

PEOPLE AND SCIENCE

An enthusiast's memoir 1950 - 90

Muhammad Ibrahim

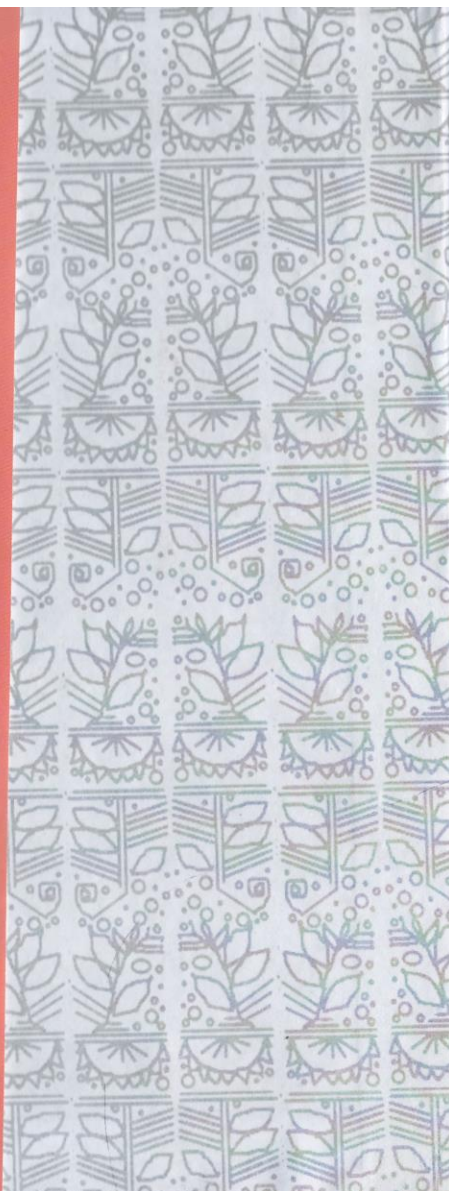
PEOPLE AND SCIENCE

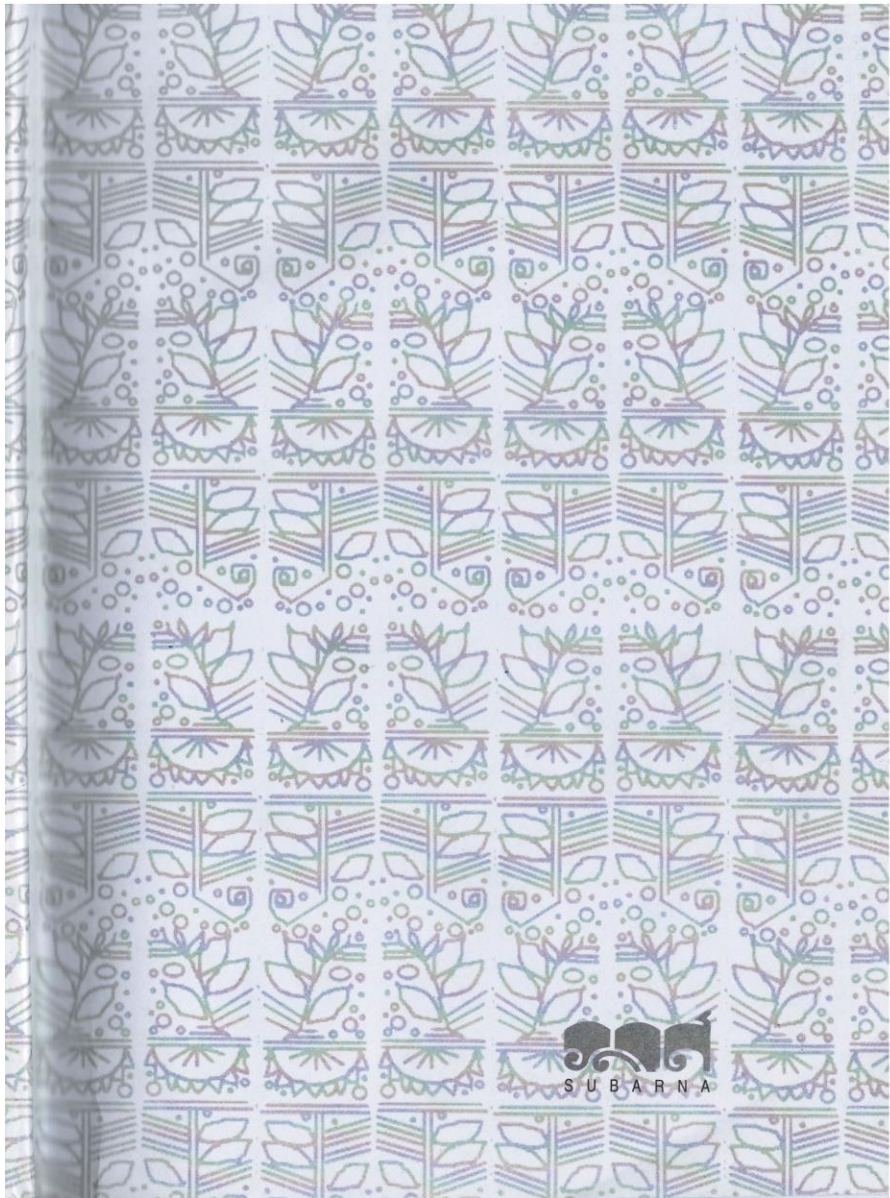
An enthusiast's memoir
1950 - 90

Muhammad Ibrahim

This is a memoir of an enthusiast in science, and in taking science to the people. He narrates here how his childhood fascinations could grow into a lifelong passion in doing science, writing science, beginning a science movement of young people reaching the grassroots. The story is told against the backdrop of the political and cultural scenes that the author experienced as he grew up. It begins with the still-present reminders of the anti-colonial struggles, soon to be replaced by the euphoria of a new country Pakistan; and then goes through the student politics in which the author participates, agitating to put an end to a long established dictatorship, and at last through the huge aspirations in the liberated Bangladesh. Throughout all these, however, the original drive behind the narrative remains unchanged—the joys of taking science to the people.

Cover • Aziz Hasan





People and Science

An enthusiast's memoir
1950 - 90

PEOPLE AND SCIENCE

An enthusiast's memoir
1950 - 90

Muhammad Ibrahim

SUBARNA

People and Science

Muhammad Ibrahim

First Published : February 2020

Publisher : Ahmed Mahfuzul Haq

SUBARNA 11 Books & Computer Complex, Room No 235

38/3, Bangla Bazar, Dhaka 1100, Bangladesh, Phone : 47115557

Printer : M.B. Printers, 28 Tipu Sultan Road, Dhaka 1100

Page Makeup : Sundarban Computer, 105, Fakirapool, Dhaka 1000

Cover Design : Aziz Hasan Copyright : Author

Price Tk. 400.00 US \$ 5.00

ISBN-978-984-94473-7-8

For this Book Please place your order @ www.rokomari.com/SUBARNA
or over phone no.0151952197 hotline 16297

To

*All the young people of the
People's Science Movement*

Content

Introduction	9
Those early wonders	14
A child's musings	38
New Horizons	60
My own laboratory	86
Glimpses of the world	113
Between science and politics	134
My short story of the west	167
Liberation war and after	176
Mass education in science	195
The importance of being renewable	215

Introduction

Looking back at my childhood, youth, and after, I see one continuous thread in it— my joys in science and my love of sharing those joys with others. I almost instinctively gravitated towards these while still in primary school. There was not much use of science in my early school education, and I had to fend for myself for the little science books and rudimentary science activities that provided those joys. The urge to explain these things to others was an additional incentive— though those ‘others’ were usually my siblings and friends only. I find it quite surprising that those little childhood fascinations could grow into a lifelong passion; one thing leading to other right from the childhood— improvising ‘do it yourself’ science labs, writing science, starting a popular science monthly, organizing science club chains, presenting science in mass media, building up grassroot organizations— through which we could gradually create a veritable people’s science movement in the country.

I could match seamlessly those labor of love with my other activities including being a student and then a university teacher in physics. In fact they effectively reinforced each other. After all, our dissatisfaction with the prevailing manner of science education, or any education, was an important reason behind our movement in the first place. Thus while attempting a memoir, this theme came strongly and persistently throughout the narrative. I felt my story can give a good sketch of the nature of our ‘people’s science movement’, which has always depended on the voluntarism and personal enthusiasm of a great number of young people— till today (2019), though the memoir ends its major narrative in 1990.

I felt it was important to put this major theme of my memoir against the background of my growing up in an ever changing political and cultural environment in which I took keen interest even as a child. Naturally, I

emphasized on things I myself experienced. To begin with, the story is anchored in a developing country which used to be in the eastern part of undivided India, and now became successively East Pakistan and Bangladesh. All this time it was struggling to find its minimal political and economic stability. The story begins in a small port-city Chittagong and a rural village nearby, with a child whose major source of musings comes from relics, tales, and songs of the recently concluded Japanese war (World War II), anti-colonial struggles, communal tensions and mass-dislocations of populations as results of Indian partition and Burmese (now Myanmar) independence. Some of the effects could still be felt. But everywhere an enthusiasm for building a new society in a new country was palpable. It was this latter aspect that shone bright in my young mind, much influenced by the schools and the vibrant family circle in our house.

There was another touch of the recent local history that would send me flying to exotic places and cultures. Though basically of middle class farming stock, my grandparents' generation also worked and conducted small businesses in neighbouring Burma and in far away Middle East—mainly Iran and Bahrain. We had relatives, cultural adaptations, and thrilling stories originally from those lands, enriching our family folklores. In the schools I soon joined the boy scouts and got quite involved in relishing its national and international flavors. It even gave me the opportunity to see a bit of the world while still a mere schoolboy.

One aspect of me that would come right across this memoir is my interest in politics. It started from a childhood surrounded by the continuous political debates in the home environment—elder siblings, uncles, private tutors, visitors, among the participants. A plentiful was going on in the national political arena too. Beginning with the prolonged constitution-making process for the new country Pakistan, politics for us was getting quite hot. Pakistan was a very unusual entity for a country—its eastern wing, where we lived, was one thousand miles away from the more privileged western one. The questions of discriminations to and exploitation of our wing, and the demand for

provincial autonomy as well as the improvement in the life of the poor, were becoming urgent. While studying in the university I joined the student politics and gradually became active in it. In the political culture of our region, the student politics acted as the hot bed and cutting edge of national politics— more so in our case. And it so happened that I was elected to a key position in the students' union at a time when a continuous all-out student agitation against the dictatorial regime of president General Ayub Khan was in motion. It was also the time when the people in our wing of the country was fast getting disillusioned with Pakistan as a nation.

Only several years after this the last act of the Pakistan drama was played out in the shape of a mass uprising and resignation of General Ayub, culminating ultimately in the bloody war of independence of Bangladesh, basically a people's war. What acted as a spark in all these was a 'Six Point' formula of extreme provincial autonomy proposed by a major eastern leader Shaikh Mujibur Rahman (later given the title Bangobondhu— Friend of Bengal). People rallied around the six point demand which was but one step short of independence. By then I was away studying in a British university. Like all Bengalis abroad, we too were totally shaken by the brutal unleashing of war by the Pakistan military on our people, but got sparked off in the war efforts from our stations. The birth of independent Bangladesh decided at once my focus so far as our science movement was concerned. After all, here was the opportunity to reshape our education, take science to the people, and build up a new youth with the revolutionary fervor that the liberation war had created. We eventually gave most of our efforts to bring the huge disadvantaged rural youth, females in particular, into a science-oriented future; an endeavour that could see some significant success. This had to go through an environment of political violence and great tragedies during the intranquil time of Bangladesh's early decades. But the enthusiasm of the young people drove the movement forward. The narrative in this book ends roughly in 1990 – the time when our science

movement had started to make a big impact on the general public. The next stage deserves a separate presentation sometime soon.

