice it, but if you do it,

you will become an angel." He was not orthodox. If I did not go to the mosque he did not object.

My grandfather had become sixty-five in 1923 when my father married. He cultivated his land with help of a pair of bullocks and a hired man, to whom he gave food, one litre of milk daily for his family and annually two pairs of dresses for him from thick rough cotton (Bafto) to wear. Since his share of land could not support his family, he kept many buffaloes for production of butter. My father decided to farm and release my grandfather from cultivation, so that the latter looks after buffaloes.

My grandfather increased buffaloes numbers to ten, out of which five were producing milk and balance five were left with his maternal cousins in Nau Goth and Nasrani in riverain area, where there was plentiful pasture. Two months before animals were ready to deliver, they were brought back and given rich feed. As soon as buffaloes weaned they were crossed with suitable bull and sent away. He retained all female off springs and gave males to his cousins as compensation. The deal worked for some forty to fifty years. This is how his family survived in the hard pre-Sukkur Barrage inundation canal era. He was always in debit for at least twenty years from 1901 to 1923, when my father took over. My grandfather was deeply religious and would not lie or intrigue or take sides in day-to-day disputes of various families in the village. Through respect all villagers called him "Khalifa Allah Bakhsh" in his presence and absence. It is habit of villagers to abuse and curse others and even animals all the time. He is reported never to have cursed or abused anybody all his life. I learnt this from him and have practised it all my life.

MY FATHER

My father was born in 1905 and he and his future brother-in-law (and my maternal uncle) Muhammad Nawaz were of the same age group. They went to same primary school in Allahabad, when about eight years old, as there was no school in our village and nearest school was two kilometres away. With no road, but beaten track for the pedestrians between the two villagers, they had to be old enough to walk to school and back unescorted everyday.

They studied for some years up to 1918 when Khilafat Movement started and poor ignorant villagers were persuaded by Mullas that education in schools started by the British was a sin, migrating from land ruled by the English infidels to countries ruled by Muslim kings was a virtue and for a Muslim education in Mulla Maktab would be highest reward here on earth and in after life. Both above boys were made to leave school, go to study Persian and Arabic in Maktab for another 2-3 years and prepare to migrate to land of peace (Islam). One of cousins of my maternal uncle Maulvi Abdul Latif had actually migrated to Afghanistan and having been robbed of his possession, returned back to stop migration of volunteers from our village. Propaganda was being carried out that the British agents were robbing the immigrants, but Abdul Latif confirmed that they were swindled by ordinary Afghan folks and it was day-to-day affair, and finally they robbed him of his last possessions in a mosque. Soon the two boys realised that it was a great betrayal and unlike their primary school mates, they could not become primary school teachers, Abdars in irrigation department and Tapedars for collection of land revenue, all of which required clearance of the Vernicular Final Examination conducted by the government after 8 years of primary education. My material uncle had become an active Khilafat worker, spending fortune of Rs. 32,000 left by his father in 1919 on politics, but he became enlightened, purchased a press in Larkana, edited a weekly Sindhi paper and earned name.

My father after having studied Persian and some Arabic found that he can not survive as Maulvi, without being a beggar and take benefit from ignorance of poor people, so he left Maktab at age of 16 and for two years taught Quran and Persian to boys of Wasan Khan Jhatial's families in their village eight kilometres away and he found that being a Mulla-teacher would not fetch enough returns to support future family. He was provided food, shelter in the mosque and pocket money.

This village in the neighbourhood of Purano Dero had flourished as the latter was a river port and also a railway station on Phulji-Purano Dero loop. In 1922 the river changed the course near Purano Dero and port was abandoned forever, causing decay of many villages in the vicinity. Railway track was removed in 1926/27. Like Purano Dero, Jhatial village too dwindled.

My father did not think it was economical to teach in the Mulla school and returned back to cultivate land.

HOONDA WILL YOU EAT BEEF

I was less than five years old when I was watching a Hindu shopkeeper of our village weighing butter from house next door to ours. Ghullam Rasool, some nine years older than me, from that house asked me to ask the shopkeeper: "Hoonda will you eat cow's meat"? I repeated the words. Hoonda left his balance and looked at me with anger. I was frightened and ran to thorny enclosure of Ghullam Rasool's house, but thorns would not allow me to move any further. He had pity on me. He picked me up, brought me out from thorny trash and brush and said: "Do not repeat it again". Next he came to our house, I hid behind grain silos, not knowing what was the wrong. After he left, my mother told me: "He is a Hindu and they worship cow as mother. For them slaughtering cow and eating it is like you kill me and eat my flesh." I was horrified. I wanted to apologise. I had learnt to offer apology from my paternal uncle, who for my playing with his things, used to make me touch his feet and then I had to stand with hands folded until he said "I forgive you". So I stopped outside the Hindu merchant's shop and when I found Hoonda coming out, I touched his feet and stood with folded hands before him. He immediately picked me up embraced me, gave me lot of sweet stuff to eat and told me "Now you are a good boy, but Ghullam Rasool is naughty and he made you say those words."

It was a lesson to respect other religions. Since then for me to disrespect any religion means that I slaughter my mother and eat her meat. This childhood psychological fixation made me read and respect all religions and do the comparative study of them. I have not hated any person in my life for the religion he or she professes. I have also found that in a geographical area old religions have never died, but have changed shape. The new religion for its survival accepts majority of beliefs and customs of older religions. This includes all superstitions deeply embedded in the people's minds.

I read many translations of Holy Quran and also its commentaries. At Mehar High School, to know other religions, I started reading them too, I read Sindhi translations of Mahabharatha, Ramayana, Gita, Puranas, Upanishads and Vedas to find out wisdom from them. All have many useful advises to give. I also read Sindhi translation of Bible by Mirza Kaleech Beg.

During the college days I also read Old Testaments i.e., Taurat and Zabur, Zoroastrianism, Buddhism and Tantarism. To understand primitive religions I read "Religion and Magic" and also "Conflict between Religions and Science." I

collected and read most of "Thinkers Library" publications. However my concepts became clear only after I did study of anthropology on my own, while studying in USA at University of Wisconsin for Masters Degree in Agricultural Engineering in 1952/53 with help of colleague student of anthropology Norma Joyce Diamond, who became Professor Emeritus on retirement at University of Michigan. My deep interest in the subject has given me new approach and extreme tolerance.

COBRA BITES MY UNCLE

I was five years old, when my paternal uncle Muhammad Ibrahim was bitten by a cobra in the lower leg. He first killed the cobra and gave himself first aid by tightly tying the belt-rope taken out from his trousers, below the knee and bleeding himself by a cross cut with an axe he was carrying with himself. This had happened a thousand feet from the village and many rushed to his rescue, who sucked out blood from the wound. On reaching home he was made to drink one litre or more of molten butter as folk cure. According to belief after taking molten butter the bitten person will survive if he or she does not die within twenty-four hours. He survived, but lost weight and grew weak due to loose motions.

He narrated that he had killed the male partner of this female cobra a year earlier one mile away from the spot where he was bitten and the female was following him to take revenge. She could recognise him by smell of his body and he always knew that she was following him, so he changed his routes often but the creature knew as much as he knew and she always escaped when he tried to kill her. Now with her gone, he had no enemies among world's snake kingdom to fear. The people in Sindh have been led to believe that cobra is "Fakir or saint" and should not be killed. Of the poisonous snakes of Sindh I know that Khapur and Bimunhi are the worst and are killed whenever come across.

Since this incident with my uncle, I tried to know more about snakes. More than 85% snakes of Sindh are non-poisonous. They live in agricultural fields and eat frogs, mice, rats, beetles and big insects and are useful to farmers, but in return farmers kill them, whenever they come across them. One type of snake in Australia kills bats and presence of one snake per every fruit tree ensures that bats or flying foxes do not destroy mature fruit on the tree. No attempt has been made to introduce it in the South Asia.

Superstitions about snakes go back to Early Aryan times (3000 years ago). Brahmans taught a subject "Snake-charming" to students, who made living on this sort of cheating. Snake charmers in Sindh are called Jogis a word from Yogis or Yoga performed by priests. Jogis live in portable temporary reed shelters away from settlements. They belong to a Hindu sect derived from Tantaric beliefs. Tantarism considers sexual ecstasy as highest form of spiritual stage and Yogis have turned it into art. Before independence of Pakistan and India they

were known in Sindh for such powers. Worship of snakes may have pre-dated their charming by Jogis.

Yogis or Jogis charmed snakes by their flute (Murli). Snakes have no ears and are deaf. Flute plays no part in attracting them. During the World War-II, American soldiers were posted in many Indian towns and had witnessed for themselves snakes and their charmers. The stories were so interesting to USA people and university students that while I was going to USA, I was approached by Wadero Adam Khan Panhwar to carry a cobra and a flute for his son Khair Muhammad, then a student in California. I refused on the grounds that it needed import permit from US government and export permit from Pakistan Government and due to quarantine restrictions in USA, Khair Muhammad would not be able to get it and cannot keep it in his room. Such however, was this craze among Americans then. Soon they became wise.

I witnessed Jogis employed for catching a snake in our village. A villager had seen a snake in his house and being afraid of his family members being bitten by it any time, he called two Jogis who did catch two snakes in six hours but they were different from what he had seen and all villagers believed that they had brought these snakes with themselves. In my childhood I had observed that cobras with Jogis, do not open their mouths in the heat of day, so it is easy to catch them by neck. The snake charmers force them to open their mouth and cut off their poison sack from the upper part of mouth by a sharp knife. I had also learnt that poisonous snakes have two fangs in addition to their teeth and on biting a person or animal, they force fangs inside the skin and inject venom. The fang wound was a big circular one whereas normal teeth made small holes of size of paper pin. Snakes are not fast runners and if they bite a person, they are usually killed on the spot. I have trained my farm labour that if a person is bitten by snake, they should kill the snake, but not to crush its head, so that on examination of teeth one finds whether it is poisonous or not and thus save expenses on quacks, doctors and medicines. The non-poisonous snakes should be considered as farmer's friends and should not be killed.

I was afraid of snakes and their revenge, till I found that they were deaf and they will move their head in self-defence to whichever direction flute or even stick is moved.

In 1973 I came across Nawab Muhammad Khan, a snake charmer, who showed us a number of tricks. Like a counterpart of his in Bombay, he claimed to cure cancer by snakebite. Many cancer patients visited him and he found it profitable to open his clinic. He was sued by a man who brought his wife from England for treatment. He made her be bitten by a highly poisonous snake. The power of the poison made her eyes open whisper a few words to her husband, went

unconscious and collapsed to death. He was arrested and a case of murder filed against him, but as the husband could not stay in Pakistan to attend every hearing, the charmer was released. His clinic operated for 4-5 years, had some 20 patients at a time. He may have killed at least 100 persons during the period. His students working as labourers on my farm captured snakes for him, but he did not teach them anything beyond it. Once he demonstrated many trickeries to my Romanian guests at Nawab Noor Ahmed's farmhouse, two kilometres from my land. He had a man of him bitten by cobra, and soon the fellow went unconscious. By reading some mantra, he brought him to senses again.

I thought that the man had been given a heavy dose of narcotics and when he was brought to senses, his eyes were red due to effect of the drug rather than poison. The venom sack of snake probably had already been severed.

MY BUJKI

For carrying books, slate, notebooks, pencils, non-splitable inkpot, pens etc., to school, a bag is needed. My mother made a bag from patch cloth (Ralli), gave it inner cover and padding and had its mouth open. It was hung from a black woven cotton string. She put it around me like shoulder bag. It also accommodated small thin wooden plank called Patti, which is prepared by applying bentonite paste on its flat surface and drying it. Initially we wrote on Patti, specially alphabet and numbers, then on slate. The disadvantage of both slate and Patti is that whatever is learnt is destroyed and cannot be revised. But against it is a question of economics, so the rural boys had to depend on the memory. One effect of this has persisted in me and as a habit most of the time, I do not take notes, but read or listen and try to understand and remember. I also cannot read the same book twice and when per chance I do, I find that I already remember most of it and just give it up.

The third habit that I developed out of this is that I read a line or part of paragraph or whole paragraph, I re-read it a second time to have complete grasp over it before proceeding further. It is only rare that I read the same book again including the text books in school, college or university.

The fourth habit is that whatever I learn cannot be reproduced in exact words as in books, but I write in my own language however inferior. In my opinion use of 'Patti' and 'Slate' has to be abolished in primary schools in rural areas.

The fifth habit it gave me is that I cannot carry papers to be referred to in a suitcase or handbag, which usually I do not open. They have to be in a simple container like Bujki, or envelope or box with open lid to draw immediate attention.

DEVELOPING OF READING HABIT

Bookworm was my nickname in the village. A voracious reader was another name assigned to me by Dr. A. M. Shaikh, Director Agriculture in Sindh (1950-1955), Director Agriculture West Pakistan (1955-1960) and my boss from 1953-1960. However none of them were aware that I was slow reader, tried to understand rather than remember the words and sentences and once I completed the book, I understood it so thoroughly that it bored me to read it again. I therefore could not read even my textbooks second time, but instead read a number of textbooks on the same subject which were available to me then. My father's textbooks from Kindergarten to fourth class were lying intact. The Primary School library had a box half-full with textbooks dating back to 1910. However the habit of reading came from elsewhere, which I can only vividly recollect. My father went to Karachi and among the other things he brought old newspapers in Hindi and English to be used for wrapping some medicines in form of spherical tablets (Hab) from a herbal plant called Sut-satgulo. My grandfather used to make tablets from it, for free distribution against malaria, but sudden introduction of quinine tablets at a cheap rate made Sut-satgulo out of date and newspapers fell in hands of my mother. This is where my education first started. She showed me various illustrations and pictures of advertisements in them and by guess she told me what they were. I am sure she must have been wrong in many of her interpretations, but I got so familiar with the pictures that when I went to Karachi some 14-15 years later, the European architecture and many things like trams, Victoria horse carriages and their lamps seemed familiar. I liked these pictures so much that for many months or even years she repeatedly showed me these, until they wore and tore out.

My grandfather after milking animals in the mornings used to read Tafsir (commentary) of the Holy Quran by Maulvi Muhammad Usman in the morning, and if I was awake, he will read some stories, originating from old and new Testaments, which would interest every child.

When I started going to school, my maternal uncle Noor Muhammad had already gone to Khairpur Nathan Shah Anglo-Vernicular School for studies. He came back on weekends. Usually most of schoolboys greeted him on the outskirts of the village near the primary school and followed him to his Autaq, before he went home. My mother took me to his house and requested him to teach me English language. From the next week onwards, I also waited at the school on the boundary of the village and became one of the whole group to

receive and follow him. Noor Muhammad had his own hobbies. He was fond of mechanical toys, which he kept collecting up to an age of 17. He used to purchase children's storybooks and some Sindhi magazines. As I grew up and was able to read, he would loan me a book, but to read and return by evening. He had large collection of back numbers of children's magazine, "Gull Pull". When his English school closed, so did mine, borrowing and reading one book a day became my habit. It was developed after reading Gull Phul. It would open any child's mind specially with its scientific descriptions, arithmetical examples, the solutions to which came in next month's issue, but because they were back numbers, he gave me the issue containing solutions next day. From these I developed deep interest in mathematics and sciences. My mother gave him some money to bring two small mechanical toys for me. These he did but in a few days they broke down. I tried to repair them with help of a kitchen knife we owned and used for slaughtering chickens, cutting meat and fish to pieces and also cutting down fruits and vegetables. The toys finally became unserviceable, but it was a great education for me. All these toys, big or small had the same automotive power machine, consisting of a spring which when wound and released rotated a crank having two wheels. The different bodies were simply showpieces to sell more of the same basic thing. I lost all my interest in them once for all and preferred reading material instead. At home, besides Tafsir-ul-Quran, we had a number of books mostly religious of my grandfather, which were readily available besides textbooks of my father up to Class IV. My father's Persian books were there, but I could not read them.

The school also had books, but they could not be carried home. The school had long working hours. All my primary school teachers belonged to Piaro Goth village, about four kilometres away and had to walk that distance to and for daily. In summer it became too warm after 8 a.m. and this heat continued up to 5 p.m. the teachers sat in the school for these hours except one hour for lunch break. They brought meals with them, but occasionally were served lunch by one or other family in village. Credit must go to them that they made students read and write something other than the syllabus for some hours daily. It is during this time that I borrowed some books from the school library to read. If there were no books to read I drew maps of Taluka Dadu, Districts Larkana and Dadu and Sindh or India showing separately in each map features like; railways, towns, canals, divisions, sub-divisions, roads and routes, places of importance like religious shrines of fame and places having schools etc. In the first 2 years of school (Kindergarten and Class-I) there were no copies. Slate, having a wooden frame and made from rectangular black coloured soft stone having A-4 or half A-4 size was used by every student. Lined copies were introduced in class-II of primary school, but were limited to schoolwork only. Unlined imperial size paper (standard size used in government offices and courts 34 x 21 cms) was available in double sheets with the village Hindu shopkeeper. I bought that on

the family loan account, made my own notebooks by stitching it to 1/4th imperial size and wrote my own notes, maps, drawings etc. Since it was not lined I developed a habit of writing in straight lines without any aid or lining it with pencil. This habit has remained all my life. If I get a lined paper I do not follow the lines and their spacing and usually do a shabby job. On these notebooks, I copied some notes from the magazine "Gull Pull", specially mathematical examples and puzzles.

In the house were other interesting religious books like; Qayamat Namah (Day of Resurrection), Nikah Namah (solemnising marriage, which had a chapter Talaq Namah and dissolution of marriage), Khawab Namah (interpretation of dreams), Ta'awiz Namah, (miracle performance), Dua Namah (prayers) etc. To these I may add my paternal uncle's Jadu Namah a lithographed booklet, which he had hidden in some corner and was reading and remembering it by heart. It was Muslim equivalent to Hindu Mantra. The language of actual "Mantra" or Jadu was neither Sindhi nor Persian and Arabic, with some strange words of other languages I was not familiar with. It was mysterious language of Jogis, Yogis or some Thugs. In general it was no language but cooked meaningless words, to fool the reader as well as listener. An interesting mantra or Jadu (magic), was: "winning over a girl you like." It suggested a mantra and stated: "Find a secluded spot near the village well, where no one suspects you are hiding, read this 100 times just when sun is just rising and again when it is setting daily for 13 days starting with Saturday afternoon and blowing a puff after every recital on thread, in each of twenty seven sittings. On the fourteenth day which will be Friday evening, go to the well at sunset and read it again a 100 times. The girl will come to fetch water from the well exactly at this hour. When she arrives read it again quickly till she keeps two jars of her head. Then by a pull break the thread with force. As soon as you do it her trousers tape will break in two pieces. Then you rush to help her, unload the jars and she is yours." I am not sure whether he was practising it on some body. The book on "Ta'awiz" had squares, rectangles, triangles and other geometrical patterns divided and sub-divided with some letters of Arabic script written in each square or triangle. Each such Ta'awiz had different purpose to serve like antidote against malarial fever, stomach pain, headaches, wound pain, poverty, enemy attack, tracing theft and finally winning over a reluctant woman or a man. Some village women suffering from something or else came to my grandfather and he would write Ta'awiz on their hands, arms, write on chit to immerse this piece of paper in a glass of water, until ink is washed and dissolved in water and then drink it or stitch the slip in a piece of cloth and wear in from neck or on arm etc. He did that only against diseases and poverty and only to women and children and also read Quran and puffing out towards them, but all for free. I got sick and asked him to write on my hand. He refused saying that these Ta'awizs and Duas are for poor people and free and use of them on family members will not work, as they are not a

substitute for saving money on cost of medicines. He gave me some Hab (home made pills) instead. Once at insistence of my mother he read some Quranic verses on a thread and tied it around my head. The headache did not go. It would relapse periodically before I was 10 years old. I now know that this was caused by low blood pressure, aggregated by hot summer days and perspiration. It was overcome, when I took some salt, lot of water and avoided to go out during the hot days. Years later, as student living in Mehar, I found that the Hindu Brahmans were writing similar mantras on hands of women, bestowing them in the same manner. I found that urban Hindus were as superstitious as Muslim villagers and even more. I now understood that why my grandfather did not charge for his Ta'awiz and Hab, as he was sure that they may not work.

In my childhood I had more material to read than time available during sun light hours and I carried a book with myself, whenever I went out and even for call of nature in the shrubs outside our village. In the village there were neither latrines in the house, nor sweepers to clean excrete. All boys and men went outside the village in the bushes. Women usually used animal shed, barn or straw yard of each family and usually covered up excrete with dust. The whole village knew that I carry books during these visits, but I had to save time. At night I used hurricane lantern to read and when once a week my father took it during water rotations (Warabandi) from channel for irrigation, I used a wick lamp using Jambho and sesame oil, raised on our farm.

All this reading satisfied my curiosity and I started thinking, I was much ahead of all students in the school and they nick named as Khiyali or philosopher. Many Hindu boys of very rich families got impressed with my knowledge and excellent position in the class and sought my friendship. It was chance to learn Hindu religion, manners, customs, ceremonies and finding many good points and in the process I lost all prejudices against Hindus or other religious groups. It was out come of this friendship that I read many Hindu religious texts; Mahabharatha, Ramayana, Vedas, Shastras, Upanishads, lives of some Hindu saints, Bhagti movement and finally similarities between Sufism and Bhagti, but all this happened between age of 10-17 and I need not go into details.

All children want to play and I found the best hours when school was closed well after sunrise and before sunset. During these hours I left house to wander, either alone or with other boys, usually one or two year's young than me so that they do not fight with me. Bathing and playing with water and swimming in watercourse was untiring until scorching sun would start bothering, but when there was no water, I would roam in the fields, see crops growing, flowering, fruit or grain formation and harvest. Railway line about one kilometre away was another attraction. There were flint and chert stones used as ballast under and between railway sleepers. The sport was to produce spark from hitting flints

against each other and setting wool from Akk plant on fire or keeping a wire or coin on the railway track to be flattened when train wheels pressed it. Occasionally in winter, primary school teachers also organised some sports between the boys. Luckily I was never a winner, but those who won, were later on beaten up by elder boys, when teacher was gone. The rivalries and jealousies among young boys, led some of them to resort to violence and this was reflected in their later life.

Knowing that physically I was not strong, I never wanted to be winner in sports, but I never wanted to lose in studies and had always secured number one, even if I had to spend sleepless nights and eat less.

I WILL GROW ONLY FRUIT TREES

There were no trees within the village itself. As village enlarged, an old watercourse became part of expanded village and trees for shade were raised on it. Near our house we had a vacant plot, but its soil was saline and my father made a number of pits, filled them with silt from embankments of watercourse and planted trees, which he watered with buckets brought from the watercourse only thirty meters away. He could not bring a channel as it had to pass through compound of neighbouring house or through the road which was narrow. He did not know that with insufficient doses of water salts will exchange with adjoining area and his pits will also turn saline. His hard work ended into failure, but I knew that he had planted mango, Ber and some shade tree.

During the same days when I was about five years old my grandfather took me to our land, where they were transplanting rice. I saw it and wanted to transplant rice as play. My grandfather gave me a few seedlings to transplant in an area of 5 x 5 feet in one corner and explained to me how to do it. I created mess of it and after finishing stood on the embankment and found myself unfit for it. Two weeks later my grandfather took me there, to show me the job I had done. What I saw that seedlings were planted equidistant from each other, all had established them and were green. I saw that this miracle was not mine, but of experienced grown-up human hand and I was being fooled. I did not utter a word, but determined that I will not raise field crops as I was unfit for them.

Some of my father's seeds of mango and Ber had germinated but ultimately perished due to salinity and this was what I had heard of in the same days. I liked Ber and mango, so I said to myself, I will grow tree crops and after initial planting in the field, I will have nothing to do except watering. I knew that my father sells his produce to Harchomal, who also sells Ber and mango, so I will give fruits to him, for sale, sit under shade of trees and play.

This childhood fixation finally led me to purchase 100 acres of land in 1964 and I have introduced with varying amounts of success following fruit crops from abroad: apples, peaches, plums, pomegranates, lychee, longan, seedless lychee, seedless grape fruit, red pulp guava, Chinese Ber, jujube, jatropha, buffalo gourd, early and very late varieties of mango, avocado, cashew and macadamia. Except for mango, Ber and guava rest were never grown in Sindh before and I was the first in Sindh to have done so. I also found that the last three fruits could grow in the delta and not the rest of the Sindh.

Success of growing temperate zone crops in low latitude sub-tropics has led to getting two awards Sitara-e-Imtiaz from President of Pakistan in 1992 and another one from 'The Revivers' an NGO in 2000 and third one 'In the name of Allah' from an unknown person, who has kept his name a secret.

KHIRDHAHI AND AIWAZ SHAH GRAVE YARD

From the Vedic times Brahmans have played the role of locating sites of different villages/towns, laying out of foundations of individual houses, locating sites for temples, bazaars and cremation yards. Like-wise they were considered water diviners and none of the utility was sited without their assistance. They read different mantras for the different jobs performed.

Our village Ibrahim Panhwar was located in 1857 without interference of any holy man or Syed, but while looking for grave yard, great care had to be taken as according to belief, men, women and children were to sleep there until doomsday, so a holy man was called who, after reading some kind of Talisman or probably some Dua declared that an old Syed named Aiwaz Shah was buried there under shed of a grove of Kirir, Khabar and Laee trees near Khirdhahi mound. The villagers were now assured that with the blessings of God, their bodies will be unmolested till the day of resurrection. With all the respect for the dead people we do not open their graves. Much can be learnt if we allow at least some of the graves to be opened up for understanding science. In my childhood I heard that saint so and so was so holy that five years after his death the grave was opened and his face was so fresh as if buried just now etc. Similar stories are told about Christian and Jewish holy men.

Actually once a person is buried and air supply is cut off, anaerobic bacteria, which is present almost everywhere and also inside human body, starts eating up the corpse and in less than one year the job is complete. In the process bacteria is killed for want of more food and their dead bodies are cannibalised by living ones, till all of them are dead. What is left after a year is bones, but even bone marrow and any other matter inside the bones is also digested totally. Bones can remain there for a long time, but if moisture is available from rainwater or the area is waterlogged, bones too are converted into various compounds and form part of the soil.

Coming back to the excavation of graves, the tombs of Taimur Lang and Ululbeg were opened by the Russian archaeologist Garasimo to verify if Taimur Lang was actually lame and Ululbeg had been assassinated. It was found that former was lame and the latter's head was chopped off with a sword. In case controversy surrounding Makhdoom Bilawal's death, I have suggested that by opening the grave we can verify, if he was crushed to death in oil expeller or not. Any sensible people and government should encourage such scientific research.

To me Khirdhahi mound next of Aiwaz Shah is more important than the latter as the former is an ancient settlement. As Khirdhahi was a small mound, Aiwaz Shah was invented near it, with a guess that the mound must be an old graveyard. The story for Khirdhahi goes to say that at this site lived Khirdhahi the sister of tyrant king Dalu Rai, who lived at Lohamjo Daro three miles north of it. She was procuress of beautiful virgins for her nymphomaniac brother and the two sites were destroyed simultaneously due to wrath of God. Almost every mound in Sindh and the southern Punjab is connected with such stories of Dalu Rai.

In 1931/32 while excavating Khariro minor, the Irrigation Department's drag line cut through the mound and debris spread on the embankments contained lot of pottery pieces. The villagers did not know their value. My grandfather collected a number of pieces. They were very small cups and jars and I was happy to get them and use them as inkpots. Archaeologically Lohamjo Daro is contemporary of Mohenjo Daro and about 4500 years old, while nobody has collected artefacts from Khirdhahi to know the exact period. However, my father purchased some 13 acres of adjoining land from the government in 1960. While ploughing my stepbrother recovered a burnt clay piece about fifteen inches diameter two inches thick totally intact and I recognised it as device for removing husk from paddy grains. If Khirdhahi and this land has the same age then it could be dated around 1300-1550 AD, when the River Indus or its branch flowed near the site.

It also seems that inventors of Aiwaz Shah had seen pottery debris and were sure that there was an ancient settlement there and therefore coined the story of existence of holy man named Aiwaz Shah.

I was about five years old, when I accompanied my mother and many women who were going to Aiwaz Shah at a distance of about half a kilometre from our village, while singing and merrymaking on way. On reaching there, they prayed and a barber shaved the head of newly born baby boy, only a few month old. They all were jubilant while the child was crying badly and his mother was happily consoling him, while she herself was like bride of the occasion and centre of attraction. Immediately after ceremony they distributed some sweets and put red cloth over the grave under ceremony uttering a few words in Arabic without knowing their meaning. The women contributed some money to her and the barber left touching the head and face of the boy with both hands and getting payment. I asked my mother what it was? She said: "Aiwaz Shah is Waliullah (friend of God). This ceremony is under his feet (to the south of his grave) and under Kirir, Khabar and Laee trees (all salt bushes of arid alkaline soils), under

which he prayed day and night. It will lead to his blessings and the child will also live long." She said: "We did the same thing to you and you cried much more than this boy." I thought it was an early childhood torture to all males, to prepare them for tough days, he would be likely to face. I asked her if they do the same thing to girls. She said: "No the girls hair are not shaved and they have to enter their graves with their hair."

My maternal uncle Muhammad Saleh (b. 1912), told me that his own father Ahmed and all males born in the village since that time had their heads shaved off for the first time at Aiwaz Shah and since rural women of Sindh are more superstitious than men, they invariably have been taking their off springs to one or other such holy grave for the first shave in life.

In 1967/68 Dr. Ghullam Ali Allana of Karachi (called G. Allana) delivered a lecture at NIPA, where I was one of the participants. I asked him some awkward questions one of which was: "Considering three decades of Sindh's history, 1937-47, 1947-58 and 1958 to this day, do you think that corruption was minimum in first decade, it increased in the second and has reached its worst in the present decade. The type of government in the first decade was democracy, watched by the British government of Sindh, in the second decade democracy was tempered with by the executive and their employees from the incept and in the third decade it is dictatorship. Do you agree that corruption is directly proportionate to the lack of democracy?" He did not want to say "Yes", as NIPA management would never call him again and therefore suggested that, it would be a long discussion and I should meet him some time in his house. I did so. A few years earlier, with help of Ms. Fatima Jinnah, he was preparing biography of Mr. Muhammad Ali Jinnah and I wanted to know some interesting episodes of latter's life. He narrated that Muhammad Ali's mother had prayed to the family's deceased Pir (holy men) in Kutch, that when her first son was born, she would have his head shaved off at his shrine. So the poor boy was first taken by boat from Karachi to a Kutch port, wherefrom he was taken by bullock cart many miles away to the holy grave and the whole journey took a few days to reach there and the same time to return. I thought of a few things; firstly he must have will to live from the birth to stand the journey, secondly had he not survived we would not have heard of Pakistan and finally I was pleased that my village folks were very smart and lucky to have invented a Pir and his grave, which was less than half a kilometre, otherwise our village could never have attained the population figure of today. Jinnah was lucky to survive and to become leader of one hundred million Muslims, but in my case, "Long live Aiwaz Shah, who did not exist." At least this legendary figure is better than a God's good man, who went to Pathan country and was murdered and buried so that they could go to his grave to seek his blessings.

GETTING SICK, QUACKS, HAKIMS, VACCINATORS AND DOCTORS

Unhygienic environments in the village took their toll regularly. Minor ailments had permanent abode in every household. Along with humans, there was equal sickness among domestic animals. The nearest hospitals for both humans and cattle were in Dadu; eighteen kilometres away. No one cared for minor ailments, but as soon as they made a person bed ridden, the village Mullas were consulted. They provided Ta'awizs, and drinking water on which some Dua had been read and puffed, to act as mantra. It was not bound to succeed but in some cases of ailments like influenza and soar throat, diseases would disappear after some days anyway and so faith in Ta'awizs did persist. In case it did not work, they turned to folk medicines. The popular begging:

Some Ta'awizs or folk medicines worked some due to body's developing resistance, rather than the prescriptions. Next step was to fall in the trap of quacks. Our village had one named Muhammad Siddique. He had a few books in Sindhi and Persian or may be in Urdu. A Sindhi volume on malaria medication was sent by him to my grandfather to read and find out medicine for him, while he probably was suffering from cancer of the liver and his cough won't stop. My father and grandfather spent some hours everyday for some days to find best materials as cure, but nothing worked and the man died. With his books, he was the wisest man in many surrounding villages, but was not an acknowledged Hakim. People went to Hakims when in dire emergency. Majority of Hakims were unqualified and quacks. People never went to government hospitals, as these were considered a certain road to death. There was a proverb that there was no difference in going to hospital or to grave. The fact was that only the very sick people nearing death in a desperate bid were taken to the hospitals and this made hospital death rate very high.

In my childhood I had experienced miracles of quinine against malaria and had developed strong bias in favour of allopathy and avoided all kinds of other cures and somehow I made it possible for me to use allopathy whenever needed.

I was vaccinated against smallpox at less than one year age. Seven years later a vaccinator came from Sita Railway Station village, to vaccinate all schoolboys, as smallpox epidemic had broken up. I willingly agreed to be vaccinated. Many boys resented and a virtual force or coherence had to be used. Mine did not

produce any inflammation, but many boys developed temperature and inflammation for a week or fifteen days.

Cholera epidemic had broken in 1931 and a doctor from Dadu injected everyone in the village, using 10 milli-litre syringe to inject ten persons one milli-litre each in line, without changing the needle. My father took me late in the evening, when doctor had already finished his mass injection. He had to fill fresh syringe with sterilised needle. Next day half of village had men and women in bed due to fever. This was the first time that some women of the village were also injected and that too by a male doctor. They were assembled in my maternal uncle Muhammad Saleh's house and injections started with his mother, wife and sisters. Thanks to Muhammad Saleh, who at age of 19 had the foresight that women needed the same treatment as men and must be treated at par with men. I did not develop fever. At least ninety percent schoolboys had swollen upper arms and temperature for one or two days. I was convinced that these measures were effective and fever was caused by using un-sterilised needles.

In 1933 after the death of my mother, my father was down with typhoid. A Hakim was brought from a distance of four miles. He gave some medicines, prescribed stopping of food etc., except small quantity of milk and sugar. He visited once a week for three weeks when my father came out of it, Hakim charged rupees fifty, thirty for medicines and twenty for visits. During his visits my paternal uncle brought him on a borrowed horse. After my father, I got typhoid attack, same procedure was followed and I had to spend twenty-one days in bed. Next target was my maternal uncle Noor Muhammad for whom they had brought a doctor from Dadu, at a fee of rupees fifty including a hired car, but it made him confined to bed for twenty one days and he also became very weak. Ten years later he still complained that weakness produced by typhoid fever was permanent and that he was physically too weak, even after all these years. Actually he was weakened by enlarged spleen caused by chronic malarial parasites but cure was not known until 1948, when cheap plaudrine tablets, one a day for many months cured him as well as my father.

In July 1935, I was bitten by Haji Allah Warayo's dog. The folk medicine was putting powdered red chillies over the wound and tying it. It made my leg septic and two weeks later at Mehar, Dr. Abdur Rasool Abro treated me, telling me that the use of red chilly could have led to amputation of my leg, if delayed any longer. I was frightened and would rush to doctors, even with small ailment. Some fourteen years later, the same doctor declared Pir Illahi Bakhsh's son, a father of two, as a minor, so that Abdul Latif Panhwar, brother-in-law of M. A. Khuhro returned uncontested in Provincial Assembly elections. I do not blame him. Government in newly formed Pakistan had become stronger than the citizens. Only five years earlier a doctor in USA had certified that the President

Roosevelt running for fourth term, was healthy enough to live up to 1949 to complete his term. Roosevelt was to live only two months and half after swearing ceremony held in January 1945. This is power game world over.

My maternal uncle Muhammad Saleh had been in touch with all Hakims who visited our village. His close friend was Hakim Pir Moinuddin, the brother of Habibullah our villagers Pir. He was also acquainted with Hakim Fateh Muhammad Sehwan, under whose influence he had volunteered to agitate at Lowari in 1938, and was sent to jail along with four others of our village. He visited Hakim Muiz of Larkana frequently as a friend. Under influence of these Hakims, he decided to study Hikmat at Jamia Tibia College Delhi, a two years course. He went there in July 1940, returning in March 1942. He already knew Urdu very well, as he was regular visitor to Karachi, Hyderabad and Larkana since 1930 and regularly went to see movies there. To understand them he had to learn Urdu exactly as I was to do twelve years later. It was easy for him as he had learnt Persian during vacations, while he was student at Madressah High School Larkana. He used to borrow books from Hakims or buy them on Unani (Greek) system of medicines and with this he helped the villagers, but knowing that he was no better than a quack, he went to Delhi to up to date his knowledge. On his return from Delhi in February 1942, he expressed that Hakims in Delhi were invariably using allopathic medicines frequently along with Unani. At that time I had appeared in Matric Examination in March and colleges were not going to open until June, so in three months I read many of his text books to add to my knowledge of Urdu as well as physiology, anatomy, diagnose of diseases etc. Further study of medical science and history showed me that Indian medical system (Ayur-Vedic) and Unani, had been emerged during Abbasid Khalifa's regime at Baghdad to form what Europeans call "Arabic System of Medicine" and it formed a link in long chain of evolution of medicine. Greeks had borrowed from ancient Egyptian and Mesopotamian medicines. From 1000 BC to 300 BC, Greek mariners had monopoly of trade in the Mediterranean Sea, which for some time they shared with Phoenicians (Algerians and Libyans), but from 200 BC to 200 AD, they had strong trade contacts with South Asia and at least from 200 BC to 60 AD, only through Sindh's port of Barbarican. Thus, Greeks borrowed from Ayur-Vedic or Indian medicine and possibly vice-versa during the period. Arabs had contacts with China and Japan and they added some medicines from those sources too. What Muhammad Saleh learnt was the "Arabic System" with some borrowings from allopathy. From 1942 to 1948 not only our village but many other neighbouring ones, did not fall prey to quacks, but he was not perfect and if he had any difficulty, he took the patient to Dadu, Larkana or Karachi hospitals and doctors. This was always an additional experience to improve his knowledge. Like his Delhi teachers, he used allopathic medicines, if they cured earlier without side effects. He never cheated any one. In 1948 he moved to Dadu and settled there. A cancer patient Zamindar in the final stage of his life

summoned him. He was expected to die within 8-10 days. He offered a huge fee. Hakim Saleh told me that he promised to pay Rs.50,000 (about 1250 Tolas or 500 ounces of gold or half of his landed property), if he could be cured. Knowing that he was dying and if he refused, in desperation he will give away all this wealth to quacks, so agreed to take up the case but would charge fees only after the patient was cured. His prescription was: "Bring a young but adult mad lion alive, without injuries of any kind and without killing him he will remove a part of its liver and make medicine form it to cure the disease." Zamindar not knowing any thing of lions, sent his men to go to Johi hills and bring a lion alive. He died before they reached the hills. He told the joke to all his friends in Dadu. They thought he was stupid and could easily have knocked out Rs.5,000 - 10,000 as advance.