This is thus the story of the joys of science getting spread out. But this is also the story of my growing up and trying to do what I cherish best, in a part of South Asia among the upheavals of political changes— born in British India, educated in Pakistan, and getting connected with the grassroots in Bangladesh.

I wrote this very abridged English version of my original two-volume memoir in Bangla, for the international as well as the national readers. My son Kushal Ibrahim then did a very restrained copy-editing of the English text.

Muhammad Ibrahim
15 December 2019

People and Science

An enthusiast's memoir
1950 - 90

Those early wonders

Faded imprints

My mother had been trying for some time to discourage me from competing with my younger sister Tunu for her milk. Tunu was just a year and a half younger than me, and could be a fierce competitor. I vaguely remember the late afternoon when my mother (*Ma*, in Bangla) was sitting on a slightly raised step in the corner of our flat roof surrounded by a solid barrier. Both Tunu and I were on her lap. Ma did not resist much when I put her nipple in my mouth, but ‘Yak’ I uttered, and let it go immediately after, never to take it again. Much later I came to know that the bitter tasting *musabbir* had been applied on the nipple; but it was never clear to me what *musabbir* is after all. Perhaps this is the earliest memory I have.

The other memory I have roughly of the same time, was of an open tank made of bricks with a few inches of water where tadpoles were swimming. The tank was actually a septic tank under construction to be a part of the sanitary latrine in our village home. Rainwater had accumulated in the tank and a number of tadpoles made it their home. I was totally glued to the scene excited by the animated movements of the little tadpoles. I was especially interested in the tadpoles trying to cross from one compartment of the tank to the other through a narrow passage.

Innocent reminders of World War II

My birth in 1945 coincided with the end of the World War II. I was born in our village home not far from the city of Chittagong at the eastern edge of the British India, bordering Burma (now Myanmar) – another British territory. Sometime earlier, my parents had moved to our village home because they did not feel it safe to stay in our house in the city. The house, which doubled as my father’s shop, was located in the very busy and thriving business center of Chittagong. Japanese bombers had

already made this area a target several times. Actually the Imperial Japanese Army got very close to Chittagong, at the border between India and Burma. They were occupying Burma, and planning to invade India. The invasion, however, was resisted. The war finally came to an end, and we came back to the city. But throughout my early childhood we would be hearing stories and seeing things related to the war. For example, everybody reminded me that the pots on our roof in which we grew flowers and tomatoes were actually empty bomb shells - wartime rejects that my father (*Abba*) had bought at an auction. The cone-shaped empty bomb shells were placed on our roof narrow-side down standing on their fins. Filled with soil and fertilizer, they served nicely as pots to grow plants. For some reason, there was even a small hole down below which was very convenient as it drained the excess water.

We loved to listen to the stories of the experiences of the wartime. One such story-teller was Ashar Bap Dadu (It literally means “Grand-uncle who is father of Asha” – we never called him by his actual name, which I don’t even know). He was a helping hand in the family for many years. He spent a good part of the war time in his village home which is by the side of Arakan Road, the ancient road joining Chittagong with the Arakan (now Rakhine) province of Burma. Japanese were making probing attacks in the Arakan front. The Road therefore had a rapid face-lifting to bring reinforcements there. Even a branch railway line joining Chittagong with the first formidable river barrier at Dohazari was hastily built. Dadu’s home was very near this railhead which fed convoys of soldiers to the Arakan Road. Dadu would describe with his characteristic fervor: ‘Some days there would be only black soldiers – as black as they can be, and nobody else (perhaps he was referring to an East African detachment), and some other days there would be only white soldiers – as white as they can be’. Dadu’s description of the soldiers, trucks, cannons passing by would lift me to a strange world of adventure. These would all be told in our Chittagonean dialect which was the spoken language all the locals used, quite different from standard Bangla (Bengali), the language of our province.

Some other stories had tragic themes, like those on evacuees from Burma. When the Japanese first attacked Burma and bombed the city of Rangoon (now Yangon) and other parts of the country, the huge immigrant population from Bengal - a very large number of them from Chittagong - started to flee from Burma. But by that time the transportation system had totally collapsed, and they had to make the dangerous journey of hundreds of miles by foot through the jungles to avoid bombing and also local thugs. Many of our relatives went through this, because our village and our extended family had much more than average representation among the immigrants in Burma. So the stories of the evacuees were told and retold in our house. Not that all of these were meant for the children's ears, but I was always an ardent listener – that was my habit.

Evacuees had to survive by eating doubtful edibles in the jungle. One such edible particularly intrigued me – the inner pith of the stem of the wild banana trees. I thought it was impossible to eat it raw, and they said they had to fall back on this for days together. Hunger, attack by murdering thugs, Japanese bombing, exhaustion and diseases look their toll in this long journey; and not all survived.

Strangely, all parts of this conflict did not end for us with the war; rather a localized variety of it lingered on right up to my early childhood. There were rumors that marauding 'Burmese' thugs were raiding villages near ours and they might soon arrive here. Now I know they *were* just rumors, but they had their roots in the skirmishes between the minority Muslim Rohingya community and xenophobic elements of the Burmese majority in the bordering Arakan province of Burma, that spilled over the border to our side. Some stories Ashar Bap Dadu told us were about his first-hand experience with the Rohingya refugees who crossed border and camped not far from where he lived. Usually he would be making fun of their way of speaking the Chittagonean dialect. Having historical ties with us, Chittagonean was their language too, but with different accents and inflections. I would laugh a lot when Dadu would mimic the Rohingya tongue. As fate would have it, Roingyas are still being

persecuted in Burma as I write this in 2019, and our country has to look after them as they come fleeing from their home.

Our real fun was playing our own war games. By now we had another very young playmate, my brother Ayub, who was now old enough to join in. We played one of those war games right in our common bedroom. Our role-playing was not as soldiers, but as ordinary civilians in an air raid. Usually this and other such games would be painstakingly choreographed by Islam, a boy in his early teens, who as a domestic help in charge of the children, had enormous power over us. But he was a very attractive character, a natural leader who could mesmerize us with his stories and games. Islam used to claim that he was in Digboi, Assam - an Indian oil refinery town. Many people from our area once worked in its refineries. Islam claimed he had experienced air raids during the war. At least he could tell us all the details. An ominous sound of siren would warn us of an imminent air raid, the tone of the siren going up and down in rapid succession – the sound created by Islam with his nose and mouth. Then the three of us would recreate the ensuing chaos in the street while one of us would play the role of a Civil Defense Volunteer chanting to all others '*Gadda me dhuko*', '*Gadda me dhuko*' meaning in Hindi language 'Enter the trenches'. Then we will all vanish, hiding wherever we could – under the bed, behind the door, or anywhere else. My own favorite was to cover myself completely with a quilt. We would thus remain invisible within the 'trenches' until Islam gave the 'All Clear' signal – a monotonous unvarying sound in the siren.

Our house in the city

After the war our family started to live permanently in our house in the city, though we often spent months at a time in our village home. As our village Bathua is quite near the city, Abba could commute between the two when necessary. In general, our childhood was beautifully anchored at 20, Boxirhat road, a two-storied house that was also a shop and a workshop, in the old business district of Chittagong.

Chittagong is an old commercial and seaport city full of hills. Though much of our days would be spent looking at the very public activities in our jewelry shop, the busy road in front, and the shops beyond; our private world consisted of just three rooms on the upper floor, combined with the veranda and the roof which gave us an open sky. Every room had a name – Ma’s Room, the Radio Room, and the Big Room. Ma’s Room was not only our parent’s bedroom, it also served as a small working place for Ma where she would give artistic finishing to some of the ornaments sold in the shop. The Radio Room was a small additional bed-room. There was never a radio in that room during my entire stay in that house. But as the legend goes there was one before my birth, and the name persisted. The Big Room was a communal bedroom for all the younger children, myself being the oldest of them. This was the hub of all our activities – a living room in all sense. We had a small dining space connected with Ma’s kitchen, where Abba would preside over our meals while we all sat on a mat spread over the floor.

The narrow veranda in front of the Big Room was our observation post from which we could observe quite a wide-angled view of the world outside – the crowded road which was a veritable theatre stage with performances going round the clock, the shops on the other side where brisk business alternated with lazy emptiness, the traffic up and down the road, and so on. In the ground floor, our jewelry shop in the front and the workshop behind where ornaments were made, were separated by a study room. This was mainly used by my two older brothers – Salam and Yunus (Muhammad Yunus, later the Nobel Peace Prize winner, 2006). We usually added the word ‘Bhai’ after their names as a mark of deference. Our oldest sibling was Momtaz, the sister who was already married and lived not very far from us. We called her ‘Bubu’ meaning the older sister. We the younger ones – Tunu, Ayub and I still did not have much to do; yet our life was very full. I myself would enjoy our surrounding enormously. This is mainly because of my habit from the earliest childhood to listen to others’ conversation and to observe everything happening around.

Boxirhat road offered sights and sounds which were bewildering, but at the same time interesting to a curious child. Most of the time it was chocked with trucks carrying goods; and side by side bullock carts, push carts and porters on foot were doing the same. All kinds of hawkers were selling tidbits, snacks and what not. And there were beggars, clowns, and people that seemed downright crazy. The noise was terrible – the drivers and helpers of truck shouting and cursing, hawkers touting their products in loud artificial voice, beggars singing, and others doing their best to draw attention. Once in a while tempers flared, and even from the melee I would try to guess the cause of the quarrel. Just look at the hawkers – one is selling pigeons in huge airy cages, another selling briquettes made of powdered charcoal as fuel for the smoking *hukkas* (sheesha as they call it in Arab countries). A lace-seller is displaying a very very long bamboo pole from which the lace hangs; his claim – this is the longest lace in the world. A clownish figure is hawking something which he says is ‘the injection for the tooth and the ear’ – actually a combination of toothpick and earwax remover.

Then there were more peaceful things, such as Mohammad’s *Pan-bidi* stall, a fixed small kiosk right in front of our shop, Mohammad was a distant relative of ours. *Pan* in the edible leaf eaten raw nicely folded with spices in it. It is almost a part of our culture, even its folding being regarded as an art, usually practiced by women for near and dear ones. The folk song in Chittagonean language goes – ‘If I could get the handsome face I pine for, I would then put the wonderfully folded pan from Boxirhat to his mouth’. Boxirhat, interestingly, is the very street where our house was. *Bidi* is the cheap indigenous cigarette in which a particular type of dried leaf is used instead of paper to wrap the tobacco. I would stand by the side of Mohammad for hours observing people from all walks of life dropping by for a *bidi* or a *pan*, and having a small talk while enjoying it. Some came just to lit their own *bidi* or cigarette from the long thin rope of jute fibre hanging in the kiosk. One would not at first sight realize that the dangling end of this rope is very slowly burning. When a smoker, *bidi* in mouth, touches his *bidi* with this end of

the rope and tries to take a suck, only then a little glow of fire appears there. Several feet of this burning rope would last Mohammad for the duration of a long day or even more.

Just one shop beyond ours there sat on the veranda an old tailor named Khalifa who would make prayer caps in his equally old-looking Singer sewing machine. In his long hair and beard Uncle Khalifa looked more like a saint. But my interest was in a man in his 20s who was a permanent feature mostly sitting idle on a stool in front of the sewing machine. Named Rahmatullah, the man was a simpleton who would repeat anything told to him, would do anything asked to be done. Thus in reply to 'How are you Rahmatullah?', he will simply say 'How are you Rahmatullah?'. If someone says 'Rahmatullah mark the time, left, right, left, right' he will start beating his feet marking time chanting 'left, right, left right'. Others even asked him to do errands such as bringing tea, or buying a *bidi*, he would dutifully do that too. I understood he was different, but to me he was different in a pleasant innocent way, which others exploited. I appreciated Uncle Khalifa who tried to protect him, and to take care of him, whenever he could.

Of course I spent much more time in our jewelry shop. The backdrop of the shop was formed by the open inside of the several iron safes from which glistening ornaments for women were displayed. The same was done from the glass showcases separating the sellers from the buyers. There were some other thin glass boxes lining the walls with ornaments and also cups and shields to be trophies in sports. Most ornaments were made of gold (rest of silver) often studded with precious stones. These were chains, necklaces, earrings, tiaras, bracelets, bangles etc. Some of these were products of our workshop behind, others came from other workshops. Sellers – Abba and his assistants, mostly our relatives– would buy as well as sell gold ornaments, which can then be remade according to the order. Watching him I would try to figure out how Abba could evaluate the gold brought by the customers. He would often do this by looking at the stains they made when rubbed on a beautifully smooth very black piece of stone – a testing stone.

The best part for me was the conversations everyone had there. Interestingly, though all ornaments were for women there were hardly any women among the customers; it was a men's world. But women did come up in conversations. When a group of customers came to shop for a marriage ceremony, it would be a big moment for the shop. A lot of consultations would be in order within the group, while sometimes Abba or one of his assistants would join in to help. Often there would be sensitive issues – making reference to the prior negotiations between bride's family and the groom's family. I could easily recognize the senior-most member of the team who would have the last word. I loved to imagine about the people concerned who were left behind in their village. Hardly anybody paid any attention to me, a mere little boy. Abba would be entertaining such a marriage group quite lavishly – offering tea, sweets, *hukka*, cigarettes according to the preference of the various group members and their age. For example, a younger person is not supposed to smoke in front of a senior relative.

Wherever we were in the house, we would be surrounded by a low background noise. The most persisting noise was that from our goldsmith's workshop right within the house. This was a continuous sound of small hammers falling on anvils shaping the gold and also the hissing sound of the polishing wheels. This went on till the small hours of night. But we got so used to the sound that our normal activities including the sleep could go on undisturbed.

The descriptions given above may create an impression that I was a passive listener or observer at that time. Not at all, I was already becoming an active associate in the many things that my two older brothers were engaged in. But before I got involved in their world, Ma and Abba were the two centres of my world. I was almost glued to Ma (Sufia Khatun) who kept me totally charmed by her story-telling and question-answer sessions which included excerpts from songs and poems always drawing a moral lesson out of them. Ma was basically self-educated as her formal education did not cross primary school. My sister

Tunu would be my constant companion in all those. Ma created a mystical world for us, especially so when the three of us would be on our rooftop during the dusk and the nightfall with the panorama of the sky above us. We would usually be sitting or lying supine on a spring-bed which was also a plaything for us to jump up and down. ‘Why are there red and blue colors in the sky?’ – we would ask. ‘Oh that is to remind us about the martyrdom of the two grandsons of our Prophet (peace be upon him)’ Hassan the elder was poisoned and Hussain the younger was knifed by evil people. Blue is for poison and Red is for blood’. Ma was eluding to the sad tragedy of Karbala in Islamic history, which as an epic has been ingrained in our psyche. ‘Why did the star just shoot out in the sky’ we would ask seeing a meteor. ‘The Satan is getting whipped; what you just saw was a heavenly whip lashing out’. When at dusk all bats would be flying towards the north and a chorus of jackals’ howl will be heard from that direction, Ma would give a wonderfully romantic description of the forest where jackals and bats have their home.

Not all talks with Ma were about history or mythology or nature; many were autobiographical from the family stories, often intended to make an ethical point of kindness, perseverance etc. She would love to narrate how our business was built up against all odds. And I was getting proof of it the way she was even then working in her room giving the finishing decorations to some of the gold ornaments. She would add beautiful soft velvet linings to some. In others she would combine small red velvet discs in between the golden parts of a chain and multi-colored braided woolen strings going through all parts. The latter would end in two pompoms – the small furry balls to go behind the neck. I would be looking on very intently while talking to her all the time. She shaped everything herself with nothing but a pair of scissors and her nimble fingers. But she had another side which we heard from Bubu, Salam Bhai and Yunus Bhai, rather than experiencing ourselves. She was the no-nonsense disciplinarian of the family. As Bubu often narrated ‘Do you know how Ma would supervise our studies and chores? She would give her orders, and if there was any sluggishness in us she would bite

her lips and say “You just finish it now”. From the look of it we would know she means business.’

Abba was the good cop, in spite of all the noises he made on the contrary. I soon became his fan and constant companion – in the shop, in the nearby mosque, in the various dinner invitations (mostly marriage ceremonies) he had to attend. Abba (Dula Mia), a high school dropout, built his business from scratch when he was young. Now when approaching middle age he was already one of the two most renowned jewelry business owners of Chittagong, going by his title of Sowdagor (Honored Businessman) all over Chittagong – the town and the villages alike. He was a very busy man engulfed with responsibilities coming from religion, business, extended family, and social works. Yet he had all the time for an inquisitive little boy like me. He would tell me stories from his life, about his relatives and especially about his mother whom he lost as a boy. Of particular interest to me were the stories of his two pilgrimages to Mecca, which in those days were filled with uncertainties and even adventures. It is for these pilgrimages that Abba was reverently addressed by all people as ‘Haji’. Abba, however, would not shy away from any question I asked, not even from the perennial question of a child ‘Wherefrom did I come to Ma’s belly?’ Instead of a classical answer Abba gave a very smart though still confusing answer ‘You were actually in my belly before being in Ma’s belly’.

Accompanying Abba to all those social occasions, sitting right beside him there, I would listen to a variety of topics in conversation, which ranged from down to earth immediate issues such as family affairs, property management, businesses, conflict resolution, etc. to more universal issues such as religion, national politics and social problems. Actually these were my first very hazy introduction to such subjects. While Abba was respected as a community leader in our own majority Muslim community, his best friends came from the minority Hindu community – mostly jewelry businessmen, and goldsmiths who worked for him. Some of them were like guardians to us, very affectionate and caring. In general, our Boxirhat road had more Hindus than Muslims,

and many Hindu festivals round the year were sources of great enjoyment for us. We particularly looked forward to the Bangla New Year's Day when Hindu businessmen would open their new book of business with religious fervor and entertain guests with sweets. It would be a great feast of sweets of all variety for us, the children. There would be a great number of sadhus (Hindu holy men) and religious folk singers whose devotional songs with appealing tunes I came to like. Around the time I had my first taste of Bollywood movies, because encouraged by his friends Abba would take me along when they went to the movies. I still vaguely remember some of the scenes and songs, to which many more would be added during the rest of my childhood.

Our village homes

Living in the village for days together was a wonderful interlude in our existence in 20 Boxirhat road. This applied both to our home in Bathua village where Abba had a house separate from that of my paternal grandfather (whom we called Dada), and my maternal grandfather's (whom we called Nana) home in village Chandgao. Both were near the town; one could even walk there in a few hours if one wanted to. But both had the serene beauty and the tranquility that our villages are famous for, a very welcome change from the hullabaloo of the Boxirhat road.

The journey to Bathua village was so refreshing for us that it featured prominently in our role-playing games. We often played this game about a make-believe bus journey right within our shop on Sundays, the closed day for the shop. We would rearrange the chairs meant for the customers in a single line one behind the other. The front seat was for the bus driver, and the rest for the passengers. The conductor would be ever-busy, hardly any time to sit. The bus goes from Chittagong town to Kalurghat near the bridge on the river Karnaphuli, after passing the bus stop for our village. Tunu, Ayub and I would take turn as driver, passenger and conductor, making all the motions of a bus journey.

Sometimes there will be more players if some relatives of our age were visiting.

While beginning our journey from the depot in the city centre of Anderkilla, the first thing to do is for the conductor to crank start the engine by inserting an imaginary iron handle, standing in from of the bus. The driver would make appropriate engine noise and the honking noise with his/her mouth, and off we go. This is how cars used to be started before the days of self-starter, and our buses were ancient relics indeed. The conductor would let the passengers get down or get up by shouting instructions to the driver in Hindi ‘Rok-ke’ (stop), ‘Thik hai’ (ok, go), as would the normal conductors do, though their own language was plain old Chittagonean dialect. Midway in the journey the conductor will dutifully stop the bus and run with a jerry can to a nearby pond, fill it up and pour the water in the radiator of the bus to cool down the overheated engine. This condition of the engine would be attested by the strange noise made by mouth. Around this time it will cross the bus stop for Nana’s home. But we would continue till the bus stop called ‘Outer Signal’ which is the one for our home. Outer signal here means the signal for the incoming trains for a nearby railway station.

To go home we have to get down here and walk about two miles. During the monsoon when the fields are wet and have rice plants on it, we would take the winding mud road that increased the distance a bit. But during the dry winter season we could walk cross-country, over the fields from which the crop has been recently harvested, following the nice shortcut tracks made by previous walkers. Actually the exotic snacks made out of the new crop and the great expanses of the dry empty field to run amock made this latter season our favourite for long stays in the village.

Our city home had two more young relatives – Abba’s half brothers Uncle Sobhan and Uncle Shiraz - roughly of the same age as my two elder brothers. They lived separately with their two adult elder brothers Uncle Khair Ahmed and Uncle Kashem who had a jewelry business by the side of ours. Whether in the city or in the village, my brothers and the

younger uncles constituted quite a creative team – call it a music band, a theatre group, a film appreciation body, a youth club – full of hobbies and activities. While in the village they would be joined by their rural peers, physically more active. The most impressive thing in my memory is their midnight sorties in moonlit nights to assemble in the field for various indigenous sports, mostly designed to test body strength. The way the initiators would lure away the young people from their sleep for these sports, was also very impressive to me. They would go from one cluster of houses to another and shout in a chorus ‘Gola Badar Badar’, which actually referred to a famous war from early Islamic history. To my ear, this sounded like a mysterious howl from a long distance. The reply back from various homes sounded equally mysterious – ‘Heio Badar Badar’. This indicated that they are coming to join in.

A year or two later, I found this very chorus call being used in a totally different circumstance, almost like a war cry to frighten others. On that occasion I was a part of a joyous pedestrian procession of relatives, the bridal party for an uncle’s marriage on its way to the bride’s home. The procession stopped for a few minutes in front of a big house for no apparent reason. Then there were the repeated shouting of ‘Gola Badar Badar’, with an increasing intensity by the younger members of the procession. I was later told that the house belongs to a businessman who is a follower of Wahhabi sect of our religion, and our people belonging to the majority Sunni sect is supposed to be at loggerheads with them. The Wahhabi sect came from the teaching of a Saudi Arabian preacher Abdul Wahhab and was considered to be too conservative and puritanical by our people. The conflict between Wahhabis and Sunnis in our area became so contentious, turning violent at times, that even children could not help notice it. The immediate bone of contention would sometimes be very trifling, such as whether the Imam is allowed to use public addressing system while conducting the prayer.