I have not been confined to bed even for single day after 1935 as I manage to reach doctors, the best available in the town, even at slight sign of illness. I had three operations. Of course they confined me but never if physicians can cure a disease.

I had found that half of children born die within first few years of their age. Most Sindhi labourers die between 30-40. Owner cultivators live up to about 45 and Zamindars up to 55 years. Government employees die within 5 years of their retirement, but intellectuals can live over 80. My maternal uncle lived up to nearly 89.

MUHAMMAD SALEH PANHWAR'S CONTRIBUTION TO UPLIFT OF VILLAGE PEOPLE

Muhammad Saleh was born in the late winter or January - February of 1912, at village Ibrahim Panhwar also called Ibrahim Kachhi. His mother was the second wife of Ahmed. From the first wife Ahmed had four daughters and a son, two daughters were married in his lifetime. Muhammad Nawaz the last son, was born in 1902. My mother was born in 1904 and another daughter in 1905. He re-married on death of his wife in 1906 with Safooran, my maternal auntie. My father was born in 1905 and in 1906 was engaged to my mother. His last daughter was engaged to a cousin. Three years after his second marriage in 1909, was born a daughter Sabhai and after another three years, Muhammad Saleh. Four years later another son Noor Muhammad was born in 1916.

Ahmed died in 1919 leaving behind five daughters and three sons. He also left fifty percent share in a retail shop of village and rupees thirty two thousands cash at the time when a Tola of gold (0.4 ounce) was worth rupees fifteen. At seventeen Muhammad Nawaz became head of family. Having left his school to become Khilafat worker, he dabbled in politics. He was not typical of Sindhi Waderas in making show of his wealth, but according to the times, he built an Autaq, furnished like government guesthouses with lacquered furniture, beds and cradle, folding and easy chairs, large table, T-poys, stools office chairs, dressing tables, mirrors, large pendulum clock and carpets, etc. He kept riding camels, horses, etc. He was good paymaster and with "Rasai and Lapo", two methods to please officers, he was popular. He met many Khilafat workers including Abul Kalam Azad, Muhammad Ali, Shaukat Ali, Abdullah Haroon, etc. Pir Illahi Bakhsh became his personal friend. Pir had bought Al-Haq Press from Shaikh Abdul Haq of Sukkur. Pir sold it to Muhammad Nawaz to raise funds to go to Aligarh University to clear his L.L.B. Muhammad Nawaz became editor of Al-Haq, a weekly paper issued from Larkana. I saw some issues of it, but standards were high according to times as he had travelled a lot and had good contacts.

Muhammad Saleh could not be sent to school until eight years old as Piaro Goth school was five kilometres away and other school two kilometres away at Allahabad was closed down some years earlier due to lack of the number of students required. Three years later Noor Muhammad also joined him. In 1927 at age of 15 he was sent to Madressah High School Larkana and put in the boarding house. He was good student, but by that time, the elder brother had

spent all wealth left by their father and Muhammad Saleh was starved of funds. In 1929 Muhammad Nawaz died due to cholera epidemic, which had visited village killing some forty out of four hundred souls. Muhammad Saleh became head of family at seventeen. The Hindu shopkeeper showed him account signed by Muhammad Nawaz that rupee thirty two thousands plus share in the shop was already sold out, but the Wanniya (Bania) told him that he loans rupees sixty thousands to the villagers each year, to be recovered at harvest and if he can contribute fifty percent, he will own half of the shop as per original agreement. Alternatively Muhammad Saleh will pay interest on thirty thousands, which Hindu shopkeeper will contribute. Thinking of pros of cons and knowing that due to post World War-I depression, many of villagers will be defaulters and he may not be able to clear interest, he gave up his share against payment rupees three thousand. Muhammad Nawaz had purchased some land from the joint funds, but had registered in his own name. It was to become bone of contention between families as Muhammad Nawaz' father in law later on claimed that the brothers had nothing to do with this property.

In 1923 my father became eighteen and though he and Muhammad Nawaz were class-fellows in primary school Allahabad and Mulla Maktab Darweshani, but on advice of his cousins, he refused to get my mother married to my father. His father-in-law Hafiz Muhammad Musa advised him to throw out his stepmother with her children and usurp the property. However, some others advised him that if he throws out his step mother with two sons and one daughter, his share will be about 16% another 32% to his four sisters and 52% share will be taken by step brothers, sister and mother and even his four sisters may ask for their share and he will lose all his property. So he quietly agreed and married my father and mother off. In his lifetime he did not settle the matter with his sister too. The matter has lingered on for more than 80 years up to today.

After Muhammad Nawaz' death three was dispute raised by Hafiz Musa, his father in law. At that time they approached sisters to part off their share in his behalf, but as one of them had died a few years earlier and one of them did and two did not. Thus, Muhammad Nawaz had 17.5% share and his two brothers and their mother and real sister had hold of 56.25 shares. My mother gave up her share in favour of her stepbrothers and so did Aisha, whose daughter-in-law was sister of Muhammad Saleh's wife and felt that his stepbrother will be helpful to establish her son Qadir Bakhsh and this Muhammad Saleh did. Thus, they got 73.75% share in property including 12.5% of their mother. Seeing this situation that now his daughter and her two sons will get only 26.25% share, Muhammad Musa withdrew from open dispute and things apparently turned smooth. Muhammad Musa died in 1940, ending dispute for a while.

Muhammad Saleh opened hospital in the village in 1942. He closed it down at the end of the same year as a breach occurred in the embankment of the River Indus near Sukkur on first August and on first September it submerged our village.

In October 1942 he established a clinic at Khairpur Nathan Shah, but soon Sindh branch of Indian National Congress found that the whole Talukas of Dadu, Sehwan, Johi and half Taluka of Kakar (now Khairpur Nathan Shah) were submerged and people stranded on high spots had to be helped. This was first major social work of Congress in Sindh, helping mostly Muslims, and though Muslim League did no work at all, but tides had turned against Hindus, who had accumulated all wealth at cost of Muslims from business with them.

Muhammad Saleh became their chief medical officer and moved by both day and night for next six months to provide help. This made him very popular among people as there were no charges for treatment. He re-opened his clinic in the village in March 1944, as until that time village was flooded.

He had very lucrative practice in the village until 1948, when flood again breached the village and he shifted to Dadu permanently, opened a clinic there, which he continued with for the next ten years.

He was progressive in his ideas and his contributions were:

- Admission of girls in co-educational primary school as early as 1931.
- Making the whole village abandon faith in the village's hereditary Pirs of Khiyari and doing the same in many nearby villages from 1931 onwards.
- Discouraging villagers to dabble in superstitions of all kinds since 1931.
- Making whole village to give up faith in Ta'awiz and mantras, since 1931.
- Stopping people to visit graves of holy men for blessings since 1931.
- Encouraging education in the village and encouraging people to go for education in high schools.
- Opening a branch of "Separation of Sindh from Bombay Presidency" in the village in 1931.
- Promoting pro-Khilafat, pro-Congress feelings in the village and surroundings and right of self-rule.
- Propagating anti-Pir, Syed and Makhdoom ideas as expressed in monthly magazine "Tawhid" of Maulvi Din Muhammad Wafai, but not stacking to orthodoxy or Wahabism of Wafai.
- Fighting out for rights of women and if a woman by her own choice eloped with her lover, he invariably, saw to it that she is not returned

back to parents and husband, but is married to the man, she chooses to.

- Managing that people of village do not go to courts of law and police to be fleeced, but setting disputes by arbitration and doing the same for other nearby villages.
- Befriending people of knowledge including some Persian and Arabic scholars, advocates, government officers, writers, poets, historians and political workers, etc.
- Helping in establishing Talib-ul-Maula High School at Dadu. He was its active member.
- Helping students financially for higher studies.

A VISIT TO THE INDUS

When I first saw water coming in the minor canal leading to our village and found that the people of the whole village had gone to receive it, I asked my grandfather wherefrom this water came. He informed me that it came from the Sindhu Darya (the River Indus). I told my grandfather to show me the Darya. Some time later, he was visiting Nau Goth to attend a marriage and he took me along from Phulji Railway Station to Radhan by train and thence by bullock cart to destination. The hosts said to me: "You are in time. The river is advancing on the sides and is only half a *Sadh* or kilometre from our settlement." Next morning we went to see the river. It was vast sheet of unfathomable water. As soon as we saw its front clearly, the men stood facing the river, which was towards our east and with eyes raised towards the sky and prayed to God in Sindhi for a minute or so. They then raised me on shoulders to see the other side of water, marked by large trees submerged into water. Next moment we all walked closer to the river. I observed that advancement of water land wards was accompanied not only by sub-emergence of land but of the higher spots or dunes simply collapsing into water. This frightened me. Besides, water was making roaring sound, which also was frightening. To encourage me, one of the men thrust his stick inside the soil and showed me that it was hard and dry, so it will not collapse. They said: "There are big beautiful boats and we still show you these." The men walked further and when we were close to shoreline, he thrust his stick again and showed me that there was water a foot or two below the surface and we do not walk any further. Then we saw a number of boats, big and small and the those going towards our village or south, were moving in the centre of the river, called "seer". They said velocity of water in the middle of river was greater and boats have to be very big so as not to be swallowed by whirlpools of the river. Those going to other side (north or up stream) were large as well as small. They were not moving fast. Since all these men were boatmen (Solankis or Mirbahars meaning admirals or Amir-i-bahar or lords of water) they recognised many boats. The boats with different types and colours of sails were a beauty in themselves. In the afternoon they showed me the boats small and large with sails anchored near the village. They were unloading some stuff brought from the other bank of the Indus to be sent to other places: Radhan, Mehar, Shah Panjo and Thariri Mahabbat etc, as I now suppose. They made me sit in one of them, but I would not allow them to sail being afraid of current. The boats were highly impressive to me. They had a cabin inside it to sleep and another place to cook and keep utensils. Men, women and children were living in some of them. They made me sit on board of a boat.

The surface and sides were beautifully carved. Nine years later in 1939 our drawing teacher at J. A. High School, Mehar, Muhammad Ibrahim Panhwar brought a number of rice paper rubbings from many boats and asked me to trace them out, with decorative patterns on most of them, for presentation to Ali Muhammad Chana a drawing teacher at Hyderabad, a well known artist. I do have one such drawing dating to 1939. Some twenty-eight redrawn and coloured by me were framed and hung in the seven class room of Mehar High School, where I saw them in 1966, on visit there. They bore my initial M. H. P, but in 2001, none was there.

About the Solangis, they are an ancient race of Sindh. They probably were mariners of Mohenjo Daro times and had traversed the Arabian Sea to Mesopotamia via Dilmun (Bahrain) and the Persian Gulf. Sindh then called Meluhha and the name may have originated from Muhana or vice-versa meaning fishermen or boatmen. As late as 1970, they used to collect every year in front of Mohenjo Daro and celebrate the night with singing, dancing and some rituals near grave of a Pir. During the Mohenjo Daro times their boats were made from bundles of Sar and Pann grass and were capable of carrying 50 to 200 tons. They carried loads from the Sindh ports starting with Kot Dijjian times (3000 BC). Their economy was sound. They spent most of their lives on boats. Small boats were used for fishing. Within the Solangi tribe, there is hierarchy of goods carriers, passenger carriers, river fishermen and pool water fishermen. Their economy also depended on the stability of the course of the River Indus. If the river changed its course, the goods and the passenger boat owners lost business for a few decades until people resettled along the new course. They were seamen and probably pirates too. In the fifth to seventh century AD, they migrated to Kutch, Kathiawar and Gujarat and established their dynasties in those areas. Solangi changed to Solanki to Chaulanki and finally to Chaulakayas. They established their Kingdom in Gujarat (998-1298 AD) and ruled well. This was time of "Climatic Optimum" and consequent prosperity. Their successors Vaghelas also called themselves Chaulakayas and though reduced by Allauddin, they exercised some influence up to 1350 AD.

In 325 B.C., when Alexander wanted to go back, he is said to have built boats to ferry down the river. Since only flat bottom boats were suiting the River Indus, he must have confiscated the boats from local Solangis.

Whenever river courses changed, Solangis were hit economically, as there were no settlements along the new course and there was lack of trade and shipment of goods along route. Since Alexander's invasion of Sindh, such major changes have occurred around 700, 1048, 1250 and 1758 AD, which have reduced area

under cultivation drastically and so the population and trade. Even the minor changes have affected all people of Sindh locally and Solangi community was probably the worst hit. Prior to establishment of railways, there were ports along both banks of the river. Even before railways came, the Indus Steam Boat Flotilla affected Solangis for some 35-40 years (1843-1878). The opening of railway reduced boat trade to less than 10% and Solangis turned into jobless people.

Although the British Parliament had declared India as welfare state, no provision existed for settlement of displaced people due to opening of railways. Solangis were therefore, reduced to paupers, had no alternate occupation or land to cultivate and became the most downtrodden class of Sindh. They virtually were treated as untouchables, though Muslims by religion.

This visit of mine was in April/May 1930. I asked my grandfather: what he had prayed? He said that he was taught the prayer by his mother, a Solangi by caste and originally from Nau Goth. Since he repeated the prayer whenever I asked him, I remember some parts of it .

Sindhi Poem

This is just a portion of the whole prayer I recollect.

The same year at end of July the river breached its embankment near Radhan opposite to Nau Goth and took route along its old channel of fourteenth and fifteenth centuries to lakes Maha, Juberji, Sutiario, Pirghunio, Talti and back to the river. Water surrounded our village, which was saved by timely efforts of my maternal uncle Muhammad Saleh who at young age of 18 collected people in time for raising embankments around the village. One feature of the embankment was that it had proper side slopes and the top was wide enough for a bullock cart to go over it. The whole village was evacuated except a few men. I saw the boats evacuating people, animals and goods to safety. I thought my grandfather's prayer had worked and the river was at our door. I did not understand the economic loss. My paternal uncle took me along to show me the boats and assured me that water was very shallow. We had gone by boat to a nearby village to give some food to stranded people. It was the first ever sailing in water in my life. I was thrilled.

Since then my interest in the Indus has kept increasing. To know the Indus, I had to understand geography, hydrology, hydraulics, irrigation system, canals, drainage, seepage from river and canals, behaviour of the rivers in cutting their own channels, erosion, formation of deltaic heads, climatic changes in the past and their influence on the river, changing courses of the river, causes and

desertification of settlements by the river and consequent shifting of population and unrest leading to change of dynasties, foreign interference and social impact on the people's lives, including their food, agriculture, animal husbandry, forestry etc.

How much Solangis suffered due to Indus flotilla and railways, followed by commissioning of three barrages can easily be known from the maps of Sindh of 1855 and 1899. The river ports which handled the inland trade deteriorated and some were even abandoned. So much was the river trade that railways line some two miles long was constructed between Phulji railway station and port Purano Dero in 1878 to bring goods from latter to be shipped up and down the country. It was abandoned some 40 years later as the river shifted by some two miles away and eastwards from the place. The settlements along the river were allowed to deteriorate. While near the railway stations rose small townships built on government land, leased out at nominal prices and the new settlers at these places were Banias (Hindu businessmen). While this was going on, the Government did nothing to settle Solangis of deteriorating and abandoned river ports. The railways did create job opportunities within its own establishment as well as at all new townships, but engineers who also were planners, only thought of execution of works and government thought only of income from railways, which were government owned.

The worst was yet to come. The construction of barrages in the Punjab from 1875 reduced water in the river. This reduced fish catch, but since government revenues on taxation of fish were small as compared to agriculture, Sindh through Bombay Presidency of which it was a part, started demand for barrages and its share in waters of the Indus for irrigation. The losses in fisheries to the government and private trade and employment were lost sight of, by the time construction of Sukkur Barrage was sanctioned. It was not realised that there was boat traffic along the Indus from Attock down south up to the seacoast for four millennia, but no water locks were provided across the barrage. This hit boat traffic and boatmen badly. Since railways were government owned and operated, it may have been deliberate to generate more income for a public sector enterprise, which no doubt was managed with high efficiency.

Sukkur Barrage also hit fisheries. Palla or Hilsa fish like giant prawns spends its juvenile period in the brackish coastal waters which are 50 to 75% as saline as sea water and then move up stream to the River Indus. The Sindhi people's belief that Palla moves up streams to Zindah Pir to pay homage is not true, as it was found up stream of Sukkur, as far north as in D. G. Khan district by Alexander Burnes in 1831 AD. In 1932 community of fishermen with fishing rights north of Sukkur Barrage head-works lost their Palla fishing business forever and approached the government for rights below Sukkur Barrage head-works. The

Sindh government could not decide their case until formation of One Unit on 13th October, 1955, when Kotri Barrage was already commissioned and its fish ladder, built purely on hearsay about habits of Palla fish, failed to allow it to pass up stream. Then fishermen of Rohri made a case for fishing rights down stream of Kotri Barrage. The fish ladder can still be redesigned after scientific studies, but engineers are neither sympathetic to fishermen nor to Palla. Its catch is now limited to below Kotri Barrage. Palla used to gain size as it went up stream. The sack of eggs in the female also became bigger in size, while by itself female became fatty and large. This is an species in which male is pygmy before its female counterpart. The Rohri fishermen tried to get fishing rights below Kotri Barrage some 40 years after commissioning of Sukkur Barrage, but they did not know that Palla will now be available only in the last eighty miles length of the River Indus below Kotri Barrage and not in two hundred miles north of Kotri to Sukkur. Again Palla will be available only at an average of 56 days a year, when the Indus flows down stream of Kotri to the sea. Only after 1980, it was realised that the brackish waters of seacoast had become too saline to be breeding ground for Palla and giant fresh water prawns. With many barrages up stream to Sindh, the glory of Indus fisheries finally came to a cruel end after 1980. Solangis could no longer fish in the present river in area covering 2.212 million acres. Before 1860 the river was free to roam and it flooded vast areas in summer and more particularly it filled all depressions called lakes, left by itself during the past ten millennia. Each year when the river receded, the lakes became the source of fish, which Solangis exploited, but on the preserved moisture of rest of flooded plains were raised Rabi crops like wheat, oats, peas, beans, vegetables, melons, water melons and other curcubitae family species. At the time of independence in 1947, Sindh produced 80% of West Pakistan's total fisheries. Frontier Province hardly 1% and Punjab 19%. Today, situation has reversed, as not only the Indus but lakes annually flooded from 729 canals taking off directly from the Indus before 1843, have all dried up. The government made no provision for supply of water to these lakes outside the Indus flood protective embankments or barrages as something went wrong with their planning. The engineers never took into account socio-economics and did not visualise that additional water should flow into Sukkur Barrage canals to fill all Dhoros, depressions and lakes with purpose of maintaining ecological balance and fisheries and save Solangis from displacement. Not only this, but also not to deprive rural people of the cheapest and most superior source of animal protein - fish . I remember fish was costing us less than half as much as goat meat in 1935. Even in those days supply of water in the river in winter was limited, but in summer there was no shortage of water and additional water could fill in lakes in summer and only minor quantities of it in winter could sustain all this fish wealth. Loss of fish, a cheap source of protein will affect the health of people of Sindh in the long run. As animal protein in food is reduced, people in Sindh will lose their health and

height and in future will be prone to many diseases due to weak physique and mal-nourishment.

Leaving aside this mistake which was not deliberate, credit must be given to some of the British Administrators, who did do much for Sindh. Sir Bartle Frere was the foremost in this respect. Among many things to modernise Sindh, he established and modernised Irrigation Department.

Under him the first River Flood Protective Embankment from Kashmore was started in 1855 under superintending Engineer Fife, also called father of irrigation in Sindh. The latter had given a mouth to Eastern Nara canal five miles north to Rohri and made it flow regularly since this old river Drishadvati-Sarsuti-Hakra had dried up four thousand years ago. This made southeastern Sindh prosperous again since the eastern branch of the River Indus had abandoned the same area around 1048 AD, deserting Mansura the Soomras' capital of Sindh. Sir Evans James was the other commissioner in Sindh, who left a minute for purpose of record and guideline for future administrators that construction of barrages in the Punjab will impose a barrages on Sindh. The British visualised the dangers of extension of irrigation in the Punjab and its consequences for Sindh. Now we do not have the mighty Indus in Sindh any more.

I WILL NEVER BE AN ORPHAN

When I went to primary school, my grandfather told me; “The teachers are like parents and grand parents. You will be with them after breakfast, will come back during one hour lunch break and will be free from the school in late afternoon before sunset. You will spend only a few hours in the house before you go to bed. You will spend more time with the teacher than with us and if he is kind to you, he will build your future more than we all can. Respect him, listen to him and his advises, obey him and God will bless you then. Teacher is like your parent and so long as even one of your teachers is alive, you will not be an orphan but will still remain a boy.” I obeyed my teachers in all sincerity. I touched their feet in the morning. This became an urge all my life. If any teacher did not allow me to touch his feet by one or both of my hands, I resented, considering him indifferent, disinterested, ungenerous, unfriendly, arrogant, or lastly probably he did not like me.

When I went to high school, touching of feet of teachers was not allowed, but they did not object to bowing down or stand with folded hands or salute like police men. In the D. J. Sindh College, Principal Bhutani, also teacher of physics was extremely friendly and always smiling. On his retirement in 1944, he said “In my whole educational career, there was only case, when a boy did not smile back and possibly was too timid to consider teacher as friend.” Other teachers though formal in the college were extremely friendly, whenever I visited them and I did it frequently to help solve some difficulties or get copies of text books other than those prescribed in the class. Although they considered touching the feet as undignified but showing respect, getting up when they got up etc., was considered a sign of culture both by teachers of D. J. Sindh College as well as NED Engineering College during my private visit to their houses. In USA, things were different - teachers were democratic and very friendly. I had difficult time in adjusting to their informality, but during my one year at University of Wisconsin, I became very friendly with Prof. D. W. Duffee and Hajamer Bruhn and in return they made me a successful engineer. The words; “So long your last teacher is alive, you are a boy and when he is dead, you are an orphan”, always rang in my ears and impinged on my mind that teacher is protector and parent and remembrance of him was soothing, even if dead and encouraging, if alive.

I am not able to forget some my outstanding teachers. My mother died in 1993. The schoolboys said; “If someone’s mother dies first, he is half orphan and if his father dies first, he is full orphan.” It is true for family depending totally on crops

or animal husbandry, but for me it was a big shock, as I preferred my mother to my father. After my mother's death we were brought up by auntie Jado. She died in October 1939 and reaching my village from Mehar High School, I had a second shock of my life that I remember spending next seven days in painting. I was about to become 14 and was too busy with my school but my two sisters were turned into real orphans a second time. Auntie had loved them so much that they maintained themselves independent of the stepmother, who herself being non-Panhwar had not achieved status for herself and also had never tried for it. For this I was sympathetic to her. I found myself a favourite of many my high school teachers due to always securing first position in weekly and annual examinations. They had given me all the love of parents, so I was not an orphan.

In 1941 died my drawing teacher Muhammad Ibrahim son of Hams Khan Panhwar at age of 39. I was his most favourite student - I had passed Elementary and Intermediate drawing examinations conducted by Sir J. J. School of Arts, Bombay in 1939 and 1940. No other student had passed both examinations during his service of seventeen years. He proposed to the Head Master that I may be sent to above school of arts after Matriculation, but I was too good in mathematics, to be other than an engineer. To decorate classrooms, Head Master asked him to produce four drawings for each classroom. He himself prepared some and asked me to produce about twenty-eight for him. Since I was excellent in geometry, I could produce complex drawings combining lines, circles, triangles, rectangles, squares, hexagons, octagons and many sides polygons and produce unique drawings, with my initials M. H. P., on each of them, but his initials too were M. H. P. - a fact I had not realised. He put all his paintings in the drawing hall, teachers' common room, Head Master's room, school office and lastly examination hall which could accommodate up to 400 boys and mine were put in the seven classrooms. Some twenty-five years latter, while I had been working as Superintending Engineer Agriculture Machinery Southern Zone (Sindh and Baluchistan), I was told by someone that there are some drawings bearing my initials in all the rooms of the Mehar High School. At an earliest opportunity I went to Mehar and told the Head Master (Ali Asghar Shah) that this was piracy to assign my teacher's drawings in my name. He promised to change name to M.H.Panhwar and M.H. Panhwar, I did not have camera with me to photograph them, but probably they all were stolen in the next 10-12 years. In 2001, I visited the same school and found no drawing of my teacher and mine. Thus, my drawings record is lost. In 1970s and 80s came a series of books on geometrical patterns in Celtic, Greek, Roman, Egyptian and Islamic art. Having reviewed them, I found I was doing similar work from October to December 1940, unaided and without having seen a single pattern of the type. In Sindh most geometrical decorative patterns on graves and mosques are copied or evolved from Jam Nizamuddin's tomb at Makli. I have tried to make sketches of them and have photographed them, but in a serious attempt to get rubbings of

exact size, my wife and I were attacked by wasps sheltering there and programme got postponed. The purpose is to draw geometrical drawings and show how they were built from complex pattern. Muhammad Ibrahim died in July 1941 due to jaundice. The maximum I could do for the departed soul to find employment for his descendants. Of his training on drawing, I learnt to express myself by use of sketches, illustrations, photographs and maps. I had no difficulty in understanding arts, history of arts, architecture and archaeology. I have remembered him for this up to this day.

On first September 1942 my grandfather died and the information sent by my father was received five weeks later in Karachi as our village was cut off by the floods of the Indus. Letter was mailed from Naushero Feroz on other bank of the Indus. It was not only a shock but I knew we were entering difficult times as no one could maintain his buffalo herd and we won't be having income from that source. I remembered his words "So long any one of your teacher is alive you are a boy and not an orphan." I could now think of my science teacher Chandnani at Mehar as protector and parent though I was in the college at Karachi.

Partition separated many of our teachers from us and I have lamented loss of them throughout my life. Of these I had greatest regards for Chandnani, the science teacher at Mehar. When I entered the school the Muslim students said; "He is an atheist, does not believe in God and transmigration of souls or Hinduism but otherwise he is thorough gentleman." Ten teachers of school would deliver lectures on general knowledge every Monday by rotation to the general assembly of 250 students for 10 minutes. As the Vice Head Master, his turn would come four times a year and he would talk on latest scientific developments covering some 10-15 items but understandable even to class-I students. I was spell bound by his utterances, but had to wait four years to come to class-V to know him better. He taught arithmetic, algebra, geometry, physics and chemistry to classes V, VI and VII. Since I could read and complete the whole year's courses in the first two-and-half months of school and solve every example, I sometimes consulted him. He was too happy to help and told me to see him in recess times i.e., two twenty and fifteen minutes breaks, between seven classes of forty-five minutes each. I saw him everyday and while in the class V, I completed algebra of class V, VI and VII and geometry up to class V and VI. I had completed arithmetic of classes IV, V, VI and VII while in class III and read all other subjects of class V during the holidays of class IV, so always had plenty of time.

He gave me to understand that geometry and physics can make your mind analytical. He gave me nearly a dozen textbooks and solutions of some exercises in geometry dating back to past forty years and many general books on physics, specially written for general knowledge of laymen. Some in this category were;

vacuum, magnetism, sound, lenses, levers, gears, steam engines, dynamo, electricity, hydraulic machines etc. He introduced me to "Thinkers Library" series by two books on psychology and history of the world. He believed in development of supernatural powers in man and gave me books by Dale Carnegie and also books on telepathy, hypnosis, will power and etc. These were for mind and for body. He gave me books on yoga exercises, hygienic living and healthy foods etc. For career building he gave me "Triumphs of Engineering, Wonders of World etc." I saw him twice a day during school recess hours to discuss school subjects and once or twice a week at his home to borrow books from his personal collection. Soon I found myself performing physical exercises for an hour daily and doing some concentration exercises too. The book of Mary Stopes he gave me, led me to read the books by great masters of these fields - Freud, Ellis Havelok, Kinsey, Masters and Johnson, Hitte etc. My deep interest in physics led me to become mechanical engineer. In the college I tried to read every book published in Thinkers Library series and I still have in my collection some 35 out of some 200 books published by them up to 1950.

In July 1940, a Hindu class-fellow of mine from village Allahabad, two kilometres away from ours, came and told me that Chandnani's wife died at Manjhand, due to cholera epidemic and let us go and condole him. We left for Manjhand and reached his house in the afternoon. He thanked us, but immediately asked if we had drunk any water or eaten any thing since arriving at the railway station. On hearing "no" he brought us two bottles of Soda, asking us to take the drink and leave immediately without eating and drinking, till you reach Dadu and that the train would reach Manjhand within a hour. Fifty percent of people in this town had died of cholera, which broke as a cholera victim had washed his private parts in source of water in the town, ground water being brackish.

In 1968, I passed through Mehar and went to see Mr. Menghraj an old Hindu teacher of mine from Mehar High School, at his residence. To my great shock he told me that Chandnani died a few months back. His ashes now in Rajkot, where he had settled as schoolteacher, will be brought to Manjhand and thrown in the Indus by Seth Vishandas and his family as per his last wish. To this, I had his recollection from 1935 to 1946. I had kept seeing him after I left High School Mehar and usually every time we had college vacations. He was a humanitarian, without any prejudice to other creeds. He was my spiritual guide in non-religious way and I feel his was tremendous influence in my thought and approach. He was non-controversial above any religious prejudices and a devoted science teacher and was serving the humanity rather than Hindu and Muslim communities of Sindh.

He influenced my life so much that his death made me think of him as a great "saint" and parent in my life. Whenever I have passed by Manjhand, there has been an urge to go to house, he once occupied and touch the lower plank of frame of his door with both of my hands in reverence, though with partition of the British India, we parted and I did not know his whereabouts. Since his ashes must have been thrown in the Indus by Seth Vishandas or his family of Manjhand, I never have thought of looking for him in India. I also get consolation in visiting Mehar specially the high school and science hall, where he sat and meditated, rarely visiting teachers common room. I visited this school in 2001 on Sunday. The chawkidar opened all classes and science hall. It was the same except the equipment and human skeleton. The drawing hall had been totally changed with some exceptional drawings of teacher Muhammad Ibrahim missing. Library maintained by teacher Lak Ram in drawing hall too was non-existent. Chandnani's death had followed my father's death by six years. I came out of shock as many of my teachers were still living.

Next of my teachers to depart me in 1979 was Muhammad Yaqoob Panhwar, who taught me in primary school for about a year. Just having passed the first year Primary Teachers Examination from "Teachers Training College Hyderabad", where he had undergone rigorous training, he wanted to show the results. He had a manuscript of solved examples in arithmetic and wanted a boy having good handwriting as well as sense of arithmetic to copy the book for him. He said; "No guess work with figures, if you do not follow ask me." It was great opportunity to be involved in very difficult examples in arithmetic, but I had no difficulty as similar examples were being taught to students senior to me by one or two years and I was always listening and following.

He found potential in me and in last week of November 1934 examined all students of various classes in arithmetic, Sindhi, history, geography, grammar and general science to find the best ones for appearing in competitive examination for scholarship, to be held in Dadu at the end of February. He selected me and two other boys and told them that they will certainly fail, but I would pass and so result of one in three will be excellent for his teacher ship and school. I passed having put in hard work. He was so pleased with my work that on return from Dadu he gave me a book on arithmetic's in Sindhi by Tejbhan Das G. Bhutani to solve difficult examples for him and myself. In the next two months I went through the whole book solving examples orally or sometimes on paper and complicated on my and his notebooks for later reference by him. This was useful to me up to matric class or high school graduation. It was a Sindhi version of advanced arithmetic for senior high school classes. On 17th April 1935 he received a letter that I was awarded a monthly scholarship of rupees seven a month for study in high school. I went to Mehar, where this money was adjusted

towards my school fee, boarding house expenses, school textbooks and surplus expenses paid by my father every month.

This teacher came to see me in 60's at Tando Jam, while we had "Quarterly Progress Meeting". It was too important, but more important was his visit. The office superintendent Mr. Kathio informed me about him. I went out, met him, brought him in the meeting to sit next to me announcing to all Agricultural Engineers, Assistant Engineers and Supervisors that he was my teacher and I have welcomed him to witness and listen to what we had been doing. I had forgotten all about it but in October 1998 a visitor from our village narrated how much honoured he felt, specially, when some 40 officers escorted him to lunch at my place and gave him all the respect he probably had not expected. Three of these persons Mr. Kamaluddin Qureshi, Agha Aftab Ahmed Khan and Karamchand Dodani, who were attentive to him, were to become Secretaries of Agriculture and Science and Technology of Government of Sindh. The others rose to become Directors and Director-Generals in future. He was born in 1904, died on 09.06.1979. He had entered service in 1922 and retired in 1964.

Mansukhani had passed his bachelors degree in Mechanical Engineering from NED College in 1933. He was employed to erect Pritamabad Sugar Mill, the first in Sindh that year. The owners sent him to study sugar mills in Bihar, get one fabricated and use minimum imported equipment, which was costly. He did the whole job by himself with help of a petty buildings sub-contractor, mechanists, welders, blacksmiths, fitters and small fabrication work-shop having one each lathe machine, drill, shaper, power back-saw and welder. Once in operation, he no longer found it interesting, left and joined Wah Ordinance Factory, where he fabricated bullets and bombs.

He liked this job due to variety and new types of materials being fabricated there from time to time. He was the most liked among the engineers by the British bosses. In 1941, an unexploded bomb of Italians was brought to open and find out what was inside. All attempts to open it had failed and Mansukhani was asked by a British officer to help. He used a power back-saw and melting ice water to cool the saw blade and gradually cut it across its diameter in two. The British officer had got the premises vacated and no one was to be present within five hundred feet of Mansukhani's operation room, which had bombproof walls. The conventional threads used for tightening the cap of bomb turn clock wise, but in this case they turned anti-clock wise and turning to open the cap, simply tightened it further. With this discovery thousands of unexploded Italian bombs were defused in Africa and Europe. He was immediately promoted and at a party in his honour, the British officer addressed him as B. F. Mansukhani. His initials were not B. F. and he said that he knew, it meant "Bloody Fool". In reply he said "only B.F's do the job which angels, cowards and British do not". His

reply was so effective that henceforth his British officer became his closest friend and would invite him and his wife regularly to his house.

He left Ordinance Factory in 1946 and was taken up as Professor of Mechanical Engineering at the NED Engineering College. Since he was very practical man, his methods of teaching became different. He said he would conduct practical course before teaching theory, so in the evenings from 2-30 to 5-30 p.m. he would take all students to laboratory, make them open steam, diesel and petrol engines in three to four groups of ten to twelve students each and by rotation explain what is inside.

The text day, instead of teaching in the classroom he would conduct the classes in practical laboratory. Disassembled engines will lie there two to three weeks and would ask students to make sketches. The same he did with boilers, coal or producers or gas plants and whatever was available in the lab. He would make students assemble the machines and engines. At the time of independence he did not like to leave Sindh, but was forced to migrate in 1950 to vacate his post for his successors. He joined as Professor in a College in Bombay Presidency. In Mitharam Hostel he lived on the first floor. I, Taj Muhammad Shaikh, and Kazi Hizbullah shared three rooms next to his and we engaged joint cook. He taught only mechanical engineering which included steam, gas and hydraulic turbines, steam, diesel and petrol engines, hydraulic machines, mechanical power, refrigeration, automotive power and transmission and mechanical structures, but was equally good in civil structures and electric power. I always took advantage of his knowledge and discussed many matters with him. I realised that I was heading towards being a practical engineer due to his guidance. Between the time I completed my studies and he left for India, I saw him regularly twice a week. Before leaving he told me that there is nothing against him, but Principal Kewalramani wants him to vacate, so that he brings new people, who have influence in the Government of Pakistan and Government of Sindh and who will help him in getting extensions. Kewalramani was a very clever man no doubt. He retired in 1946 at age of 60 but kept getting extensions for next 17 years up to 1963, as he knew how to handle high government officers and he helped many of them to get their daughters married to brilliant young boys of college who had bright future. Mansukhani left Pakistan just after I left for USA to study and could not get his address to be in touch with him. In seventies, while I was appointed as Consultant for NED Engineering University's laboratory equipment (1971-1979), I heard that he was dead, but no further details. I considered him as one of my best teachers in life and a friend. That day I reviewed my position as my teacher-parents. My three professors Dr. D. W. Dufee, Hajamer Bruhn and Rose were alive in Madison (Wisconsin), but the last one in psychiatric hospital and Muhammad Yaqoob, my primary teacher in Piaro Goth. I thought that I am too far away from being an orphan.

In 1951, I got advise from my friend Muhammad Khan Chawro that my practical training with International Harvester company in USA will be counted only towards my experience and in the long run for prestige and promotions, I have to have Master's degree. That time I was in Chicago and International Harvester suggested that I try University of Wisconsin, which had good reputation. I travelled there the same week, visited the Department of Agricultural Engineering and the staff guided me to Professor Hajamer Bruhn. He received me well, checked my syllabus of Bachelors degrees University of Bombay and Sindh, saw my certificates of experience, in Pakistan and USA and said; "You need not take many class courses, but we will ask you to write about your experience in various fields" and taking duplicates of my certificates, he told me that there appears no objection to any joining for Masters degree in February 1952 and I would get official letter of admission in a few days from Chairman D. W. Duffee, whom he had consulted and shown the papers.

When joined, he and Duffee discussed with me and suggested that I write papers on:

- Rice harvesting, drying and storing as part of post-harvest of agriculture crops.
- Threshers: British and American.
- Mechanization of cotton in USA and Pakistan.
- Ground water: its occurrence, development and conservation in Sindh, Pakistan.
- In addition, I had to study three subjects, the purpose being that; I would be needing them in future. These were:
 - Advanced diesel engines to be used in earth moving machinery.
 - Heating, ventilating and air-conditioning (to be used for post-harvest of agriculture produce, cold storage and processing).
 - Farm power and implements.