We, the younger children, were not a part of those midnight sports in the moonlit fields. Our world in the village consisted of a mixed group of young boys and girls, often led by girls just in their adolescence. We

played our little games which were more fun than physical exertion. But apart from that I particularly remember two adolescent girl leaders who made a permanent imprint on me by their atypical free spirit and love of nature.

One of them, Aunt Pakhi, was the youngest daughter of one of Dada's (my paternal grandfather) brothers. Aunt Pakhi was just thirteen, and she would lead us in expeditions through the bushes around our household. A big pond occupies the central place in our hamlet separating the market place from the houses and the court yards. Aunt Pakhi had a daily chore to carry meals to her father in the market, and on the way we had our expeditions in the bush surrounding the pond. She transformed the whole bush into a make-believe world for us. Every plant represented something – thus for example, she would identify some fern and let us know that it is actually a male fowl (wild chicken) whereas another type of fern is a female fowl. We would collect all these for our play-house where we would go through the motions of a rich picnic with all kinds of foods and garnishes. But in the process Aunt Pakhi introduced me to many plants, particularly interesting herbs which are actually used and are much talked about. I regarded Aunt Pakhi to be an expert on flora and fauna, but her mother had other ideas. She would continuously scold Pakhi for neglecting household chores. But our leader was undaunted. I was all the more awe-struck by her because she would secretly smoke *bidi*; not really a secret to us. It was unthinkable for most females to smoke, let alone for a girl her age. In our eyes Aunt Pakhi was a hero, defying restrictions imposed on adolescents girls.

The other adolescent girl leader I had was Aunt Khalida in Nana's (my maternal grandfather) house. She was Ma's very young half-sister. She was also my favorite naturalist with a bias toward birds and insects. She was always trying to discover bird nests to follow up the progress of the eggs and chicks, and describe her theories about these to us like a professor. One such lecture by her is still vividly in my mind because it was accompanied by a demonstration which was extremely surprising to me. She made us sit on the courtyard ground in a circle of which she is

the centre. She then spread her scarf in front of her and put down a big black spider on it. From the contrast of color we could see clearly that the spider was clutching to a white thing of the size and shape of a big medicine tablet. Aunty Khalida turned the spider upside down, and using a toothpick-like small tool snatched the white thing from the spider. Then with surgical precision she cut open its soft cover, and out came what seemed like hundreds of wiggling mini-spiders, transparent white in color. Soon these were all over her scarf. Like my other adolescent girl leader, Aunty Khalida was also on the receiving end of her elders' wrath. Nana assigned many household chores to this daughter of his, the only one in the house now; and he would be complaining about her, non-stop. But all she cared about was the appreciation of her young fans.

Apart from Dada's and Nana's villages we had another place to go much more frequently – Bubu's home in the suburb of the town, which was then quite rural. Our oldest sibling Bubu (Momtaz Begum) was a kind of flagship and signpost of our whole family. Abba went by as 'Momtaz's Father' and Ma as 'Momtaz's Mother' among relatives and villagers; and Abba would not do anything important without consulting Bubu. But more than that, barely in her early 20s, Bubu was the person whom even our distant relatives of all ages would visit, to be in touch with our family. This is because she was always a very pleasant and welcoming person, who kept track of everybody and inquired about their well being. She had a child-like simplicity and always looked much younger than her age which was somehow maintained till the day she died in 2016.

Our frequent visits to Bubu's home were sheer joy for us. Her greatest pleasure was to feed us our individual favorites. She would ask us about the smallest details our daily life. 'What did Ma feed you last night?' was a common query. Apart from Bubu herself there were two other attractions for me in her house. One was her cute little daughter Bulbuli, with whom we loved to play. The other was the radio. My brother-in-law (Bubu's husband whom we simply called *Borda* meaning Big Brother) had a penchant for radios and he changed models often. Radios then tended to be big in size and fashionable. As there was no electricity in

the house, the power-hungry radios of those days needed another equally big box-like contraption – a battery suitable for radio. Borda had state of the art radios picking up stations from all over the world. They glowed with iridescent colors. I would play with them turning the tuning knobs slowly as strange voices and tunes kept coming with the flash of a magic-light every time. To me it was a magic box par excellence.

My colorful grandpas

Dada, my paternal grandpa (Naju Mia) was a patriarch figure not only for our extended family but also for our village and around. With a pale, lean body and an imposing beard on a thoughtful face he even looked like one. Though the title of Sowdagor (Honored Businessman) written after his name shows that he had some success in commercial activities in the past, some of it in Rangoon in Burma, his lifestyle now resembled that of a feudal chief. One sign of this was always there in his out-house for us to be curious about. It was a throne-like wooden chair, called *Tanjam*, that would be carried around by several porters with Dada on it. Thus carried, Dada would go supervising his landed properties and attending social calls mostly to preside over various arbitration cases of the villagers.

My early impression of Dada's home was that everything in it was big and grand. The drinking glasses were huge and heavily made with exquisitely worked thick glass; I could hardly lift these with both of my hands. The beautiful china carefully preserved for special dinners were huge too; some plates actually were big enough for four persons to eat from the same plate. There were some communal cooking vessels and water jugs with long spouts made by shaping thick copper plates. The name of Dada's father, Abdul Hamid Tendol, was engraved on these impressive heavy metal things. Tendol is a title my great grand father earned through his work as a labor contractor in Burma, where he spent a good part of his life. The readers may have noticed already that the custom of having a family surname does not apply to our case.

Dada's main claim to fame at that time, and the reason why his name is still uttered by many, is the market-place he established in our village. Called *Naju Mia Hat*, it was already a thriving business centre during my childhood, and much more now. The word 'Hat' means a market place with permanent shops catering for all needs, and special roadside bazar twice a week when sellers and buyers from long distances would congregate. My early childhood experience of these bazar days was fabulous – a crowded and highly animated place which was like a huge amusement park to me. The entertainers performing, and hawkers selling colorful exotic snacks, drew my particular attention. I remember vividly how a young performer swallowed a long sword keeping a big crowd of spectators in awe-struck silence. Among the professional sellers with a lot of merchandise I would be pleasantly surprised to see some neighborhood boy or girl, only a few years older than me, sitting there with perhaps half a dozen eggs or two chickens to sell, on behalf of their parents. Sometimes I accompanied my uncles there who would collect tolls from the sellers as representatives of the Managing Committee of the market. Many would pay in kind filling a huge wicker-work basket we took with us with gourds, pumpkins, chilies and what not.

There was a good reason why *Naju Mia Hat* prospered fast with smart shops and brisk businesses. Beginning in the early 20th century our village and the villages around sent their young men to distant shores to work or to do business. Many in our extended family thus spent their youth abroad. Akyab (now Sittway) and Rangoon (now Yangon) were the most popular. But the oil towns of Digboi in Assam in India, Abadan in Iran, and Bahrain in the Persian Gulf were also attracting a big number of young men. A part of the money they earned was invested in the business centre next to their home – *Naju Mia Hat*. The tradition continues till this day though the destinations have changed somewhat; the Gulf and Saudi Arabia being the main ones now while Burma was abandoned long ago. During my childhood a common saying in the area went: 'One of these days *Naju Mia Hat* will become the city (of Chittagong) and the city will become *Bilat*'. (*Bilat* means Britain – more

specifically London). Obviously only the half of the prophecy has come true. No one will claim that Chittagong has become like London, but Naju Mia Hat today is no different than parts of Chittagong, which is the second largest city in Bangladesh.

Dada died when I was still a very young child. Even during his last years I saw him as a grand old man, frail in body but very strong in spirit. His is the first death I ever witnessed. I remember of being ushered into the room where his dead body was kept. The shroud was lifted from his face for a few moments especially for me to have a last glance.

Dada along with his father and two younger brothers were quite a local legend in our area as shown by a rhyme people used to quote light-heartedly. The sense carried is like this:

Tendol's etiquette
Naju Mia's market,
Forakh Mia's motor car,
Junu Mia's plowshare.

Tendol was the father and Naju Mia (Dada) his oldest son – both of whom the readers have already met. Dada's brother Forakh Mia bought an old car to commercially carry passengers between the town and the nearest point to our village, but the venture failed. This was, however, the first car owned by anyone in the area. Junu Mia the youngest brother was known for his hands-on approach to agriculture – hence the plowshare.

Forakh Mia tried his hand in some other enterprises which were not only more successful, but also could excite the imagination of a small boy like me. He had a workshop where block printing of fabrics took place. It was amazing to observe how a beautiful design gradually took form by the application of a block; and it smelled good too. Forakh Mia was also producing his own brand of *bidi* (local cigarette) called 'Forakh Bidi'. I took pride in his picture printed on each package of the *bidi* – an image not very different from the real man we always would find sitting in his shop – clean shaved, reddish face with a formidable mustache, a red

Turkish fez cap adorning his head. He is the one for whom Aunty Pakhi (his daughter) had to carry meals. For some reason he never went home, preferring always to be in the shop. All of his five sons were either named after kings or with some words meaning king. This king-loving great-uncle of mine himself could be mistaken for a long lost vizier of an Otoman emperor given his appearance and bearing. Though he never visited Turkey, he had been to Abadan, Iran once to bring back his younger brother's wife. The brother worked in Abadan and died there in a plague epidemic during the last days of World War I in 1918.

As for Junu Mia, the youngest of Dada's brothers, I loved to visit his household mainly to be near his wife and mother-in-law. Junu Mia spent his youth in Burma and married there. While coming back he brought his mother-in-law too. I was very fond of these two Burmese ladies who adopted our ways and our language beautifully. Particularly, the older lady, in her casual Burmese dress of *thami* (sarong) and blouse, amazed me by her devotion to the farming activities going around her. She would regularly do chores like milking the goats and cows not minding her ripe old age.

Our favorite among the grandpa generation was Nana, our maternal grandfather (Dula Mia, same name as of Abba). A very loveable person, Nana was fond of rich food and enjoyed feeding us with delicacies. His regular long walks to all the great food markets of the town were the talk of the family. It was a great joy for us to follow him to the orchard to collect mangoes. He would use a long bamboo pole with a knife attached to its end and a small basket just below the knife, to pluck ripe mangoes very skillfully. He would then prepare a wonderful sweet dish for us mixing the mango pulp with boiled rice and hot milk with his own hand.

Nana had unorthodox political ideas, which he would discuss with my elder brothers. He was an outspoken fan of the British royalty even in those euphoric post-independence days. I always looked with awe to the rather faded picture of George V in his bedroom wall. He did not like the excesses that Indian independence movement had sometimes resorted to.

He was particularly critical of the movement that advocated the burning of British made clothes during early 1900s, as a protest against the first partition of Bengal by the British. He had a personal reason for it. According to him his business in clothes in Calcutta and Chittagong was ruined because of forcible burning of the clothes. By the time we were in the scene. Nana had retired to his landed property. Unlike Dada, he was a mellowed person, very friendly to his grandchildren.

In the after-glow of anti-Raj movement

The British Raj in India came to an end in 1947, and I was growing up in independent Pakistan, newly created through the partition of India. But the attitudes of our elders as well as the general environment somewhat kept alive the last days of the independence movement and the various shades of politics in it. Some of these were carried into the small children's world in surprising ways, and some others I could make some sense of a few years later.