Professor Bruhn then suggested that I should refer to Directory of American Manufacturers and Merchants to collect information on manufacturers of all equipment, I needed for my papers and class room, get some catalogues by writing to them and these may give you new ideas and may be something that

may breed new thoughts. In Pakistan I had worked with Caterpillar and John Deere dealer (Buckwell and Co.) and Ruston Bucyrus, Bucyrus Erie, Ruston Diesel Co. GE and GEC dealer (Greaves Cotton) and International Harvester dealer (Volkart Bros.) and thought that they were best in the World. I thought that Professor Bruhn's suggestion was something too funny, but I obeyed and when I collected the names and catalogues, they proved to be highly educational. For the next fifty years, I have been referring to similar catalogues from UK, France, Germany, USA, Canada, Australia and Japan for any projects. I used same catalogues to lay hands on best type of equipment for laboratories of NED University, Mehran University, National Building Research Institute, PCSIR, Appropriate Technology and etc., in Pakistan, as their consultant. I have used the same directories and catalogues to locate nurseries for import of fruit varieties, import of post-harvest equipment for fruits, vegetables, flowers, herbs and even grains. In writing my papers on ground water, besides drilling equipment and pump manufacturers, I came across manufactures of filters, sprinkler and other irrigation equipment and drainage machines and drainage tiles. In 1952 only one US manufacturer produced threshers, but many in England and I laid hands on their catalogues. How much they added to my knowledge, only I can realise. I have been successful engineer, consultant, fruit grower and scientific researcher, because of this simple training. In Pakistan I was recognised top agricultural engineer since 1955 to this day. With devotion, I prepared four papers for MSc and they kept me busy most of the year. My experiences with ground water are discussed under chapter "Well in the Village", but I devoted almost 50% of all my time at the university to write on ground water in Sindh. It was this education that finally led me to carry out research for the next nineteen years and produced eleven books (3000 pages) on ground water in Sindh and Baluchistan and this was education in Madison that helped me to establish myself as consultant for LBOD and RBOD projects from 1974 to 1997. I cannot forget my gratitude to Prof. Bruhn.

From 1953 to 1970, I as government employee had no time to write any personal letters. I got cut off from all my friends in USA, but then for first time I visited USA in 1973, I went to see my Professor Bruhn and D.W. Duffee and he invited me for lunch. My visit was in connection with laboratory equipment for NED University. At my request he arranged my visit to all laboratories of all the departments. I had already visited two universities in Australia, two in Germany, two in UK, MIT Boston and this was the last, which took me five days against one day in each other seven, as teachers took extra care. Consequently I made NED the best-equipped university in laboratory equipment in Asia, as World Bank remarked on its completion.

I visited Professor Bruhn again in 1989 and finally went to see him in July 1996, but he had gone on vacation for a month to a friend's house, where there was no

electric power or telephone and they would spend time in hunting, shooting and enjoying nature. I could not meet with him. I again went to USA for treatment in July 1997 and was neither in a position to go to Madison nor write a letter as my three vertebrates had been damaged by dacoits, who had hit me badly on 1st June, 1997. On return from USA in August I was shocked to read in bulletin of Department of Agriculture Engineering (Now Biological Sciences Engineering) that he died on 01-07-2003. I said to myself that: "I am now an orphan at age of seventy one". As a remembrance I have kept the bulletin giving arbitrary and his photo framed in my drawing room. I do not have photos of other teachers of mine.

MY GRANDFATHER'S AGRICULTURE

Pre-Green Revolution agriculture was sustainable in all respects. The area under irrigated cultivation in Sindh at time of my grandfather's death on first September 1942 was only 4.0 million acres and the crops raised on it were not only supporting about 4 million people of Sindh, but cotton, wheat and rice were also exported in quantities sufficient to give Sindh a name of "Grainary" among Indian provinces and states. Yields of crops were higher than the Punjab and UP - the most progressive provinces. Yield of Sugdasi of the owner cultivator was about forty maunds per acre (1600 kgs or 1.6 tons). Some cotton grown around our village was producing about seven-hundred-and-fifty kilograms of seed cotton per acre. On good land wheat would produce eight hundred kilograms per acre, though the other provinces' yields were only half as much.

I saw my father and grandfather raising the three crops of rice, wheat and cotton after 1933, though before opening of Sukkur Barrage they grew only Sugdasi rice, peas, horse beans and oil-seeds. These last three were grown on preserved moisture of rice fields by everybody with poor yields.

My grandfather was very particular that cow and buffalo dung should be collected from the barn, dried under sun and dumped in the manure yard, which was maintained at high spot with slopping sides, so that rain-water could quickly flow out of this small compacted earthen platform. To this dung were also added bedding straw and grass or fodder chips - left over by animals. There was a custom to make bed for rice seedlings from the animal manure. Manure was spread on a small plot to a depth of six to eight inches and set to fire. It left one or two inches of ash into which seeds were broadcast and irrigation water applied. Within three to five weeks, seedlings were thirty to forty centimetres tall and were transplanted. My grandfather told my father and uncle to collect animal dung from the waste lands, spread over some twenty acres lying between the village and our rice seedling nursery and grazed by animals for some 8-9 months a year. Without much effort a number of bullock carts loads were hauled to the site for nursery. Only a part of it was used for nursery and the rest was spread on the land to be brought under rice around the same time. As it was not enough for the whole land, only one third of land was treated every year and rotation was completed in three years. My grandfather said that effect of manure lasts three years. This is common belief in Sindh, but experiments also show that only thirty percent nitrogen in it is made available in the first year. Details about further period are not available. This was not the only secret of his high yields.

The Rabi crop of peas, beans and oil-seeds was harvested in February-March and immediately after harvest they were ploughed into the soil. Early ploughing did not produce big clods and soil was easily inverted, burying plant roots in. He knew that nodules in the root of above crops provided some fertility and they must be buried before high heat of summer destroys them. No other farmer in the village was doing it.

Today science knows that if manure has some moisture left, when only partially dried and stacked, it digests bedding material straw etc., mixed with it and forms compost under an aerobic condition. If manure is too wet and rain-water collects around it, the digestion process is anaerobic and some nitrogen in the form of ammonia gas escapes to air, while that in form of nitrates leaches down the soil, when pile becomes too wet and water trickles through it to the ground or if manure stands in a pool of water. He told me that his father Haji by name had told him to do like-wise and he had found from experience that his yield was thirty three percent more than others due to this practice. Sustainable agriculture was killed by Green Revolution. In 1954 Pakistan allowed USA to establish military bases and facilities, to be used for keeping an eye on USSR. With this came US-F.O.A (Foreign Operation Administration - predecessor of USAID), which brought a fleet of American advisors, many of whom were disinterested or inefficient, but they brought free urea. It was followed by plant protection chemicals and equipment and introduction of tractors. In Sindh the construction of Kotri and Guddu barrages had been started much before F.O.A and when water became available in early sixties, it brought a boom to Green Revolution. The fertilisers and plant protection chemicals were subsidised and tractors and implements were exempted from import duties and it seemed that farmer had full control over production. It was theorised that modern farming needs middle class and well educated managers, having access to capital. The government servants were encouraged to purchase land. Land reforms were enacted in 1959, to cripple the power of big landowner of Sindh to purchase more land. The best land in Kotri and Guddu barrages went mostly to Armed Forces and the business community. Some good land of Guddu Barrage was also given to the government officers for their meritorious services and Armed Forces. By early 70's the Green Revolution started signs of serious cracking. The yields won't go up in spite of extra fertilisers and plant protection chemicals. By 1980, Green Revolution was dead the world over, but the developing countries did not know the reasons, consequences and solutions.

In the Golden rush I also purchased 100 acres of land in 1964-65 and grew mangoes and bananas. There became glut of both since 1980 and we started introducing new crops like: jujube, buffalo gourd, jatropha, avocado, macadamia, cashew, peaches, plums, nectarines, grapes, pomegranates, red colour guava, grape fruit, mosambi, pummelo, lychee, longan, etc., but yet they will not

flourish under factory made fertiliser and pesticides. I thought of my grandfather's agriculture. He considered all kinds of organic wastes as Akseer (elixir of life). I now have developed similar Akseer, which I call "Mulch - the Magic or Miracle".

OUR PIRS OF KHIYARI SHARIF

I was about 5-6 years old, when the hereditary Pir or holy man of Panhwars of our village named as Habibullah from Khiyari Sharif, a medium size man having beard dyed red with henna, came to our village first by boat up to Purano Dero on the right bank of the Indus and then on horse back escorted by horsemen. The male members of the whole village collected outside the Autaq of my maternal uncle. When he alighted from a camel, they first bent down to touch his feet first and then raised their body to kiss his right hand. The ritual consisted of the Pir stretching his right hand forward with palm down for ceremony. Men first kept their left eye on it, then right eye and then kissed it. He did not shake hands with any one of low folks. Boys were doing the same. A few young boys of my age participated, but like me they also were too small to reach and kiss the targeted hand. Nor did he lower his hand for small children. It frustrated me. He stood erect like statue but watching people with eyes rather than looking at the actual worshiper, who at that movement was performing his part of ritual. In the Autaq he sat on a lacquered cot, well decorated with silken bed sheets and pillow covers and everybody else sat on a cotton Farasi spread over a reed mat on the floor. As soon as he sat, his shoes were removed by one of the attendants of Muhammad Saleh, named as Abdur Rauf and feet were carefully washed in an enamelled steel basin. This basin was taken away to the housing area. Soon I was bored with people's talks with him, as I did not understand any thing and went home. What had happened by then was that the above washbasin was taken by Abdur Rauf to my maternal uncle Muhammad Saleh's house and contents were poured in a large clay jar (Mat) filled with water.

This water, called the dust of Pir Sain's feet, was distributed in the whole village. A large brass water container or (Watto), about one litre, from this jar was brought in our house by my mother and put in small clay water jar (Dillo) in my presence. She told me to drink it. I refused on two grounds; the holy man did not lower his hands that I kiss them and secondly his feet were dirty with dust. In the mean time my grandfather came and I made both complaints to him. He asked my mother about this water. She narrated it. He said "This is infidelity (Kufur) and only Kafirs do it." So water was thrown away. He then went to other houses forbidding its use. Next day boys of school mentioned names of sick people whom the Saghora Sain (Holy Pir Saheb) had blessed with his prayers, Ta'awiz, Pheenno etc., and they are going to be all right. They also said that the holy man had come to take the annual Dhan (subscription or fee) as rice has been harvested and people had money. They will give him buffaloes, cows, bulls, goats, sheep, clothes and money. Those who do it, will be wealthy men - go to

paradise with his blessings. The elder boys who were taller than me laughed at me that you did not keep your eyes on Sain's hands and kiss them. You should have kissed his feet instead. I could not think of kissing the feet of anybody, as in rural areas streets are dirty and dusty and feet are rarely clean. Many boys knew that they had drunk water containing dirt from his feet and were proud of it. I did not argue at all, but thought that I was right. I was not sure whether our luck will change, as my grandfather had said that even after harvest we are in debit, as he had borrowed money to exchange two calves for buffaloes and payment to Pir was unnecessary. I thought that my father and grandfather won't go to paradise, though I could see that they were respected in this world by the village folks.

Something happened that the holy man did not come again. It so happened that my maternal uncle Muhammad Saleh went to his Dargah and was informed that Pir Saheb had thrown out his son from the house and was having illicit relations with his daughter-in-law. The son narrated the story to close relatives, who rebelled against the holy man. At that time, a Sindhi monthly magazine 'Tawhid', edited by Maulvi Din Muhammad Wafai, had launched crusade against worship of Syeds, Pirs, Makhdooms, Pirzadas and dead saints and of graves and holy men's tombs and other places of worship called Dargahs. My maternal uncle used to send for this publication and not only had tuned anti-Pirs, but had turned the whole village against them. Gradually other villages did the same. Thus, our village had good luck of having no Pir, to visit us since 1932 or so, but some people did go and pay Dhan for the blessings. The Machhis of our village had their own Pir, but my uncle Muhammad Saleh managed to relieve them of the exploiter.

I read Tawhid much later, when I went to the high school and was able to understand some portions of it. It is worthwhile to tell more about Tawhid and Maulvi Saheb. His crusade was against Sindhi aristocracy (Syeds, Pirs, Makhdooms, Makhdoomzadas, Waderas, etc.), whether rural or urban, against their not getting their girls married for life, no marriage relationship with poor, superstitions connected with birth of children, spending on ceremonies like chhathi, circumcision, betrothal, marriage and birth of son, belief in Pir's Ta'awiz, Dua, magic threads (Saga), magic and Karamat, Fakirs, tombs, graves and what not. Pir worship at that time was considered as pillar of Islam and Maulvi Din Muhammad was bent upon stabbing it. He was an enlightened scholar and historian of Sindh. Maulvi was born on 27th Ramzan 1311 AH (4th April 1894) as correctly calculated by G.M. Syed. He died on 10th April 1950 at an age of 56 years.

Tawhid pleaded a social reform, to remove the local ritualistic and expletive influences, whether Iranian and Central Asian or Indian form of Islam. Wafai

was not anti-Sufism but anti Sufi-saints' worship. He was opposed to belief in miracles of living or dead Pirs and saints and his twenty-nine years Jihad (1923-1951) brought unique revolution unheard of, in any other province of undivided India. His work got set back as the same group of holy men were successfully returned to the provincial and the federal assemblies after 1962 and to this day. Zia's Islamization and gradual decay of educational system, combined with ever increasing rural poverty, lack of security and deteriorating law and order situation has turned the rural populace back to this group again, for security and their exploitation has continued. However, many educated people have rebelled against this holy class and only a few families of these saints who have strong political and social positions are unchallenged. A large section of them have lost their prestige.

I read Tawhid form 1935 onwards. He had started it in 1922/23, continued for about two years and restarted nine years later. Maulana's other work on history of Sindh was Al-Wahid Azad Number, which guided me to carry out investigations in the history of Sindh. I still have the original copy purchased by every Muslim student of Mehar High School, under pressure of our teacher Muhammad Aarab. I met Wafai in Karachi when he was editor of daily "Azad" and was working on Tazkira-e-Mashahir-e-Sindh. I loaned him a few Persian histories published by Asiatic Society Bengal having historical information on Sindh. His three-volume work was with Sindhi Adabi Board in 1956, but their publication was delayed and these volumes were finally printed in 1973, 1983 and 1986. The book lost its impact as much of material in it was reproduced in the writings of many scholars over twenty-five years, whether independently or copied but it is known that at least three of them had access to Wafai's manuscripts. Had it been published in 1956, Wafai would have been considered at par with the recognised top historians of Sindh.

I owe him this respect, as during my young age, it was his writings, which I knew through my maternal uncle Muhammad Saleh, had freed me from all superstitions, miracles of Pirs and their graves and became a free man. I must also state that crusade that Maulana started was so bravely and systematically propagated by my above uncle that village after village accepted the ideas and freed themselves of the intellectual slavery, before we were enslaved by the same group after the end of the British rule in 1947. The Sindhi Nationalism has its origins in Wafai as he stood for preservation of Sindhi language and literature. Sindhi society, its culture and glory of Sindh's past were systematically laid down in his various writings.

MOSQUE OF THE VILLAGE

This was built by my maternal grandfather Ahmed, at his own cost, but in order to see that it is not usurped by any Mulla, he did not allow it to be locked - tradition which has continued for a century to this day. He also did not allow any other mosque to be built in the village as it will soon divide the people and create competition among the Mullas, who will further divide the community. Since unburnt thick mud brick walls of mosque made it cool, people came and slept there on hot summer days. First Mulla of our village was Ibrahim, who had turned into the village Wadera by usurping share of land of every one of his relatives jointly purchased by them in his name from the government, but later on he refused to transfer the shares to them and had nominated his brother-in-law Habibullah as his successor. This Mulla was quite assertive in his traditional rights. In the month of Ramzan food came from every household to the mosque at sunset, for the persons to end the fast by taking good food. He sent away good food to his house on the very receipt of it and when there was call for sunset prayer, he served the inferior stuff to the holy fasters.

He also solemnised all Muslim marriages. Marriage in Islam is simple contract involving the consent of both bride and bridegroom and in case of minors that of guardians, in presence of two witnesses. Indian custom of two attorneys and two witnesses of both parties are not obligatory in Islam and has been introduced in Pakistan by the Indian immigrants after independence in 1947. The Mulla's reading a few prayers, blessing the couple are not obligatory, but are so much insisted by Mullas that without it the couples are considered to live in sin. There was no registration of marriage in those days and there is none in the rural Sindh even to day. Habibullah was quite a socialist. His charges from poor people were rupee one per couple and rupees five from the well to do. Charges were doubled for out of village places and in that case, luxury ride on horse or camel escorted by the invitees. He charged cash in silver coins. He preferred Queen Victoria's one rupee coin as it had more silver than the rupee coin of Edward VII or George V, because the Government of India was reducing silver content of coins, as per inflation from time to time. Since he was a hoarder, he surely knew advantages of Victoria's coins. He would not solemnise a marriage without first sorting this issue out. In all these cases he was shrewd businessman i.e., no less and no down payments. Best food was served to him at end of ceremony and also enough to carry home for his family. It was a customary bonus. The people were afraid that marriage may be desolemnised; if he gives a statement that he read wrong blessing (Dua). He also performed mass scale marriages, when two to four

parties exchanged girls. In all such cases, though a combined Nikah ceremony took place, but he charged fees for each couple separately.

In case of death he gave final bath to the male deceased to purify him to face the enquires of angels in the grave. His wife did so for the women. He was sometimes called to make dying man read "Kalmah" so that his or her sins are forgiven. He was paid in kind for funeral services. Although our village was called that of Mullas (Mullan-jo-Goth), everyone knew and could perform rituals, but as it brought Habibullah some financial benefits, nobody interfered in it, as it would end into quarrels. He got all clothes of dead man, including shoes and rings, if he wore any. On my maternal uncle Muhammad Nawaz' death in 1929, he got everything of his personal effects, but one very costly and unique head-wear (Loongi), worn only by landed aristocracy was kept back. One day he called my maternal uncle Muhammad Saleh and told him: "I saw Muhammad Nawaz in my dreams with naked hair and looking miserable. Please do something about it." My uncle bought a white Japanese fine Muslim (Malmal) cloth and gave it to a poor man in his presence and told Habibullah: "After you have witnessed this with your own eyes, I hope you will not see my brother with naked hair." In those days keeping head uncovered was considered an act of immodesty unlike today when covering head or using veil is considered a sign of backwardness and conservativeness, even for bald headed men. His greed was known even to school children and one of them said that as soon as he gets up in the morning, he reads the prayer: "*Ko ding mar, ko ding mar, ko ding mar*" (meaning O God, kill a rich person, kill a rich person, kill a rich person). By late afternoon finding no hope he prays: "*Jehro tehro kar, deinh na khar, jehro tehro kar, deinh na khar, deinh na khar*" (meaning O God. kill any one, do not spoil my day, kill any one do not spoil my day).

Habibullah cannot be blamed as an isolated case. This was true of all who belonged to his profession. A friend of mine in Karachi in 1981 told me that a Mulla in his neighbourhood has four mosques in his possession. He has engaged four Moazins for Azan (call for prayers) and four Pesh-Imams for leading prayers. He gives both these groups Rs.200 and Rs.400 respectively a month, plus food that comes to the mosque specially that before sunset prayers and also to take home for family and, if enough was received in quantity, to last him 24 hours. He has two Suzuki pick-ups to haul all food that comes in his mosques in the month of Ramzan and afterwards, to food catering hotels and restaurants of Karachi under contract. When a person is dead, he sends a group of boys to read Quran. His charges were Rs.50 for a child and Rs.100 for an adult and his own fees ranged from Rs.500 to Rs.1000, for this service for one hour. His fees for solemnising marriage (Nikah) varied from party to party, with an average of Rs. 5,000.

These are petty Mullas. The upper cadre ones who called Maulanas, Ulemas, Muftis etc., charged Rs.25,000 to 100,000 from the very rich and rarely solemnise marriages of poor. It is prestigious to call them and also prestigious to pay them heavily.

Recently an employee of mine entered into marriage proceedings an arranged marriage. The in-laws insisted that the Haq Mahar (bride's gift) should be Rs.600,000 and payable to the bride on demand by her. The groom, a practical person would not agree to enter into this contract. The demand came at the last moment, much to his surprise. He won over the Mulla by promising a payment Rs.2,000. Mulla asked the father of bride to name Mahar and also asked for his fees in cash in advance, at rate of 5% of this amount. Hearing figure of 600,000 he told him that he had three daughters and his intention as appeared to him was to get Rs.1.8 millions from three of his son-in-laws, get all three girls divorced and live on that money for rest of his life. This being an un-Islamic act, he was not going to preside over the ceremony. The father agreed and came down to Rs.150,000. The groom sitting next to him was told by him to keep quiet. The Mulla filled the first copy registration form, took signature from the parties and witnesses, but also took signature on 6-7 more blank copies from all concerned and went away. A few days later he gave a registered copy to the groom showing Rs.50,000. When approached by father of the girl the Mulla said: "I keep one copy for myself as a future witness to this marriage, one is in the office of Marriage Registrar and one in the Court of law, I can not give you a copy. You can go and apply to the Court for it. After hearing this story, I said to myself: "If this is what they are now, then the Mulla Habibullah of our village was an angel." He died around 1935 leaving a son Mullo Janu, the famous Mawali, who introduced narcotics in the village and also took these himself and made his living from their sale.

The single mosque in our village has been centre of activity of mosque-goers. Since pressed mud (Oadki) walls are good insulators against scorching heat of sun in summer and chilly nights in winter, men come and sleep there in summer afternoon and chilly evenings of winter. Besides prayers, there was no other religious activity or education at the mosque.

THE DRAG LINE OR EXCAVATOR

In the end of 1931 a small drag line was put on the job to excavate Khariro minor and while it was about half a kilometre from our village, the schoolteacher took all boys to show us (Sarkari Koder) or the government's mechanical spade. It has already cut through a portion of archaeological mound called Khirdhahi. My grandfather had collected some artefacts for me to play. I eagerly watched the machine. It was smoky, oily and noisy but had some human like features. It had an arm stretched from its shoulders, which could bend at elbow and with palm and fingers bent down to form a cup or a bucket having teeth like human fingers. To excavate the heavy hand was lowered, its weight and sharp teeth dug in and filled the bucket, which then was raised in the same manner as a farmer would fill his hand from a sack of grains. With hand still intact, the arm would move towards new embankment and empty itself like opening the human palm and then bend the arm and go for second cycle of digging. The other students were excited by the roar of machine, its smoke, navy-blue working dress of its Delaver (driver or operator) etc. I watched how ropes were being pulled and released by the driver to make it function like human hand. It moved so much earth that some a dozen men were working on the embankment to dress it and before they finished it, the second bucket was already dumping another cubic yard of earth. It was so interesting that the next day, I asked my grandfather to take me to the excavation site. He did. On the third day I walked myself after school hours and sat to observe. The driver asked me to come inside the cabin and see, but I refused feeling that I could slip and its huge wheels, cranks, levers and cables could churn me up. However, I found that this machine could do as much work as 100 men and I should take up to that occupation, but not as driver, whose looks, oily and dirty clothes and hands, I did not like. The machine completed its job on Khariro distributary and two minors Pirghunio and Phulji and was left nearly Phulji Railway Station to be loaded to other destination. It lay there for until 1945, when it was shifted.

Since it was on our way to the railway station and we passed within 20 feet of it, about 100 times a year, I examined its working with the help of winches, clutches, levers and wire ropes and before I was 15 years old, I thought, given chance, I would become mechanical engineer and would specialise in earth moving. Such was the determination that I passed B.E (Mech. and Elec.) in 1949, managed and manipulated to get scholarship for training in USA in bulldozers, scrapers, excavators, drag lines etc., with International Harvester and Bucyrus Erie, then the leading companies in their fields in USA, as well as the world and

on return increased the fleet of 13 bulldozers of Agriculture Department in 1953 to about 600 in 1968 and established 13 workshops in Sindh for their repairs, employing more than 6000 persons.

I also got training on two of my other childhood fixations, ground water and improved methods in agriculture and machines for it. I always remember the day I saw that drag line, which now is lying at Sukkur Barrage museum at Sukkur, as I could know from its model number and department's serial number.

DOOMSDAY OR QAYAMAT IS COMING - A PREDICTION

In the month of Ramzan 1351 AH and probably around second week of January 1932, a circular was received by my grandfather, which as I recollect vividly read as under:

“I Syed Haji Ahmed son of Haji Abdullah of Al-Madina Al-Munawar hereby inform all the believers in God and Prophet Hazrat Muhammad (MPBUH) and Islam that on 1st Ramzan 1351 AH, when I was sleeping in the Rozat-ur-Rasul (Prophet’s mausoleum), the Prophet himself told me in my dreams to convey to all members of Umat-i-Rasul that Qayamat will come in the year 1356 AH, on 30th Sha`ban and that will be the last day of yours on this earth. However, before that Yajooj and Majooj (Yagag and Magag) will appear like locusts and will eat away every green vegetative matter - trees, shrubs, grasses, weeds, grains and aquatic vegetation like locusts and will also wipe out all insects and many animals and the world will turn into scorching desert. This will be followed by the appearance of Dajal, a two horned beast whose horns or antlers will be as wide as the earth itself and it will indiscriminately kill animals and those human beings who are sinners, but many sinners will still be left to face Qayamat. On 30th Sha`ban will start the doomsday itself. The sun will come close to the earth and stand only one mile above it. Sun will melt all metals - iron, human made railway lines, trains, engines, ships, bridges etc.” Surprisingly aeroplanes were not mentioned. “It will be so hot that water on the land and in the seas will turn into steam and both sun and steam will burn the human being sinners. The day will be very long and under heat you will be roasted and almost reduced to ashes, but not die. Only those who are true believers in God and Islam and have offered prayers, observed fasts and performed Hajj, will not feel any discomfort on that day. I Syed Ahmed therefore want to inform you in the name of Prophet Muhammad (MPGBUH) that from today onwards you give up interest in worldly things i.e., purchase of property and accumulation of wealth, but instead resort to Khairat, Zakat, Nimaz, Salat and Ibadat and read Quran, Hadith, Maulud and do Zikir, Fikir and etc.”

“Further to this, if you make ten copies of this circular, without mentioning your name and send to ten different persons, you will not suffer on doomsday, because of delivering the message of the Prophet. Each reader is obliged to make ten copies of this message of Prophet Muhammad (PBUH) and circulate and if he fails to do it, curse of the God will fall on him and he will be worst sufferer on the last day of this earth.”

My grandfather read it and told my father to make ten copies, which he sent to ten villages namely Kiriya, Jakhpari, Nasrani, Nau Goth, Purano Dero, Jhatial etc. One copy was left in the house, which I read for some years. My father and uncle were sent to deliver this message. They were happy that for this pious act, they will escape the sufferings on the last day of the earth itself.

I was frightened by the story as a whole, but was also afraid that soon I am going to be eaten up by Yajooj-Majooj, but if I survive I am going to starve for want of food and wait to be thrown up in the skies on horns of Dajal. However, if at all I survive, I am going to be roasted by the sun. I felt that all this injustice was due to no fault of mine at all. I liked life as well as world, which was a fun and that will be gone before I became eleven years old. I also felt sorry for my mother, father and other members of family and my toys and books, as they will burn up before my own eyes.

Soon after these circulars, Waiz Maulvi Qamaruddin of Shikarpur and Maulvi Muhammad Suleman Noonari of Thariri Mahabbat, were invited on two different dates by Wadero Allah Warayo to our village and their fees paid by him. They lectured in the mosque almost until midnight about Qayamat in the same tone as in the circular, but in great details told the people to prepare for the Next World by not thinking of property making but rather by poverty and hardship, so that they earn better deal in the eyes of the God, failing which they would go to hell, be roasted alive in fire for thirty million years. Maulvi Suleman was a good stage actor. He would make people weep and cry by describing hardship to Imam Hussain at Karbala and next would narrate love story of Yousif Zulekha and make people laugh. Their lectures ended with half an hour's prayer requesting God Almighty to give long life and prosperity to Wadero Allah Warayo and his family. My mother and auntie heard them and being frightened started to pray five times a day, but soon gave up. I heard two three such lectures (Waiz) in 1933-1935. This coincided with Wadero's purchase of Sukkur Barrage lands near our village virtually secretly; specially there were no buyers from the village due to role played by the two Maulvis.

Some thirty years later, I was told that these circulars were engineered, so that poor land-less villagers of Sindh should not take to purchase of five million acres of the government agricultural land expected to be released after opening of Sukkur Barrage and zamindars as well as outsiders wanted to grab more land.

SEPARATION OF SINDH FROM BOMBAY PRESIDENCY

I had seen map of Sindh in the school and in early school days knew that it was an area where Sindhis lived and spoke Sindhi. On Eid-ul-Fitir in 1931, which I have calculated to be 8th February, at the end of prayers, my maternal uncle Muhammad Saleh addressed the gathering to form the village branch of Sindh Azad Conference for "Separation of Sindh from Bombay Presidency". He proposed names of the office bears etc., and finally it was agreed that:

President: Maulvi Muhammad Qasim.
Vice President: Allah Warayo.
Secretary: Wadero Muhammad Saleh.
Treasurer: Haji Panhwar.

(This news appeared in the Daily Al-Wahid on 24-02-1931 and is reproduced by Dr. Zardari in his book "Separation of Sindh from Bombay".)

After prayers they enrolled members at fee of one anna per head. My maternal uncle filled the forms, my father signed the receipts and gave to the members, retaining the counterfoils. Everybody was carrying paper and I stood by side of my father and asked for one. He said: "You want to be a member". I nodded. He wrote my name, gave me a slip and put one anna in the pool money already collected. I was happy that I was a member and other schoolboys were not. When school opened a few days later, the boys asked me to bring receipt to the class to show them, but I did not, for the fear that they will tear it. About a month later all members received a two pages sheet, on quarter of foolscap paper. I got one too. I could hardly read it. It described advantages of separation of Sindh from Bombay Presidency. As a child, my own concept of Sindh as a province was totally different. I thought that with new developments, our village will be upgraded to the level of town of Dadu. The new district of Dadu was being planned from first April 1933 and it would become a large and important town like Larkana. Karachi will become like Bombay. Our own school will have at least thrice teachers and a Tapedar will be head quartered in our village like Purano Dero. I was too happy that condition of life and standard of living would improve along with our improved village.

Since that day I thought, I had to understand Sindh. This childhood psychological fixation with Sindh, led me to read more and more about Sindh. I started reading and collecting books on Sindh. They were not classics, but

essentially converted history, geography and some government reports. In 1949 I was preparing to go to USA and sold all these books to a Karachi second hand book dealer for Rs.3,000, though I was sorry that it was 17 years' collection. I also felt sorry that it contained many Persian books published by Asiatic Society of Bengal, its journals and translations of Persian texts, all of them became rare in a few years. As I read more, I developed an urge to collect more information. During my school and college days, I was collecting information mostly on history, historical geography and biographies pertaining to Sindh. Another outcome was the urge and excitement, I felt in visiting various places of Sindh, whether important or not, but they always spoke to me that my ancestors in many a millennia may have wondered there to search for food and shelter. I shared all my feelings and sympathies with them. In Thar I came across many dry wells. I almost had tears, when I thought that my ancestors had dug that well for days and months or even a few years and were totally frustrated and probably their cattle had been doomed for want of water. Every place I have visited in Sindh, I have tried to examine all kinds of antiquities and sometimes getting no clue to a deserted place I have said to myself: "All of us who are living in Sindh had common ancestors, because we all have shared Sindh's environments and products equally, since modern man appeared on scene in Sindh - some sixteen thousand years ago." Selling of books on Sindh in 1949 was not the end of my psychological fixation. The urge grew in absence of them. In 1950 on way to USA, I dropped in London, but for limit of weight allowance I purchased only three classics, namely; 'Antiquities of Sindh', 'Mehran of Sindh' and 'Indus Delta Country', but I obtained the addresses of rare book sellers in London and by 1953 had imported in USA about one hundred books on Sindh, which I sent shipping by sea to Karachi. In 1954, for as Agricultural Engineer in Sindh, I launched a programme to investigate ground water in Sindh. This programme led me to read and understand Sindh as no man in the world before me had done for Sindh and is discussed under "Well in the village:- Eureka".

IN SEARCH OF CALORIES AND VITAMINS

I was born with low weight of about five lbs or a little over two kgs. I do not know the reasons but my mother was thin and tall and she probably had gluten sensitivity, which I too have. The year she was married, no woman in the village observed Purdah (seclusion) and all of them helped their husbands and families in agriculture fields. Like all other women she also worked in the field, helped in feeding cows, buffaloes and bullocks and jointly with my two aunties, cooked food and churned yoghurt to produce butter and butter milk or Lassi (Dudh). This toiling and lack of rest may have affected all her four children. She accumulated no fat. For a woman to get pregnant, she should have twenty five percent of body weight as fat. She did not produce a new child every year as is common for rural Sindh. There was a gap of almost three to four years between the births of all of us - brothers and sisters. I did have gluten sensitivity and consequently loose motions. For my good body growth, they bought wheat to feed me this grain, rich in proteins, against then the staple food - rice, which was gradually replaced with wheat, after opening of Sukkur Barrage on 12-01-1932. Wheat is rich in gluten (Medo), a poor form of protein, which I was not able to digest, but it was forced on me as nobody in the world then knew anything about disease called "Gluten Sensitivity". It was not until in late 1950's Dr. Sir Avery Jones, an English doctor, discovered that forty percent children and five percent grown-ups in white race suffer from it. We are classified as white race due to shape of our faces. My father stood at 5'-11" in 1962 as hospital report showed, when he was 57 years old. My mother must have been 5'-6" as my two sisters (measured by me) had the same height. I ended at 5'-8½" when eighteen years old. This probably was due to gluten sensitivity.

How did I survive then, I think the brain has in-built mechanisms to help a person, if he/she is not suppressed by parents and is allowed not only to decide for oneself but also is allowed to spend family income within limitation on food that one's body adjusts to. Thanks to the whole family who treated me with extraordinary care. They served me butter, sugar and bread of wheat for breakfast along with yoghurt. I put sugar in butter and yoghurt and ate both with only small quantity of wheat bread. For lunch it was again bread mostly with pulses, but on the average once or twice a week with chicken or fish. For dinner it was rice or rice bread with pulses or asparagus (Palak) in winter and one litre or more of milk to drink and if need be in instalments. For lunch butter milk (Lassi) was available, but I was discouraged to take it, as according to the common belief best part of its energy - butter, had been removed. They did not know value of

calcium and protein in milk. Before Sukkur Barrage there was no water for agriculture in winter and ground water was brackish, so no vegetables were grown in most of Sindh. They were grown around some towns on ground water for needs of Hindu businessmen living there. By large Hindus of India were vegetarians. In Sindh fresh vegetables were rare and Hindus partook same food as Muslims, including goat and sheep meat, chicken, fish and eggs. Sindhis as Buddhists were also taking meat in 641 AD, when Heiun Tswang a Chinese traveller condemned them for it, without realising that if water was only available for four months a year, how could they grow vegetables year around. The religion has to adjust according to socio-geo-economic conditions or perish. They tried to take fresh green and yellow vegetables in addition to pulses and meat. Sindhi Hindus in general were slightly taller than Sindhi Muslims as I observed, due to better and healthier (high calories) food and also due to presence of vitamins and minerals in vegetables.

As I have said before, it is brain of a child which guides him and I started looking for fruits and fresh raw vegetables, cherished them and gathered them without assistance. So long I did not go and play with cow and buffalo herds, I was free to roam around the village. We had about one and half acre depression one third of a kilometre to the north of village, belonging to my mother's maternal uncle Hafiz Musa. Without man's effort, it grew Kunni, Paban, Kum, Beh, Lorh, etc. It was free to all except Beh, which he sold, but anybody could dig it out and give the owner fifty percent of harvest. Kunni was a fresh salad vegetable. It was brought in the house, when I was small but when about 6-7 years old I would walk, bathe in water, pull them out and eat the stems, which were as long as the depth of water and as thick as pencil. The flowers of Kanwal (Kunni) developed seeds called Napo immediately after pollination. These were of size of sesame but soft and tasty. I ate them along with petals as salad right there in the water. When they developed in size and were called Paban, I harvested them from water and eaten them too. I was able to collect them from mid-July to mid-October and occasionally up to end-October. Beh was eaten fresh as vegetable or was dried and stored for some time. Kum was a root and contained protein, carbohydrates, fats, vitamins and minerals.

During summer they also harvested two more wild fruits of Khabar and Kirir called Peroon and Delha respectively. Hindus made Achar from it. These two fruits were collected from wild by women of the village and distributed and occasionally sold very cheap. As both did not have post-harvest keeping quality, they were disposed off the very day. These two were available for only couple of weeks each, in summer and they formed a source of vitamins and minerals for me. Lesuro was another fruit, somewhat tasty but messy to handle. It grew wild. It has been commercialised in India. Green vegetables were rare but gourds

which did have a few days keeping quality were bought and used, Shalgham and Meho were common in early summer.

Potatoes were common in winter. Onions at different stages of growth were available year around and cheap and could be stored when fully ripe. These were also eaten raw by some people but my grandfather had ruled against it as it produced bad smell in mouth. From January to March chicken peas (Mutter) and horse bean (Channa) were available in green stage. They probably had some vitamins. The leaves of the two were also used as salad or vegetables, but the former caused me stomach problems and the later was marginally tolerable. However, the best season of fruits for me was at early March to mid-April when Ber (*Zizyphus rounifolia*) was ready for harvest. There were a number of wild trees growing around the village and were free for all. A neighbouring boy of ours, took me to one Ber tree in their land, climbed and shook the tree. I collected the fruit and he took half. Later on I visited the same tree by myself and found that it sheds fruit daily, so I visited it regularly and later on many other trees. When I was eight year old, I learnt to climb some eleven trees around the village to collect berries. No other boy took this trouble. As I collected more berries than I consumed, I dried them in sun and quantities were large enough to last up to end of May. Storage beyond May resulted into fungal attacks and total loss. I thus had adequate assured supply of some sucrose, fructose, vitamins and minerals from mid-January to end-May. This kept me disease free except malaria. Post-barrage addition to food was carrots (Gajar), sweet potato (Lahori Gajar), and many other vegetables. After opening of Sukkur Barrage many new fruits became available, but by that time, I was over ten years old.

There were no mango trees probably in the whole Dadu Taluka at least on commercial scale, as they needed perennial supply of water. Mangoes were grown on ground water, lifted from wells in fresh water areas, which accounts for only ten percent of area of whole Sindh and fruit was brought by Hindu shopkeeper once or twice a week for sale. Mangoes were raised from seedlings and were of variable size and quality. They were available in July-August.

In brief this type of food meant marginal health, specially in view of my gluten sensitivity and still wheat as staple feed. I had developed a taste for sugar both powder and large crystals called Misri. I took substantial quantity of sugar daily until age of ten, giving me substantial part of my energy requirements. I bought sugar from Hindu shopkeeper on loan debited to my father's account, who had told him not to restrict my sugar demand in small quantities. I never enjoyed local sweets, biscuits, noodles and cakes, all of which are made from gluten but instead kept Misri in my mouth, to dissolve it gradually.

Today at the age of 77, I realise that brain is wonderful thing to guide one to survive and also to survive itself, provided it is not suppressed in the childhood by external forces like; parents, neighbours, friends, teachers and preachers. It seems to me that we all are slaves of our brain, which keeps us fit, so that we provide nutritious blood to it. As long as we do it, it keeps us fit too, but when we fail, it commits suicide.

The kind of poor diet all over South Asia, led ancients to create some taste in food. This was done by adding all kinds of spices and varieties of dishes from the same food ingredients.

Non-perennial supplies of water in the canals and lack of rainfall had restricted people to adopt monocultures of rice, jawar, bajri and cotton in Sindh and many other parts of South Asia. Sporadic rains led to poor pastures on which animals foraged. The animals raised were not in large numbers, enough to support meat requirements. Fish from the Indus was cheapest animal protein, costing one third of goat meat on weight-to-weight basis and had more meat than goat as the latter's meat had more than 50% bones.

Children need high amounts of carbohydrates and eat frequently. The village shop carried many things, children bought on barter i.e., they brought grains from household stocks, stored in silos called Gundyoon, to sell. The Hindu shopkeeper kept Revrhyoon i.e., sesame (Til oil-seed) coated on sugar pieces, Bhugra or horse beans with or without sugar coating, Patasha, Misri (large sugar crystals), soft dates (Katal), Chuhara (Kharkoon), red powdered sugar (Musti) and red lump sugar or gur (Ghur). I bought these two or three times a day in exchange of small quantity of grains. A Hindu roving hawker from Purano Dero used to bring steam cooked Beh and horse beans (Channa) in winter. They were extremely tasty due to steaming and spices added to them. My mother told me not to eat that stuff which was surrounded by flies and instead cooked her own. She could steam it in cooking pot (Degri) by making a frame of wooden twigs to fit in the widest part of vessel as a sieve. This cannot be done in ordinary cylindrical cooking pots, without special frames of inert metal.

This type of stuff was uniformly available throughout Sindh and was eaten by children of Hindus and Muslims, rich and poor alike, as it was not costly. They could be called as children's national snacks.

It is worthwhile to discuss the various religious attitudes towards meat. Pig is very efficient animal in converting feed to meat and converts twenty percent of feed to meat, provided it gets food of its choice i.e., grains, nuts, fruits, vegetables etc. Fed on grasses and fodders it gains only seven percent like goat, sheep and cattle. It prefers to eat all that human beings eat, except animal protein and thus

is serious competitor of human beings for food. Due to the same reasons it was eliminated in river valleys like the Nile, Mesopotamia and the Indus, much before Jews declared it as Haram about 3,500 years ago. In Sindh it was eliminated earlier probably during Indus Culture times.

Bull was worshipped in Mesopotamia and possibly in Indus Culture. Aryans ate meat and aridity around 3000 to 2500 years ago caused meat shortage. To increase milk production, Brahmans made cow holy, worshipped it and prohibited its meat. They prohibited partaking of all kinds of meat by people except to themselves. Buddha prohibited all types of meat to everyone thus breaking Brahmans monopoly to eat meat. Jews prohibited pork. Islam supported Jewish stand.

In Thar until 1970 Hindus formed eighty percent of the population. They were considered Schedule Castes. They took sheep, goat and cow meat through necessity and were looked down up by High Caste Hindus.

To face meat shortage, Government of Pakistan has declared two days a week as meat-less days.

OUR POULTRY

Meat is necessity in towns in Sindh and a luxury in rural areas which produce it. However, all villagers of Sindh knew that for sound health animal and fish meat is an essential ingredient and they all raised chickens from local broods. In pre-Sukkur Barrage era, when rice was the only crop in summer in Sindh, everybody saved straw and stored it in November and December each year to be used as feed for cattle for next ten months.

I am not sure whether everybody else knew that threshing of paddy by trodding under feet of bullock moving round and round over it, was an inefficient method, which left some grains still attached to paddy stems and was removed with straw. That chicken can remove it efficiently was known in our family and straw to be fed to cattle in the evenings, was separated from bails and spread on the ground in the morning and chicken driven there to feast. They did their job in couple of hours, when the straw was turned over. By noon they were brought back and given some chickpeas very rich in protein to eat and rest. They were also given food scraps left by the whole family. They were not ready to be slaughtered in six to eight weeks but rather took twenty-four weeks. When over twelve months old, they were too old for kitchen use, unless cooked for longer time under pressure, which was achieved by metallic lid kept over aluminium cooking pot and heavy brick kept over the lid to make it air tight.

We raised chickens in large numbers and ate them too. I guess in some years when I was less than 10 years old, our kitchen turn out was about two chickens a week, but it fluctuated.

As the main chicken feed came from food scraps, it depended on the size of our family. It reduced as my mother and my uncle's wife died and I left the village for studies in Mehar High School. It further reduced in next few years as my father's sister and grandfather died. Chickens also eat some left over from animal feed, specially green grass and oil-cake scraps. Chickens were able to extract wild grass seeds from the dung of buffaloes, cows, and bullocks. The number of milk animals had to be reduced as there were no women to churn yoghurt for extracting butter. Rice was replaced by other crops on opening of Sukkur Barrage, so this source of chicken feed too dwindled. In brief overall reduction in poultry in rural areas started before establishment of Pakistan in 1947.

One effect of availability of chickens in my childhood was, my preference for its meat. In 1957 having been over-worked with the government job and not eating in time, I developed digestion problems and my friend Dr. Ali Muhammad Chaudhry advised me to take boiled chicken meat. In 1964 Dr. Sir Avery Jones of London diagnosed my gluten sensitivity and I had to give up wheat, oats, barley, rye, jawar and bajri, all of which contain gluten. My food since 1957 is 500 grams of boiled chicken including bones for lunch and the same for dinner with rice or potatoes. In view of this I thought description of poultry deserves special place in my life, though my friend Muhammad Khan Chawro once said: "On the day of resurrection, all chicken will complain to the God that Hussain Panhwar has killed more of us, than Halaku killed your Muslims."

OUR VILLAGE CARPENTER

My mother always wanted to get for me what her brothers had, however inferior our house was of the low family income. Her brothers had two cradles - one in the house and one in Autaq. The better one from Hala was lacquered. My father called Allah Bakhsh carpenter, who did all minor services like making bullock carts, bullock yokes, wooden frames of animal drawn ploughs, handles for small tools, yoghurt churning heads, pulse grinders, flour plates and rollers, wooden spoons etc. He belonged to village Thahakann, five miles away near village Arain and served some eight to ten villages. He discussed with my father who in turn told my mother that according to Allah Bakhsh, lacquered material has willow (Bahan) as base wood. It is not strong and in time lacquer would chip and appear shabby and if it breaks at the joints, you cannot repair it. If you get some cured Tali wood (Shesham) it is good for turning on lathe and he will do a nice job. The next best is Neem specially for frames. My father got Neem tree trunks from different sources and carpenter was set on the job. The place of work selected was our neighbour's empty barn. I was six years old then. Since I had school vacations, I sat with him observing what he was doing, with what and how? He first sawed the wooden logs in to planks and cut planks to closest sizes suitable as various members of frame. He made a heavy U-frame which was his wood lathe and on which he had to turn ten pieces to four different sizes. The pieces were held in position by heavy nails one passing through each of the two sides of U-frame. He marked the square pieces, one end was turned round and around which he passed a rope for to and from rotary motion. Then he used a long curved chisel to give ten pieces a fine shape. Next he cut slots in some pieces and made square peg type end of other members. After one month the cradle was complete. Watching him for a few weeks, I understood principles of carpentry and jointry. I then watched the joints of tables, chairs, beds, other cradles, doors, windows, king and queen type beams in the houses, Autaqs and schools and concluded that if we had one or two carpenters in our village and plenty of wood of various trees, as was available or could come from riverain areas only two miles away, these carpenters could turn the whole village into a place worthy living with various items of furniture, cheaply made for everybody. It only needed initiative and desire to improve living standards.

My first chance to learn carpentry came thirteen years later during the first year engineering in NED Engineering College Karachi and I put in 200 hours in one year. This job consisted of various intricate joints requiring high precision,

beyond the knowledge and ability of Allah Bakhsh. In 1951 I saw carpentry machines and their working in USA. I thought that I could establish a carpentry shop, mass-produce furniture for every rural and urban household in Sindh at affordable rates from local timbers of poor or high quality. I also studied books and manuals on finishing, painting, polishing and waxing of wood while in USA. I still have a collection of books on these trades.

On being appointed as Agriculture Engineer in Sindh in 1953, I ordered a set of power-operated carpenters' tools, consisting of universal power saw, band saw, wood lathe, surface planner, two side wood thickness planner, mortiser, drill, sander, and all kinds of hand power tools. They were installed in Tando Jam workshop in 1955 - the year when Agriculture College was shifted from Sakrand to Tando Jam. With the help of these machines and locally made jigs, we built total furniture for hostels, laboratories and most of furniture for classrooms of college. We also built ten feet high and sixteen feet long racks for agriculture workshops. We had engaged five carpenters on contract to run machines, to produce various components on mass scale and nine carpenters to assemble them. Our permanent carpenters acted as supervisors' in-charge. While doing this work, I remembered the basic training that I got while watching Allah Bakhsh the carpenter of our village.

Recently I used mango and Jamman wood to build total furniture required for our house in Karachi, including its doors and windows. Very few people know that once finished Jamman wood is indistinguishable from teak. Other woods attacked by termites can be protected by dipping them in diesel oil for a while.

OUR VILLAGE SHOEMAKER

In the hierarchy of South Asian castes, the lowest ones are butchers, tanners and shoemakers. Sindhi Hindus would partake meat of poultry, goat, sheep, duck, etc., so long one did not kill it himself and also if the sin of killing a living being is added some of else's account. Such beliefs sometimes totally funny have been developed through economic necessity and deliberately religions are subordinated to economic advantages. Nepalese, pre-dominantly Buddhists, do not eat honey, because it is food that bees collect for themselves to be used during winter, when there are no pollen to collect, in miles, but all the same the Buddhists collect it and sell it to the Hindus of India for the latter to eat and become sinners. The butchers of Sindh by necessity had to be Muslims, because they had to read "Bismillah Allahu Akbar" three times, while cutting off the throat of animal to make the meat Kosher, before Muslim partake it. Sindhi Hindus considered it normal and never objected to this type of slaughter. Butchers in Sindh invariably were Muslims, but in Hindu dominated areas of India they were untouchables. After butcher slaughtered animal belonging to any one, he dressed and disposed off the meat to the owners and skin was handed over to him against his fees for slaughtering the animal and dressing meat. He sold skin to tanners.

Our village shoemaker Muhammad Ramzan was also a tanner. Once my grandfather slaughtered a bull of Eid-ul-Uzha and turned over the skin to this shoemaker. I was curious about what would happen to the poor creature's skin. Learning that it is being processed at latter's house, I went there to have a look at it. It had been stitched to form a sack, with front and rear leg skin still attached to its main body and filled with water. No water was leaking out of it except a little out of some stitches. It had been filled with water and chipped bark of acacia nilotica (Babur) added to it. This bark is very rich in tannin, which digests soft parts, blood vessels, nerves etc., attached to inside of skin with help of anaerobic bacteria. The digestion products are gases which are so smelly that one cannot go closer than 50 feet from the sack. For a minute I glanced at the rig from which the skin was suspended. It consisted of three wooden columns forming a tripod, sufficiently heavy to hold load of more than a ton. The skin near the neck, where it was separated from the head, had been tied to 3 legs of tripod to keep it vertical. He had three to four rigs of this type in his house at a time. Any water dribbling from stitched parts was collected in a conical burnt clay pot fixed into the ground and the women folk of household were periodically picking this

water and putting back into the sack. After 15-20 days, they smelt no more and skins were removed from the tripods and allowed to dry.

I had seen the tanning and shoe making at the same time. Tanning was done inside the compound wall of the owner but in the open yard at corner of which, he also had buffalo shed. His and his cousin's wives, as well as his cousin's mother looked after animals and tanning. The mother was also Dai or midwife and served some neighbouring villages too. Tannin had affected the hands of all members of family and they appeared unnaturally reddish rough and dirty.

The shoe workshop was an open shade outside the compound wall and was open to everyone. The shoemaker made shoes of only two designs - one for males and the other for females. On both of them silver thread work was done for beauty. The silver work was done elsewhere and cost of shoe depended on the type of silver work. For female shoes in addition to silver cotton or wool thread decoration was done in multi-colour designs. The toe and heel pieces of female shoes were also decorated with silver work. Female shoes did not have heels and back portion going towards ankle but work was done on the place where women keep their heels. The toe piece in both male and female shoes was so small that the whole upper surface of foot was empty. In case of females there were no straps or buckles to raise the shoe while walking with them on, so the women had to drag their feet along with the shoe and blow dust behind them in the dirty streets of the village.

Shoemaker Ramzan told the people about the properties of skin, which he stretched on the floor. He marked it in seven categories according to quality, strength and the price before cutting it. These were; upper part along the spine, two sides of ribs bottom portion of living animal which once was stomach, upper part of rear leg, upper part of front leg lower part of rear leg and lower part of front leg. I have verified from the leather industry specialists and his classification is considered as accurate. He charged the price of shoe according to seven categories of skin. The best quality was worn by men while ploughing and would last years. The last two were weak skins and used for soft female shoes. For children he used goat and sheep skin, again divided in seven qualities. He made shoes for me. They were highly uncomfortable, actually meant for flat-footed people. After going to high school I discarded these shoes in favour of common stern shoes forever. The knowledge of Sindhi artisans and quality of workmanship was not lacking, but society had become so stagnant over centuries that no improvement in design had been allowed. I saw that he made all male and female pairs of shoes, the right and left pieces of which were similar and interchangeable, making shoes uncomfortable to everybody's feet. There were no heels, no adequate supports or quadrants on both sides of the foot and therefore they collected dust and dirt, which had to be cleaned regularly. The

dust of village had lot of sodium chloride which on collecting over feet caused itching. Tough leather not softened with suitable oil, caused blisters. The shoemaker did not have enough shoe trees to suit large shapes of feet, he catered for.

These artisans in general were more progressive than the farmers. They dealt in cash whole buying and selling. They were better off financially than the latter. The first girl of our village, who went to the primary school was daughter of this shoemaker Ramzan and it paved way for other people of our village to send their daughters to school. In this respect he was pioneer of female education.

Hindus and Muslims all alike wore similar shoes. Hindus did not mind wearing shoes from buffalo hide and always asked the shoemaker to ascertain that it was not cow hide. The whole village knew that it was difficult to distinguish between the two once shoe is made. The Mochi himself knew that buffalo hide was stronger than that of cow and latter was slightly softer. Men used these shoes while ploughing the tough and cloddy clay soils, which could injure bare feet. My father asked him to make a shoe for me. He said: "It has to be a soft from goat skin. Most of female shoes are also from goat or sheep skin." He made a shoe totally unacceptable to my foot. The shoes he made were for flat-footed people. When I wore it and walked fast or ran I was invariably hitting my ankles with it. The defect in design of this shoe, used probably for centuries, was that it had no heel to adjust for flat and curved feet and no vamp to cover the back of foot. Toecap covered only toes or fingers of feet. Quarters were not wide and were directly connected to toe cap allowing dust and sand to get in from sides. For the sake of beauty a decorative shoehorn was attached at the back end by stitches, which extended inside the horn and invariably was hard on foot. The ladies shoe had only small toe piece and bottom, without heel or vamp. Such a shoe with a reasonable size heel and called mules, are used in Europe for indoor purposes. The torture though different from Chinese tying female feet, was not without damage to the female feet. The shoemakers did not have adequate sizes of clogs, patterns, shoehorns to make shoes for all sizes of feet. Thus, end product was misfit to everybody.

I really hated this kind of shoe and had to wear it till I went to high school and purchased a modern shoes introduced by Europeans.

The shoemakers called Mochis, were low caste Hindus in India. In Sindh by becoming Muslims they had not improved their lot. Muslims also avoided to eat with them or invite them to marriages and parties, but they were allowed to the mosque or join in Eid prayers. Since they sold their shoes by cash transactions,

financially they were better off than Muslim tenants, farmers and small landholders. Acceptance of Islam by untouchables in some cases had not improved their lot.

BOOKSHOP AT MAKHDOOM BILAWAL

Makhdoom Bilawal is most revered Sufi Saint of Dadu district, having been crushed to death in oil-expeller by Shah Beg Arghoon near Talti, wherefrom his body was brought and buried at his ancestral village. He had willed that no structure will be raised over his grave and for 470 years after his death (1524 AD), there was no structure, no saint worship, no dancing girls and no Malakhra, except a monthly fair for shopping and lectures in the mosque. A beautiful mosque was built there by Mahboob Ali Waggan, a Zamindar of Warah Taluka in early 1930s. The fair is held on the night between first Thursday and Friday of every lunar month. It is six miles from our village by road and four miles as crow flies. Some people of our village used to take shortest route through the bushes and fields, but large-scale cultivation has hindered this route. There was no roof over his grave, nor did his followers Jam Nizamuddin, whose tomb does not have the dome. It was in 1988 that a Panhwar Hasan Jamadar, who claims to have prospered due to blessings of this saint, built a dome above this saint, much to the protests of G.M. Syed family, who are also disciples of the Makhdoom.

At age of about eight I accompanied my maternal uncle Noor Muhammad went to Makhdoom Bilawal. We had taken with us meals for dinner and breakfast. I was delighted to be there, not with the temporary bazaar, sermons that Maulvi Muhammad Suleman Noonari of Thariri Mahabbat and Waiz Maulvi Qamaruddin of Shikarpur delivered with eloquence, but with two bookshops right inside the entrance of the mosque and well covered against sun and rain and lighted by Petromaxes. They were allowed this unique position as they were selling the Holy Quran, Hadith, Tafsirs and other religious texts, but in addition they were also selling Sindhi books published by Pokardas and Sons of Shikarpur and other publishers of Sukkur and Karachi.

These publishers had served the same purpose, as Sindhi Adabi Board, Institute of Sindhology and some others are doing now. The shopkeepers who had kept books on carpets laid on the floor, allowed people to examine books. My uncle bought a book and I also bought one and we allowed him to keep these separately and told him that we would pick them in the morning. With newly established customers, he allowed us to examine and read books. I remember having read two books "Ali Baba and Forty Thieves" and "Allauddin and the Wonderful Lamp" during the whole night. In the morning I picked up the book "*Dahriyun joon Kahannyoon*" and paid six paisas for it. For next few months, I

thought that these stories were true and planned to go to Iran to search treasures of Ali Baba some day. But was shocked to learn that it was a fiction. The stories however had such forceful influence that I laid hands on four volumes of Arabian Nights (Alaf-Wa-Laila) in Sindhi, from my maternal uncle Muhammad Saleh and read them. In war with India in December 1971, I was stranded in Quetta for three weeks. I saw "Arabian Nights" in 16 volumes translated by Sir Richard Burton, with a friend. I borrowed them volume-by-volume and went through all volumes. This version had beauty of language surpassing the original Arabic, it is said. When it described physical beauty of females, talks, gestures, makeup, ornaments etc., and virile physique of males, it surpasses pornographic limits, not at all properly expressed in Sindhi abridged versions. I read is not for stories, but medieval mind of Arab and the language. Latter on it cost me fortune to lay hands these volumes and I have preserved them.

For the next two years after first visit to Makhdoom Bilawal I would go there every second or third month and whatever was my pocket money collected up to then, was invested in books. In 1935 I went to High School Mehar, where I had access to more books and then I did not go to Makhdoom Bilawal for books any longer. But visited it twice to hear G.M. Syed and to see a friend Fakir Muhammad, then a teacher at Baghban, a town nearby.

This childhood psychological fixation of giving priority to purchase of books over other necessities of life has continued in my life up to this advanced age. I learnt preservation of books from my mother, who periodically took out my father's books from the wooden box, cleaned them and re-packed them. These books had good leather binding and were covered both out and inside of hard cover binding with fine printed cloth having colourful floral patterns. She would clean books one-by-one, hold each one in her hands, lower her eyes on it and kiss it before keeping it back in position. Since books filled the box to the top, they had to be replaced in an orderly manner so that lid is closed without damaging them. I learnt respecting, packing and preserving books of all kinds from her, collecting books from my two maternal uncles and father and reading them voraciously from my maternal uncle Muhammad Saleh.

However, to convert theory into practice was my own innovation, developed from reading, thinking, observing, experimenting and trying again and again after initial failures. My mother kept the religious texts like; Quran, its commentaries Hadith, Khutbah etc., on large decorated wheat straw baskets hung from ceiling. They were holy and had to be kept over the heads of people walking in the room. I still keep all kinds books pertaining to all religions in racks at height of at least seven feet, though I hardly read them. I can read Persian and some 105 histories in Persian having material on Sindh are kept in

the top racks at height of ten feet, only as memory of my mother, who preserved books of my father.

Today in 2003 AD, I still give procurement of books, as top priority to other necessities of life and spend most of time in reading and writing, with utmost pleasure.

My present collection consists of:

- | | |
|--|----------------------|
| • Books on Sindh (non fiction). | 15,500 |
| • Books and bulletin on fruit crops and agriculture. | 14,500 |
| • Books on Engineering, Environment and Technical Reports. | 20,000 |
| • Books collected by Mrs. Farzana Panhwar on bio-technology, environment, genetic engineering, gender issue, social works, farm chemicals and computers etc. | <u>13,000</u> |
| TOTAL | <u>63,000</u> |

These books are properly stored in racks rising to the ceiling in four rooms, two in Karachi and two in Hyderabad. They would be property of the "Trust", I, my wife and my four sons jointly want to establish. My books have been stolen periodically and many times I have given them away due to lack of space to store. I have tried to replace the stolen books but some are second editions and I have felt extremely depressed at remembrances of them. If I were one of more than 150 Pharaohs who ruled Egypt for 2500 years, from 3000 BC to 500 BC, like them, I would go to my grave with this most precious collection, but if I actually had such a choice now, I will not do it, as I will leave them for my wife, Farzana who reads them as much as I do and she will give them to the "Trust" which can use them. Our collection in 1982 was only 6,000 but during the past twenty years, wherever we travel, her priority will be to visit bookshops and search for books of our choice. When we travel to Europe and northern America or Australia, we return with bags full of books and in addition each of us carries twenty kilograms of books in our shoulder bags. This is how childhood fixation acts during rest of the life.

WALL MOUNTED MAPS AND CHARTS IN SCHOOL

Geography was a compulsory subject from the class II to VII of primary education and the kindergarten was an extra year. We learnt geographies of Taluka Dadu in class II and Larkana district in class III. District Dadu was created in mid of year 1933 and we had also to learn its geography in the same year. We learnt geography of Sindh in class IV. In class V, VI and VII of primary the geography of India, Asia and World were taught for Vernicular Final examination. The same geographies were taught in first three classes of high school (in which admissions were allowed after four classes of primary) and again were to be studied in greater details in last four years of high school leading to Matric examination. There were large coloured maps hung on the wall, namely of Dadu Taluka, Larkana District, Sindh, Bombay Presidency, India, Asia, America and World. Once teacher taught us how to locate various tapas, towns, villages, railway lines and stations, roads, canals and the River Indus on the Taluka map, we could do the same on all maps.

Some boy had novel idea of initiating puzzles of locating a particular geographical place on any of seven maps. Soon everyone seemed to be studying and remembering names of geographical places on all maps, to enter in competition. The schoolteacher had to walk four kilometres from Piaro Goth to reach our school and he invariably came late. In the mean time we persuaded our sport.

Later on in life I realised that this was a great education that I received and developed deep interest in geography and historical geography. In 1976, I started making historical maps of Sindh and continued the work for seven years producing 250 historical maps of Sindh. I have also collected large number of historical maps and at least 3000 historical and many official and also rare maps of Sindh from governments reports etc.

When my above maps are published, it would form 500 page Historical Atlas Sindh and in brief will be an abridged History of Sindh. A part of them has been published in the book "An Illustrated Historical Atlas of Soomra Kingdom of Sindh 1011-1351 AD".

One of the motivations of maps and geography was to travel and see the world, but the other was understanding ecology, climate, changing climates of the past and their impact on people in different parts of the world. This was an education

in itself and I have produced a book: “Changing Climate of Sindh and Its Impact on its History during Holocene”.

In 1983 my wife and I decided to introduce new fruit crops. We did study of climate of the various Horticultural Research Stations of the World and this gave us the background about which crops can suit Sindh’s climate. We built our own map of climate of Sindh dividing it into 12 micro-climatic zones and comparing climate of the above stations with Sindh. We concluded that Sindh can grow more than two hundred new fruit species, if there is government support and interest. Thanks to the maps in single room primary school.

One of the greatest damage that has been done to this nation is abolition of geography in primary and secondary education, as compulsory subject, making people ignorant and stupid.

WELL IN THE VILLAGE “EUREKA”

There was only one well in the village constructed by Wadero Haji Allah Warayo in late twenties. He brought his Murshid (holy spiritual guide) to locate the site, the latter also brought a person from Thar or Rajasthan desert. The latter may have been water diviner to help Pir in his assignment. The location of well was in cultivated low land rice field and it was sure sign that having been irrigated for some 60 years, enough seepage water may have accumulated down to ensure regular supplies for drinking purposes. The land surrounding it was irrigated year after year and thus water was recharged annually.

This well was an attractive site for children. Water from Nar or Persian wheel was falling into a trough (Parach) dug out from trunk of a tree and it discharged into another similar piece called Nesar. The latter discharged into cemented manger like pond from which animals drank. Animals of whole village were brought by owners, who queued up. About ten thirsty animals were drinking water simultaneously and the movements of their mouths, heads, necks and upper shoulders, during the process of drinking showed their urgency, containment and final withdrawal at end of quenching the thirst. Each group of animals i.e., buffaloes, cows, goats, sheep, camels and even dogs had their own way of drinking and is worth observing any day. For birds, this was the only place to get water in miles. But the most interesting was the drama going on inside the well.

The Nar or Persian wheel called Sindhi wheel by Arabs in the 12th century AD, was a copy of bronze bilge pumps developed by Greeks to remove water from leaky ships around 250 BC. A large number of Greek ships visited Barbarican (Banbhore) under patronage of Ptolmeys of Egypt since 200 BC and under Romans after 30 BC. Bilge pumps had two cogwheels to convert rotary motion of one cogwheel moving in a vertical plane to horizontal axle of another cogwheel. On the axle of second cogwheel, the Nar or wheel with a long endless fibre chain was fitted. To the chain were fitted bronze buckets. The trade with Barbarican reached its climax around 60 AD. It was during this period that Sindhi carpenters and farmers may have seen the wheel and copied it for irrigation, though it was used in Mediterranean countries around 200 BC and information on it may have travelled from there. However, the crude wooden copy was not as efficient as bronze one. The trough dug out from tree trunk allowed water to splash as buckets kept discharging from some height. Since trough had to be located

sufficiently above the axle so as to discharge via another trough to water tank by gravity, to reduce excessive splash it had to be located midway between buckets and axle of wheel. Buckets discharged water before they reached the level of trough and kept doing so after they left it. In general fifty to sixty percent water discharged back into well. This splashing created beauty of sprinkling water that was surpassed only by Niagara or Victoria falls, which I visited decades later on. Large quantities of water broken into droplets, were falling everywhere inside the well and along its walls. Sometimes rainbow was formed specially just before midday to mid afternoon.

On a Sunday, I lay down on stomach with my head on the edge of well and was watching its Kaleidoscopic beauty, when around 11.00 a.m., they stopped the wheel, as water table had gone down by some ten feet and buckets of wheel could not submerge into water. I saw something that has been a matter of investigation in my life. The village folk believed that water in the well was connected with another well near the grave of Makhdoom Bilawal, a holy man six kilometres south as crow flies, but I saw something altogether different. Water was trickling through the brick joints all around the ten feet column and though hardly perceivable in top layers, but as it collected on way down the wall, it could clearly be seen filling the well sump. I rushed to my grandfather, who was there and told him water in the well is not coming from bottom or by any underground natural pipe-line from Makhdoom Bilawal's well, but from the sides. Everybody who heard it laughed and ridiculed me. The next day the schoolboys did the same. They called me by name Khiyali (day dreamer). However, it did not discourage me and I kept watching the well every Sunday. Then we had summer vacation which coincided with flowing of inundation canals and irrigation water applied to fields surrounding the well. I went to visit it. Water table in it had risen. It was half way between the top of well and where it stood when Persian wheel was operating earlier, before the fields around the well were irrigated. I made it a point to visit well everyday and by end of vacation (end July or early August), the well was full to the berm. During the same day I had dug a pit just one foot diameter with a pointed wooden stick, near the bank of watercourse and deep enough that I could lower myself into it up to neck to hide myself from my mother, when she took me for bath around sunset. Next day I found the pit almost three quarter full, but no sign that any one had filled it. I dug another pit, left it overnight and again saw it filled. The mystery was solved. It was water, seeping from watercourse which had filled my pit and level of water in pit was slightly below that in the watercourse. It became clear that it was water from fields which was going down and also seeping horizontally to fill the village well. When water table in the fields kept rising, it did so in the well too. By end of July ground was saturated with water and water in the well reached its top. This discovery while I still was about six years old made me very happy to run and disclose, but I understood the consequence

would be another ridicule. While in high school, I read of Archimedes running naked and disclosing to the Ptolemy King, "Eureka" or I have found out.

My mind was so involved in this, that twenty years later in 1951, I found myself voluntarily busy in USA, on investigating of ground water, its development by tube-wells and conservation by recharge. An economic outcome of this was installation of three thousand tube-wells in Sindh and one thousand wells with pumping sets in Baluchistan, as Agriculture Engineer in Sindh 1953-1958 and Superintending Engineer for Sindh and Baluchistan (1958-1969). Another outcome was some major publications on ground water listed below:

- I. Ground Water in Dadu District, 1962.
- II. Ground Water in Hyderabad District, 1962.
- III. Ground Water in Arid Zone of Hyderabad and Khairpur Divisions, 1963.
- IV. Ground Water in Hyderabad and Khairpur Division, 1964.
- V. Ground Water in Karachi District, 1964.
- VI. Ground Water in Lasbella District, 1965.
- VII. Ground Water in Quetta Division, 1967.
- VIII. Ground Water in Kalat Division, 1968.
- IX. Ground Water in Hyderabad and Khairpur Divisions, enlarged edition, 1969.
- X. Ground Water in Karachi Master Plan area, (4,000 square miles along the Super Highway) 4 volumes, 2400 pages, 1972.
- XI. Water Requirement of Riverain area in Sindh 2002.

The efforts put in by me between 1953 to 1969 can be seen from introduction to my book "Ground Water in Hyderabad and Khairpur Divisions".

Investigation into ground water meant extensive travelling in Sindh collecting information, reading and analysing. In my travels I visited Darhiaro, Kute-ji-Kabar and Gorakh Hill peaks. I also was able to locate forty-two springs out of which eighteen were thermal or hot springs in Dadu, Thatta and Karachi districts. I travelled both Thar and Kohistan, the Indus plains being routine travel. I have observed the plains and hills from aeroplanes and have learnt how to locate old courses of rivers, archaeological sites etc., from air and aerial photographs. Between 1953 to 1970 I had collected 3000 books on Sindh. This number has increased today, I have 15,500 books on Sindh and another 34,500 books on Engineering and Agriculture. I think nobody in this century or before has travelled in Sindh so extensively as I did and read books on so many different fields. Thanks to childhood membership of "Separation of Sindh from Bombay Presidency" and psychological fixation with Sindh. I think Freud was not right when he said that childhood fixation pertains only to sexual behaviour of a person. In my opinion it affects the total life pattern.

OUR VILLAGE POTTER

I was about seven years old when some potters came from nearby village to our village to make burnt clay pottery. They worked under shade of my maternal uncle's Autaq. The clay was brought from a dug pit near the school. That pit was worked a few months earlier by a bricklayer and also by others to make pressed clay mud walls for the houses of villagers.

It surprised me why only that pit and adjoining areas were used for taking out this raw material. Watching them I found that they are removing top thirty to thirty-six inches of soil, below which lies hard soil which was sticky when wet. When they dug it, sound produced by Sindhi spade was different. Spade did not penetrate fast and after removing some twelve to eighteen inches thick layer, then came a soft layer. Was it peculiar to this patch of land? In the next few years I saw clay being borrowed from such pits all over the village as if it was present in Sindh every-where. Later on I found that they are mixing the clay so removed, with water and puddling it before making bricks, pottery or pressed clay mud walls. I also saw potter's wheel and frames for making bricks.

In my opinion at that young age, the clay pot patterns were a few stereotypes. If they applied any colours to it, it was with free hand and a single colour. The wheel was fitted at ground level and one person was needed to turn it around with long pole while standing or with his feet while lying down on the ground. The potter squatted on his two feet on ground and worked the soft clay into pots. No two pieces of pot produced were identical. No forms for uniformity of pots were used. In general it was a rush job. The kiln was a dug trench about thirty inches deep into which were laid the unburnt but sun dried pots, each of which was filled with rice straw and between them were put pieces of dry wood from bushes not more than one inch diameter and six inches long. These covered the pots right up to surface. Above them they put loose earth layer up to six inches thick, layer-by-layer and sprinkled water between layers. Two small openings were left in the trench at both ends - one for firing and allowing air to get in for burning straw and wood chips and the other for exhaust air. Soon after firing the earth over trench started giving up smoke in spots. The leakage points were closed by throwing loose earth at the points. Firing went on for a few days and when it stopped, the pots were allowed to cool for a week and then they were removed. Half had cracked and the other half were sold. Later on I saw brick kiln in Mehar. The design was similar but was more elaborate, with greater depth almost circular and they were using firewood, thereby raising high temperatures

and better quality product. The low temperatures of potter made the product brittle and as not deep red as the bricks.

I thought I could make toys and burn them and that will be a great achievement. I borrowed sticky clay from the same source, made toys of all kinds - household crockery, animals, carts, furniture and any thing imaginable, dried them and even painted a few with water soluble paints used for decorating houses and burnt then in a small trench dug near the watercourse on the northern periphery of our village. The experiment did not work. I knew I had not burnt it for 2-3 days, but if I had it would be a success.

However, my interest in pottery, ceramics and tiles did not vane. My search for ground water in Nagar Parker in 1959-63, some twenty-seven years latter, led me to the discovery of large deposits of kaolin and granite having twenty-seven different colours. A few years earlier I had built two furnaces at Tando Jam for heat treatment of steel. I also knew that they use oxides of various metals to paint on ceramics and burn them to various temperatures in furnaces of above type. All my suggestions to Sindhis in this profession have failed, as they do not understand various qualities of clays, metallic oxides and temperature control and there are no guidebooks or schools to teach the technologies.

In 1952, I acquired a few books on pottery making and glazing and with some friends visited the pottery laboratory. It could be special subject in the faculty of arts or technology. I felt the need and for guidelines of those interested, I have added three pages in the book "An Illustrated Historical Atlas of Soomra Kingdom of Sindh" on pottery, kilns and glazing.

MODERN AGRICULTURE REACHES OUR VILLAGE

Royal Commission on Agriculture in India set up in 1928 was a monumental work, under which farming and farmers were to get fair deal - a decision taken much before US president Roosevelt's "Fair deal". Agriculture had to be modernised and all efforts were made to improve it. In our village a plot of about one acre of Wadero Allah Warayo was taken up for demonstration in 1932/33 to 1937/38. A Field Assistant (or whatever was the designation) Abdul Hakim Charan, belonging to Dadu, was put on the job. He laid a demonstration plot of one acre belonging to this Wadero.

Prior to that an "Agricultural Fair" was announced and a number of implements were planned to be demonstrated outside our village, probably on the land of Hafiz Muhammad Musa. On the day of fair besides large number of Agriculture Department's officers, those present were Deputy Collector Sehwan, Mukhtiarkar Dadu, Executive Engineer Dadu, Police officers and a large number of their sub-ordinates. It was around autumn of 1932 as Sukkur Barrage had already started flowing. This date can be later but not earlier as an implements called "Jenkin's Clod Crusher" first time introduced in that year, was also demonstrated there and one or two bulletins on them, dating back to that time, were given to my father and these have been preserved by me from that date. The Agriculture Department's Inspector, who I saw for the first time, was Malkani, who since then visited frequently and stayed in my maternal uncle's Autaq. He would allow his servant and cook to go and stay in Autaq of Wadera Allah Warayo with Charan, the Field Assistant and would eat meat of calf secretly, when his servant was not there. Malkanis were Amils, whose profession was government job. Many of their families had been brought by Mughal governors in Sindh before 1650. Subsequently they served Kalhoras, Talpurs and the British and had become progressive and liberal. They avoided to intermarry among businessmen (Bhaibands) Hindus of Sindh, considering them culturally and socially inferior.

I recollect the implements demonstrated from their shapes were; mouldboard plough, chisel plough, ridger-furrower, seed drill, animal drawn bullock cart with steel axle and wheels, bullock yoke, animal drawn intercultivator etc. Since we saw them everyday for about a week, I remembered their shape and function, but did not remember their exact names which I re-learnt some twenty years

later. They had been tested on land everyday since their arrival to familiarise people, who visited regularly to see the demonstration.

Fair started with some announcements. Then the Field Assistant, Charan ploughed land with a mouldboard plough. He went round and round in circles till he closed it in the centre. It formed clods which were crushed by Jenkin's Clod Crusher operated by another man with a pair of bullocks. Then one by one the other implements we demonstrated. Some early rice variety was harvested and manually threshed to get green straw for animal feed, but rice grains were separated from stocks on a manual winnower. The end of fair came with Malakhro and distribution of sweets among people. Before sunset officers disappeared on their horses.

I saw implements before and a few days after demonstration. Winnower impressed me the most, but they all were curiosity. However, the villagers refused to accept them on the ground that:

- Mouldboard plough cannot be made by Piaro Goth village blacksmith.
- The others are costly and impractical.
- They are too heavy for our pairs of bullocks.
- Village blacksmith cannot repair them if they break or wear out.

I thought they were wrong and determined that I will introduce them, when I grew up. In my heart I admired the unknown Englishmen, the inventors of them.