One part for the lingering environment were of the songs. The magic of the songs worked on me even as a child, as this works still now when I hum the songs. On the Boxirhat road there were many singing beggars who along with religious songs and folk songs would sing the patriotic songs from the independence movement. For example, take the one on the martyrdom of Khudiram Bose, a boy of 18 who threw a bomb at a carriage he thought to be carrying a particularly cruel British magistrate and killed a British woman instead. He was later hanged. The song was everywhere.

Goodbye mother, let me have my little trip.
Will put on the hangman's noose smilingly,
While all Indians will watch.
I will be reborn in your sister's home,
Exactly ten months hence.
Look for the scar on the throat,
If you fail to recognize me then.

For us the song became even more vivid when during the bazar days in our *Naju Mia Hat* we watched Khudiram's idealized gallows scene in the so called 'Bioscope'. This was a big box with four lenses that magnify various memorable pictures for four children to watch together. One by one comes the picture when the show-man sings a description of the picture.

The Khudiram song was in a folk style in our Bangla language. Less emotional but nationally more popular were the famous patriotic Hindi songs, some of these coming from Bollywood. These were enthusiastically sung in our house, along with the mainstream romantic Bollywood songs. One from a 1943 movie was very popular:

Step away, people of the world,
India is ours.

There were political songs of that era in our Chittagonean dialect too. These had tremendous folkish appeal, some even to the children. One of these was my special favourite:

Our hearths, our homes, our properties,
Who rule here? The home-burning monkeys.

This song was actually written and first sung by Kalpana Datta, a revolutionary young female politician from Chittagong. In 1932, she was one of a team of two woman students just past their teens who planned an armed attack on the European Club in Chittagong. The other was Pritilota Waddadar. Kalpana was arrested just before the attack, but Pritilota carried out the attack causing deaths and injuries, herself committing suicide on the verge of being arrested. Both became household names. Kalpana Datta on her release from jail 7 years later, became a member of the Indian Communist Party and rose to the top leadership of the party after Independence.

Divisive politics of the time could affect, in strange ways, even the very young children. Some years later elders in our house narrated to me how I used to make a lot of fuss about the sweetener used for our daily

snacks. Our regular sweetener was molasses from sugar cane that was a comparatively cheap soggy yellow mass. Once in a while we would have normal white sugar. I hated molasses and demanded sugar all the time. I was taught to call molasses ‘Gandhi Sugar’ and the nice white crystalline real sugar ‘Jinnah Sugar’. Gandhi as the leader of Indian National Congress was opposed to the creation of Pakistan, whereas Jinnah as the head of the All India Muslim League led the Pakistan movement. Naturally our elders who were on the side of Pakistan wanted to lower the status of Gandhi and raise that of Jinnah in the child’s mind. While I was screaming for the ‘Jinnah Sugar’ rejecting the ‘Gandhi Sugar’ I was unwittingly making a political statement.

I showed a similar preference for the newly minted shining silver Pakistani pennies over the same old and rather worn out coin used in British India. These were the lowest denomination coins we used to get to keep and buy things like peanuts. All kinds of notes and coins were then in people’s hand – British Indian, British Burmese, Pakistani. Many informal money changers took upon themselves to change all others into new Pakistani ones. One such money changer operated from a makeshift little kiosk right in front of our shop. He would nicely arrange various notes and coins on the top of a box and chant in a rhythmic monotonous voice:

We change everything – note, half, quarter, dime, penny
We change Burma money, India money.

At home and outside we were surrounded by talks about our national leaders past and present. As a local son the name of Jatindra Mohan Sengupta came again and again because many spots in the town – road, school, auditorium were named after him. He was a top leader of the Indian National Congress. He died in 1933, but his wife Nelly Sengupta, a British woman, dedicated herself to the cause of Indian independence. During pre-independence years she was elected the President of All India Congress. She was also the top leader of Congress in Chittagong. She

remained in Chittagong after independence. I once saw her as an old but spirited lady leading a procession.

Of course, the Congress Party in Pakistan was of less importance because it represented only the minority Hindu community and that too only part of the community – the upper caste. It was Jinnah whose name was reverberated in our house and in most houses. People were calling him Quide-E-Azam (the Great Leader) and Father of the Nation. I had heard about his last visit to Chittagong so many times that I could describe it myself. He died in 1948 at the peak of his success, achieving the creation of Pakistan and becoming its first Governor General.

But even after his death the beggar singers in Boxirhat road were singing

May Allah give long life to
Our Mr. Jinnah.

Right before independence in 1947, the political rivalry between the two main communities (Hindus and Muslims) everywhere in India, including in Chittagong, had become very tense, mainly on the question of the possible partition of India and the creation of Pakistan as a separate Muslim-majority country. Congress formed ‘Congress Volunteers’ and Muslim League formed ‘League National Guards’ as a morale-boosting exercise. Abba would tell us how he was helping to organize the National Guards in our village and also in the town. After independence the Guards joined another newly created volunteer organization – the ‘Ansars’, (Helpers) Nurul Alam, a young worker from a nearby shop, enlisted in the Ansars. Every Sunday he would have physical trainings and parade in a nearby ground. I was very impressed with how he changed into a totally different person on those days. The ordinary shop assistant in his usual lungi (sarong), shirt and sandals would be suddenly transformed into a soldier in his khaki uniform with beret cap and heavy boots. My inquisitiveness made him take me along to his training several times. He explained to me that a lot of people were fleeing to Pakistan from India as refugees because of communal riots in Bihar and other parts of India. We even saw many of these helpless men, women and

children in procession on our road chanting slogans in Urdu language. Nurul Alam said that as an *Ansar* (helper) it was his duty to help these *Muhajirs* (refugees) to settle down in Pakistan. It gave me some food for thought.

A child's musings

Looking up to the seniors

Before my schooling began, my education had been largely self-motivated and had diverse sources. There was a religion teacher coming every day to teach us how to read Arabic and a house tutor who stayed in our house to teach Bangla, math and some English. But they were very lenient and left it to me to decide how much time I wanted to spend on my studies. My literacy in Bangla developed quite fast as I would try to read everything – signboards, promotional flyers, books, newspapers. But literacy and numeracy aside, I got the opportunity to learn a variety of things from my seniors, especially the vibrant group of young people in our home – brothers, uncles, tutors. Among other things the continuous discussions and debates going on around various topics, mostly political, would keep me curious and excited.

Often more senior members of the family joined in, especially the husbands of two of my aunts (Ma's younger sisters). One of them was Uncle Chowdhury who was the manager of Abba's business, and lived with us. The other was Uncle Moktal who would often come on his bicycle from his office at Lloyd's Bank. He had passed high school when proficiency in English was much demanded and would often revert to English in those discussions. He was quite proud of the fact that his immediate supervisor in the bank was an Englishman.

The younger members of the group were engrossed with Bollywood films and songs. They were my main reason of loving music, but then such songs were everywhere around our house for Hindu religious festivities, marriage ceremonies, and other celebrations. Even today oldies from that time would take me back to specific memories related to one or the other of the songs or tunes. It is during those days that I got my first chance to handle a gramophone myself, and would listen to a variety of mostly Bangla songs, – religious, modern, romantic, folk,

patriotic, left-wing political etc. In the house next door lived two young uncles of mine – sons of a cousin of Nana. They had a gramophone and a wealth of heavy shellac records, which prompted me to hang around them frequently. The older Uncle Shafee was a teenager, and the younger Idris a few years older than me. The three of us were in effect experimenting with the old fashioned spring operated turn-table and a mechanical pick-up with a pin. We would crank the spring, select a record disc, put a new pin from time to time, draw the ‘S’ shaped ‘sound box’ over the record and place its pin on the tracks of the disc. I used to listen to the songs so intently sitting on the floor and bringing my ear near the horn that my uncles compared me to the picture of the sitting dog on the top of every disc – the trademark of the recording company His Master’s Voice.

One of the songs with a left-leaning political message was about a rickshaw-puller who moans that he wastes his body by pulling fat rich guys on the rickshaw under the scorching sun, but can hardly make a living. The song had very sad lyrics and tune and made me think a lot of the scene and the fate of the rickshaw-puller, and the injustice of it all. But I had not seen a rickshaw of any kind till then, because our town did not have one. Apart from the buses and a few ancient taxis the only other transport for hire was the horse-carriage. Our family often used it, especially when Ma or female relatives were passengers. Unlike the rickshaw-puller of the song, the coachman of the carriage seemed to me to be a lucky man looking grand on his high seat with the tether in one hand and the whip in the other. I used to examine every part of these beautiful Phaeton carriages – the polished brass bell, the brass lamps, and of course the sturdy horses. This classic Phaeton carriage was of the same design as the Queen of England still uses for ceremonial occasions. Perhaps Chittagong was the only city in the entire Indian subcontinent where Phaetons were regularly used by the public. One time Uncle Moktal took us all to his office at the Lloyd’s Bank in the evening, with prior permission of his Englishman boss. This was to give us the first glimpse and experience of the elevator and the refrigerator–technological

wonders still novelties in Chittagong. We were treated with refreshments and very cold soda as a surprise.

The most satisfying and active learning for me came from my two elder brothers Salam Bhai and Yunus Bhai. Salam Bhai was ten years older than me, Yunus Bhai five. I had a particular attachment to Yunus Bhai, and he would take me along everywhere he went. I became a de facto younger brother to his several enchanting friends. By that time he was earning some pocket money and we used to visit a restaurant nearby during our regular outings. In addition to the tempting potato chop and tea, I loved the big loud radio and the general environment of the restaurant.

My two elder brothers were adopting engaging hobbies in which I could also play small parts. By the time he was ten, Yunus Bhai teamed up with his friend Faiz Bhai, a naturally gifted artist (later quite an accomplished commercial artist), to be apprentices to a local art guru. Yunus Bhai installed an easel and canvas in our study room and would work for days on his paintings. I was his little assistant, but most importantly I would warn him when Abba was passing through the room so that he could hide everything quickly. Abba did not want him to neglect his studies, nor did he like him to draw human figures because according to Abba it is forbidden in our religion.

Salam Bhai and Yunus Bhai bought a box camera and started photography. It was a cube-shaped box held at the waist level. You could see through a view finder on it, and then click. Soon my brothers graduated to a more expensive folding camera held at the eye level. They aspired to be like professional photographers, where their photos would be considered works of art (“art-photos”, as they called them). I often accompanied them in their photographic expeditions looking for a better subject or a better perspective. Yunus Bhai would take the lead. He would explain in details to his peers the artistic points of their photos and techniques used in taking these. I would try to make sense of what they were discussing and also accompany them when they visited their

mentor in photography. This man was the owner of a photography studio with the name 'Mystery House Studio' (*mayapuri studio*), not far from our house. My brothers had the permission to use the dark room and the retouching facilities of the studio. The very dim red light in the dark room, and the way images materialized under this light on a blank plastic sheet, did make the place a house of mystery to me. Retouching the black and white photos to add color was also an interesting practice in the days when color films and their processing facility were not available here. Often I acted as a model for my brothers' photography. I used to love that until they took one of their 'art-photos' of me and titled it 'The nude' – quite embarrassing for a boy of five.