The demonstration plot on one-acre plot of Wadero Allah Warayo was a fair success. They applied composted (old) farmyard manure to the land, ploughed it in with mouldboard plough, harrowed it with Jenkin's Clod Crusher and the tine cultivator, irrigated it first and then drilled wheat. For us children it was a fun to go and see new innovations, but soon they lost all their charm. However, before harvest the crop looked better. For Wadero Allah Warayo, very miserly person, advantages were; no land revenue, no water rate and no share of tenant and seed and equipment operations also free and above all produce became his. Of course he fed Field Assistant Charan, whenever the latter was in our village, but here too Allah Warayo was not a loser, as he could go stay with him in Dadu and send his children there for study. I think demonstration plots continued for 4-5 years, when the first Ministry in Sindh, fixed their own priorities.

Twenty-one years later I became Agriculture Engineer in Sindh. I saw the same implements lying in Agriculture Workshop then located near the railway station, Hyderabad. There were no bulletins available on them then. There were drawings of them, drawn by draughtsman Mr. Mascrenius, who assured me that they were done under guidance of Mr. Cuming, the first Agriculture Engineer in

Sindh (1933-39), who had died in Hyderabad and fourteen years later I occupied his house in Mukhi's Garden, Hyderabad near the old Power House. The other engineers of the department had also occupied the same premises, but none had taken any trouble to investigate what he was. A broken cupboard, a broken folding chair an octagonal table without top and a few annual reports of Department of Agriculture Sindh were, what I found lying in veranda of the house. These were restored by me at cost almost as much as new ones and preserved in his memory. Probably implements, I had seen twenty years before were not made under his instructions, but were brought from Agricultural Engineering Workshop at Poona (Pune), now in Maharashtra (India). It was a coincidence that I was now required to popularise them in whole Sindh.

Since I inherited the responsibility of promoting the improved animal drawn implements, I tried my best. I thought it was an opportunity to popularise them with the farmers, but soon realised that government's cost of production was high, raw materials like steel and wood purchased by the government organisation through procurement agencies established by the government were high. I therefore induced some enterprising blacksmiths of Hyderabad, Tando Allahyar and Mirpurkhas to produce them locally from scrap steel and cheaper types of wood to our designs. One party at Hyderabad made Persian wheels with galvanised buckets and iron frames to our design. However other than ploughs, demand for other implements was negligible. I also had a chance to verify improved animal drawn implements used world over. They all were the similar and copies of each other and Indian Agriculture Departments had brought these from Europe during the last decade of nineteenth century or the first decade of twentieth century and were slightly modified to local conditions. Some new additions were copies of tractor drawn implements.

No doubt most of seedbed preparation implements were very efficient and needed to be mass-produced. I could also see the gradual replacement of bullocks with tractors as motive power. The reason being increase in population and limitation to increase in land and water resources. A pair of bullocks needed two acres of land under fodder year around and this meant bullocks as competitors of man for production resources. In 1959 General Azam, as Minister for Agriculture, wanted large-scale production of agriculture implements at Faisalabad (Lyallpur) and Tando Jam workshops. I concluded that a separate mass production workshop with latest machine tools could produce all kinds of implements at 30% of the market prices, provided right type of steel was allowed to be imported. However the plan could not be executed as General Azam was soon transferred as Governor of East Pakistan. Such workshops could have built tractor drawn implements too and at very cheap rates. This would have promoted mechanisation of agriculture faster.

When I saw these implements in 1932 I did not know that interest in them will lead to my study of Agriculture Engineering. My childhood fixation on them was to lead me to their production centres.

Today seventy years later, I see that our village farmers' objections to these implement were very valid then as they were 30 years later. The Agriculture Extension was not manned to be effective in introducing new practices. There was also no arrangement for manufacturing these implements cheaply.

There are hundreds of things worth introducing to remove drudgery of exhausting human muscle on the farm. On my farm I have introduced many such innovations for example use of wheel-barrow, donkey cart with rubber tyres for hauling fruits to packing shed, wooden and plastic boxes for picking fruit, tripod type ladders for harvesting, various types of scissors, chain saws for cutting down trees etc. Farming needs revolution but none is in sight in Pakistan.

FAIR IN ALLAHABAD

There was an annual fair at Allahabad about 2 kilometres from our village. I had heard of it from elder boys, who had visited it. It was a 3-days show and at suggestion of my mother, my father took me along on the second day of the fair in the afternoon. What I witnessed was not too attractive and almost repulsive. Food was cooked and served in open with a black cover of flies over it. Children's toys were there, but costlier than those sold by a Pathan, who visited village after village each year and camped for 3 to 4 days in every place, where he could get customers. Clothes and shoes too were costly, but villagers were purchasing them. I had heard of prostitutes visiting these fairs and also women singers and dancers. We passed close to their tent and with their over make-up, the ugly creatures looked uglier. They were certain to pass gonorrhoea and syphilis to many visitors, as was already reported by elder boys. Since I refused to eat any thing out of the temporary bazaar, my father took me to the main bazaar of town to get me some sweets to take home. On way to the bazaar, we passed near grave of the holy man, in whose memory and honour this fair was organized every year. Outside the grave was a grove of Khabar and other trees and a large wooden pole with one of its ends stuck in the ground and a flag at the top of the upper end and was called Angas. Under the trees were a number of people sitting and drinking hemp (Bhang) and some of them were from our village. My father went to shake hands with them and we saw 8-10 persons in a small reed hut at the site, smoking a very smelly stuff, I could not understand. My father told me it was marijuana (Hashish) they were smoking. A thin tall and anaemic man was Dargah keeper and he would serve hemp and marijuana to any one, on payment. Next we were in the Hindu shop in the bazaar. The owner gave me one kilogram of assorted sweets packed in small cardboard box, well tied with jute thread. Then father brought me back to Mela or fair bazaar. With many men and children moving up down the two streets of it, they blew so much dust in the air that it formed thin coat on every article present, including our faces. I was fed up with non-cleanliness of the place, but my father promised to show me Malakhro (wrestling) the best of the whole thing. In the school the boys would always play Malakhro or Sindhi wrestling, so I was familiar with it but there it was big. People collected around in a large circle already made and wrestlers were invited. Although it was interesting but the game would be over in minutes and seconds, depending on luck of winners and losers. It is unlike western wrestling or boxing. Sindhi Malakhro is finished in 2 rounds taking at the most two minutes. The winner may be challenged by another and if

unchallenged another couple comes in the ring. An interesting part of the game was that winners became favourites of rural women in the same manner as sportsmen of the West to-day. Though an interesting sport, I was soon bored, as fight did not last long and it seemed that it was purely a game of chance rather than strength or technique.

At sunset we came back with my trophy of sweets. However fair as a whole was repulsive and I did not go again to see it or any other fair in Sindh. Bhit Shah and Jacobabad horse show were exceptions, as there we had to demonstrate agriculture implements when I was government employee from 1953-1969.

In twenties and thirties rural women had wrestlers as their fans. In sixties the situation changed and rural women changed their fans from wrestlers to educated men with jobs in cities.

FRUITS NAMED IN HOLY BOOKS OF MUSLIMS, CHRISTIANS AND JEWS

When I was very young my mother, auntie and other women told me the children's stories. They all were a kind of fairy tales, full of magic and mysteries, which excited young mind. These were tales their forefathers had been telling the children. My grandfather used to read four or five volumes of Tafsir-ul-Quran (commentary on Quran), written by Maulvi Muhammad Usman. Whenever I asked him to tell me stories, he read the descriptions of miracles like Pharaoh's chasing Musa and former's drowning, Asahab-e-Kahaf, Noah's Ark, Jones having been swallowed and vomited out by whale and many others. I got so fascinated by the Quranic stories that at age of about seven when I could read Sindhi by myself, I picked up the Tafsir and read whole of it with special concentration on geographical names, persons and miracles. I found that the Tafsir had elaborated the stories which were not so detailed in the translation of the Holy Quran. I thought there would be other books with elaborated details, which I must read. I asked my grandfather, who told me that the Taurat and the Zabur (Old Testament) and the Bible (New Testaments), are also books sent by the God and these details are known from them. I was so impressed that in our single teacher class from which seven maps hung on the wall, I looked for various places mentioned in the Tafsir on those maps. I dreamt of travelling from Eden to Jerusalem and Sinai, to see those places for myself and be part of these miracle lands. I also tried to list fruits, mentioned therein. While student in the High School Mehar, I laid hands on Sindhi version of the Bible translated by Mirza Kaleech Beg in 1905. I came across the Old Testament while in the college. By that time I already knew that my planned trip through the economically backward areas will not be worthwhile, but I did have fixation with the deserts. There are twenty major deserts of the world namely; Great Indian Desert (of which Thar of Sindh from Reti to Nagar Parkar is a part), Irano-Balochi desert (of which Kohistan of Sindh is a part), Sahara Takla Makan (Gobi), Syrio-Arabian desert, Namibian-Kalahari desert, Mongolian desert, Sonoran desert, Peru-Chilean desert, south-east Argentinean desert, Great Victoria desert of Australia, Turkmenistan desert and etc. I have visited some or other part of some fifteen of them. I have seen Syrio-Arabian desert only near Riyadh and Damascus and did not find it attractive enough to travel through it, as I had thought in my childhood.

My fixation on fruits has remained to this day. Many of those fruits were grown in other parts of Pakistan and India and I somehow had preferred to eat them in comparison with fruits of warm low latitude sub-tropics of Sindh. May be that mango, citrus and guava are so plentiful that for a change I preferred these exotic ones to those, suiting Sindh's climate. The fruits mentioned in the Holy Books of Muslims, Christians and Jews are; walnut, table and wine grapes, date, apple, apricot, pomegranate, fig, olive, peach, plum, citron and almond. I had developed an impression in early childhood that since these fruits grow in the Holy Lands and all Holy Prophets ate them, they probably had more nutrition. I also thought that only these fruits will be available in Paradise and not those grown in Sindh. This was further strengthened by an English saying; "an apple a day keeps doctor away". Today I know that our local fruits including dates, have more energy than these of temperate zone or high latitude sub-tropical fruits, as high heat of Sindh converts carbohydrates into fructose, glucose, sucrose and sugars and also makes them sweeter and imparts them more calories, but fixation and interest in them made me grow these trees and force them to flower and bear fruit and harvest them on a commercial scale on my land near Tando Jam.

I am presently the only person in Sindh, who has developed technologies to produce temperate zone or high latitude sub-tropical fruits namely; apples, peaches, pomegranates, almonds, figs, citron, Syrian Ber (zizyphus jujube) and dates on commercial scale. Apricot and olive are on my list and I am waiting for suitable plants to come from USA in year 2003. I know that I cannot grow walnuts in Sindh as it has very high chill requirement, but I have introduced its cousin pecan, which has fruit of similar shape and of much superior taste.

I do not practice religion since the childhood, but from the religious books I learnt names of above fruits, which are exotic to the climate of Sindh. It has taken me 20 years to study some 15,500 books and bulletins and spend at least a crore (10 millions) of rupees to travel, to buy books and plants over these years and carry out experiments on them for their successful commercial cropping. I feel happy to make them grow successfully, flower and fruit. I go and stand hours before these trees, have them pruned, sprayed against diseases, fertilised, control water and weeds and look after their health as much I do after mine. Imagine some 400 trees per acre and 100 acres in all, having 40,000 trees to care for. I spend 18 lac (1.8 millions) rupees a year on them, engage (four or five) managers either B.E (Engineering) or MSc (Agriculture) to work as farm managers, supervisors and foremen. In my agriculture an uneducated or semi-literate Kamdar has no place.

I must admit that I still consider mango as king of all fruits. All others are pygmies before it, but childhood fixation forced me to grow and enjoy other

unusual cool climate fruits in Sindh's high heat and low chill. Thanks to Maulvi Muhammad Usman's Tafsir.

PERRI

In 1930/31 a theft occurred in our village in the house of Haji Muhammad Ayub, a cousin and brother-in-law of my maternal uncle Muhammad Saleh. The police called Perri or Perr-wado who could recognise the footprints of thieves. All suspects were lined up and made to walk bare footed on a dusty yard, prepared for the purpose and were examined by Perri. The feet did not match with footprints of thief, he said. Some 8-10 years later it was revealed that thief was wife of Wadero Rasul Bakhsh Panhwar of Kamal-jo-Goth, two kilometres from our village. She was visiting wife of Ayub who kept silver and gold possessions of many households in a heavy wooden box with heavy lid and drawers, in a dark room having only one window opening outside in veranda and only one door opening into their bedroom. One or two days before theft, she visited the house, on some pretext went to the room and unbolted the window and went away. Apparently the window appeared to be closed and nobody suspected the fowl play. At midnight she along with two other thieves came, entered from window, opened the chase and removed ornaments, but Haji Ayub awakened and they hit him on his head with a wooden mallet and he fell down. His wife cried for help and mean time the women thief jumped out from window and escaped. It was her footprint which was covered with a pot and shown to Perri. After a couple of years, I thought of becoming a Perri. After rains the wasteland became soft and footprints on it were very clear. It was an incentive and I developed a novel way of recognising footprints. The school foot rule was the only instrument. I simply measured linear lengths from toe and fourth finger to centre of heel, the width of foot at widest part and its perpendicular distance to the tip of each finger. These eight measurements were enough to recognise footprints and all I had to do was to keep a notebook and sketch of foot width measurements. Of course the contour to tips of fingers and toes of foot differed from person to person, but it did not catch my imagination. Now I was sure that by checking footprints of known thieves, I will become a successful Perri. However I soon gave it up, on hearing that Perris were touts of police and will not reveal name of any thief, unless police wants it. This then was not an honourable profession. It however gave me a clue that like palmistry, footistry can be used as joke on other people in telling them of their past, present and future, as feet also have lines similar to these on hands and vary from person to person and footwear to footwear, if worn over long time.

CHASED BY A CROCODILE

In December 1933 my grandfather took me to Nasrani, a village near Pat close to the river and within the river's Flood Protective Embankments. On the way we passed near Old Pat, in ruins. I wanted to see the ruins. He spent half an hour taking me around the site. After Khirdhahi's artefacts, this was my second lesson in archaeology and not a bad one. He also showed me an old abandoned river channel responsible for its doom by flooding.

My stay at Nasrani was uncomfortable caused by flies and mosquitoes and premises unprotected against cold winds and I decided to return to our village. I told my grandfather that I know the map of Dadu Taluka very well. If they take me to Dadu canal in the neighbourhood of Pat, I will walk south to Khariro minor regulator and walk along the minor to our village. I narrated him names of villages enroute so accurately that he found no problem in agreeing to my going back alone. He stayed behind to have a deal for purchase and sale buffaloes and two men from our hosts took me to Dadu canal's left bank, below Pat and parted. I walked half a mile or so and saw a boat ferrying people to the other bank. Boat had a chain with one end fixed to its front and other end with a ring passed through wire rope, which was tightly tied to two girders fixed in the embankments. It ferried people to village Kalri on right bank. Three men on the other side asked me if I wanted to cross. On positive reply, they brought the boat and taught me to pull the rope and boat easily started moving. The only thing I had to do was to move the ring forward simultaneously pulling the rope towards me. Walking another two to three kilometres or so I approached a big village, which on the Taluka map had been shown as Gihlapur. I was within about 200 meters from it, when I saw a crocodile on the other bank had just jumped into water and with only nose out, it swam towards me. I had not seen a crocodile before, but I had seen a picture of it to recognise. I said to myself, had I not crossed the canal and kept walking on the left bank, it was waiting to devour me. Immediately I ran down the embankment to the fields and rushed to Gihlapur. Being frightened I did not look back and on reaching the bazaar, jumped on a cot lying in front of a shop and shouted crocodile is coming. The Hindu shopkeeper shouted to others to run as crocodile had come in the village. They all ran for shelter. I also ran to southern end of village and turned west towards our village. I was told that these creatures have strong sense of smell and they follow their prey for miles. On the way were agriculture fields, through which ran a narrow

road for pedestrians to Kot Qasim, one kilometre from Gihlapur and equidistant from our village. Reaching the village I looked back. The crocodile was not following me. I thanked my one room school and teacher who taught us geography and had developed enough sense at age of eight to transverse the tract ten kilometres long unaided alone in some three hours. The experience showed how dear life is to its owner.

I narrated the incident to my village people. None believed that Dadu canal can have crocodiles. Some 4-5 years later a crocodile tried to pass through the gate of regulator of minor canal MIR, about 1 kilometre from our village, but the gate was too low and with his neck on downstream side he could neither go back, nor push rest of his body to the downstream side. Not knowing what to do with it, the Beldar (attendant) consulted my uncle Muhammad Saleh for solution. The latter told him "you can raise the gate to save his life, but in absence of sufficient fish in water he is bound to eat up some people and so the beast may be killed by lowering the gate. The crocodile was thus killed. Only then did everybody of our village believe, that I had actually seen and was chased by a crocodile in December 1933.

Since then my interest in scientific study of life and habits of crocodile continued. The famous lectures on BBC by Lawrence Elis in 1952 later on published as "Crocodile Hunt" in 1954, was a guideline for further studies. Like this author, I wanted to raise crocodiles for profit from their skins, but had difficulty in locating suitable land and water near Hyderabad. I visited lakes on the desert margin in Khipro and Sanghar Talukas in 1994 and was shocked to find that there were only eighty beasts in all these lakes instead of 3,000 as claimed, but the Wild Life Department will not admit the truth and while shifting those animals from these lakes to Chotiari lake, the contractor charged the Government of Sindh thirty seven times more than the actual job involved. Crocodiles in this country are fresh water animals, but in Northern Territory (Australia) there are seawater crocodiles. Thinking that it would be feasible to raise them, I and my wife visited Darwin (Northern Territory) in September 1989 to see them for ourselves and start the project in a part of some sea creek near Garho, Gharo or Sakro. We found that crocodile meat was considered delicacy in Australia and there is considerable new market for it in Europe and USA, both for skin and meat and may be for shell and bones. I also took crocodile steak and other dishes a number of times to have personal experience of the taste and acceptability of its meat in the Western market. In brief a scientific study was essential. We visited Singapore, where they raise freshwater crocodiles commercially and collected literature on raising them. We found that it was easier to raise crocodiles as compared to shrimps or even fruit orchard and was economically feasible, if suitable land and water was available.

There was plenty of material on raising its American cousin alligator and everything seemed fine. We had been allotted 200 acres for shrimp farming near Garho, but as creek water had turned too saline and therefore unsuitable for this species, we decided that the land could be converted into seawater crocodile farm. I approached the Sindh Government for sanction and also asked Department of Primary Industries Northern Territory at Darwin (Australia) to get me 200 fresh crocodile eggs to start the programme. The shock came when they replied: "Sea-water crocodile is speciality of Northern Territory and the government cannot allow this species to be exported for propagation. We therefore regret that export of sea-water crocodile eggs is not permissible." Thus ended this programme.

The pioneer of crocodile farming Elis had bad luck with his wife Peggy, who considered him as unclean as crocodiles he was hunting, whereas my wife encouraged me and even did not object to my eating crocodile, kangaroo, camel and Katherine buffalo meat, condoning it as scientific research for future applications in Sindh.

MY GRANDFATHER'S VISION OF AGRICULTURE

We had a zizyphus rountifolia (Ber) tree on the outer embankment and boundary line of our land. It produced excellent, large size, sweet and juicy fruits, but it happened to be a shy bearer. I asked my grandfather to make it fruit more like other trees of same species in our village. This happened in the morning at our land in early March 1933. My grandfather had asked my father to plough up the land immediately after cutting down the crops of peas, beans, oil-seeds etc. Half an hour later my father's cousin Alam also came to his land next to ours. He was followed by his pet dog. Reaching the Ber tree, the dog raised one of his hind legs and ceremoniously urinated on the tree trunk. My uncle Ibrahim rebuked Alam and told him: "Keeping dogs is un-Islamic. You are not only keeping dogs, but carrying this Paleet (dirty and unhygienic) creature everywhere you go. It has sprinkled our grass with urine which our buffaloes will eat and we will drink their milk." My grandfather told my uncle: "Do not get up-set. There must be God's wisdom behind it and may be tree needs it." My uncle replied: "I do not think the tree wants to drink urine of a Paleet dog and there can be no wisdom of God behind it."

My father had taken a pair of bullocks to plough up the land, so that the roots of crops containing nodules rich in nitrogenous fertilisers are buried down to provide fertility to soil. The bullock had excreted dung. My grandfather took fresh dung, applied it to the trunk of this tree and sprinkled some water above it and gave instructions that more dung be applied to trunk and water sprinkled. Two months later I saw the whole trunk was covered with dung. They were bringing an earthen jar filled with water daily for the family members to drink and it was kept under this tree. Whenever anybody took a cup of water to drink, some of it left at bottom was sprinkled on the trunk. This went on until rice crops was harvested, threshed and straw bales removed in November.

Next March the tree bore a good crop. My uncle said "It was no miracle, neither dog's urine or animal dung has done it. It seems prayers of my grandfather had been accepted by God."

Two years later I went for studies to Mehar and could not pluck fruit of this tree in early March, but my grandfather collected some, allowed it to dry in sun and

its crispy apple flavoured and delicious taste could only be matched by that zizyphus jujube (Chinese Ber), per chance imported and planted by me in 1993. A few years later, our tree failed back to its original shy bearing habit and was cut down for making agriculture implements. In Mehar I saw Hindu orchardist applying cow dung to the trees, but not sprinkling water and keeping it moist. For them it was religious duty and not to increase tree performance but the original scientific knowledge had been lost over centuries and only ritual was left.

I had completely forgotten about the whole thing until 1982, when I read that by making use of radio-isotopes, scientists in USA sprayed large quantities nitrogen, phosphates, potash, calcium and magnesium and small quantities copper, zinc, manganese, boron, iron and molybdenum compounds diluted into water, on the leaves, twigs, branches and trunks of trees and found that all these compounds were absorbed by bark and other parts of tree and efficiently translocated into various parts of the tree, where they were needed the most. I was convinced that my grandfather was right in putting animal dung on the trunk and keeping it relatively moist and Ber tree fruited better due to the macro and micronutrients in the animal dung. I also appreciated that the Hindus had so much reverence for cow dung and urine but they failed to give equal attention to other animal's excrete as my grandfather, who seems to have developed idea from the Hindu ritual.

KHAIRAT

Khairat is an occasion of celebration in Sindh for various reasons that the God had been kind to the family. My grandfather had been in debt for more than 30 years of his life and my father, as a farmer was able to pay back the loan within a few years after my birth and the villagers told him to have Khairat to feed the whole village, so that he prospers more. The Khairat consisted of slaughtering a young adult bull, the one we could as well have used for ploughing or sold it for cash, our own rice and butter in enough quantity that we fed the whole village of about 400 souls after Friday prayers. Men ate in Autaq of my maternal uncle and each household was given enough that they used it for the evening meals too.

My mother told me that the whole village blessed us and prayed for our prosperity, but we could have sold the bull, rice and butter, which we did not and were in debit again and it took another 3 years hard work to pay back. When eight years old, I realised that it is better to be in debit, by a small amount, so as not to spend on Khairat and not be in debit again. This was also the time my mother had died followed by my uncle's wife and on the death of both we had to feed people, though on a smaller scale than the Khairats, I had witnessed since age of about five years. Soon after my mother's death my father fell ill with typhoid fever and was in bed for three weeks and was reduced to bones and unable to work, but yet my grandfather had prayed to the God in the mosque before a Friday congregation that he will have Khairat if his son survives. As soon as my father became all right to do farming, we had Khairat. This time we slaughtered our own buffalo bull and borrowed money for butter and rice. No Muslim in the village would lend any money for the purpose and loan came from the Hindu shopkeeper Harchomal. My grandfather prayed for long life and prosperity of the Hindu, saying: "Oh God, had he been a Muslim, he would certainly go to paradise, but let you be kind and reduce the tortures of hell to minimum for this Kafir". But unfortunate for the family, soon I had attack of typhoid and was in bed for twenty-one days. My grandfather prayed again, slaughtered a buffalo calf and fed the village. By this time, I had learnt enough arithmetic to know the yields of our crops, expenditure on seeds, water charges, land-revenue, payments in kind to carpenter, barber, potter and blacksmith and income from butter and concluded that without this expenditure of four Khairats within twelve to fifteen months, my father could sent me for education to high school. I also promised to myself not ever to spend lavishly on these occasions, as in a poor rural society they were meant to keep the poor people poorer, under

false prestige of being generous, God fearing, pious, religious and important. The poor are also more jealous of each other than of the rich, who cannot easily be reduced to their own level of poverty and therefore were tolerated by the poor.

DECLARED AS UNTOUCHABLE

At age of eight, one summer morning, I was ready to go to school, when I saw a handsome man sitting with my grandfather on the edge of platform inside our buffalo barn. He was slim, tall, fair coloured and had a medium size black beard, finely trimmed. He wore spotless white shirt, trousers and turban, which was unusually wrapped on his head, giving him look of an educated and respectable man, Maulvi, Hafiz, Waiz or a middle class gentleman. I went shook hands with him, as I did with every guest, showing manners of a cultured boy. He had a smile and wished me good luck with my studies.

As soon as I left, my mother, uncle's wife and aunt (father's sister) called me and told me: "You should not have shaken hands with him. He is a Ballo or Bhangi. He sweeps streets, collects human excrete. Now wash your hands before you go to school." Ghulam Rasool boy of neighbouring house came to know and before I reached the school everyone knew it. The boys forced me to sit on stool near the back wall. When the teacher came he snubbed all the boys, who said that I should take bath seven times to purify myself. During noon break, they took me to the watercourse, a familiar place where all boys took bath daily. I took bath on upstream side of watercourse, while they were on downstream side. I was loaned a towel to bathe, come out, dry myself and re-enter water seven times. All done I ran home and told them that I had polluted all water and they were also impure, as they were on downstream side.

From that day onwards I thought about the whole affair. This man called Ballo or Baleshahi or sweeper or untouchable was a well-to-do person and had come to buy our best buffalo, which my grandfather had sold him for rupees two hundreds and ten. I could not understand that he was inferior to any one in the village at least physically or culturally. I came to know that he was a public servant in-charge of Purano Dero sanitary works and was boss of dozens sweepers, employed in that port town.

This was my first rebellion against ill treatment of untouchables by both the Hindus and Muslims alike and since then I started believing in equality of man, irrespective of race or religion or social status. With such open talks, my colleagues in schools and colleges called me socialist, communist and infidel and smilingly, I never protested. In post-Pakistan era, I have engaged untouchables (sweepers, Kohlis, Bhils and Menghawars) as my cooks, drivers, chawkidars and household servants, although many of my other employees won't eat or drink

even from utensils used by them. I have benefited as they are more docile, obedient, reliable, responsible, honest and respectful than Muslim labourers and they are willing to work at lower wage rates for longer working hours than the latter.

The hatred against labour class originated with Aryan classification of castes according to professions introduced around 800 BC. The educated people were Brahmans and they tried to monopolise on higher learning, which included religious texts, medicine, astronomy, astrology, magic, divine powers, witchcraft, snake-charming, forecasting the future and etc. The next to Brahmans in hierarchy were Khatriyas, whose profession was to fight wars, protect and extend borders and control the state with help of Brahman ministers or advisors, administrators and petty official. The state employees for various functionaries were also Brahmans. The third category of people were the trading class and landowners who were considered as the Vaishas and paid taxes, to run the government. The last was labour class, who worked with their own hands as farmers, skilled and unskilled workers. The castes may have come down from Mohenjo Daro Civilisation and introduced by Aryans later on. The caste system has survived to this day. Before the British rule of Sindh, Syeds were the ones who got higher education to enter in ruling Mirs' service. The Jagirdars mostly Balochis were Khatriyas, who fought wars for Mirs. Business class and zamindars were Vaishas and rest were working class. If by chance any one from the lower class became Maulvi or learned person, he was immediately admitted and respected as Syed and was called Pir, Makhdoom, Pirzada and was involved in government functionaries. Same was done to educated Sudras and were admitted by the Brahmans to their class. British broke the monopoly of Brahmans, Syeds, Makhdooms and Pirs by opening education to everyone and employment without any regard to caste, creed and colour. The untouchability as I witnessed 20 years ago, is continuously being reduced due to the lingering British influence and there is no possibility returning to old system.

INTEREST

This is an interesting incident which took place some 15 years before my birth. My maternal grandfather Ahmed carried out business in partnership with a Hindu merchant and established the sole shop in the village. They charged interest at six-and-a-quarter percent on all loans. One day a Punjabi religious Muslim sub-Inspector of Police of area sent him a message that he with fifteen zamindars, their horses and servants will be his guests next day. He arrived with his camp followers and stayed for two days and two nights. It was understandable that horses will be given beans as feed and this item alone will cost more than food for the human guests. The police officer was uneasy to find that host was not bothered by his excesses, he took care of guests smilingly, went to mosque to observe prayers regularly, attended to his business, saw his shop clients, met his Kamdar (farm foreman), operated things efficiently and therefore, called him for a talk, which is reproached below:

S.I: I understand you take interest from people.

Ahmed: Yes I do.

S.I: Do you know that interest is "Haram" in Islam.

Ahmed: Yes I know it is "Haram".

S.I: Then why do you eat Haram?

Ahmed: I do not eat it. I keep it for the day when those who are used to take "Haram", come and eat it. I also use it as charity to deserving. Thus, it is a useful item for many occasions.

S.I: I am not convinced fully, give me the details.

Ahmed: We serve about 200 households of our village and surrounding areas. They are poor farmers. We supply them all their domestic and farm input requirements from beginning of January to end December i.e., for twelve months. They pay back from harvest of their crop of rice in December. We do not have extra capital to buy all their requirements of food, domestic articles, clothes, agriculture implements and household and buildings materials for the

whole year. In brief we supply them all their requirements and some cash. As we do not have enough capital, we borrow money from rich merchants of cities and pay them interest and in return we charge interest at the same rate. Without such arrangements these villagers won't be able to go on, even for a month. We save some money from interest but then there are defaulters, some widows and orphans. The surplus money from the interest helps such people, who accept it not as "Haram" but as "Khairat". As a part of Khairat, money was donated to construct the only mosque in the village.

S.I: Ahmed you are fair, honest - Imandar and believer. I have been misguided by Wadero Arz Muhammad and thought of punishing you. We will spend another two days with him and punish him in return.

Ahmed: Wadero Arz Muhammad has sold most of his property. He is poor. You can stay two more days with me and I will serve you all.

S.I: In that case, let us break the camp and everybody should go home.

I have nothing to comment on religious aspects of interest, but in the history of Sindh the following are highlights of interest in the past three thousand years.

- Rig Veda states that loaning money against interest is an honest business.
- Upanishads repeat the same statement, adding that rate of interest should be regularised. Upanishads were an outcome of ancient beliefs prevailing in Sindh and the Punjab around 2350-1650 BC in the Indus Civilisation and lingering beliefs were absorbed in Vedic religion around 700-600 BC. Lingering influence of the Indus Civilisation which had decayed around 2000 BC, shows that interest also prevailed during Mohenjo Daro times.
- Gautam Buddha stated that rate of interest can be fifteen, twenty and twenty-five percent for various purposes, but no interest will be charged after the first year.
- Kautliya in Arthasastra, states that loanee is not able to repay capital and interest, the government will recover the money, but charge the loaner five percent fee for recovery. However total interest will not exceed the capital.

- Manu in Dharmasastra fixes rate of interest as five percent and any amount charged in excess of this is not recoverable and total interest will not exceed the capital. Higher rate of interest is allowed on foreign shipping as risk of loss is greater.

In Sindh we followed the above systems and Arab governors (711-854 AD) did not interfere with the system. Habaris (854-1011 AD) did the same. In the eleventh century many Sindhis became Ismailis and the system continued. From thirteenth century onwards, Sufis of Sunni faith converted people, but large-scale conversion took place in fourteenth century under Sammas. The public had two choices to remain as Hindus or Ismailis and remain in business, pay and charge interest or become Sunnis and get out of business. However for Sunnis, it was one-way traffic, they could not charge interest, but had to pay when they borrowed. This is how total business in Sindh went into hands of Hindus and Ismailis in the past 700 years.

President Zia started interest free banking. Essentially it was a fraud as he wanted to please Mullas that it was profit sharing rather than interest. He allowed interest free loans to Haris, but no Hari got it. Zamindars (land-owners) gave security for that loan and used it themselves in almost hundred percent cases. Profit sharing is another name to legitimise interest. He paid interest on foreign borrowing.

The rate of interest charged by moneylenders at ten percent a month definitely is against interests of any civil society and must be crushed by law as a crime or under any religious doctrine. Interest can be abolished only in a true welfare state where the government takes responsibility of sharing inequalities between its citizens.

ENTERTAINMENTS IN OUR VILLAGE

Life in our village was totally monotonous. There was no entertainment. I was very bored with it from childhood. When I started school education and could read, I overcame boredom by keeping myself busy with reading, writing and above all solving examples of arithmetic of higher classes than mine, but this could not be done all the time. Occasional change was; new beggars, some of whom were fortunetellers and women paid them heavily so that they tell them certain flattering things about them and their children. Whenever a baby boy was born, there would come a fleet of eunuchs, who dressed as women, sang, danced, blessed the child and got paid much better than beggar-saints, beggar-fortune tellers and even Pirs. Eunuchs were men, who clean shaved their beards and moustaches, kept long hair like women and also put on female dress, ornaments and make up. They had reputation of being catamites and professed it openly. It was surprising that even orthodox Muslims and Hindus did not object to these people who roamed around with full freedom. I have heard of no eunuch of this type anywhere in the World except South Asia.

Whenever any marriage or similar festival took place, women would collect and sing, but men always were conspicuously absent. In absence of musical instruments their vocal song had no rhythms and charm. Muhammad Machhi, blinded by small pox in young age, would sing on Yak-Taro, but his voice was poor and his singing created pity and some offered alms. One entertainment was playing cards without bait. I considered it waste of time though it does create concentration and analytical mind and played it sometimes with my two maternal uncles and their nephew Saifuddin during high school vacations, but it was short lived as Noor Muhammad got a job in Dokri and Muhammad Saleh went to study Arabic medicine in Delhi. There were no sports and games in a puritan society. Young boys would play a few outdoor games, but end result would be fight between losers and winners. After opening of Sukkur Barrage I could go and swim from mid-March to end-September. This was the only sport worthwhile in the village, but very few were interested. It could not keep one mentally busy, though was highly relaxing.

In a neighbouring village Piaro Goth two incidents took place in 1931. Pir Bakhsh, a Panhwar, killed his brother's wife on charge of being Kari (having illicit relations with a man) and handed himself over to the police. He was given seven years imprisonment. The people of our village discussed it for days, some exonerated him for right action against wrong doing of the victim, but others

thought that only husband had the right to kill. Yet some thought that if husband cannot satisfy his wife, she within her right, could do what pleased her. The Mullas thought that action is right if both Karo and Kari were killed but red handed on the spot by the husband. Majority thought that flame of illicit love is to be extinguished by death of women.

The other incident raised more whispers than comments. Gul Muhammad, a young married man, left his family (wife, father, mother, brothers and sisters), wore female clothes and joined ranks of eunuchs, who named him as Gulie. The two incidents were much talked about as my maternal uncle Noor Muhammad had been engaged to a girl closely related to these two families. It was surprising that Mullas of our village never objected to gangs of eunuch visiting our village to rejoice birth of a boy and get paid. It was also surprising that birth of a girl was not celebrated, a clear acceptance of unwanted birth, a matter not to be proud of or be happy about or even worth announcing. In general discrimination against females started from their first day of birth.

Mullas did not condemn, passive homosexuality of these eunuchs. I had found that in the village many boys and some grown-ups were dabbling in homosexual acts and none was taken to task. In societies where women are segregated, homosexuality is common and is tolerated. Only in one case, the villagers made the man involved, Abdul Ghafoor to sit on a donkey with his face towards its tail, put some old shoes around his neck and took him around the village, laughing and joking about it, though the Indian Criminal Code awarded seven years imprisonment for it. This relaxation was quite understandable to me as some fifty percent villagers reportedly had committed homosexual act at least once in their lifetime and felt morally guilty to punish any one. However I could not understand why Gul Muhammad joined ranks with eunuchs. The clarification came from Kinsey's report on "Sexual Behaviour in Human Male" published in 1948. After interviewing 20,000 males and females in all walks of life, the learned Professor of Indiana University USA, after twelve years' research reported that thirty seven percent American males had committed homosexual act at least once in their lifetime. Of every hundred American males seven persisted in homosexuality during their lifetime and of these seven, there were five who were both homo and heterosexual but two were exclusively homosexual. He also reported of sodomites and catamites among these two. Since Gul Muhammad was from a neighbouring village, his whereabouts were known to our village folks. He had joined hierarchy of eunuchs at Sehwan and rising through ranks, became the Guru (chief) of the group and when he became ill, chelas (eunuch followers) took him to Liaquat Medical College Hospital, lodged him in a private air-conditioned room and paid the fees of all kinds of specialists.

We were told that the ritual of converting into passive eunuch included removal of his testicles at Khawaja Sirae (tomb of saint Qalandar) Sehwan by their own specialists. The latest research shows that if these are removed during pre-puberty period, on growing up the man becomes totally impotent, but if removed after start of puberty (thirteen to fourteen years age), the man remains sexually potent but cannot impregnate a woman. The records of eunuchs guarding Harems of kings and Amirs (courtiers) show that women inmates knew this and many eunuchs had great fun even with the queens, this included the Queen Mother (Dogar Queen) of China in the nineteenth century.

Mullas tolerated no music, singing and dancing at our village. Only once when I was about seven years old, a women singer was called to the village by someone and she sang in the Autaq of Wadero Allah Warayo. So much was protest of Mullas that my grandfather told my father and uncle to stay away, though in the cold winter we clearly heard the music and songs from Autaq only one hundred meters away. Mullas never objected to visits of jokers, conjurers, snake charmers, bear owners and monkey trainers. They would visit once in a blue moon and all males from age of five and up would be there and after the show was over, the women captives in the house would be narrated the details of what male members of their family saw. This was the best entertainment for female folks.

Abdu and Khamiso, the two well-known jokers, visited our village a number of times on various occasions. They were Sindhi counterparts of Bob Hope, Jack Lemon, Laurel and Hardy. Essentially anti-feudalism, anti-Mullaism, anti-police and anti-officialdom, their oral jokes had depth and meaning and they were darlings of common men. Basically uneducated, rural dwellers, unexposed to city life and living, they had limitation to their scope of entertainment. At age of ten, I heard them on three consecutive nights, two at marriage of my uncle Noor Muhammad and third at marriage of someone at Mehar on the following night. It was such a repetition of the same show, that I got bored with them and never witnessed them again. Some years later they quarrelled, separated and reverted to farming and were never heard of again.

Of these entertainers, conjurers appealed me the most. When I grew up, I learnt a few trickeries just to be sociable among other students. I did not believe in palmistry, but read a few books and used to joke that if I needed money, I would sit in front of Municipal Corporation Building Karachi and tell people their fortunes. I also used to say that not only lines on hands but also on feet show the future, so some students, ritually would wash their feet a number of times with soap, lie down on bed with legs raised on back seat of chair for me to examine. One Mr. Daudpotta, a cousin of Dr. U.M. Daudpotta, a simpleton, wanted me to tell him of his future. I told him that I did not believe in palmistry. He became sure that I was hiding the facts and on his insistence I told him a few things,

starting that he was not satisfied with his arranged married life and was going to have a romantic affair like Gul Bakawali etc. That was a hit. He had come to Leslie Wilson Hostel (now Jinnah Court) to appear for Higher Examination of Revenue Department and soon to become Mukhtiarkar. He carried out such propaganda of my expertise in hand and foot reading that many Mukhtiarkars were searching for me. I took no advantage of this farce.

During 1952 Easter holidays, a groups of foreign students from University of Wisconsin were invited by some people from a small township in northern Wisconsin. There we met Judge Carter, a 70 years old man, the President of American Conjurers Association. He did an arithmetical trickery with some of us. I was quick in having understood the method and volunteered to do it myself on him. He was impressed and generous. He showed me some and told me of other trickeries and also showed me some books, models and his magic studio. I purchased some of the books and could make models, but considering it waste of time, I never persuaded it, as my involvement in engineering, agriculture and Sindhological studies left me no time for this type of social activity and worthless popularity and I did not consider it honourable at all. I still have those books.

One way of entertaining myself in such dull environments of the village was to get out from our house after the school hours and holidays and simply roam around in the fields to watch people and animals at work. Although the Sindh is a true desert without the Indus, but the latter has changed its surface in its central alluvial plains, which even before opening the Sukkur Barrage were green for nine month of the year i.e., from July to March, rice crop from July to November and dubari (second crop) crops of wheat, oil-seeds, peas, beans and some vegetables on preserved moisture. There were trees planted on embankments which germinated from chance seedlings. I observed branches of trees putting on new leaves from apical twigs and later on flowers which resulted into fruits or seeds, both edible and inedible. It was not only cultivated trees, but even those trees and shrubs of desert climate growing wild in wasteland, were flowering and fruiting. There were hundreds of thousands of insects going up and down the trees. Trees and bushes would shed leaves at particular times of the year. There were also weedy plants growing in the fields and in wild. There were some weeds in the rice fields which were harvested and used as cattle feed. I observed men working and some people had better tools than others. I found that it was simply by chance that blacksmith produced some good and some bad spades, scythes, spades, Khahiros and plough points as none of them were identical and so was the case with carpenter, who produced wooden ploughs, whose angle to draft beam and angle of hole to insert plough point in the shift varied from piece to piece and even the same plough point could not fit exactly in different ploughs he made. Thus each plough needed different animal draft to penetrate the soil in the field. Invariably they were

inefficient on power, quality of work and output. So was the case with animal yokes. They were neither same size nor were chiselled and planned to make it convenient for humans or bullocks to produce maximum draft. The worst was threshing of rice in which case animals were yoked together in a straight-line side-by-side to turn around a central wooden pole or pivot. The animal near the pole, could not turn with ease and after a day's hard work looked sick and exhausted. They could easily make the threshing yard in the form of a wide ring around the pivot leaving the central six feet diameter empty. I had determined from the childhood that if I had to farm, it would not be the conventional way, nor will I accept conventional tools of rural artisans. This entertainment of observation gave me an understanding of biology and crafts at this very young age. I could see that all crops, trees and shrubs depended on optimum combination of soil, water and sun, to flourish. One other entertainment I discovered for myself was that even after small rains black alkaline land turned smooth and soft on which one could draw any figures with a wooden point. Such spots were many surrounding the village and I made them my drawing studios. The other boys soon found out and scratched and destroyed my work but I could do nothing as neither land was ours nor was I stronger than them.

My maternal uncle Noor Muhammad was very fond of toys. He kept buying simple mechanical toys with four wheels until he was about eighteen. He was student in high school and on return would bring toys and demonstrate to the villagers. He had stacked them in a small room nitched in the staircase and when he was in the village, he would sit in the room cleaning and re-stacking his large collection of hundreds of toys. He allowed me to observe him at play. My mother gave him money to bring me some toys and I too collected them. Mine was not big collection, but I was already fed up with mechanical toys all of which had the same spring-loaded motor with gear to run wheel. I lost all interest in toys by age of eight.

Another entertainment was to climb trees, specially those difficult to do so. I enjoyed sitting up under canopy of trees. My uncle Muhammad Ibrahim had given me a small spade, having a blade about six centimetres wide and I used it to make way for climbing trees. Today I know why it was so pleasant to sit upon the tree under canopy. Trees evapotranspire and create lot of moisture within the canopy and around themselves.

Evapotranspiration results into cooling and temperatures within the tree canopies are lower in summer and higher in cold winter days. This makes it comfortable to sit under them and better still up their canopies.

Looking at Uncle Noor Muhammad's toys I concluded that I could make many toys myself, if I had tools and materials, except mechanical toys which needed

special machines. I made kites of various designs and combinations from paper and bamboo strips. I also used thread and discarded postal cards to make telephones. I could nail pieces of wood and make different patterns, I also made clay toys and burnt them in household fireplace used for cooking. However around the age of eight or nine, I lost all interest in them too.

Eid Sha`ban falling on fifteenth of the lunar month was specially celebrated with fireworks. The Hindu shopkeeper provided fireworks free to rich clients. The potter used to make special wick lamp chandeliers for the occasion. Maternal uncle Noor Muhammad brought fireworks from Dadu or other places and was centre of attraction on the Eid day. His chandelier was the best design and largest.

The boys took chandeliers out for show and gathered outside the village and when it was about to extinguish due to lack of vegetable oil in it the elder boys specially those who had no chandeliers of their own, broke other boy's chandelier, with wooden sticks. After my first experience, I felt danger involved and oil was nearly boiling and therefore danger of fire or oil burning.

I learnt to make traps to catch birds. The first experience was disaster. I had used inverted Laee twig basket supported on a single stalk for the purpose and when I pulled string attached to stalk, basket came on a dozen sparrows all of whom escaped from the holes in the basket. The birds in pre-barrage days were not too many specially after canals stopped to flow in October. I used Gulel to hit birds. It was too slow to hit before birds fled. I tried to fish but water was too turbid to allow fishes to flourish and time to wait for luck was so much, that I defined fishing hook as a device, with hook at one end and fool at the other.

Village was occasionally visited by magicians or conjurers. They would show some card tricks, make monkeys perform some tricks and imitate humans. The whole village was there except poor grown-up women. Some time a Fakir accompanied by his black or brown bear, will visit to entertain people. But all these essentially were beggars, collected some money occasionally and spent their lives in poverty.

Occasional visit of snake charmers in the village was another fun. Shopkeepers, beggars, Jogis, Bagri toy-makers and fortune tellers were allowed to get into the village streets as women observed no seclusion from them. Jogis were one such class, who as believed by people had mysterial powers over the snakes and with help of their Murli (musical pipe) and mysterial utterances could catch and tame even most poisonous ones and make them dance. People being afraid of snakes, always called Jogis to help in catching them from their premises. They keep working on their Murli from one to other corner and finally extract one to the

surprise of the client. Many think that they bring snakes with themselves for the purpose. It was a fun to see the snake charmers at work for the whole day. The whole village believed in Jogis' magic, but when I grew up I observed that there were two types of snakes, poisonous and non-poisonous. The formers have two hollow or grooved fangs for injecting venom, which clots the blood of their prey or paralyses their nerves and muscles. The bite of those which are poisonous can be identified by two large diameter fangs as compared to tiny teeth with which they bite to eat. Sindh has two well known poisonous snakes, cobra and viper but it is said that flying snakes also exist in Sindh. The last one resides in trees or thatched roofs and while targeting the prey glides by straightening and flattening its body to reduce air resistance and lands in a true flying fashion. I was 8 years old and when eating my lunch, a snake in thatched roof of our outdoor kitchen targeted me or my rice plate. My auntie shouted. I ran to neighbouring house and Gaji, a cousin of my father, brought one meter long slender needle with wooden handle used for making camel saddles etc., and pricked it in its stomach. Half dead animal had needle passed through it. With his trophy in hand, he went in front of the shop of Hindu merchant and fixed the needle in the ground. The men and the children of the whole village collected there. He finally killed it at protest of the Hindu merchant, who told him that in his next life he may well turn into a snake, if he does not show pity to it, so kill him instantly without torture or pain. Gaji claimed that his trophy was a flying snake but I am not sure.

Jogis connected with snake charming were welcomed everywhere and their cobras were called fakirs. Later on I learnt that all classes of snakes are deaf and cobra moves its head in the same direction as Jogi's Murli. Many times I pick up a stick and move in front of its head and snake follows it. Snake-charming could be dangerous, but we were told that Jogis catch it at the neck and press to make it open the mouth wide apart and with a knife separate poison sack from the body. It can still bite but cannot pass venom.

The visit of Jogis to the village was always welcome. They wore orange colour clothes similar to Buddhist Bikshus. Some of them were good musicians. There were nomads who lived by beggary and fortune telling and their women sold their charms openly. Educational system of Aryan tribes 2800 years ago had a syllabus, which included snake charming as a special subject to be taught to the Brahman students. There was another subject Yoga, which consisted of not only Yoga exercises, but also some kind of magic and mysticism was taught and is still popular.

The Yogis of Vedic religion were Brahmancharis (those who do not dabble in sex, both physically and mentally) or those who renounced the world and lived in hills or jungles. Bikshus had evolved from Yogis. In time in Sindh Bikshus

became Jogis. Since they are aboriginal race it seems that they originated in the Indus Culture times and Aryan merely copied them.

Before I was ten years old I found that snake was deaf as it had no ears and could be harmless, unless stepped upon or attacked. The farmers in Sindh kill snakes in thousands everyday without knowing that they eat rats, rodents and insects of all kinds which otherwise are agricultural pests. They are useful to the farmers, who must be trained to distinguish between poisonous and non-poisonous ones.

My uncle Ibrahim at times would try to perform miracles. He found a cobra snake with broken spinal cord and said: "I am going to convince her that I did not hit it, and I am going to make it my pet". The snake could not move with damaged back, so he brought it to the house, kept it in a corner in the buffalo barn, procured a Murli (cylindrical musical pipe) and wanted poor creature to dance. He killed small frogs and mice and kept them before it to eat. Poor creature in pain raised part of its body to defend itself from the end pipe of Murli. It was hot summer time and snake could not open its mouth to eat, but it devoured the stuff probably at nighttime when it cooled. I had never seen it open its mouth during the day as high heat paralyses its system. My conclusion is also based on my experience from the childhood, that I do not work efficiently in summer, develop headaches, want to lie down and sometimes used to lie down on bed, with legs raised and resting on the wall as Abraham Lincoln was reported to be doing. I did not know the reason in spite of many doctor friends. Only when I purchased blood pressure monitor in 1964, I could visualise that it was on account of low blood pressure, I have had from the childhood. As since 1957 I have been eating two chickens of one kilogram each per day, has blood pressure normalised but I still suffer from heat of April to July even in southern Sindh, in spite of air-conditioned rooms and vehicles. Now I have reduced intake of chicken to half due to old age. It seems that snake must have recovered and escaped, as my uncle had put thorny fence around it and dogs could not have eaten it. My uncle said that it is going to protect us even from other snakes, as we have been so kind to it during the 7-days, he was its host. It is also not going to bite any member of our family as all of us were kind to it and is going to recognise us. This is what he believed and considered everybody wrong, if they did not agree with him.

VILLAGE ARTISANS

I think, to prepare me to become a good head of a rural family, my grandfather took me with himself, when visiting different artisans like blacksmith, potter, carpenter, silversmith and washer man etc., while I was only 6-7 years old. All these artisans were settled in different villages surrounding ours and I could easily walk there. He chose my winter vacations as time for such trips. We spent about four hours on each such occasions at respective work place. He wanted me to get acquainted with the artisans myself, so that on growing up, I know, where to go for repairs of plough share, plough frame (wooden), animal yoke, household furniture, washing clothes or getting clay pottery for household etc.

While grandfather was training me, where to go for various jobs, I looked at each place differently. I watched how things are made with various tools and devices and how these tools work on the object and the end product. Later on for me it was also playful to walk to those villages and watch how they made these things. Two to three visits to those places for 3-4 hours each, gave me enough education that I was sure that I could do the same jobs as an artisan after a little practice when I grow up. For example I could also improve on the job of silversmith, simply by adding the number of dies into which he poured molten metal. Instead of one stereotype monotonous pattern they could be changed to unlimited new designs. The blacksmith had no dies. He did not make fine stuff for kitchen or pen knives, which needed forms and dies. Carpenter was good but lacked precision instruments and marking devices. The potter lost half of his pottery during the firing in a pit kiln and his pots lacked strength and colour as compared to burnt bricks, as his kiln was shallow and inlet and exhaust ports (holes) were improperly designed, temperatures were too low for good quality pots and were unsynchronised. To save on washing soda, washer men depended on heat of steam for longer hours and reduced life of cotton cloth. Later on I found that all these rural artisans were using primitive methods and even a small town like Mehar (5,000 population), had much superior workers.

Curiosity made me study the technicalities of all above professions scientifically and I felt sorry for our people's lack of knowledge and general public's indifference to these sciences. The workers and their employers both lacked education, common sense, initiative and above all incentive. Their mentality was limited to that of common labourers.

While as student at Mehar, Larkana and Karachi, I went and watched various artisans at work and observed many wasteful operations. In Karachi I could lay hands on many books on these trades and even before my engineering education, I knew so much of them that I could improve the techniques. The books were available in plenty but needed some sensible person to translate faithfully with exact terminology understandable to semi-literate workers. Pre-independence bookshops carried most books available in England, but the British rule of India was too short to transmit knowledge to the level of workers.

As things shaped, I joined Agriculture Engineering Wing in Agriculture Department and was to establish 13 agriculture engineering workshop throughout Sindh, which I did between 1955-1968 and equipped them with machines for carpentry, blacksmithy, furnaces and kilns for melting metals and heat treatment and other workshop tools of all kinds at the cost of the Government of Sindh. Some of furnaces could handle pottery and all kinds of tile work. It was outcome of my childhood self-training in depth of all these crafts that motivated me to do all these jobs successively. I trained workers on all these jobs as much as I could and did run all the machines myself for training others.

SINDHI BHOPAS

A man visited our village. He was called Bhopa and was known as expert in mantras, magic and wicked trickeries. He was tall, dark and ugly with broken teeth and I shunned his looks. I was never convinced that such an ugly, illiterate and un-mannerly person can have supernatural powers.

In 1944 we were living in Rup Villas Hostel in Karachi and two groups of students had an argument over the mysterious powers of Sindhi Bhopas (witch doctors). A few said that they are impostors and rest believed that they can do the things, which even devils will fear to tread. Finally the parties bided upon entertaining the winners at cost of losers at a dinner on Sunday at Islamia Hotel, if a knowledge person gives his verdict, as to who is right and who is wrong. Both the parties had agreed upon mine being the final word. I made them sit in two groups in my room and said: "Sindhi witch doctors have inherited knowledge from ancient mantras of Egypt, Mesopotamia and Indus Valley. Hindu Sadhus who retire in Himalayas at old age know it, but have kept it a secret. Bhopas are most powerful group and are concentrated mostly in Sindh. The British Government knows it, but ignores their wrong doings because by their evil actions they can cause harm to their officers and administration. In the World War-II, now at its peak, the British are desperate. The Russians are being slaughtered to their last able man. Allies are expecting defeat. The British Empire is going to dissolve. As a last resort in desperation, under orders of Sir Hugh Dowe, the Governor of Sindh, all leading Bhopas of Sindh have secretly been invited to the Governor's House. Now in arrangement with Churchill, the Prime Minister of England, Bhopas of Sindh are being flown to England to make clay images of Hitler and prick him with needles to death. This way the World War-II, which is going on for five years is going to end within a month. Only if Hitler had known of their evil powers, he could have smuggled them out of Sindh to avoid German defeat. Now wait for a month, see the World set up side down by Bhopas of Sindh. They can undermine what modern science and engineering has achieved in the past 200 years. To know, if Bhopas have the powers as claimed, we wait and see if Hitler is mysteriously killed and war ends within a month. If I had access to their rustic knowledge, I would not be spending sleepless nights in the hostel and reading these engineering books and preparing for examination. Now postpone your dinner for one month and you will yourself see the winner."

The leader of supporters of Bhopas, Muhammad Shafi Ansari (Junejo) my roommate told his group: "I told you Panhwar will not support Bhopas. No Bhopas have come to see the Governor. He has ridiculed us. Now you all pay for the dinner and not me, as Panhwar was your choice and not mine".

In the childhood I had heard stories of Jins, devs, fairies (Paris), witches and Bhopas. By the age of about eight, I was sure of their farce. I had seen magicians but by age of twelve, I could perform at least some of their tricks. I had watched Mulla's Duas and Ta'awizs having failed to cure the patients. Visiting graves of saints had brought no prosperity to the pilgrims. Living Pirs were benefiting from being successors (Sajada Nasheen) of the old saints, many of them were agents of the governments of their own day. Unfortunately Sindhi folklore is full of all above types of tales and supernatural beings as the last minute rescuers of heroes, heroines and innocents in trouble. There is also enormous literature about miracles of Pirs, Syeds, Fakirs and beggars. At the age of eight I was already a rebel and by age of ten I had freed of myself from all the superstitions and could think rationally. The happiest part of my life has been rational thinking, which was promoted by freedom to think in early childhood and studying publications of Thinker's Library series of some 200 books, followed by study of anthropology, evolution and earth sciences.

SEX EDUCATION

I think rural boys and girls get the chance of sex education very early in life and such is unavailable to the children of towns or cities.

I do not know how early I knew, what the Western people call telling children about bees and birds. It must have been too early in my life. We had animal yard adjoining our house. We saw male and female buffaloes, cows and bulls mating year around. Dogs and bitches were mating in the street, just outside our houses and cats and rats were mating right inside the houses. Mating of camels was an exhibition in which the males of the whole village came to witness his screw-like stuff and the owner of female camel guiding the whole operation with his hands. We had seen goats, sheep, horses and donkeys mating and also birds. Of the amphibians, male and female frogs were mating in the cool hours of summer mornings near the embankments of the irrigation channels. There was no curiosity in it. I knew this much before I was four years old and knew that animal females will produce offspring's after this intercourse.

At the age of five-and-half around sunset my mother took me to a newly dug shallow well with water table about six feet deep, just on the edge of village for raising rice nursery and shared by some eight to ten farmers. My father was inside and she lowered me to take bath. I saw my father with his stuff hard on. I knew that he uses it on my mother to get me, brothers and sisters. To me it appeared normal without being bashful.

I liked the well because soon after sunset I saw the image of moon in it. Next morning I went back to the well, which was less than a quarter kilometre from our house, to check if sun was visible in it. It must have been month of June, as in those days rice were transplanted in July when nursery was only fifteen to twenty days old. The sun on 26°-30' would only be 3° south on 21st June and therefore it would be visible in the well at noon, throughout the month. While I was peeping in the well, two boys Abdul Ghafoor and Ghulam Rasul of fourteen years and a ten years old girl from neighbouring house were sitting in a hut a few feet from well. Hut was six feet cubical structure made of pressed clay mud having thatched roof and was meant for watchmen, to protect rice nursery from birds and wild animals and other uses. They had hung their clothes (turban and girl's Dupata) on the door as curtain. I went nearby to see them and found them naked - the girl lying on a reed mattress and boys performing action like all male

animals, except that animals use rear entry position and in this case it was frontal.

I had started going to school and a few days later, these boys had threatened me that if I told this story to any one, they would kill me. Being afraid that they may execute their plan, I narrated the scene to other senior boys, who in turn broadcast it. That day evening the father of the girl took her to the guardians of boys for their misbehaviour and fight between the families raged to the level of taking clubs to beat boys and their parents, if they did not apologise. The next result was tragic. No Panhwar of the village was willing to marry the poor girl and she was married in a far off village. I could now see that socially it is not so easy in humans as is in animal kingdom and what should be considered as animal act or urge, was punishable in humans. Orthodoxy and slavery of women under Sindh conditions is described separately.

While I was in my third year in primary school (kindergarten plus two), elder boys talked about male Panhwars and their mistresses or extra marital affairs. They had mine of information probably heard during causal visits to Autaq or the women folk in the houses. They told about my father's affair with a young Panhwar girl. It was the time I had read Qayamat Namah and had started offering prayers occasionally in the mosque. All of a sudden my father too had started offering prayers. My mother had asked me to which side of mosque my father stands to pray. I said northern side. Now I could see that my father's visit to the mosque was connected with his liaison with the girl having house close to northern wall of the mosque and the yard which was used for prayers most of the time, as mosque was too dark inside and mosque was built on a mound, so that one could see inside the house to the north. A few days earlier my father had sent me to knock at her door and find out if her brother Idrees was there. When I knocked the door, she opened it and saw me. Immediately there came a blush on her face, matching that of pink nectarines and such as I had not seen before on any woman's face. Without knowing of my father's relationship with her, this was first case in my life, where I felt that the beauty of grown-up female face could also appeal a boy of eight years. From talks of boys in the school, I concluded that my knocking at the door was a kind of pre-arranged signal between the two. I did not bother what consequences it will have for my mother or father, so told nobody, I felt proud of my father for two things, the girl was most beautiful in the whole village at that time though not tall like my mother and he was the only Panhwar among all males who had extra marital liaison with a Panhwar woman, whereas other Panhwars had similar relations with women Machhi by caste, who socially, economically and educationally, were inferior and their women were freelancer partners. At that age I also felt that if one was to have any relationship with a woman, she has to belong to the same class as one's own and she should be beautiful enough to appeal.

When my mother died my father asked the brother of the girl for her arm (helping hand but actually marriage), as they call it in Sindh. The man refused. Probably my father did not have sister or daughter of marriageable age to exchange or probably they asked for money large enough for my father to afford. Two years later my father purchased a Kutchi girl from her father living in Karachi, for an amount equivalent to 125 grams of gold. The parents of the girl never turned up to see her. Within short time she was absorbed in rural life. After my father's marriage, the brother of the same girl now turned enemy and reported that the girl he married, was minor and my father was liable to punishment according to Sharda act of India. Nothing happened to my father, as police charged rupees fifty and filed the case. Thus, though British officers were incorruptible, the lower ranks were not above board and the classical five-volume report of 1918 on "Rasai, Lapo and Chher in Sindh" is an example, how corruption was legalised and tolerated.

Sex education starts with the birth. Child suckles mother's breasts for food as well as pleasure and adults tongue-to-tongue kiss is continuation of the same process. The mother is attractive to the baby boys and father to the girls. The sexual behavioural pattern of grown-ups is actually formed and determined at very young age, starting from the birth and is completed before age of seven. I suckled the breasts of my mother up to age of three and I went with her wherever she went up to age of about eight. Whenever she went to see her parent's or sisters' houses or to meet womenfolk she took me along. I sat there hearing their talk and even though I did not understand it, but their voice was soothing. All this has special significance even to my age of 77. I have felt more comfortable in the presence of women and have always treated them gently and as my equals or at least not inferior and hate-worthy. In the company of men I have always felt competitive, careful and invariably rebel, if they try to show superiority, or try to dominate or make show off.

Even the type of females a man will like or vice-versa is determined at very early age before a child becomes seven or eight year old. I had such fixations but not on one woman. I have found that certain female faces have appealed me, but not their bodies. I have liked some women's body but not faces. Pondering over the issue, I thought I must be crazy that out of one hundred girls I may not like even a single. In the University of Wisconsin I came across hundreds of girls, but hardly liked a few. I asked a psychologist friend, who told me that: "you happen to like a particular combination in women like that of Venus de Melo, in which case the sculpturist had combined various body parts of a number of women to produce a perfect beauty. As that is the case with you, do not spoil your taste. If we succeed in curing you, it may be that you may start liking ugly women and

you do not know it may affect you in what you want." He said that he believed in Bible and answer is it, in which says: "seek and yee shall find."

My fixation certainly is on an imaginary woman who has to be tall (at least 5 feet 5 inches) and slim, oval face and maximum measurement 36-24-36 inches or less.

Smaller waist than that is better if body proportions are similar, but no compromise on height. I imagine this description fitted my mother, but she was not fair in colour, though was not dark either. I got fixation on skin colour from other women, may be my mother's sister or my paternal uncle's wife, who were fairer in colour. I did not know a thing about this fixation in the childhood, but around the age of about sixteen I found myself fantasying a girl, who could be my life partner and I imagined this type of body, face, colour and blush. This has dominated me for all my life. I do not consider this illegal, immoral and crazy.

From the childhood I had considered heterosexuality as normal human behaviour. If sex was so wrong, why then the animals were allowed to perform it in public, before women and children. Observing the dogs at very young age, I had seen that a bitch in heat, collects a number of candidates around her and she herself selects the partner for the occasion only and others simply stand and watch. I knew it could lead to murders, if human female does the same and therefore sexual privacy became necessary among humans. We had always kept a number of hens and one cock for our poultry meat. Eggs were not used in Sindh until recently. We had observed young chickens matured and started competition for female partners. The old cock as master of his harem, invariably challenged young ones. We usually killed them for meat. There was Jatt (camel herdsman) settlement near our village and they had mixed population of camels. Males were preferred as baggage and riding animals and females were to produce as many offsprings as possible. They drank their milk. The camel owner once told us that only one camel in a herd is master of all females. It does not allow any other males to cohabit with females. After some years when he becomes old, one of the younger ones takes courage to fight and if it defeats the old fellow, the latter surrenders his harem to the conqueror and never thinks of sex again.

In my childhood sex or sexual talks never bothered me as illegal or harmful to health. Once a donkey owner narrated that he was riding a male donkey and another person on a female donkey crossed him. He did not know that female was in heat, nor did the owner of female know. After he went about one hundred metres further the male brayed, the female responded, both animals raised their front legs almost vertical, both men fell down and both animals rushed to each other and met in the centre to perform the act. By the time they were through, owners reached them. He said this was first ever experience of that donkey and it

became so proud that it refused to carry load next day. To make it work he had to wash it thoroughly so that no female donkey smells are left on its body and then alone it worked. If he told the truth, it showed, how proud animals feel after successful sexual act.

Much before I was ten years old I had concluded that males are polygamous and given chance they will eliminate or sub-ordinate other contenders to have monopoly on females as long as they can maintain it. In other cases like those of bitches, they are selective in making partners every time but change them frequently, so given chance human females may become polyandrous. It was not until 1996 that a report from an American psychologist stated that men want every sperm of theirs to impregnate some women and woman always looks for the best man as father of her offsprings. Thus, in free a society, men and women will always end into multiple love affairs.

I had ignored thought of sex almost from very young age specially as I did not like the ceremony and use of henna, smell of which drives me 100 metres away. In 1942 after appearing in the matric examination, I went to see my mathematics and science teacher, Mr. Chandnani at Mehar. As he was familiar with the social customs among both Hindus and Muslims and he thought that they will get me married soon after the matric results are out or even before it, so he told me: "I had given you books on general science and psychology, to read. Now I give you a book which you should read now and I will give you another one, a week before you marry." The book he gave me was Dr. Marie Stopes "Married Love", written in 1918, banned in England, the author tried and imprisoned but ultimately exonerated. I read the book. It was not at all pornography. I had to learn a number of lessons from it, specially that marriage is successful only if sex is satisfactory part of it and if not, there is always fight. She did not separate love and sex, the two have to go together. I understood that the subject needed thorough study from various angles, specially psychological behaviour and I had to look for books on the subject. I had many Hindu class-fellows, who had mentioned that three Shastras namely Kamasutra, Kokasutra and Angaranga were books which train a person to become a perfect sexual sage and named many such sages. After one week I went back to Mehar to return the book and through a Hindu class-fellow, got two books 'Kam Shastar' and 'Kok Shastar' in Sindhi, which I read and returned. They did not impress me, specially division of sexual behaviour of women from different areas, Sindh included. Essentially they concentrated on pornography. Sindhi translations were defective and were loaded with Sanskrit words, a language from which it was translated and this made their understanding difficult. Today I know that read between the lines, they were classics.

Chandnani was right. One evening my father took me to a quiet place in the village and told me that two marriageable girls are available and if I agree, he would talk to their parents. I told him that, I do not know about my future and he should wait; besides I do not like the two girls any way. He never talked on this issue again.

After the result was announced on last day of May 1942, I went to Karachi to find about admission in D.J. Sindh College and went to the bookshop in Elphinstone Street owned by a Hindu, renamed as Pak-American Bookshop in 1948 and closed down in 1998, to get books on sex. He had three available. I bought all the three and one called 'The Ideal Marriage' by Van de Vilde a Dutchman, was what I think Chandnani had in view. I read all. Ideal Marriage was classical for its times, the others were less informative. In 1946 per chance I came across second hand copies of the quarterly journal "Sexology". Reading it I found it was scientific journal available very cheap and I purchased most of issues from (1934 to 1946) at Rs.1 each. The journal described the research going on in Europe and USA. It was some five years later that I came to know that sex was taboo in Europe and USA and since under the British there was more freedom to non-political writings in India, it was published from Bombay to cater for scientific writings on sex, the world over. It brought the world scientists together and paved a way for sexual revolution of type unheard of in the human history before. As early as 1880's the British India had demonstrated that translations of semi-pornographic Kamasutra, Kokasutra and Angaranga, all three on 'Indian art of love' and 'Perfused Garden' on the 'Arab art of love', could be published in India and circulated in the West legally or illegally but Indians were not bothered, as the class of people who read them in India, were already liberated and common man thought that they were written by Hindu sages to guide married couples. That time I did not know that the Chinese and Japanese present sexual albums to their daughters as marriage gift, as they were more liberated.

In general availability of scientific literature on sex was rare and limited throughout the world up to 1960. Dr. Kinsey was working on sexual behaviour of human male and female at the Indiana University from 1936 to 1959. He had interviewed 20,000 American males and females from all walks of life, consisting of politicians, high government officers, executives in industrial and commercial concerns, factory workers of all categories, small businessmen, office assistants, mechanics and even the circus acrobats. The data was published in two large volumes and few interesting conclusions were:

- Thirty-seven percent of American males have committed homosexual act at least once in their lifetime.

- Ninety-nine percent of American males and females have masturbated.
- Percentage of lesbians is sufficiently large.
- One out of every five women became pregnant before marriage.
- About two percent males are exclusively homosexual.
- Eighty percent married couples have tried anal intercourse.
- About five percent males are homosexual as well as heterosexual.
- A number of men have committed sexual act with animals.
- Successful marriages are those cases in which, females had about four love affairs with men, before marriage.

Excepting the last, all the rest were crime in USA and many people were in jails. Justice Douglas, a humanitarian judge of US Supreme Court, started releasing the accused and even the imprisoned, on the plea that we should be punishing all the culprits instead of selected few and it was a case of discrimination. Soon the State and the Federal Laws were changed to accommodate the minorities who were involved in what they called sexual abnormalities.

Kinsey, thus laid foundation for sexual revolution. It was followed by Dr. Master's and Mrs. Johnson's research on "Human Sexual Response" and "Human Sexual Inadequacy". Hitte was another researcher, who did a number of surveys, pushing the sexual revolution in the West further. Finally 1982 came solution to human sexual inadequacy in the name "ESO or Extended Sexual Organism". It gave methods for extending sex to an hour or more, simply by use of exercises suggested by a Germany researcher Kegal in 1939, but ignored due to prejudice against Germans during the World War-II. While in the high school, I had been told of similar powers of Yogis by Hindu students and a Swami with such powers had visited Mehar. At age of 15 I started exercises for development of body. These were the same as Yoga exercises and I knew Yoga works. These general exercises were evolved over many thousand years, world over, but were only penned down in India.

After trying the Kegal exercises for about three months, I found that they work. A number of books on the same lines as ESO have been published since 1983. I

cannot predict where these will lead the humans to? The ecstasy they produce, may be similar to Sufi doctrines, but I am not sure.

In this process of understanding sex further, I have collected 700 scientific books on the subject since 1942. They are no pornography and they have given me understanding over the human behaviour. I always remember my teacher Chandnani, for guiding me in 1942 to this subject of which every one of us has distorted knowledge in Pakistan.

MY FATHER AND GRANDFATHER'S SEX LIVES

In late sixties of twentieth century, there came out two classical biographies by the two sons of the two great men of first and second quarters of twentieth century. The first one of them was the hero of the World War-I (1914-1918), Lord Lloyd George (1863-1945). The biography writers were already over seventy when they wrote about their fathers, who had died some twenty-five years earlier and any revelations of their sex lives were not to hurt any one.

Lloyd George's son wrote that at age of 82 in 1945 he had a harem of twenty women living with him on his farm (estate) helping in all odd jobs to make the property a viable venture. They were free women and not the Eastern slaves. He further describes that while the father still was the Prime Minister of England in 1922, the son himself received a call from the Parliament House that his father's party has been defeated and he may immediately be notified. The son found it awkward, but yet was compelled by the circumstances to knock at the door of his father's bedroom. After a pause father answered, opened the door, while wearing only the under-wear and on the chair next to the bed, the son saw the blouse of his mistress Mrs..... (I forget the name. MHP). On hearing of the news, George replied that he did not know why the Englishmen kept electing him after the World War-I was over. The book did not tarnish image of Lloyd George, nor did the Englishmen condemn his son. On the contrary they praised him for his stating the outright truth, which he normally was not obliged to tell, specially when nobody had asked him to narrate.

Roosevelt's son wrote that his mother Anna Eleanor (1884-1962) and married to his father in 1905 lived in White House alone, while his father shared his spare time and bed with Mrs..... (I forget the name. MHP), who also lived in the White House. The President Roosevelt and children dined not with their mother but with the father's mistress. Eleanor was a companion for only the public ceremonies. The family kept the whole thing a secret, so that Roosevelt's political image is not tarnished. In this case one of the biographer's three brothers in a press conference stated that he had nothing to do with his brother's book, but he did not say that it was not the truth. Other two brothers and one sister did not contradict. The American public did not condemn Roosevelt or his son the biographer and on the contrary they felt the brother's statement was out of place. On reading the books and their reviews published in Europe and USA, I concluded that the White men want to hear the truth and appreciate it and they are not hypocrites as we the Eastern are.

At the age of seventy-one, I felt that sexual urge at that age is the same as at the age of seventeen and though the ability to perform would appear to decrease in some people due to sheer ignorance, but since sex is controlled by brain, it essentially is an intellectual game. As the brain keeps developing with age, it is capable of making its owner (man or woman) feel, act and perform as young person, without any outside medical assistance, but it is only by proper use of brain power, which commands the total life style of the owners. Giving brain time to develop itself and control the body is a difficult task, but any intelligent person with a will, can develop the ability to feel and act like seventeen at seventy-one. Unfortunately we are a nation of double standards and hypocrisy. We hate to tell truth and proclaim false modesty.

My father died young age of fifty-seven and my grandfather, lived to become eighty-four. As both of them were exceptionally intelligent, why could they not have extra-marital sex, specially as my grandfather had lost his wife at age of fifty and lived alone for another thirty-four years and my father lost his first wife at age of twenty-eight and second at age of forty-two and lived another fifteen years. They were neither Georges nor Roosevelts but like them were humans, having equal rights at birth like all other human beings.

My studies of psychology led me to hit up on a number of important conclusions and these are:

- At the age of eighteen a boy is in love with his mother's friends (elderly women).
- At the age of sixty a man is in love with his daughter's friends (young girls).
- The same is true of women and girls.
- Men and women both are born promiscuous. Woman wants the best man as the father of her children and keeps searching even after selection of a husband of her own choice. The man on the contrary wants to impregnate every pregnable woman. The sure sign of pregnable woman is blush of youth on her face, cheeks and lips, young body, sweet voice etc.

With above inborn psychological factors, humans in a free society like the present Europe, Northern America, Australia etc., have openly given vent to their feelings of almost promiscuousness and number of divorcees in the lifetime of a person is hitting three to five. The same is going to happen here too, in the

next twenty years. The society is in such an open revolt that one out of every three girls, even in the backward villages of Sindh to-day refuses to marry the boy of her parents choice. In big cities divorce rate has hit twenty-five percent and it may rise to fifty percent by 2010. After 2010 probably the number of arranged marriages may reduce to less than twenty-five percent.

Now as regards my father, he did have two affairs before my mother died and I became eight years old.

In the thirty-four years bachelor-hood of my grandfather he had two long affairs, with two widows, though I am not sure whether it was simultaneous. Boys in the school used to whisper but nobody had evidence as he was very secretive in this respect. The women belonged to Machhi caste and Machhis of our village were poor and share croppers. Many did not have their own domestic animals for draft or milk. Many of their women came to our house for free Lassi (diluted yoghurt milk with butter and cream removed). My mother and aunt were courteous to the most of them and gave them more quantity of Lassi and sometimes a small piece of butter or occasionally a glass of fresh milk obtained from animals in the morning. In 1942 the secret was leaked to my father, who told my maternal uncle that my grandfather had taken some cloth from the Hindu shopkeeper and given it to Mai Bhagi. My uncle told him that the household income from milk of buffaloes reared by my grandfather was more than income from produce of the land he (my father) was cultivating and former had every right to it. I over-heard it and became sure that men and women can easily be sexually active at age of eighty and above. It was many years later that I came to know that some men of Europe and USA are active even above ninety years of age.

I did not condemn the sexuality of my father and grandfather from the very childhood and nor did the whole village did so. As long as the affair was not with a woman of Panhwar caste, all Panhwars considered it as taking a glass of water. In case of my father, his both affairs with Panhwar women had gone unnoticed, save school boys, who probably heard whispers from women-folk in their own houses. I felt proud of both of them. Most probably this left an indelible impression on my mind and led me to think that all arranged marriages usually lead to boredom and failure and so men who in our society are dominant, look for secret extra-marital affairs. The right course I felt was freedom to choose the partners. My observations on human sexuality are described in previous chapters.