Around this time my brothers tried their luck in setting up a business of selling postage stamps as collector's items. Both of them were enthusiastic stamp collectors, and had a remarkable collection between them. Two glass cases of stamps were on display in front of the jewelry shop of Uncle Gopal next to ours. Uncle Gopal was a youngish trader quite fond of us. My brothers' venture did not succeed, but my involvement in the sorting of all the stamps opened a window for me to countries of the world. Many of the stamps came from countries of the then British empire. They carried the mandatory picture of King George VI or George V depending on how old the stamps were, often combined with some local motifs. These included countries like Malaya, Kenya, Nigeria, Jamaica, Bahama and many more. In another category having a similar picture of the king were Canada, Australia and New Zealand. My brothers took time to explain to me about the countries and their political relationships.

My brothers and the younger uncles also formed a sort of theatre group. They used to rehearse for days various plays, mostly historical. The rehearsals were fascinating for me, but most of them did not result in any actual performance. However one of these did, or almost did, and left quite a permanent impression on me for more than one reason. It was a historical drama based on the tragedy of Karbala. The performance was set to take place in our village home in Bathua, because we were staying

there at that time. Our home theatre group was joined here by some local young enthusiasts. None of this combined group was older than 15. Yunus Bhai, then only 10, was an organizer as well as an actor. Enormous amount of efforts and imagination were invested into improvising make-shift sceneries, swords, spears, crowns and other outfits, and beards and mustaches. The whole village was invited; and half of the seats in our out-house, the venue of the drama, were reserved for the women. The upcoming event was the talk of the village.

On the day of the performance the excitement was palpable. The venue was beautifully decorated with colorful sarees, scarfs, and colored papers. Most of the invitees had taken their seats. Especially excited were the women and the girls whose enthusiasm knew no bounds, because it was a rare opportunity for them to actually enjoy some form of theatre. The overture music was already on. And then something unexpected happened. Dada (Naju Mia) appeared looking extremely angry, red in face, his walking stick held in the air. He shouted at and severely scolded the organizers – his younger sons and grandsons, for their ‘irreligious’ and ‘shameless’ activities; and wielded the stick madly on any person or anything in front of him. Everyone disappeared in seconds, the whole place looking like a garden after a tornado. A ghostly silence descended. Dada retired to his house fully satisfied.

But the story was not quite over yet. After about an hour when the first shock of the incidence was absorbed, I saw Ma appear on the common courtyard in front of our house. Standing there with her face towards Dada’s house at the other end of the row of houses. She protested against what Dada did, in a loud clear voice. In no uncertain terms she blamed Dada for interfering in the innocent play of the children. And this was her revered father-in-law, a patriarchal figure to whom none in the village would dare to talk loud. I was standing by her side all the while, and felt very proud of her, a bit afraid for her too. Ma decided to leave the village with all of us the next day. We never returned to the village for any significant length of time after this, and became permanently urbanized.

But there was an interlude before we became confirmed townsfolk. Abba bought a property in the city not far from our shop. The area still had a rural feel to it, which is exactly what he wanted. He did this to give the family some space and open air. There was a cottage-like house complete with a large courtyard, a garden, an out-house, and a pond surrounded by many coconut trees full of fruits. We shifted there after necessary renovations. Though this new place was idyllic in its natural beauty, I felt lonely and bored; and the man who saved me from this loneliness was the caretaker of this property – a handyman who also cooked for us. He was a distant relative, and we called him Shaheb Mia Dadu. A tall sturdy middle-aged man, with a scarred face blind in one eye, he was a remarkable figure. He wore his lungi short, fastening it with a prominent broad leather-belt with pockets – the type of belt our relatives back from Abadan in Iran often sported. In the afternoons when he had time to spare he gave me company by telling fantastic stories of his days in the oil refineries in Digboi in Assam in India. He would tell me how critical his work in the refinery was, controlling the pressure of the boilers. A malfunction of the controls causing an explosion in the boiler almost cost him his life. This is when he lost one eye, and had those permanent scars on the face.

Shaheb Mia Dadu often took me with him on his afternoon tours of the semi-rural neighborhood, when he met with the neighbors and lent them a helping hand if they needed any with their work. He could seemingly do everything, help with the delivery of a calf, build a fence, what not. He talked all the time, and I was a good listener. He was also a great animal lover. Later when he was with us for years more in our Boxirhat house, he built up a menagerie of small animals within the cramped space there. There was a she-goat he found lame in one leg and abandoned, and there was a Mynah bird which he saved after being badly wounded by an eagle. He brought them back to health with a lot of empathy and tenacity. He taught the Mynah to mimic our talks. As a child it was my habit to visit the Mynah first after coming back from the school to hear its welcoming words to me ‘How are you today’?

But one of those tours with Dadu during our cottage-house days gave me nightmares till long after. We were visiting a house where a boy was to be circumcised, and Dadu wanted to help the family in this. Obviously the procedure being followed by the quack doctor was a very cruel one and the boy was crying his heart out. It was a frightening sight for me. Dadu on the other hand was quite unperturbed and calmly went on advising the women of the house about how to observe certain rituals. This was with the incised bit of the foreskin so that the recovery would be quick. I was shuddering thinking about the day when my turn will come. No wonder it gave me nightmare afterwards.

Abba's experiment with the cottage-house did not work. After a few months we went back to Boxirhat.

Sorrows and adaptations

There were some silver linings in our cramped existence in the city. There were occasional outings with the family – to the movie theater and other entertainments. One prolonged example was the visits to the Chittagong Exhibition. This was in the stadium field where many stalls, mainly shops with fancy exhibits, formed a huge circle. This had many wonders for me. Our jewelry shop had a stall in the exhibition; so I could stay there as long as I wished. I would usually be by the side of the man in uniform guarding our shop standing outside in full attention with a gun. The man, Sona Mia, was a farm-hand working in our farm in the village. Now he was transformed overnight into an armed guard. From this vantage point of the guard's position, I would stare towards the colorful activities going all over the exhibition venue, particularly near the very high and well-decorated tower at the center. A military band played continuously going round the tower following the bandmaster's very impressive hand signals. The tiger-skin sash worn by the members of the band and some half a dozen bag-pipes they played in unison were sufficiently wondrous to lift me off the ground.

One day came the circus. The famous ‘Kamala Circus’ from India visited Chittagong. It was a rare opportunity for us. The whole family went in a hired horse-carriage – Abba, Ma, all the kids. It was a fantastic show, we had never seen anything like this before. When we boarded the carriage on our way back, the youngest of us Ayub wanted to have a packet of peanuts being sold by the hawkers. But none of us had the change needed to pay the hawker. Abba and others tried to get the change from shops nearby, but in vain. Ayub kept crying for it. Suddenly Ma lost her cool and started shouting at Ayub and all of us. This made no sense. Her composure was not restored till long after returning home. From then on, we often experienced in Ma similar loss of patience, shouting, inconsistent talks triggered by the smallest of excuse. We gradually realized that Ma had been afflicted with a mood condition which became worse by the day.

Ma’s condition changed our life forever. Most times she would do her chores, say her prayers, read Quran as usual. But then she would change suddenly, become aggressive, even violent – throwing things targeting whoever is perceived as an imagined enemy for the moment. Abba would come into the firing line most often, getting most of the blows. But he had a way ultimately to calm her down every time. We, the children, were afraid of the noise and the injuries she could cause unwittingly. We tried to make sure nothing agitated her especially at night so we could have an undisturbed sleep. Always deeply attached to Ma, I tried to remain attached even then – during her calm periods, bringing her into usual conversations. But I missed terribly her real self; it was extremely sad for me.

Did it take away all joy, fun, games, debates and music away from 20 Boxirhat road? No. We only had to adapt with the new situation. While various attempts for Ma’s treatment were going on, we got quite used to our new life. We even made light of it among ourselves. When the younger kids went to sleep in our communal bed, not far from Ma’s room, we would ask each other, ‘What’s the forecast’ tonight?’, trying to guess Ma’s latest mood. We had to actually rename some of our

relatives. Ma's main object of criticism and verbal abuse happened to be her father and relatives from that part of the family – her only brother, and several brothers-in-law. Two of them, Uncle Chowdhury and Ma's younger brother Uncle Absar, were working for Abba and living in the house. We could not avoid mentioning their names many times a day. But the moment Ma heard their names, all her aggressive emotions would come back and trigger a bout of verbal storm. So Uncle Chowdhury became 'Number Four' and Uncle Absar 'Number Two' – the codes selected not for any particular reason. Once thus renamed they were always referred to by these codes, even when it was perfectly safe to use their real name – such was the force of habit.

The one person who had to adjust most with the new situation was Abba. He became both our father and mother. He had to take care of the younger kids now, and he turned out to be very good at it. When we fought for the best portion of a food item during the meals, it was he who would come up with an acceptable formula. He would come and check several times at night whether we were sleeping or still chatting. His method of waking us up early in the morning was very funny. He would implore us, clap loudly, and sometimes hit the ground with his feet rhythmically. If appropriate, he would even draw our attention to something unusual happening outside – heavy rain, storm, flooding of the road – always a bit exaggerated. He would even tempt us by promising a special breakfast. He made sure each of us got a good bath every day personally supervising the process. We had a tiny bathroom with running water. Abba had a particular fascination with it and refurbished it with beautiful colored glass for the windows and a marble slab on the floor. This became like a magical place to me, with sun rays coming through the tinted glass and coloring the white marble. We have to keep in mind that while he was doing all these things he was a very busy businessman, the President of Chittagong Jewelry Association, and a community leader with many obligations.

This assumption of dual roles by Abba made everything easy for us, even to accept Ma's new persona. But Abba's most important mission

was to take care of Ma, and to try for her the best treatments available, giving her as normal a life as possible. He encouraged us to be close to her and behave with her as if nothing has changed; and he himself did exactly the same. After mainstream treatments failed, Abba began seeking unconventional ones. They sometimes had comical effects. Once a Hindu sadhu (holy man) claimed his ability to take the help of goddess Shidhya in curing Ma. He selected me to be a medium between him and the goddess, saying I was of the right age. I was made to look at my thumb nail made reflecting by a polish while chanting a mantra dictated by the sadhu. I was supposed to see the image of the goddess on the nail; but all I saw was some reflected light in spite of the repeated imploration of the sadhu. My siblings could not suppress their giggles,, though the occasion was meant to be a solemn one.

There were other unconventional methods of treatment tried which were considered to be scientific. One time Abba consulted a famous psychologist of the country who was visiting Chittagong. We had attended a public demonstration by him of mesmerism. The psychologist advocated hypnosis for Ma. But Ma, however, refused to cooperate. But this gave us an excellent pastime trying to hypnotize each other, sometimes quite effectively, as we then thought.

Ma never got back to her normal self, but within a few years her violent phase was over. She lived in a make-believe world of hers and made us a part of it. She even gave some of us new names – nice affectionate names. In conversations with her we would usually go with her perception of things to keep her calm and happy. Her bond with her children remained rock-solid.

My first school

The name of my first school was Lamarbazar Free Primary School. Lamarbazar is a place near Boxirhat, and the school was 15 minutes' walk from our house. The place was familiar to me because I used to accompany Abba and others to the mosque there, and Uncle Chowdhury

would take me to a public pond there to teach me swimming. But neither my familiarity to the place, nor my enthusiasm for learning could make the school attractive to me at the beginning. The discipline and regimentation were new to me; , not fun at all for a six year old used to be a free agent till then. Most of the students in my class were older than me, and they formed quite an unruly group. Perhaps in response to that, the school was very strictly run by its Head Master – Dila Mia Master (The word Master is added to the name of a teacher as a mark of respect).