MIDWIFE OR DAI OF OUR VILLAGE

Anything connected with menstrual cycle, pregnancy, delivery, female sexual diseases etc., was considered unclean and dirty in Sindh for centuries and was not discussed with men. Midwifery was considered unclean and menial occupation belonging to low castes or untouchables of India. Our village midwife belonged to the shoemaker family called Chamar, one of the lowest castes in Hindu hierarchy. Though Sindhi Chamars or Mochis were Muslims, but even the poorest of the Panhwars of our village, did not associate with them socially.

I saw this middle aged woman, when she came for delivery of my mother in 1933. She complicated the case and although the baby (my sister) Amnat survived, my mother died. Today I recollect that among her many casualties were; a sister of my father and a sister of my mother. She had killed almost every forth woman in the village. She was unclean and dirty. To cut naval cord of the child, she used a dirty butcher's knife, normally used for cutting meat to pieces. Her hands were equally dirty as she tanned skins in her house. She collected placenta and other remains in an earthen pot to be buried somewhere. When she carried this pot on her head, it exhibited her success with the performance.

Thirty-three years later, my sister Amnat a case of placentaprevia perished at hands of another midwife of our village. It was outright murder. Women won't tell men and her husband knowing fully well that Civil Surgeon Dadu, Dr. Aftab Qureshi, a very close friend of mine, was only eleven miles away, instead went to Sita Road to fetch a nurse and found it preferable to play with her for the whole day while my sister died leaving four children.

This is a typical case of death due to ignorance prevailing in the rural society of Sindh. The ignorance is not only cherished but is taken pride of. A Khandan (noble family) is proud that with her marriage a woman enters their premises only once and the last you hear of her when her body is dispatched out of the house to the graveyard. During her lifetime, she will see no male members other than those of the joint family. No doctor is called by these noble families, even when there is risk of death. Even in urban areas elderly urban women of seventy years and above suffering from breast and uterus cancers, will not show it to a male doctor and therefore the demand for female doctors in urban area had made it a flourishing occupation in the last quarter of the twentieth century.

MY CIRCUMCISION

Circumcision in Europe and America is considered healthy as the person will have less chance to penile cancer. It is disputed elsewhere and some scientists think that it reduces pleasure to the man. It is compulsory among Jews and Sunat-e-Rasul (tradition of Prophet Muhammad [PBUH]) among the Muslims. A Jewish male without it will not be considered a Jew, while a Muslim without it is still a Muslim. This occasion was celebrated in Sindh with pomp, ceremonies, festivals and extravagance, considering it beginning of puberty. Janiyo ceremony among Hindus depicts the same. I was about eight years when my mother died of post-delivery complications. It was the time my uncle Muhammad Saleh had been carrying out propaganda against superstitions, grave worship and exploitation of Pirs. It was at this moment that my father secretly made arrangements with a barber, expert in circumcision, to come on a pre-fixed day and just before sunset to perform the operation. Nobody else knew it. He asked me to come out and in one minute barber performed the job, applied some cream, ash and was gone after getting one rupee. I wept for pain on the first day, but soon realised that it was good, as I was too shy to stand ceremonies connected with it i.e., women singing for seven days, festivals, dinner served to the whole village and neighbouring villages and feast.

In any case this would not have been too elaborate in my case but due to our poverty, I feared that boys in school would have laughed at me. My father said only one thing in his defence that all these ceremonies are un-Islamic and he had saved himself from a 'sin'. This would have been talk of the whole village but another relative of ours, a well to do person, Muhammad Saban repeated the same with his son Karim Bakhsh and then it was no longer considered as bad. Added to this most of religious people of village appreciated it, as they also considered such ceremonies as un-Islamic.

This has left a final impact in my mind that circumcision and marriage are private affairs of the persons involved and as far as possible only a few persons may be involved, with as little ceremonies and expenditure as may become possible. This ceremony is almost unobserved in Sindh, except if it is attached to a marriage festivity in the family. In post-Zia era the ceremony is re-introduced by many rich politicians with pomp and dignity to make a show off and collect voters, supporters and high-ups of political parties. It is the last reminiscence of feudal era and must be done away with legally.

A VISIT TO KACHHO

Visit to Nasrani and an encounter with crocodile had made me fairly confident. My grandfather had to leave for Kachho or the foothills of Khirthar mountains in Johi and Kakar Talukas, buy sorghum and millet. We were still not producing wheat on scale as Sukkur Barrage was just opened and availability of enough water had extended area under rice in the first few years. The ancients knew that rice lacks protein as in wheat and cannot be taken as staple food. Sorghum though rough grain, could be converted into fine bread loafs and did have protein and was taken at least once a day in form of bread. It was grown on rainwater in Khairpur Nathan Shah, Kambar, Johi and Sehwan Talukas. At my enthusiasms, my grandfather took me along on a camel to Kiriya village near Kakar, where we spent the night and next morning rode to Khairpur Nathan Shah Taluka after crossing Johi branch siphon over main Nara Valley drain. Travelling some six miles, we were in the mid of our destination - the Kachho, which lies west of Flood Protective Bund. It was sight to see. No trees or shrubs in miles, no settlements, no human beings except in hutments some miles apart. Around midday my grandfather showed me mirage. It looked like sheet of water, but that only deceived the human eye. I saw the hills clearly to the west and some out-crop of hill nearby in north. It was a desert and true desert, but desert can be terribly beautiful as I first saw it. I wanted to see Thar Desert but I had to wait for another twelve years to see it east of Shadipali. Since this childhood experience with desert, I have liked them. There are twenty deserts in the world: Rajasthan (of which Thar of Sindh is a part), North American Temperate desert (Idaho, Wyoming, Montana etc.), Death Valley (California), Sonoran (Arizona and Mexico), Mojave (Nevada), Chihuahuas (North East Mexico), Patagonian (Argentina), Atacama (Chile and Peru), Kalahari (South Eastern Africa), Namib (South Western Africa), Sahara, Sinai (Eastern Egypt), Negev (Israel), Syria, Arabia, Iran of Balochistan (of which Kohistan of Sindh is a part), Takla Makan (Sinkiang China), Gobi (Mongolian) and Central Australian or Victorian. They all are alike. Vegetation in them belongs to same families. They have similar features, climate and problems. I like deserts so much that I have travelled more than fifty times in Thar and Kohistan. Interest in them led me to visit fifteen of twenty deserts. My wife Farzana has listed 4500 flowering plants of Thar and Kohistan. She also has listed mammals of Thar and Kohistan.

I have located forty-two springs in southern Kohistan below Gaj. I also visited Darhiaro and Kute-ji-Kabar to look for a suitable hill station. Dr. Flam Louis has located six springs more north of Gaj.

My book *Ground Water in Sindh* describes Thar and Kohistan in abridged form. I also have written a two-volume study of Thar and Kohistan, not yet printed.

MIRZA KALEECH BEG AS I HEARD OF HIM

In 1934 at age of nine I was preparing to appear in the competitive examination for scholarship to be held after having passed primary class IV for studying English in high school. Our textbook on history of Sindh (100 pages) was written by Tejbhan Das G. Bhutani. The schoolteacher gave me another history of Sindh written by Mirza Kaleech Beg on the same subject and about the same size. I found that the latter was more knowledgeable than the former, therefore thought of contacting him to answer the following questions of mine:

1. What was the history of Sindh before Mohenjo Daro?
2. Who ruled Sindh between fall of Mohenjo Daro and appearance of Aryans on the scene?
3. What was the history of Sindh after Raja Jayarath of Mahabharatha to the conquest of Sindh by Alexander the Great?
4. Who ruled Sindh before and after Alexander's conquest of Sindh?
5. Who ruled Sindh between Arab conquest of Sindh to Soomras' rule?

The next day I asked the teacher about possibility of meeting Mirza Kaleech Beg one day. He told me that Mirza had died six years back. It was a shock and I thought that since there is none to guide me, I will find these facts for myself, by my own researches and investigations from now onwards. However my childhood fixation was that Mirza was most knowledgeable man on history of Sindh and I must study his writings, which I did and I decided to enumerate some useful ones. This was sixty-seven years ago and I have been probing into the same question up to this day. The net result of this search is that I have been able to push history of Sindh to 16,000 BC and lot has yet to be discovered. It was during the college days that I got Mirza's Chachnamah and History of Sindh in English and I used these to help in reading Persian texts of Chachnamah and Tarikh-I-Masumi edited by Dr. Daudpotta. His other books Qadeem Sindh, Sindh-ja-Qadeem Shahar, Riyasat Khairpur and Memoirs of Mirza Khusru Beg, were available to me during college days and I have to affirm that up to 1928, he was most knowledgeable man on the history of Sindh.

In 1953 I joined Sindh Government's service as Agriculture Engineer in Sindh and soon Dr. A.M. Shaikh, Director Agriculture asked me to help Mr. Karim Dino Rajpar in preparing bulletins on various crops and operations. He said

English versions are available but Sindhi terminology has to be coined. I had four books on agriculture in Sindhi in my possession namely:

1. A Manual of Gardening (Principles and Practice in Horticulture Science) By Mirza Kaleech Beg 1897, 300 pages (Sindhi).
2. A textbook of Indian Agriculture with application to Sindh (Principles and Practice of Raising Field Crops), By Mirza Kaleech Beg, 1899, 280 pages (Sindhi).
3. Pokh (Translation of Khambhata's 'Agriculture'), 1899, 103 pages (Sindhi).
4. Kheti (Agriculture) by Kaoromal Chandanmal Khilnani, 1901, 112 pages (Sindhi).

Since 1983 I and my wife had been working on new fruit crops and have collected 15,500 books and bulletins on fruits, nuts, ornaments and industrial crops and as of causal interest, we re-examined Mirza Kaleech's books on agriculture. They are not translation of any English text as one may suppose. For each of the two books Mirza Kaleech Beg had to refer to a number of classic books of the era and the list of which he has also given. Examining the details, one is forced to conclude that Mirza Kaleech Beg did have complete mastery over the subject of agriculture itself and has taken endeavours to apply the various theories and practices to the Sindh's conditions. Both books are so scientifically written that if somebody adds just a page of new information accumulated in the past century (1897-2000) to each chapter, his books can still form guide lines for farmers. The book on gardening has seven sections and fifty-three chapters. Addition of one page - note to each chapter, will make the book up to date and a quality text book or manual for use in schools, colleges and also for the farmers. The book on agriculture has eight sections and seven chapters in each section. Addition of about fifty pages will also make it an up to date manual. The reader will be surprised that more than a century before, Mirza Kaleech Beg had talked about artificial fertilisers, irrigation and drainage, rotation of crops, furrowing of land and chapters on field crops like; sugar-cane, maize, moong, manh, moth, till, kelp, indigo, tobacco, poppy and turmeric in addition to common crops of today. He talks about animal husbandry, animal breeding, meat and milk animals, feed for different animals at different stages of life, feed analysis, scientific dairy management, agricultural calendar and finally bibliography and their extracts. In case of 'Manual of Gardening' he discusses modern subjects like climate, garden lay-out, irrigation and drainage, glass-houses, pot-culture, garden pests and diseases, plant propagation, plant pruning, fruits of various types, nuts, berries and stone fruit. He also includes ornamentals i.e., floriculture, shady trees and herbs, as a part of horticulture. Further to this he

gives garden calendar i.e., month by month the operations suiting condition in Sindh. At the end he gives the index of English names of fruits, vegetables, flowers and herbs with Sindhi equivalents. He gives designs and layout of flowers and ornamentals. No book of the type of Mirza Kaleech Beg, has been published since his death. The two other books printed in 1900 and 1901 are sketchy and were meant for primary or lower classes high school students. Since there is great need of introduction of scientific agriculture, it is strongly suggested that Mirza Kaleech Beg's books may be reprinted by addition of papers prepared by specialist from an agriculture university. If such a work is undertaken I volunteer to help.

The present Sindhi translation of Bible was done by Mirza Kaleech Beg is known to many but evidence is lacking. I visited Bishop Rudwin of Church of England, Karachi to find out the details. He informed me that a book on Donald Harper of Sindh (preacher posted at Hyderabad) by latter's daughter Dora Green has been printed in England in 1981. It gives the details, but he does not have the book and one can get it from the publishers in UK. I got the copy of the book through a friend Dr. John Issac and it states:

“The method for revision was as follows. The leading Sindhi author, Mr. K.F. Muiza whose books and plays are read all over Sindh, is a truly religious man and loves the Bible as the word of God, though a Mohomedan. He agreed to write a version in Sindhi as a basis for our revision. This he prepared in the most careful and scholarly way and in a truly pious spirit. He prepared it from the revised English version, comparing his work as he went on with the Urdu, Arabic and Persian versions.”

Bishop Rudwin told me that extracts from Bible and even chapters were translated by various missionaries, since 1855 and a large number of them are available on their records and photocopies can be supplied. He said that Mirza Kaleech's Bible is reprinted with minor changes of words even today.

Rev, D.S. Harper in his note on translation of Bible states:

“Old Sindhi version was prepared in 1850's, when Sindhi language was in formative stage and therefore many of the passages were not always clear. Sindhi Hindus are not averse to continuing use of Muslim religious terminology though there are influences to induce Hindus to use Sanskrit terminology. Hindu women are more influenced in this respect by their religious leaders. Within 50 years of introducing, Sindhi has stabilised. Many books have been written in Sindhi and translated into it and

is fully formed and settled. It is a good flexible language with grammatical forms most clear. It can convey distinctly scientific terms and Christian ideas.”

Harper selected Mirza Kaleech Beg son of Feridun Beg (K.F. Muiza), as the best person for the job and this translation has not been changed in a century. Only occasionally have a few new words replaced old ones.

THE HINDU VILLAGE SHOPKEEPER AND INTEREST

My grandfather had thirteen children, my father being the eleventh and the first of his sons, twelfth was a baby girl and thirteenth was my uncle. In pre-Sukkur Barrage era, the canals were taking off direct from the River Indus and there was enormous amount of silt clearance for some three months a year. Two out of five crops would normally fail and every farmer was in debit. His daughters could not help him with tasks needing heavy muscles and handled by men i.e., silt clearance, ploughing, harrowing, clod crushing, threshing and winnowing and within his own limitations, he toiled hard to support the family by cultivating two-and-half acres of land under rice and raising buffaloes for milk. In the latter case his daughters could help in cutting grass and fodder and hauling it to milking animals and churning milk for butter. Under the circumstances he has no saving and had to borrow from a Hindu shopkeeper (Bania) and payback at harvest, once a year in December. Being educated in a Mulla Maktab at Taga and yet instead of turning into a Mulla, he earned his living by his own physical labour and therefore he was well respected in the village. Though a Mulla was a necessity for some religious rituals, yet most of them belonging to this class, lacked moral character, were greedy and lived virtually on alms and trickeries and therefore professional Mullas were never respected in rural society of nineteenth and twentieth centuries Sindh and possibly even much earlier, leading to respect for Sufis as early Sindhi literature of the past five centuries shows. Essentially they were a tool of laughter, while genuine religious persons were always respected.

He lived on borrowed money from local Hindu shopkeeper, who sold him goods at rate of twelve and half percent more than those prevailing at Phulji Railway Station only five kilometres away. Of this extra amount six and quarter percent was profit and equal amount as transport, labour for handling etc. He also charged six and half percent interest on the loans. In November 1933 my grandfather along with my father was settling account with this shopkeeper in presence of Haji Allah Warayo, the Wadero of our village and my maternal uncle Muhammad Saleh the two to be umpires, though the former was an ignorant person, specially in arithmetic. The account books were properly kept i.e., they had journals and ledgers and total honesty existed in these accounts. While he was reading item by item from the ledger, my father was writing figures for totalling them, I sat on floor between the two cots laid parallel, they were sitting on and kept listening to them. At the end, amount of loan in the year came to Rs. 380, which figure my father too accepted. Here the Bania asked for interest,

which even Wadero could not calculate and the Hindu gave an arbitrary figure of Rs. 50 to be negotiated usually to half, as was being done customarily. All Muslim borrowers usually considered it immoral to pay interest. I got up and whispered to my father that at six and quarter percent, it should be Rs. 23.12 annas as I have calculated by scratching on dusty floor with a wooden piece from a branchlet. The Hindu over-heard, looked at me, smiled and told my grandfather, I charge you the interest, your innocent grand son says. He is so intelligent and interested in Hisab-Kitab. I will teach him bookkeeping from now onwards. He called his assistants to give me some sweets to eat and take them home. I was shy and whispered that this figure too was not correct as interest on some items, was not for all twelve months but for less time and interest on each item had to be worked out separately. Next day my father sent me to his shop, where his son Rupomal taught me Hutki (shopkeeper's script). When I went to high school the same Hindu advanced my father loan for my education and without this I would not have been able to pass even matriculation examination or high school graduation. My education did not frighten him at all.

His father Lilomal was partner of my maternal grandfather for years. So much was the faith and trust of my maternal grandfather in him that finding that his young bride did not know cooking, asked Lilomal to help and he did help her to become the best cook among all neighbouring villages. On my maternal grandfather's death in 1919, he left Rs. 32,000 cash as loan to the shop. His eldest son Muhammad Nawaz discontinued the partnership after spending all the money. The Hindu shopkeeper had the same two hundred clients and he loaned money to each of them from January to December and recovered it after harvest of rice in December. He would advance money for marriages and other occasions. On Eid he would provide clothes. On Eid Shab-e-Barat, he provided items of fireworks for children. In general he was one of the community, but each member performing duties in his or her own manner. His children had not gone to high school. His house about two kilometres away in village called Allahabad was visited by some women of our village and they reported that though his house had brick masonry with girders and T-irons, but yet the standards of living were not very high.

He carried out his total business of Rs. 100,000 a year on loaned money but defaulters also accounted for some losses. After creation of Pakistan he left Sindh for Bombay, where he died and my maternal uncle remarked; "He was better than many of our Mussalmans and his acts of piety, generosity and humanitarianism in all his life would bring God's mercy and send him to Paradise."

His shop was replaced by a local Sindhi Muslim, as were shops of all the Hindus of Sindh. There was none to replace his business ethics and commitment to the

community they served, irrespective of religion they practised. Almost the whole institution of rural economy collapsed on departure of the Hindus from Sindh. The new comers did not realise the bond that existed between Sindhi Muslims and Hindus and carried out anti-Hindu propaganda, which Sindhi Muslims did not cherish. Sindhi Muslims then opined; "We have exchanged our jackals for these wolves."

For many years' people borrowed money at very high rates after Hindus left Sindh. Soon Pathan Muslims moneylenders appeared on the scene and they loaned money at ten percent interest a month. Some fifteen years later came up commercial banks, which paid loans by mortgaging agriculture land as per government policy. Our survey in 1985 showed that ninety percent of the total land in Sindh was mortgaged with banks. Every big and small landowner was a borrower. The recoveries were not adequate and to cover the arrears. The banks with active assistance of the government advanced new loans at higher borrowing limits per acre i.e., instead of a limit of rupees one thousand and five hundred as production loan per acre, it was increased to rupees three thousands per acre. The land remained mortgaged but loan plus interest was shown to be paid up against new loans advanced on paper only. Bank employees also fleeced the loanee. This practice has been repeated four times in the past twenty years.

It is true that due to worldwide economic depression from 1917-1940, some thirty percent of agriculture land in Sindh was mortgaged with Hindu Bania, but Sindh Assembly had declared that since Banias had made adequate money from the interest, the capital was not payable and land should be de-mortgaged without any compensation. Even the Hindu members of the Assembly supported it on the plea that according to Manu Sutra, interest cannot exceed the capital and therefore extra interest paid was adjustable towards the capital amount loaned. They also stated that if possession of land was handed over by loanee, the returns from the land offset the capital plus interest.

In my opinion Hindu merchant of Sindh was not a Thug, as depicted by new comers to Sindh or urban elite. He was in general fair and humanitarian. He borrowed money on which he paid interest and supported the local populace. The interest on the loan was his right and his bad unrecoverable debits had to be debited to the whole community in the form of interest which thus was justifiable even on moral grounds.

SELF APPOINTED MULLA OF OUR VILLAGE

Our village was called Mullan-jo-Goth, but there was only one practising hereditary Mulla named as Habibullah, though many others were educated in Islamic studies from reading of the Holy Quran to Persian and Arabic literature. There was one Maulvi and one Hafiz. Many of them, specially heads of families offered prayers five times a day. Since every one of them was better learned than hereditary Mulla, the latter was hardly respected, specially as he was greedy and professed to meet the dead in his dreams and conveyed this to the heirs and relatives of the deceased to knock out some money and gifts. The people were superstitious all over Sindh. When anybody became sick, Mullas wrote some Tilsam with India ink on small chits of paper and asked them to swallow it or wash in water and drink. Common disease like malaria fever do disappear after a few days, though a person would be left weak due to presence of malarial parasites. He also wrote some Tilsam on the hands of sick person. There were books on this type of magic, having triangular, square, rectangular and circular patterns further subdivided in squares or triangles. Each of these parts bore different Arabic letters or words like in the crossword puzzle setting and the essence of Tilsam was in letters. It seems that everybody believed in it. I caught malaria in 1931. My mother knew that my grandfather could write Tilsam from an old book in his possession, but he refused saying that it only works on someone who believes in it, but I will pray to God to make him all right. So he prayed and exhaled air on my body. It did not work. A few days later there came peon from office of the Taluka Dadu's Educational Officer with quinine tablets in the school. Every boy was asked to take two tablets. He had also brought large posters which were hung on walls of school, Autaq and shop of Hindu merchant. I remember, it gave instructions to spread kerosene in ponds to kill eggs and larvae of mosquitoes. It was issued by Education Department and signed by I.Y. Suleman. My maternal uncle Muhammad Saleh hosted the peon and entertained him with lunch and gifts. The peon was so happy that he parted with large number of tablets. My mother brought a few dozen tablets from my maternal uncle and kept them in a box to be given to the family members when they became sick, as per prescribed dose of two tablets a day for 3 days. They broke magic of Tilsam, Dua, Phenno and Ta'awiz as far as I could see. I was never to believe in them again. However before I was one year old my mother had a silver amulet from the goldsmith of neighbouring village made, into which was inserted a paper with Quranic inscriptions and filled all around with wax before sealing the top in the smith's workshop. I wore this amulet until 18th April 1935, when I was leaving for studies at High School Mehar. My maternal uncle Muhammad Saleh could not stand it. He ridiculed my father, cut the thread with

a scissors and threw it on the floor in his Autaq. My father picked it up, saying that its silver has some value, so why to lose it. I do not know who wrote the Ta'awiz, but I believe not this Mulla, as none in our or my maternal uncle's family considered him genuine.

The Mulla Habibullah and his wife had argument on the question, who his son Jan Muhammad should marry. Each one had a niece of marriageable age. The matter was finally resolved by Jan Muhammad's marriage with both of them. Probably the girl who was neglected by the husband became hysteric and it was said that Jin had entered her body. They found a specialist calling himself Syed and claiming mastery over Jins and could call them like Aladdin's magic lamp. He stayed in my maternal uncle's Autaq, so the latter came to know of his trickeries, which consisted of use of some prismatic glass with reflectors at different angles showing multi distorted images of the same object indistinguishable at first sight and a number of similar things, along with a double bottom steel sheet bag, one portion of which contained things he hid from people. When he called Jins he turned the bag upside down many times and uncovered the hidden bottom, to the surprise of many. He fleeced Mulla Habibullah and some Hindus women of Allahabad, a village two kilometres from our village and disappeared. Later on it was found that he was a Dahri from Nawabshah district and was known for his conjury.

Mulla's son was a Mawali (drug addict), the two antagonists. He took Bhang (hemp) Charas (marijuana) and opium. The people won't accept him as hereditary Mulla easily, so on Mulla's death they buried him on the south of mosque just adjoining its wall and put a red cloth called Par on his grave to make a Waliullah (God's friend) out of him and his son Jan Muhammad as Sajada Nasheen. My maternal uncle Muhammad Saleh removed the Par in the dark of the very first night and told the people: "God did not think him pious and He sent his angels to remove it, so do not try to do it again. May be God's calamity will fall upon you."

However Jan Muhammad was claimed as Mulla by his relatives, but he was never respected in village and surroundings as he spread Charas (hashish) and opium in the village and some thirty to forty people out of population of five hundred became his regular customers. He was arrested by police time and again and died while returning from Larkana with intoxicants, when he fall down from a moving train.

The school in Ibrahim Kachhi was started by my maternal uncle. He had forced everybody to send children to school. Some boys were unfit to continue specially those who were ten years age or above and most of them in a few years became cattle-herds and farmers. However some boys of my age group and younger,

who did not fair well in studies at the primary school, took up to farming and cattle, but a few others became Mullas in addition. They had no knowledge of religion save a few rituals, a few passages of Holy Quran or a few prayers. They spread ignorance all over the village.

FAKIR MAJEED AND A HINDU SWAMI

Majeed an old man, a simpleton, Fakir (beggar) by occupation used to visit our village for alms. Everyone in the village seemed to like him, as he would bless everyone whether he was paid or unpaid. Whenever he was in our village, depending upon the time, my mother gave him breakfast or lunch and some grains. I had malaria, my mother gave him a live chicken to pray for my health. He returned the chicken saying; "kill it and feed to your son, he will be all right". She had faith in him and he always said; "With grace of God and my Dua (blessings) your son will be a Dhepati (Deputy Collector which was highest post, locals could aspire for during that age of the British rule, unless they passed ICS examination). My mother believed in it and so saw to it that I study. I become indifferent to all kinds of these things after visit of our hereditary holy man the Pir, but at least the influence of my mother was so overwhelming that at no time in my life I thought of becoming an ordinary farmer. I attribute my present position to early influences and training, specially of my mother, followed by exemplary life of my grandfather who was recognised as man of peace and impact of my maternal uncle Muhammad Saleh's ideas, which were revolutionary for that time. However most of my village folks believed that it was Dua of Fakir Majeed that I worked my way up.

In 1935, I went to study at High School Mehar and lived in the boarding house with thirty Muslim and ten to twelve Hindu boys. Muslims and Hindus stood socially cut off from each other in the boarding house, as there were four prayer visits to mosque between closure of school and going to bed at night. Of the four, three prayers were followed by some religious teachings and lectures of Syed Ali Akbar Shah and the fourth one by school sports. Thus, the two groups Hindu and Muslim students had no time to talk to each other. Their meals were cooked separately and ate separately. However we all mingled during school hours and on holidays. I cultivated friendship with a number of Hindu boys at school and learnt many new things from them, specially with regards to their saints, Yogis, Brahmans and Brahmancharis, religious beliefs and superstitions. Some Muslim students ridiculed their faith but most of them were indifferent. The Hindus devotedly worshipped above group of saints. Through curiosity I kept an occasional track of them. In August 1935 a naked Hindu holy man came to Mehar. He wore no dress, shaved no hair of his body, had only a few grey hair and sat for the whole day under a Neem tree on the right bank of Kakol canal which ran to the north of the town. He applied bentonite (Mate) with oil to his body and flung into canal every two to three hours, swimming against the

current of water very fast, thus making a show of strength. There was rush of Hindus to see this Swami, who was said to be a Brahman and a Brahmanchari (one who dabbles in no sex during his life time) and was believed to have spent years on the Himalayan mountaintops in meditation. For security reason he saw women only in the mornings and evenings in a near by building, which was Musafirkhana converted into boarding house for Hindu boys in 1941. He wore loincloth in presence of women. The rest of the day was spent in meeting men and children. He spoke very little, sat with closed eyes in Shiva and Buddha postures most of time. He would also perform lot of difficult exercises including standing on his head for an hour. I learnt to do it for half an hour, with hope of making brain strong and alert. I do not believe in it now.

His greatest feat as reported was that he would stand facing the rising and setting sun and with hands stretched towards it and while he murmured some mantra, his penis gradually turned erect and was able to maintain it for half-an-hour or so, but reading mantra in Sanskrit all the time. This was his daily prayer and in order that nobody sees him, he went to the above building during hours of sunrise and sunset. It was reported that many people went there and stood near the main door and watched him through some holes in it for Darshan. Some Hindu students claimed to have seen the miracle. With so many claims heard through friends I was convinced that the Swami was capable of it. When I grew up I thought it couldn't be a miracle but probably mental or muscular control. The book "Freedom at Midnight" also mentioned a Hindu Ruler, who entered the court with hard on. There is Alexander the Great's painting worshipping god Nim at Karnak and both having full erection. In 1983, I came across the book "Extended Sexual Organism" published the same year. It described details of Kegal's exercises, with which any one can achieve erection without difficulty.

In my opinion, which I formed after years' association with my Hindu school and college mates. I concluded that this Brahmanchari group of priests in majority of cases were great debauches and fooled the people. I also read similar accounts of Buddhist monks and Christian priests and nuns and also of Shiva temple worshippers and Dev-Dasis. Tantara, a religion, was prevalent in eastern India around the time of Rai and Brahman rule and Arab conquest of Sindh. To them sex was a holy ecstasy and a number of temples depicting sexual orgies dating to the period are still tourists' attractions in the central east India. The predecessor of all of them was Taoism, dating back to 1000 BC and started in China, which taught men to extend organism and even be multi-organismic. Many of their works have been translated in English recently.

The whole village of ours, believed that I rose from rural slums to urban middle class, gained name and some achievements is due to blessings of Fakir Majeed, but I believe that there was no contribution of his, beyond pleasing my mother,

who in turn encouraged me to study to become Dhepati. Good hearted Majeed was not a fraud, but he did what he did and said was for his stomach and survival.

SUPERSTITIONS IN THE VILLAGE

Rural Sindhis are highly superstitious people. The reason is ignorance of poor masses and their exploitation by clever people, who pretend to have supernatural powers.

My sister Amnat was born when I was eight years old. My mother died when she was 4 months old. My auntie was taking care of her and she was swaddled, head bandages were used for shaping head, nose was pressed to become thin and pointed, chin was pressed with a thin brass rod to part the muscle in two. Swaddling made sure that child does not move, but I found she kept crying immediately after she was tied down and she was also vomiting out goat milk fed to her. I removed her swaddling and found her happily moving her hands and feet. My auntie did not object and so long I was present, I saw that she is free from bondages and swaddling. Her health improved dramatically. She did not vomit milk any more. I think it is a way of nature that child moves hands and feet as physical exercise and if this is stopped, ill-health is bound to occur with many deaths in the first year of life. I know that all of us have been swaddled and definitely were lucky to escape an early death at hands of our own mothers, but they never knew that they were choking their loved ones to death.

In the same year someone in neighbouring house was dying and they rushed a woman to our house to take Aab-e-Zamzam (water from spring at Mecca) in small tin cans, presented to us by some Hajis on return from pilgrimage. Some years later I learnt that when a Hindu is dying, they put water of Ganges in his mouth to ensure his re-incarnation as a human being.

In 1930 cholera had broken out in our village. It was rumoured that a witch was entering various households to impart the disease and to stop her from entering the house a Ta'awiz was hung from the door of every household though in our house in addition to Ta'awiz, Neem tree branches were hung at the door. Neem leaves probably repelled flies (carriers of cholera bacteria), which did not enter the house.

In early 30's there was solar eclipse. The pregnant women were advised to hide and Mullas read Quran and lectured people that: "The God Almighty does not spare even the sun from torture, how can you sinners escape the God's wrath." The people were fearful of the sun and the moon eclipses and also of comets. Since comets like Haley's appear every 76 years. With human life expectancy of

about 40 years in Sindh, the memory of the last comet is lost and becomes a mystery leading to speculations and expected calamity. The same is true of earthquakes. Sindh coast and southern desert bordering the Rann of Kutch is within active seismic zone, but width of this belt is only 30 miles. Earthquakes cannot destroy inner towns of Sindh. Destruction of Brahmanabad and Alore by earthquakes is a folk-tale to frighten the people.

There is belief that man can form hybrids with beasts and one such belief is that Panhwars as a tribe were hybrid between a human female and a Jin and this propaganda has made the whole tribe fearless, bold and aggressive. Only twentieth century education has tamed them.

Barbers, who shaved head and beard, were considered as surgeons in the village and claimed to have many cures for small wounds. Pottery makers were considered as bone specialists and in their quackery ruined many lives.

Insane people were considered as Fakirs and holy. The intoxicated people were not condemned but were considered as innocent and harmless. This is because over ninety percent men have taken drugs at least once in their lifetime. No attempt was ever made to restore them to normal life.

The rural life is full of superstitions. They start with concepts and there do not end with the death. Even in the memory of the dead or seeing him in the dreams leads to interpretations and more superstitious ceremonies and almsgiving.

In Sindh, southern Punjab and Gujarat there is a custom to shape child's head so that front to back length of head is reduced. The grey matter in the brain is longer from front to back and shorter from side to side.

Women keep head of child on burnt clay cup, parabolic in shape, for several hours daily during the first year of the life of child. This cup is hard even on the head of adults and for delicate body of child it must be hell. I am not sure what damage it ultimately does to the brain.

CAN HE PLOUGH

Sindhi Muslims basically farmers were backward people even before their conversion to Islam. The irrigated agriculture based on primitive canals taking off directly from the River Indus was influenced by day-to-day level of water in the river. Monoculture of rice, a lazy man's crop, for nearly four millennia had left people without alternatives, incentives and initiatives. If someone did not improve his lot by hard work, everybody kept warning him. The British rule had brought new opportunities by new system of education leading to government employment. Even petty government jobs brought income more than in agriculture employment. Added to this was posting in towns, where life due to amenities surpassed the best rural life. It was bound to bring change. Our own village folks did not know, as no one had been demonstrated it. I passed competitive examination after five years of primary school education and was one of the ten boys in Dadu district to get scholarship of rupees seven a month for high school education. Without this I would have been a farmer or if had passed Vernicular Final Examination; a primary teacher or Tapedar or Abdar. I passed this examination in 1941 securing first number in Sindh, as reported in the Gazetteer of the Government of Sindh, December 1941. My grandfather's brother Amir Bakhsh told my grandfather that English education was meaningless and I was being turned into a lazy chap. Reading and writing is alright but he has to look after family of eight and without learning to plough, he will be utterly useless.

On a hot summer day of May 1942, fire broke into barn of my maternal uncle's house at noon and since the women had been put into seclusion, only I and my uncle's nephew Qamaruddin could go inside. We both took a pitcher (Dillo) of water in each hand and handed over to ladies across the seven feet high compound wall and they controlled the fire within thirty minutes, before men working in the field arrived to help. Amir Bakhsh told my father and grandfather that I was now fit to plough land, so make best of the opportunity. However I passed matric, B.E (Mech. & Elec.) and M.Sc Agri. Engineering in USA and continued field training there until 1953. As Agriculture Engineer in Sindh, I brought fourteen crawlers tractors to Manchar Lake in March 1954 to plough twenty thousand acres in four months, before it got filled again with rain and river water. He met me in Dadu, I took him in my jeep to Manchar, hitched twenty-two feet long, twenty-eight inch diameter disc cultivator behind a caterpillar D-8 tractor and ploughed five acres in one hour and told him: "see I can now plough". He asked me how about his sons. I told him they are too old for education, but they can be trained to become tractor operators. Though it is a

skilled job, but yet it is categorised as labourer and will not give them prestige and money-wise too it will not be so remunerative. They will be better off as farmers. His grand son Abdul Fateh became an engineer in 1996 and I employed him in my company and later on helped him to join Ordinance Factory at Wah.

Amir Bakhsh was admitted in Civil Hospital Hyderabad in August 1954, but he refused to be operated. Dr. Sher Muhammad Baloch thought that it was case of blockage in small intestines and was curable, but his own thinking was: "It is better to die in one's own home than in the operation theatre." He left hospital to go and die in the village, a month later. His advise to my grandfather amounted that I give up studies and become a farmer to be at par with his sons.

IRREPARABLE LOSS OF OUR MANUSCRIPTS

My paternal uncle did not study, except Quran and couple of years in the primary school. He was made to leave the school to participate in Khilafat Movement. With this disadvantage, he became religious fanatic. He was opposed to my continuing studies in primary and high schools. He was opposed to my college and postgraduate studies. He firmly believed that English education would lead a person to become Kafir (atheist). In my childhood I had observed Maulvi Abdul Latif, husband of my mother's sister, binding books by use of wheat flour as paste and a wooden press. It was easy and I started binding our books. Occasionally I would borrow press from my auntie to do the job. There were about a dozen manuscripts in our house, of which three were holy Quran's and the rest were Persian or Arabic texts, I could read them without understanding, as our Sindhi script was similar. One of Holy Quran was also dated as 1108 AH or about 1697 AD. I had not personally read name of scribe and place, but my grandfather had told us that it came from our ancestors brought over from generation to generation. My paternal uncle would invariably suggest that if these holy books are not read or referred to, they may be made Shaheed (destroyed by burying). I would invariably oppose the move for their antiquity, uniqueness, beauty of writing, some calligraphic pages, thick and rough hand made paper, black ink made from charcoal soot and gum, red and other colours of antiquity, made from natural organic materials coloured borders on each page, floral pattern on new chapters and finally they had no duplicates. I also knew that after high school education, I may get scholarship to go for engineering or medicine and may go and live in urban areas, where these books shall be preserved for their antiquity, beauty, prestige and occasionally for reference. In 1942 I went and joined First Year Science in D.J. Sindh College Karachi. My uncle knew that I won't be back for four or five months, he took all the manuscripts out, dug a pit in the graveyard and buried them. The graveyard was not waterlogged or moist and I could have dug them out and saved them, but there was a Super Flood in the north western Sindh caused by a breach in the Indus river Flood Protection Embankment on first August 1942 north of Sukkur. It had flooded most of right bank up to Sehwan and our village along with graveyard got submerged in it on first September 1942. Water remained there for some six months destroying all the manuscripts. The printed books had escaped his catastrophe as they were locked in a box. Some years after my father's death in 1962 he told my stepbrothers: "I am fifty percent owner of this joint property of books. Muhammad Hussain (me) has no interest in them, so give them to

mosque." All printed books of my father and grandfather were given away to mosque in the village and were soon stolen. I had no idea of this to make payment and save these rare books.

GOING TO HIGH SCHOOL FOR STUDIES

My maternal uncle Noor Muhammad went to study English at A.V. School, Khairpur Nathan Shah in 1930. The school was selected due to arrangements for his stay in a nearby village. He was followed by Saifuddin, son of his late brother Muhammad Nawaz, in 1934 to study in A.V. High School, Sehwan, where he stayed with his maternal grandfather's friends. In the same year Wadero Allah Warayo sent his son Maula Bakhsh to Charan's family to study in A.V. School Dadu. Noor Muhammad left Khairpur to study at Tando Bago in 1933 and then to High School Mehar in 1934, as there was a boarding house for students in Mehar. Thus there was activity in the village to send boys to study English leading to matriculation and for job opportunities.