A stern-looking imposing figure feared by the students, he was widely renowned and revered because of his dedication to the cause of education. He would always be in simple casual attire – a shirt over lungi and wooden sandals. The wooden sandal, not held with any strap but with only a small wooden knob to be grasped between two main toes, was once normal footwear for people in authority. But by then it was becoming a rarity. In spite of the casual clothes this tall and well-built man in his fifties with grey mustache and bloodshot eyes had all the appearance and qualities of an army general. The cane he always carried was also meant to be a symbol of authority like the general's baton, and not so much as an instrument of punishment for the students. Corporal punishment was not, however, uncommon in this school and others.

Lamarbazar and the fringes of the city around it was a difficult area for a school. A good number of the inhabitants were masons, carpenters, and small entrepreneurs who had good skills, but not much enthusiasm for educating their children. Enrolment, therefore, was poor, absenteeism rampant and dropout rate high. The mission of Dila Mia Master, on the other hand, was to bring all children in the area into the school, and to keep them there. In this he had a very famous and determined mentor, the elected chairman of Chittagong Municipality, Nur Ahmed Chairman (again, the job becomes the name, very common in the subcontinent). He made primary education free and compulsory for all children in Chittagong municipality, the first municipality in the whole of Pakistan where this could be done. That is why our school boldly displayed the

word 'Free' in its name. Empowered by his mentor, Dila Mia Master applied the full force of his persuasive abilities on the local parents, encouraging them to send their boys to his school and the girls to the sister school adjacent to it. Whenever he failed in this effort he would threaten them with litigation. We often heard his threats to some or other students who were irregular in attendance or whose siblings were not enrolled – 'Tell your father, I will put him in jail if he does not...'. Though it was only a threat, his insistence usually bore fruit.

Nur Ahmed was at the same time elected to the first Constituent Assembly of Pakistan. The job of the assembly was to draft the constitution of the new country and also function as a parliament. At the assembly, he drew a lot of attention for his fight for making primary education free and compulsory for the whole country. He also made a name for himself for the record number of parliamentary questions he asked the government in every session of the assembly.

Our Head Master himself taught us Bangla composition and spelling. But what he taught us most passionately - and I loved it – was patriotism.

He took every opportunity to tell us how strong and how great our new country would be, how it was going to prosper, and how should we prepare ourselves to meet future challenges. Whenever there was an unforeseen gap in the usual class routine he would fill it up by trying to instill some patriotism in us. Of course he would also use the occasions of various national day celebrations, or special events, or an important news for the same purpose. While talking on these topics he would be quite a different man, an emotional one, trying to get closer to our heart. For example, when the first non-British general in the army Ayub Khan (later President) took over as the Commander in Chief and made his first visit to Chittagong after that, our Head Master sent us to greet the general with an inspiring talk about the man. He narrated how this heroic officer foiled an Indian attempt to force into a part of Pakistan during the battle for Kashmir in 1948. We joined the kids from other schools in a procession to welcome the general, carrying small national flags. Our

teacher Ruhini Babu guided us in the procession. We shouted slogans such as ‘Long Live Pakistan’, ‘Long Live the Great Leader (Jinnah)’, ‘We will fight on to win Kashmir’ (the Kashmir issue still remains). Now that our Head Master spoke on this, some of his emotions rubbed on me, making me an enthusiastic slogan monger in the procession. Of course, like all the other children I was also looking forward to the packet of sweets after the event.

The other event I vividly remember is the sad incidence of October 1951 when one day in the evening I came to know from somebody at home that the prime minister of Pakistan Liaquat Ali Khan has been assassinated by a man in a public meeting. We learned the details from the radio. The atmosphere of grief and anger was palpable. The implications were grave – Liaquat was the key leader for the country, the closest lieutenant of Jinnah in the Pakistan Movement. Everybody wondered what would happen to the country now.

The school was closed the next day. The following day, Dila Mia Master, in a choked voice, said that now with the demise of Liaquat the nation had become an orphan. Liaquat was an extraordinary leader, he asserted. The only one who could stand up to the enemy. As he spoke, he made the same sign that Liaquat often made to warn the enemies of the country. He raised his right hand with a clenched fist. It was quite an emotional experience for me.

A few months after this in February 1952, there was another shocking news. This one reverberated for me not only within our house, but also on the road in front. Several students had been killed by the police in Dhaka, the capital of our province East Bengal (later named East Pakistan). The students were demonstrating with the demand that Bangla, our language and the language of the majority people of the country, be made one of the state languages. Jinnah had declared in 1948 in Dhaka that Urdu, and only Urdu, would be the state language. The students protested, and continued to agitate. Now, four years later, it resulted in bloodshed, and a much more vigorous Language Movement

spread across the whole province. In the days immediately after the deaths I witnessed angry protest marches by the senior students, and even female students. Groups after groups of high school students came out in their hundreds carrying black flags, mourning the martyrs and demanding capital punishment for the chief minister of our province. This time, however, there were no comments from our Head Master.

I had started my schooling with a dislike for it; but as the days passed it became quite attractive. One reason was my sense of achievement. My home education being quite self-motivated and a bit advanced, I had easy time during my three years in this school. I topped the class every time almost effortlessly. I was determined to keep this top position always, though in subsequent schools it was not so easy. I was in the good books of the teachers and especially Dila Mia Master. An added reason for that was Yunus Bhai, who was a remarkable alumnus of this school and the Head Master took it as if I am carrying the mantle of my brother. After all the Head Master was then struggling with many families with his mission of universal primary education. The school also liked me because I would always volunteer for performing in various cultural events. The most important was the Annual School Day – the only combined event with our neighboring girls' school, attended by parents and all important people of the area. I would sing patriotic songs and recite poems with appropriate gestures. I could be so relied upon with these things that I was even sent to another school to perform in a similar event among complete strangers. My self-confidence was helped by the fact that I was already witnessing these in Yunus Bhai and his friends, whose school I used to visit often.

While still in Lamarbazar school, I had a glimpse of a quite different kind of environment so far as children's early education goes. This was in Barkal, a village far from the town, home of Uncle Chowdhury. His only son, my cousin Badshah (it means king), a year younger than me, was visiting our house. It was decided that I would accompany him and his dad when he returned home. It was a wonderful boat journey and a very joyful stay of a few days. I was treated like a special guest who

even merited a special fishing expedition to have freshly caught fish in the meals. Badshah was keen to show me around, pointing out things he thought I would find interesting.

One day early in the morning he took me to their out-house where roughly a dozen boys from the neighborhood had gathered for their Arabic and Bangla lessons. They carried some slim books. It took me some time to find out that there was a teacher too – a middle-aged bearded man half lying on a mat on the floor. He wore a lungi, but had nothing on his upper body. He was carrying a very long cane which he was swinging absent-mindedly and using as a pointer when needed. Badshah introduced me to the teacher, who asked me to take my seat with others. The children followed him in reciting the Arabic alphabet. Then it was time for writing.

On a signal from the teacher the boys ran to the corner of the room and each came back with a piece of banana leaf. While coming to the out-house Badshah had carried a few big feathers of a chicken. I saw now that others had done the same. Each of them used knives to sharpen the naked thicker end of the feather to convert it to a workable quill pen. The next thing they did was even more surprising. One boy crushed some deep blue colored small berries already collected and kept in an iron mortar and pestle. It became the ink pot. They wrote the syllables on their pieces of banana leaf using the improvised pen and ink. I tried my hand in it too. Though the ink was rather watery and the surface to write on was not ideal, these somehow served the purpose. The boys covered the leaf with their writing and showed these to the reclining teacher. The teacher spoke little, letting his cane indicate whether the writing was ok or not. If asked to do it again a boy would simply wash the leaf clean in a plate full of water and reuse it. To my astonishment those who got the nod of acceptance started to massage the extended feet of the teacher while waiting for his next instruction. Nobody had asked them to do this; they were actually doing everything enthusiastically – the preparations, the writing, and the massaging of the teacher's feet. Perhaps they took all these as essential steps towards education. To me this was a new

experience, and a new realization that there are other worlds in education beyond my own in Lamarbazar school and Boxirhat.

Freedom to explore

In 1954, after finishing third grade, I skipped fourth grade and got admitted to a new school in fifth grade to compete as soon as possible for the prestigious Primary Scholarship. The exam for this used to take place at the end of the fifth grade and selected students from all schools of a district (there were 17 districts in the province) compete for a handful of scholarships. The elders at home decided I would be good enough to compete for the scholarship without even going through fourth grade if I submitted myself to the excellent tutoring arrangement available at the well-known Municipal Primary School.

Municipal Primary School was much more competitive than Lamarbazar School. It is located at a central place of Chittagong - near the railway station, the stadium, and the court. It attracted more talented students. The availability of tutoring for the scholarship was also an attraction. My early connection with the school was through my house tutor Mannan Master, who was a friend of the key tutor of the school. It was this teacher, Bedar Bakht Master, with whom a select group of students, including me, spent a lot of time throughout the year in the tutoring sessions after usual class hours. We called him by his nickname Gorom Master, which roughly translates to Grim Master, and I will use here the translated nickname. Our Grim Master was not actually that grim. He had a stern face and a no-nonsense attitude, hence the nickname. I soon discovered that he has a softer side, connecting well with the students, and finding and developing their potential.

Grim Master was in a never-ending cold war with another teacher of the school Poet Master (again a translated nickname). Poet Master was really a poet, with several books of poems to his credit. He even looked like a poet with long hair and flowing clothes. I never was sure about the actual cause of the animosity between them, but we sometimes got entangled in

it unwittingly. My classmates were nominally on Grim Master's side. But it was not so easy for me. Poet Master was a decent man; he knew my family, and affectionately even called me 'Sister's Son'. Grim Master, on the other hand, was helping me in every way; and considered me the best in the group. So I learned at an early age how to keep both sides of a conflict happy at the same time.

My house tutor Mannan Master and his friend Grim Master were great analysts of national and regional politics. Both had liberal progressive views, and detested the then mainstream communally divisive politics. Grim Master's ideal politician was Burma's Prime Minister U Nu. For some reason he wished that I would grow up to be a politician like U Nu. He even called me U Nu. I felt quite flattered. This is how I came to know about U Nu and to appreciate him. U Nu was a classmate and comrade of Aung San (father of the present leader Suu Kyi) in the struggle for Burmese independence. When Aung San, the great leader, was assassinated just before independence, U Nu took up the very difficult task of upholding the liberal democratic path in Burma against all odds. He was the prime minister for many years.

The preparation for the scholarship exam was a serious matter, as its syllabus was an open one and somewhat undefined. Our coaching went on with the help of various 'Source Books', 'Note Books', 'Made-Easys' 'Solutions', and 'Question & Answers' – a frightening plethora of printed materials. The basic idea of preparation was to be able to answer the test questions of the last fifty years from all over the province. A lot of the materials seemed to be from my grandfather's time, because they actually were. The teachers like Grim Master, however, were specialists in the art of taking exams. With their help I soon learned to cope with these materials well, and still had time to wander about in the city. Actually 1954 was the first year when as a 10 year old I was given freedom to wander about and explore things on my own. My new friends at school, the central location of the school in a place where things were happening, and the long walks to and from the schools created the opportunities for these explorations.