I heard my mother talking to my father in 1932: "We also send Hussain out for studying English". My father replied: "We do not have landed property." My mother said: "We could keep more buffaloes and produce one seer of butter a day. It will fetch us enough to pay for his education." My father said: "You three women of house churn milk for one Pahar (three hours) and hardly produce half a seer of butter. We need three more women to do the job." I understood the problem and though did not know the solution, but I figured out that if I am good at studies, some day I may be awarded a scholarship. I was lucky to get scholarship and went to High School Mehar, which was selected simply because my maternal uncle Noor Muhammad was studying there. In 1936 Abdul Bari was also sent by his father Hafiz Musa to Dadu to study English. Maula Bakhsh could not study English as he was a dullard. He therefore was sent to a Mulla School to become Maulvi. It was lack of foresight on part of his father. He took six years to complete the Persian and Arabic studies and on thirty first May 1942, the ceremony of Dastar-Bandi (graduation) was taking place at our village. It most probably was Friday and there collected a dozen of Mullas, Maulvis and Hafizs to participate in ceremony. I had gone to Dadu to buy a bulletin from newspaper vendor at railway station as my Matriculation Examination result was announced the same day. Train from Karachi arrived at 1-30 p.m. with newspapers. I bought the result sheet and returned to Phulji Railway Station by same train reaching my village at about 3.00 p.m., when the ceremony was at the peak. Nobody except my uncle Muhammad Saleh and my father asked me about the matric result. The rest of people of our village were busy in paying attention to the new Maulvi. Many of them paid cash to him under ceremony called 'Ghore'.

I stood there saying to myself: "It is day of my achievement and I have future. I am going to get scholarship for studying in the college and become an engineer. This Maulvi is going to beg from tomorrow onwards. This ceremony is shallow and outward show, which they all know. To make living he will cheat and misguide people and with his frustrating behaviour, he is going to lose sympathy of the whole village. But look at the people, they are showing all this enthusiasms, because he is son of the Wadero. Why do not they tell Wadera to put him to an honourable use."

He died three years later due to sun-stroke (meningitis) and in words of Ziauddin Barni, "God saved Muhammad Bin Tughlaq from his people and his people from him." He was the last person from our village to go for religious education to become an orthodox Mulla. People had become wiser as three matriculates from our village had already become government employees with decent salaries.

A week later my uncle Hakim Muhammad Saleh who had completed his course in Hikmat from a Delhi Hikmat college in January 1942, told me that Noor Muhammad has informed me from Sakrand that you are going to get scholarship due to your position, so go to Karachi and arrange admission in D.J. Sindh College, which is the best one in Sindh. So I left for Karachi on June 17th and saw my grandfather for the last time. He said: "Religious education is Ilm-e-Din. What you will study is also Ilm. It is Ilm that brought railway lines, trains, buses and cars. It is Ilm that brought Sukkur Barrage and water all the year around. My brother Amir Bakhsh says that you look after land. Your paternal uncle says college education will make you Kafir. Your father has left it to your maternal uncle, who says you will be an engineer. The year I was born, this village was in the mid of a jungle. The year I married, I saw train running at speed faster than pigeons. After you were born, we saw a car faster than train and aeroplanes carrying men in the sky. So go and study and be a part of new world. The old world is not for you." I was convinced that these are words of dying man. He loved me more than my father did and thought that this approval was a blessing that could be the last in his and my life.

He died on first September 1942 when the Indus flooded such as he had never imagined, submerged our village so suddenly that out of shock he became sick. The whole village had shifted half a kilometre away to railway embankment, which was sufficiently above the flood line. He was carried on a cot (bed) used as stretcher. He died on the very day at age of eighty-four years. He knew that he could not be buried near his father, mother, wife and daughter's graves, which were within a stone's throw, as they were submerging just before his dying eyes.

He did not know that my uncle had buried manuscripts in that very graveyard and they too were submerging.

I was in Karachi and on 7th October received a letter mailed from Tharushah and written by my father announcing destruction of our village, death of my grandfather and place where the family sheltered. I left Karachi, reached my father's shelter two kilometres east of our village and I found all of us as orphans in absence of our grandfather. His herd of buffaloes gradually perished and we entered difficult times. Once my mother and two aunties had wept for death of our buffaloes. Now we had none to look after them and sold them to perish.

A year or two later my maternal uncle sitting with many people and talking about my grandfather said: "I have not seen a Waliullah, but if there could be some, my grandfather would qualify for it." If he had said that I should not study English, that would be the final word. He gave me all the freedom I wanted. In this way he mothered me after my mother's death.

Going out from my village, staying in boarding houses and hostels from 1935 to 1949 and another three years in USA up to 1953, gave confidence, independence, rationale and free thinking and freedom to do any thing I preferred in life.

HOT AND COLD FOODS

Foodstuff in Ancient Sindh was divided in two categories hot and cold. Hot food should not be taken in summer and during fever, but should be taken in case of cough, cold and flowing nose. Tea was a hot drink and was used as medicine for ailments categorised as cold. For malarial fever, tea was served to produce more heat in the body and the patient was then laid in bed covered with quilts, so that he perspires the fever out. Chicken was hot and could be taken during winter or to recuperate energy after ailment. Eggs were too hot and injurious to eat any time. Red pepper was hot and black paper cold. Ice was hot but molten ice water was cold, as it had lost heat in melting.

With such contradictions, I thought of listing out hot and cold stuffs and carried out a survey from various households, for various types of foodstuff. Since women specialised in this, I interviewed twenty Panhwar women of our village. The results were funny. A hot food to some women was cold and to others and vice versa. I concluded that hot and cold foods were “old wives tales” and never believed in it. Imagine milk was hot as it gives energy and helps to add fat in the body, but for better results, it should be boiled to take its heat out and then it is cold. Sugar is hot if taken orally, but added to milk, its heat is cancelled and milk in sugar is a cold drink for giving energy. Such was rubbish that was taught to every villager and talked about with confidence. Due to this I gave up all interest in folk medicine in my childhood.

The origin of hot and cold stuff probably can go to Mohenjo Daro times (2350 to 1650 BC). Between 800 BC to 60 AD, Greek merchants had monopoly over the Mediterranean Sea and were trading with Sindh via Red and Arabian seas through Barbarican - Sindhi port. Greeks collected all this information from South Asia and seem to have been used by Greek medicine man Homerley, who also categorises diseases as hot and cold and so the medicines. This theory caught imagination of the whole world including Arabic and Auyer Vedic systems of medicines and has been gradually discarded by modern medicine in the past 200 years, though in the South Asia is still believed by house wives, Hakims and Veds. Somewhere in the sixteenth century an Auyer Ved folk poet Ghagh and his wife Bhaddari composed a Hindi poem describing hot and cold foodstuffs, herbs and medicinal plants. Many people still remember it by heart, but no two versions of it are similar, having been changed by people from time to time. Since there was day to day talk in every house, I list some foods according to Ghagh’s theory.

- **Very hot foods.**

Sorghum, chicken, nuts of all types and tea.

- **Hot foods.**

All grains except rice and barley, all dried peas, beans, pulses except when in green stage, egg plant (Brinjal), coconut, ripe mango, all oil-seeds, red and green pepper, many species of potato, sugar, buffalo milk, beef, goat and sheep meat (less hot than beef) and sheep milk.

- **Cold foods.**

Rice, barley, green peas and beans, tomato, citrus, water melon, unripe mango, butter, ghee, turmeric, banana, palak, all green vegetables, gur, cow and goat milk and salt.

- **Very cold.**

Lemon, Ber, baked green mango, yoghurt and Lassi.

There was another category of foods - "light" (Halka), which were considered "cold" and easily digestible and "heavy" (Der Hazam), which were considered "hot" and late digestible and with difficulty. Chicken belonged to "heavy" and rice to "light" food, but chicken is digested in three hours and rice in four and half hours. For the same reason buffalo milk is not given to children and infants and under compulsion it is mixed with equal quantify of water.

There was another interesting talk about certain foods having some other properties called laxative, blood purifying and strength building aphrodisiacs. They also advised to take less food in summer as the digestion in that season is not that fierce (Tez) and strong as in winter and only Halka (light) and cold foods may be taken in summer. To make hot food cold some sour ingredients were added to it, for example green mango, lemon etc. For the same reason dry fruits and nuts were never found in the villages in summer. Ripe mango considered hot, was put in water for a few hours or overnight to turn it from hot to cold before eating. Sugar is hot, but to make it cold it was wrapped in a piece of cloth, hung by a thread and thrust in and out of water in a bowl till it dissolved and becomes cold. Salt added to tea was considered neutral and sugar added to it was considered hot. Roasted unripe mango was cold if while roasting skin is not broken. Phalsa was considered miracle fruit, against may summer ailments in the village. Thadal containing spices, nuts, sugar, seeds of cucurbitae etc., all hot stuffs were converted into cold recipe by grinding them in water. To make it more cold the well to do were adding almonds, rose petals, poppy, saffron,

cardamom, musk, pistachio nuts, pomegranate juice, cloves and black pepper to it. Bhang was drunk by Machhis of our village. It is derived from cannabis sativa or marijuana, a plant sacred to Shiva and Sadhus (holy men), but was not used by Panhwars of our village for unknown reasons and possibly as it was an intoxicant.

LOW BLOOD PRESSURE

I had low blood pressure from childhood. I have gluten sensitivity and probably some difficulty in digesting lactose in milk. Consequently I had to visit bathroom thrice daily. All efforts of family were that with thin body and poor rate of growth, I must be saved from perishing. I did not know the importance of blood pressure until I was twenty-five and was told by my friend Dr. Noor Hussain Ansari that he envied my blood pressure of 120/80 in winter and 110/70 in summer. Having been conscious, I had it checked often and realised what was scenario since my childhood. My duties to supervise bulldozer operations and tube-well drilling in Sindh from 1953, took me to various parts of Sindh on hot summer and cold winter days. Summer heat would exhaust me and perspiration would probably aggravate it further. By 2 p.m. in temperature of 45-49°C, I would feel headache, dry mouth, unquenchable thirst and blood pressure would drop to 100 ± 5 and 65 ± 5 . Now I knew what was happening in my childhood. In summer even in shade I was discomfortable. I would prefer to lie down across the bed and keep my legs vertically on the wall, a natural process to bring more blood to the brain, but I did that without knowing why Abraham Lincoln kept his legs on the wall in the same way in a cold country showing that he probably had the same problem and much more acute. The most miserable months for me during my childhood in the village and High School Mehar were; April to July until rains came when temperatures came below human body temperature, but I developed enormous energy in winter months that no work during long hours could tire me out. This has happened in all my life and even to this day. Thanks to air-conditioning that temperatures around 20-24°C in the room has resolved my problem since 1960.

I talked to my friend Dr. Ali Muhammad Chowdhry. He advised not bother as low blood pressure people are expected to live very long life. I told him that my body temperature is also low 97.0 to 97.5°F, against other people's 98.4°F. He said if I can lower my body temperature to 96°F, I will live 125 years, but it is not within anybody's ordinary powers. I had already heard that some Indian Yogis have mastered this type of body control.

My whole family on maternal and paternal side had low blood pressure, consequently they would not enter into unnecessary disputes and will try to adjust coolly, bear any losses without worries and mind their own business. My grandfather and father were exactly this type. My two maternal uncles Hakim

Muhammad Saleh and Noor Muhammad were low blood pressure persons and so was their mother Safooran and sister Sabhai. Except my father, who died due to smoking and cancer, the rest of them lived between eighty-four to ninety-one years age. Such is the genetic set up of my family.

ANIMALS AS MY CHILDHOOD COMPANIONS

In rural areas it is difficult to separate men from animals right from the birth of the two. They share part of same premises and segregation is always incomplete. The relationship as I saw was that of friendship and cruelty. I disliked unmerciful treatment of all work and milch animals like cows, buffaloes, bulls, horses, donkeys, camels, goats and sheep. They were physically beaten up when owner was annoyed. This may have reduced their own blood pressure but mine must have either risen or fallen due to fear that someone could also beat me in the same way. It left lasting influence on me that in my life I have not hit any animal, refused to shoot any bird, though have caught or trapped some through love for them but soon released them. The animals were and still are over-loaded, over-driven and under-fed. Animals developed sores at points of friction with yokes, saddles and ropes but cruelty continued. Young boys of ten and above were given a herd of animals to graze them in the fields, where grasses and shrubs grew wild. The only training the boys had was use of filthy language and stick. Both were used mercilessly. If I had been a boy grazing these animals, I would never have reached the position, as I did, and would have turned vulgar on the first day. Both beating and abusing were mostly unnecessary. I soon realised that the farmer is too poor to care for them.

Thanks to my parents, who though poor allowed me to study. Before opening of the Sukkur Barrage in 1932 only rice was grown in most of Sindh. Its straw was stored as feed for domestic animals. Being very poor in proteins and rich in lignin, straw was difficult to digest by all domesticated animals and they reduced milk out-put and growth rate and had starving look. Farmers raised some oil-seed, peas and beans as dubari crop and their straw and oil cake, rich in proteins and fats, was fed to animals in milk but quantity was far less than animals needed. Usually animals' health deteriorated badly until green grasses became available many months later. This was true for the whole Sindh. When people had plenty they over-fed them with oil cake, grains, rich green fodders and even poured vegetable oil down their throats with discarded liquor glass bottles of one and quarter litres, without realising that excess oil could damage their livers and kill them too, but they themselves took large quantities of butter and ghee, fattened themselves and ultimately ended into sluggish liver diseases and thought that they were healthy. A rich person was easily distinguishable by his bulging belly. We had one cow in addition to two bullocks and fleet of spiral

horned buffaloes. Some people had buffaloes with long horizontal horns bent. They wore unusual look, which I did not like.

They are known as swamp buffalo against water buffalo we had. My impression was that spiral horns ones were better milch animals. I have not verified this. Cow was to produce male bullocks. Our family did not bother about its milk as the yield of butter from it was low, but they were milked when it was needed in the house, during the daytime. Milking of buffaloes always took place before sunrise and after sunset. Female calves of cows were sold out after a year but males were retained for use as draft animals and sold to others for the same purpose. Cows were mated with best bulls to produce quality draft animals. My father liked big bulls with long, curved and wide horns. At least they looked more virile. We did not have goats and sheep as goats produced milk inadequate in fats and sheep milk was too rich in fats. Below are some of my observations before I was ten years old.

Cattle.

- The cattle of Sindh are inoffensive. The bulls were mercilessly castrated by laying them on the floor and crushing their testicles with flat clubs. It was so painful to poor creature. Only after 1939 bulls were castrated by a sort of wide pliers with blunt edges, resembling these of carpenters. Even this was painful.
- Male bulls are adorned with bells, knitted necklaces and occasionally painted with henna and other natural colours.
- Good milkier buffaloes were called Kadhan in Sindh.
- When milking a cow the first stream is allowed to fall on the ground, probably an old Hindu tradition of “offerings” to mother earth, one of their goddesses.
- When draft and milk animals became sick or did not produce milk, owners tied black twisted thread around their necks, provided by Mullas. In case of oxen it was put around horns.
- Sick animals are branded with hot iron or knives to cure them. I never saw it work. They also slit ears or pierced them as remedy.
- If buffalo did not yield milk, a long leather tube probably from tail of some animal closed at one end, was stuffed with stiff reeds of Sar grass,

pushed in their rear and worked like piston moving in and out until it produced milk, some minutes later. It was called Ghucha. I have not seen the practice in the West. It worked in Sindh as I witnessed, but the scene was disgusting.

- My father had bullock cart made and chassis pieces and draw-pole were engraved. He used it to haul agriculture produce - rice, wheat and straw for animals and transport of family members to other villages. But earth roads were not plain and travelling on them was cumbersome.
- Farmers make weak and sick animals work by use of stick, abusing, shouting and many times twisting their tails, so that the vertebrates of tail rub against each other and produce pain.
- Training of bullocks to plough or to pull carts is known, but not practised. Stick and torture is used as alternate solution. I have seen men even biting tails of animals with their teeth.
- Trained oxen can work without blows with stick. The farmer only shouts or makes strange sound probably used in training. Sindhis move tongue and make sound Cha-Cha-Cha from mouth rather than throat. I think it works because of training.
- A farmer of our village purchased two leather forehead shaped frontlets, embroidered with coloured cotton patterns and brass bells and put them on the forehead of two oxen. His wife was recently dead and he used bells to inform his girl friend of his passing near their house. Since everyone took siesta after lunch, his girl friend would come out and wait and while passing, he fixed time and place with her for the coming night. He was genius.
- During my childhood everyone in the village used hand made and dried cow dung cakes for fire. My grandfather preferred to apply it to the field. My paternal uncle used to cut wild wood and store it for annual use. Thus our female family members were free from kneading dung mixed with water and making it into thin pieces for fireplace, though they collected it daily from the barn and dumped it on a pile for use in the field.
- Buffalo was never used for ploughing or as beast of burden. It is much stronger but has no sweat glands and therefore cannot perspire and stand high heat. In summer it must get into water pool to cool and be able to milch.

- Male buffalo is kept for mating. Since it served many female buffaloes of the whole village, it was left free to wander and eat from anybody's field. My grandfather had released one male from his herd. Whenever any farmer wanted they roped and brought it to his barn. My grandfather had tough time in searching another buffalo-bull every time this service was needed for females in heat. His conviction was that the bull should not mate with his mother, aunties and half sisters. May be it is good from breeding point of view but there is nothing immoral about it.

Goat and sheep.

- My father's maternal cousins were shepherds and goatherds. They were virtually nomads, grazing animals on waste lands within a few miles of their settlements, but sometimes after good summer rains were going to Kachho of Johi Taluka to feed them on wild grasses for two to three months. They made more money than farmer-herdsman of irrigated agriculture areas and yet were considered inferior due to occupation. This is how economy is destroyed by caste and professional prejudices.
- Goat meat is preferred by the rich. In Sindh there were a few Hindu vegetarians as due to non-perennial irrigation, vegetables were not available year around. The very rich preferred kid's meat to grown-up goats. Very few people took sheep meat considering goat as selective feeder of vegetation while sheep would take even trash, roots, dry leaves and what not. It also had too much fat, which easily separated as soon broth started to cool down. The rich avoided beef, as its meat was difficult to chew. The poor ate beef whenever available. Male calves of buffalo and cow were cherished by rich due to soft meat. Sindhis did not know how to cook beefsteak and lamb chops, the two luxury items among meats in the western world. Sheep was economical due to its wool but it damaged wild grasses more than goat. People, who did not like Mullas, called them old-goat after beard of goat. Goatskin is soft. Its skin is carefully stitched to make pouch for carrying water from distant wells and sometimes carried on the backs of oxen and donkeys over long distances. Hindus of Sindh did not object to supply of water in goatskin even by Muslim carriers, I witnessed this in Mehar and Phulji.

Rabbits.

Although I was assigned calves in my name by my grandfather, but they were too big to be my pets, specially when they grew too fast to be handled by me as a small boy. My paternal uncle however was fond of pets. He brought a dear cub

and a grown-up rabbit. I liked them both, but he would keep them for a few days and then slaughter them much to my shock, though I partook the meat. My fixation with rabbit led me to raise rabbits in the house. A pair can multiply to 50 in a year if fed and cared for. They are more economical than poultry and their Tikkas (barbecued) are comparable.

Camel.

- There were some one dozen camels in the village. My father's cousin Gaji, with whom we shared the common thorny compound wall (Lorho), had one. Least thieves may steel, every night he chained its hind legs with cuff, similar to the ones police uses, and locked it. No one in the village drank its milk or ate its meat considering it smelly, saltish and etc. Before Kotri Barrage was commissioned in 1960, the area in its command was pastureland and camel breeders (Jatts) raised large herds of them for hauling agriculture and other products. Jatts drank its milk, ate its meat and used its wool for carpets and ropes. The lower Sindh carpets are still used as special pieces of art. Thin camel ropes were luxury item and rope-strung beds and cradles were prestigious, specially when black goat and brown camel wool were woven in different patterns. Same rope or thread is used in carpets. Another family of our village also owned camels. There was absence of motorised trucks and pick-ups as well as roads in most of Sindh up to end of World War-II and metalled roads did not exist except some in Karachi, Hyderabad and Sukkur. When even bullock cart tracks did not connect one village to other, the camel was only means of transport. Users had to pay cash, while with his own bullocks, farmer had to borrow cart invariably free from other villagers. Besides baggage camels (Ladoo), there was only one riding camel (Mahri) in the village, belonging to my maternal uncle, but it was disposed off as uneconomical burden. It did have speed and riding camels were quite prestigious, in early thirties. Railways reduced them, buses replaced many and finally Suzuki eliminated them in most of Sindh.
- Although it was considered virtue to eat camel meat as the Prophet Muhammad (PBUH) had partaken it, but nobody availed of this virtue in the village. Tall boys in the village were called "camel" (Uth). This word also meant tall but brainless, though a foolish person was invariably called an ass.
- Camel rarely bites a man, but it could be poisonous and sometimes fatal. Abu Bakar Panhwar of our village, while riding female camel in heat, was bitten by male camel. His leg had to be amputated in 1929. Since that time I never passed near a camel.

- Camels are said to go on without food and water for 40 days, but when available, they drink water once or twice a day and keep browsing on the way and even when loaded. Poor creature has both nostrils pierced and wooden well turned piece looking like valve of a vehicle engine or a nail with wide head is passed through this hole. To the end they tie rope. It is called Nakeli (Nak-keli or nail for nose). It must have been painful as even eight years' child could lead the poor beast anywhere. A small silver or golden version of Nakeli or Boolo is worn by women, who pierce their noses for it. In 1951 I attended annual date festival at small village named as Mecca near Indio California (USA). They had camel races, but no camel had nose pierced and with ropes around their necks, camels did not keep to the track and winning was anybody's luck. For merriment's sake, the riders wore Badawi dress. Since Sindh then had more Jatts than Saudi Arabia had its Badawis, these Americans camel-men should have used Jatki dress of Sindh, but I did not know about it then.
- The loading type camel is large, heavy and sturdy built, to carry heavy loads but lacks speed. The riding type is lightweight but a good runner. At age of about six, my mother took me on loading camel to attend a marriage of one of her relatives. A Kajao was placed on back of each of eleven camels, the number of which had to be odd for superstition's sake. Kajao consists of two "W" shaped frames kept in front and behind the hump of camel and connected by wooden braces at bottom and top. It forms two "V" shapes boxes on each side of its back. 6 women with 4 children sat in the two boxes. Since it is difficult to sit in "V" type of box, they filled the bottom half with Sindhi Rallis (bed mattresses) and squatted on it. It took some five hours to cover distance of ten miles. When the procession passed near any village, women were asked to sing and people came out to see. Since the Sindhi women observed no purdah in those days, no one objected. The owners of camels walked with camel rope in hand, in the front. None could stop it from browsing when it passed under the tree along road to Mondar village. Trees were planted on both sides of earthen roads for shade and were numbered to guard against their cutting down. All small schoolboys trapped in 11 Kajaos, tried to read numbers, much to surprise of women and most men, who could not read the numbers. Women cried loudly while camels went closely under the tree branches to be hit by them or at least be injured by horns of acacia nilotica (Babur) or tried to browse low branches. At their shouting elders of village rebuked camel men to be careful. By the time we reached the place, my knees and lower leg muscles (Pinyoon) were aching and I bid final farewell to camel. Later on I came to know that the angle of hipbone with pelvis in women is different than men and they never get

tried in squatting position, whereas I did. Due to my obstinacy and determination to walk back ten miles, my father took me to Dadu and brought me by train to Phulji Station. There was no gain, as I had to walk two miles to Dadu and three miles from Phulji to our village, but I saw Dadu town and learnt about its shops, roads and railways.

- Gaji's female camel gave birth to a male cub. I found it taller than me and therefore unfit to become my pet. They did not drink its milk and all was allowed to be suckled by cub, so very soon he grew larger. My father developed enlarged spleen due to chronic malaria, when I was about fifteen years old. He was advised to drink camel and donkey milk mixed as half and half. It did not work and he suffered badly for another five years, when I brought him plaudrine tablets (containing quinine) as per advice of Dr. Noor Hussain Ansari. One tablet a day for some months cured him.
- An earlier experience of mine with camel was at age of about four when my mother and father took me on a riding camel to Kiriya village between Juberji and Kakar. While crossing the shallow Sutiara stream (an old branch of the Indus) near village Taga, the camel refused to move. Water was only some thirty centimetres (twelve inches) deep and ten meters (thirty three feet) wide, but all persuasions and beatings were in vain. So he was driven back a 100 feet to forget about water and his eyes wrapped up with cloth. Then alone did the beast cross but with some beating and crying.
- In fifties I had to ride camel to locate ground water in Thar and Kohistan. Its use was necessity to supplement jeep but was tiresome, simply because the animal moves both right side legs simultaneously, throwing the rider on left side and then moves both left side legs together throwing rider on right side. It is like a physical exercise of bending torso on right and left side alternatively. I like the exercise provided my feet are on firm ground, not on saddle (Pakhro) of camel, which also tilts with camel. I thought it was fit for villagers, who have lot of time to waste and rest after each ride.
- I took camel steak in Riyadh (Saudi Arabia) in 1975 for curiosity's sake and again in Darwin, Australia in 1989. It was not distinguishable from beef or horse steak. I had taken horse steak in USA in 1951. Introduction of tractors made horse surplus as draft power and government thought it wise to lift ban on its slaughter and publicise its meat to give farmers some returns from out-dated animals. Raw meat of beef, camel and horse is distinguishable but not when fried as steak, they are the same in looks and taste. In 1945, Central Hotel, Karachi had served donkey steak to

European guests and nobody complained, but when its head was found, owner was prosecuted. He probably had been supplying donkey meat for months.

- Sindh was breeding ground for camels and Sindhi language has forty indigenous names for it. The Jatts are proud of them and make them wear costly and decorative saddles (Pakhra) and Kajaos. They also tie bells, brass ornaments and knitted cotton or woollen decorative-ware on its neck, knees, feet and back. Many such items are found in museums as pieces of art and decoration. Sir Richard Burton's tomb has complete sets of camel saddles and decoration stuff in his tent shaped tomb, opened by some thieves and sealed back by President of Royal Geographical Society in early eighties of twentieth century.

Jatts are considered as inferior in caste hierarchy of Sindhi Muslims, without considering the fact that Jatts, Chuhra, Sikhs of Punjab, Jatts and Indo-Scythian population of Sindh, Kutch, Kathiawar and Gujarat have the same cornice index and racially are the same people as those of Mohenjo Daro.

Horse.

Horse riding was a prestigious as camel and sometimes more. Our village had six or seven horses when I started going to school, but within ten years their number was reduced to one, as travel between villages decreased and travelling by train to big cities connected by railways, increased. Horse is costly to keep. It needs beans as part of food in addition to balanced diet of greens and straws. They have less fat in the body than other animals Sindhis feed them oil cake and pour vegetable oil down their throats.

What I was surprised at, was thorny iron bits they put in the mouth of horse, to steer it and control it. They were real instruments of torture and I wonder why they could not be modified. It is true that horse understands who is riding him and if he is inexperienced, horse is going to show his superior skills in throwing him down.

During my childhood I saw police officers, Taluka Mukhtiarkars, Tapedars, Abdars, and Waderas from other villages, Pirs, Syeds and beggars visiting the village on horseback. The first group were officials, but the last three came to beg.

Some parties lavishly spent on silk and silver embroidered leather saddles. They also decorated them with necklaces and body spreads of silk or costly cloth. The decoration included silver ornaments and a vertical flower on head. The leather

had silver and silk embroidery. It was also custom to make bridegroom ride on horse and take him from street to street in the village while musicians played on their instruments. Some horses were better decorated than the groom. This is Rajput custom going back to Prithvi Raj taking away Drupadi, the daughter of Jaising by force and ceremony repeats the chivalry of kidnapping the bride. Horse pulling Tonga, a two-wheeler cart is still in use. Its primary use was to carry passengers from Phulji station to various villages, but we were unlucky in having no suitable road for two-wheeler though occasionally Tonga driver treaded it. The Tonga drivers were very vocal in use of their filthy language and they used a typical horse whip made from thin flexible wood of bamboo at end of which was thin leather or cotton rope, with far end made heavy to strike. They were cruel to poor animals. I had the first chance to sit on one in 1930, when our village was surrounded by the Indus flood and women, children, men and cattle left village leaving elderly persons behind to be watchmen. We went by train to Sita Station and from there by Tonga to village Kadhan. Not a minute passed without use of whip and harsh language by Tonga owner.

Horse gets better treatment than all other animals. The horse head found from Mohenjo Daro is not a true horse but half horse or onager, now found in Rann of Kutch. I followed one in a Jeep at eighty kilometres (fifty miles) per hour in 1954, but could not reach it. Horse was domesticated after fall of Mohenjo Daro. It was used by cavalry first and in chariots later on The Achaemenian symbolised it with winged horse. Buraq, which took Prophet Muhammad (PBUH) to meet God, too was a winged horse. Horse belongs to Central Asian Steppes and cannot withstand high heat of Sindh. Invariably therefore, it is provided a good shed for housing.

Religious mendicants used to ride horse to beg. This including Fakirs who usually took opium and hemp (Bhang) and some poor Syeds and Pirs lacking regular followers. They came at the time of harvest from nowhere, took their first share of produce and happily parted by the owner in the name of God. If the same beggar came on his own legs, he probably would have got nothing. Horse added respectability to the beggar rider. The above ones were domesticated animals of the village, but Fakirs and conjurers from time to time brought other trained animals for entertainment.

Monkeys, pigs and bears for entertainment.

In my childhood, I only saw a few animal performances in our village and these were; trained monkeys performing large number of gestures and mimicking human being; trained dogs attacking bear, bear showing limited tricks and trained dogs attacking a wild pig, which had one of its hind legs tied to a long rope tied other end to a strong pole. Pig could move in a diameter of about 30

meters or 100 feet and was attacked by dogs. It was too cruel to observe and after first glimpse, I left, never to see it again in my life. I remember on that occasion Mullas had announced that witnessing of pig hunting will break marriage vow (Nikah) and was a great sin. I thought torturing of animal this way was a greater sin.

Ass.

There were a few asses in the village usually belonging to poor share croppers, not owning any land. They used them both as loading and riding animals. Hindu shopkeeper of our village, used to bring merchandise on asses. He had two or three in addition to one horse. He used horse if load was heavy. They were most neglected of all domesticables and browsed on all kind of agriculture wastes and wild growth. They were too useful and highly economical to be discarded and when tractors displaced oxen, donkey cart replaced bullock carts in Sindh and the Punjab.

The regular users of donkeys were; potters, washer men and nomadic people like Jogis, Bagris and others, who instead of tents use pre-fabricated reed for housings. The prejudice against ass goes back in history at least to first millennium BC.

Roman did not allow any donkey to enter their cities. Jesus Christ took procession on donkeys to defy them and was crucified.

Dogs.

Dog was domesticated some twelve thousand years ago. Domestic dog descended from wolf, rather than jackal. It is an indispensable animal in rural houses, which may even have no other domestic animals. The dog is untied at nighttime to watch within compound wall and is alert all night. It barks at the distant sound of intruders, even in nearby streets. Almost every house in our village had a dog. It eats scraps from kitchen, rice or wheat meal, meat, fish and all scraps of cooked feed. This way it is no burden on the household. Without dogs in most houses, thieves would have entered in our village everyday.

In our society it is no pet animal lover, as in the Western countries. Among Muslims it is an unclean animal and if it happens to lick any utensils or crockery item, that has to be destroyed. In Sindh society it is an untouchable and has not been petted, allowed to sit near house inmates and has only a specific function of guarding the house and domesticated animals, but in general it is never allowed to starve. Some people train dogs to assist in hunting, but in that case general

public considers it as costly luxury befitting feudals only. In general Sindhis have failed to make full use of the potential of this poor creature.

In spite of this every house had a dog. It was not tied but usually remained in door. Most houses had compound walls either of thorny bushes or of pressed mud and it was the boundary, which it was to protect. It kept awake all the night and barked enough to awaken all inmates if someone passed in the street nearby. They never kept a pair to give poor fellows company, but whenever any bitch was in heat in the village all dogs became candidates in the Drupadi-Prithvi Raj Suwaimber ceremony.

WOMEN'S PLIGHT IN OUR VILLAGE

The women were always over worked mostly doing muscular work, were preparing food for the whole family and eating at the end and whatever was left, get up early to operate millstone to grind wheat, rice, sorghum and millets for making bread, spaghetti, and other stuff, milk animals in the morning, prepare breakfast for men and children convert yoghurt into butter and separate sour milk (Lasi or Dudh) for 1 to 2 hours in the morning, husk rice to remove husk and (Kati), husk wheat to remove field impurities, clean house and prepare lunch.

Converting yoghurt into butter and sour milk was by churning contents into an earthen vessel. The centrifugal force of churning separated light weight butter and quantity extracted depended on time and recovery kept reducing as hours passed. The recovery was more, if contents were warm and Sindhis had found a unique solution of putting the whole gear in the sun without shed. Poor women sat on a low stool or Mangi, facing the gear and with back towards the sun. Physical work in such a situation was torturous. They could put gear in the shade and if need be heat contents by slow fire.

After lunch specially in summer working men took siesta or afternoon nap and women worked on stitching clothes, making patch work or ralties and embroidery. Before opening Sukkur barrage poverty in Sindh was to its extremes and whole population was under-fed, under nourished and women were usually anaemic. The reason was that in every five years in two year inundation water in canals would come late to plant crop in early July, in another two years it well recede two early in September and only one year crop would be good.

Agriculture which had been invented by women around 8500-9000 years ago by use of hoe was soon taken over by man the pastoral owner of domesticated animals. He invented plough, animal yoke and put a pair of bullocks on the job. A woman with a hoe could cultivate only two acres and man with a pair of bullocks ten acres. So he displaced women from agriculture and made her to do all house hold chores for him. She no longer was mother goddess. Since now he owned and cultivated land, produced more than woman in terms of food, he styled himself owner and superior and if he could produce enough to support more women, he practised polygamy, and now mother goddess was forgotten and replaced by Venus the goddess of beauty and well-to-do searched and

acquired goddesses as wives and mistresses but only until they lost physical charms due to age hard labour and were replaced with other.

Women also helped in agriculture when extra labour was needed for rice transplanting and harvesting, cotton picking, and harvesting of wheat, grams, peas, oil seeds etc. Due to exposure to sun and heat most of the time, fair women became permanently dark and with added early marriage and number of children, at twenty she looked old and un-attractive. I saw in my childhood that young beautiful girls soon lost their appeal and some times turned repulsive and thought that this is natural process and therefore it is futile to marry and live with ugly creatures all the life. When I went to high school I saw Sindhi Hindu women in the temple and even in their thirties, they looked attractive. Then I realised what rural economy and unwritten rural codes of conduct and social injustice has done to rural women?

The rural women chores were not over in the afternoon, when men got up from siesta. Men either went either to mosque to gossip (as in our village) or to Otaq to smoke hubble bubble and gossip, poor women did house hotel work or went to field to collect grasses and fodders for the milch and other animals, prepared animal feed and milked them. They also prepared supper or dinner and usually an hour after sunset all men returned for meal. Invariably after taking food they again rushed back to Otaq or mosque. The women toiled behind cleaning kitchen, utensils and even did husking as needle work could not be handled in the dark of the night. In summer they took out cots from inside the house and made beds and continued with some thiny or else including putting children to bed. The wives waited for arrival of men, whom they put in bed for Sindhi massage. This was every married women duty. I have never enjoyed this kind of Sindhi massage, but now I suspect it is meant to arouse man for sexual congress. In labour class daily sexual performance goes not upto age of thirty five and then total disinterest, a figure reported by Kinsey of USA and later on confirmed by researchers in Japan, Europe, England and many other countries.

Man's right to beat wife was and perhaps is unquestionable in Sindh's society. Position of woman was so degraded in Sindh that a deputation of Hindus met Sir Charles Napier that Sati being a custom among them they should be allowed to perform it. Napier's reaction was classic saying; "We have custom too. We hang a person who burns a woman alive, so put your pire, I put my gallows, you burn a woman and I hang you on the spot". Langley reported that if a man did not like his wife, he simply hanged her to death and British stopped it. This was just a husband's right and they did it, if she protested against any treatment meted by her.

This was stopped by the British. Karo Kari a Balochi custom was introduced by them and it is not understood why the British did not stop it? They were humanitarians, atleast under the law they introduced. My feeling it that to control tribal areas bordering Jacobabad, they accepted local system of Jirga and mild punishment of Karo Kari, but many courts went beyond this and considered Karo Kari a murder. One Pir Bakash Panhwar of Piarogoth killed his sister-in-law and surrendered to police some where around 1930. He was given seven years imprisonment in Hyderabad jail and returned in 1937. Some people from our village considering him right invited him for dinner at age of 11, I still thought that this was immoral and man was no good, but he had all ignorant men on his side.

I had felt that women in Sindh was poorest of the poor, had received no justice at hands of parents, brothers, husbands and their families and it was not only true of Sindhi Muslims and Hindus but also of other religions and at age of 20 wrote a book on position of women in various religions and social laws with a chapter on Sindh. My finding then were that Hindum, Buddhism, Jendaim and Christianity had been harsh on woman and degraded position of Muslim woman in Sindh was on a account of Indic Culture which is so deeply implanted in the whole population of South Asia that it needs revolution and revolutionary laws to improve the situation as woman in house-hold in South-Asia has position less than that of a slave, who morally and legally atleast was fed and clothed properly and also at proper time, progress has been made now, but not enough. In my childhood days, if a woman eloped with a man of her choice form a village, under un-written law and agreement between all waderas of Sindh, she was returned back to parent and on arrival married to another man kept as slave under watch and ward till she produced a child and now for whose survival she stayed behind. In my childhood I saw that my maternal uncle Muhammad Saleh vehemently opposed the system and sheltered many couples, who had sought his help. He did it almost all his life. In one case school records proved that she was sixteen and District Court wanted her to be produced with a fortnight he contacted famous advocate Dingo Mal, who him that he cannot take up the case, simply to lose it. He told learned pleader that case can be won, if he can bring it on for sixteen months when girl will be eighteen. Dingo Mal told him "you dangerous man" have given me a new lead in law. I take up the case. They won.

Many women thought that it was curse that they were born as women. It is my hope that world movement for equal rights to women is going to play its role, but poverty and consequent improper education is going to dignity of women in the third World.