On my way to school I had to pass through a field called Laldighi Field, which served as the central square for the town. Major public meetings would take place there. But most of the time it was full of other activities – performances by folk artists, magicians, advertisers; and makeshift exhibitions. If I had time and saw something new and captivating, I would stop for a few minutes. I was often accompanied by my friend Bodi from school. For example, I was amazed by the performance of a pair of trained monkeys who would flawlessly enact the whole drama of a courtship and a marriage ceremony. Named Lord and Lady the pair would court each other, Lady often getting sentimental and Lord trying hard to break her coyness. Once the marriage was arranged Lady would beautify herself as a bride examining her face with a hand-held small mirror while applying cosmetics and other beauty wares on the face. Lord would get into his groom's attire complete with a turban, and at an appropriate moment would follow the local custom of removing the veil of the bride for the first glance at her. All these would be accompanied with the music and the sing-song narrations by their handler – the “monkeywala”. After the performance both Lord and Lady would bow to the audience amidst loud claps, and both would then proceed to collect money from the audience.

On another occasion Bodi insisted that we should see the Spider-Girl, advertised as the ‘Wonder of the World’. We bought tickets and entered the tent erected in the Laldighi Field, joining a long queue. There we came face to face with the Spider-Girl for a minute or so. She was a huge black spider with the head and shoulder of a beautiful teenaged girl. People were asking her questions which she would answer with a smiling face. Bodi and I spent the walk home arguing whether the Spider-Girl was genuine or fake. I tried hard to find evidence of her fakeness, but could not find any at the moment.

On my way to school, after passing Laldighi Field, I would climb a hill reaching a plateau, follow the road on the plateau, and then down to reach the school on the other side of the hill. This was the famous Fairy

Hill. The legend goes that there were only fairies living on it dominating this whole area. Badar Shah, the patron saint of Chittagong lit a lamp (called 'Chati' in our language) which scared the fairies away. This is the reason the place was named Chatigao, and Chittagong became the Anglicized version of the name. Fairy Hill was known for having the 'Court Building' on its plateau, the elaborate century-old seat of the administrative offices and judicial courts – an excellent architectural relic from British Raj. For a few minutes I would be mingling with the office-going clerks, black-cladded lawyers, and the litigating public around the building. Or sometimes just on the other side of the building I would occasionally stop to have a look at the panoramic view of the city, its river Karnaphuli, the port, and if there was not much mist, right up to the mouth of the river and the Bay of Bengal.

Sunday was holiday, but sometimes we had to go to school on Sundays. The top of the Fairy Hill and the hillocks and valleys by its side would be less busy, allowing the kids to wander about in the hills and valleys. Once we were attacked by a group of hooligans. Chasing us, they managed to catch up with my friend Sanjib. He was pushed, fell down the slope rolling, and was badly bruised. The rest of us raised such a hue and cry that we could draw the attention of a nearby fire station. They came down quick and rescued us. The hooligans fled at the sight of them. Sanjib was given first aid in the station while we regained composure. I had visited this station several times before and the firemen there knew me well as a boy very curious about fire engines and their job. They said that the attackers were just some teenaged bums who wanted to scare us. I never mentioned this incidence at home lest it cost me some freedom of movement.

One spot we would often visit was the stadium, especially when some important sport event was due, and the sporting celebrities would be practicing there. Because of our very young age we would be allowed to go into the practice area. For example, when the Indian cricket team was visiting Pakistan, it played a 3-day international match in Chittagong. I got a chance to see the Indian Captain Vinoo Mankad and some other

legendary players like Umrigar, Manjrekar, and Subhash Gupte, and Pakistani players like Imtiaz, Alimuddin, Khan Mohammad, and Mahmud Hossain. Later I saw them playing the match in the stadium, but I was thrilled to see them practice for hours, and I even managed to talk to them a bit and take their autographs. The famous Pakistani wrestlers that I saw in the stadium gave me even more thrills. They were working out before taking part in an international wrestling event.

The wrestling team was particularly fascinating because it consisted of several brothers, all nephews of Gama Ghulam Muhammad or the Great Gama who was a world champion in wrestling for many decades; we read about him in our text book. I was astonished to learn that every day he had, among other things, two gallons of milk and one and a half pound of almonds. The wrestler brothers we went to see were Bholu, Azam, Aslam, Akram and Goga. Bholu was considered so good that no one wanted to fight him. So he was just sitting idle, and others were busy in vigorous squats and pushups. They were very friendly with us, the children. I would touch them and , ask them questions on their diet which they found very funny. We did not get to see their international competitors at such close quarters. But I soon saw them in action in actual wrestling when I accompanied all my siblings there one night. There were Bert Assirati (UK), Bill Verna (Australia), Zbyszko (Poland), and, of course, the Bholu brothers. The foreign wrestlers were older and heavier than the Pakistani ones, but lost to them anyways. A Chinese wrestler, however, was light and nimble, who won the day with his famous ‘flying kicks’. Returning home, our youngest brother Jahangir, only two years old, hurt himself badly when he tried the flying kick on us.

The celebrities I went to see those days were not all sportsmen. One of them was a guerilla commander from the bordering Arakan province of Burma, who was then staying close to our school. We had heard about him. He was the leader of one of the guerilla groups fighting for the rights of Muslim Rohingya population and had escaped to Chittagong. Called Kashem Raja (literally King Kashem) by his followers, he

became the talk of the town for some time. The rumor was that he had become a civilian and was working as the manager of a Chittagong restaurant. A classmate said that as the restaurant was close to our school, how could we not have a look at the 'King'. Off we went to the restaurant and asked a waiter whether the rumor was true. The waiter pointed at the man sitting at the cash register. I saw an unimpressive looking stocky man in plain lungi and shirt supervising the waiters there. We double checked – he was indeed King Kashem. To me he looked more suited to run a restaurant than a guerilla group.

King Kashem was a disappointment, closely followed by another disappointment. This time I expected to enjoy a musical evening but got something very unpleasant instead. My classmate Badal and I planned to attend this event at Chittagong Medical School. The Medical School, with the General Hospital attached to it, was a landmark of the town. Its imposing old red building with grand arches was located on a scenic hill-top not far from Boxirhat. Student politics, beginning from the time of the British Raj, has always been important in our province. The occasion for the musical evening was the installation ceremony of the newly elected Students' Union Executive Committee, and the musical part was to follow the formal part of the installation. Badal and I went early to get front seats in the auditorium.

All the important officials of the Medical School were on the stage. Then the general secretary of the students' union led the oath-taking ceremony, and was about to make his inaugural policy speech. All speeches, of course, were in mandatory English. A lanky young man, he exuded a composed leader-like personality. But as soon as he made his opening remarks, several students in various parts of the auditorium stood up and waiving their raised hands started to chant in unison 'No Installation, No Installation' – again in English. The general secretary continued the speech unperturbed, albeit in a louder voice. Some other students stood up and joined in the chanting, which now grew into a war cry and reached a crescendo. Some others started to throw small harmless things such as crunched paper made into balls towards him. It

was obvious that the opposition party was bent on ruining the ceremony. The general secretary suddenly jumped from the rostrum shouting an obscenity and fell directly over one of the protesting students and grabbed his hair – not far from where I sat. Perhaps taking this as a cue, a general pandemonium and severe fist-fighting broke out. I had never witnessed such violence before and was scared to death. I made for the door as fast as I could, never minding my friend Badal. I stopped only after reaching the foot of the hill far away from the auditorium.

So it was that my first unintentional brush with student politics was not a happy one. But there were other much brighter facets of student politics which I soon observed and enjoyed, and much later I enthusiastically took part in.

New Horizons

Reading Science

The germination of some of my life-long love affairs took place during my primary school days and a bit later; and some of these will become major themes in this book. But let us have a look here at a few of those germinations beginning with that of my reading habit.

Bangla books and children's magazines available in our home became a kind of companion to me even before I could really read them consistently. My elder brothers had a good collection of books already and they subscribed to some children magazines from Calcutta. At first I would only browse through them, focusing on pictures and their captions. I still remember some picture captions I read then, but no other parts of the books. The collection at home had more than their normal share of detective books and adolescent adventures. Yunus Bhai was such a fan of the former that he authored a complete detective novel at the age of 12, though it was never published. When my schooling began at six, I quickly became a better reader and soon was making a reasonable sense of the adventure books, and even some of the easier detective books. Some non-fiction materials came from the children's magazines. I was actually reading anything I could lay my hands on, but did not have enough variety around me. Idris, my young uncle next door with whom I used to listen to the gramophone, came to my rescue by getting books for me from his school library. On Saturdays which were his weekly library days in school, I would be eagerly waiting at his house for him to return with a book for me.

One of the books I got hold of at that time was so exceptional that I still remember it well. It was a children's book on astronomy written in the form of a story book. In the story a college student took upon himself to explain various astronomical bodies and events to a group of kids who met every night in the courtyard. The student's grandma was an

exceptional person who attended regularly and listened to him with enthusiasm. But sometimes she would play the devil's advocate and offer her own beliefs as theories – suggesting, for example, that the black shades we see on the moon is an old lady with spinning wheel rather than the huge craters on the moon's surface as the student claimed. However, each time she would finally come around to the point of view of modern science. There were many beautiful pictures in the book, some viewed through the telescope, others drawn by artists. So far as I can remember, this was the first full book on science I read, and I loved it. I could feel a bias in me towards these type of books.

My real chance to read books at will, and to get many science books, came when I discovered not one but three libraries which I could use – all in the same building. This was on the way to my second school, the Municipal Primary, very near Laldighi Field, where I watched monkey drama and spider-girl. It was as if I had suddenly struck a gold mine. There is a different story for each of these three libraries as to how I gained access to it.

Yunus Bhai's classmate Ahsan Bhai knew me well and appreciated my reading habit. He was now going away from Chittagong and asked me whether I would be interested to use his Municipal Public Library membership. If so, he would not withdraw the security money from the library and would transfer his library card to me. This is exactly what he did, and he also introduced me to Mr. Musa, the young Assistant Librarian there. Mr. Musa agreed to overlook my age which would have disqualified me. He even became a mentor to me in the library, helping me find books I would like to borrow. This was very welcome; but I did not like the way he censored some books telling I was too young for those. The Public Library was an old one, and it seemed to me that no book had been bought for it for a long time. There were no children's book. I grew a liking for books on travels and explorations. I came to know how the London subway was built from a book written not long after its construction.

Mr. Musa introduced me to his younger brother who was an Assistant at the USIS (United States Information Service) Library on the upper floor of the same building. Actually I was already visiting USIS in certain evenings to watch documentary films. Most of the films were on American history, American democracy and American life. There would usually be a narration in Bangla. I loved them all, and would not miss any. Mr. Musa's brother now invited me to become a junior member of the Library by filling up a form. This would allow me borrow three books at a time from the children's section, and I could read any other book sitting in the Library. This single action became a big turning point in my life.

It was a new world to me. How could books be so beautiful! The texts, the colorful pictures, even the binding and the smell were exquisite. I spent whatever time I could to read the general books in the library – some of which were in Bangla translation. And I borrowed and took home the children's books. I remember reading one particular book in translation continuously for hours in the library for several successive days, not stopping till I finished it. This was 'The Spirit of St. Louis' by Charles Lindbergh – a detailed account of his historic first transatlantic flight. It was not only the thrill and adventure of the dangerous flight that attracted me, but it was also the technical details – the way he worked with the airplane manufacturing company to modify the design to suit his flight; the way he managed the load carried; the way he controlled the fuel supply; navigated the plane avoiding the weather conditions; even the way he kept himself awake for so long.

The books I borrowed from the children's section of USIS Library were rather slim, but to me these were as attractive as chocolate candies – with big-character text and pages full of colored pictures. Science books were my favorite. Those were all in English. I was thus forced to try to read English. It was not easy for me to do at that stage, my formal education in English being quite flimsy. But with the help of the pictures and occasional use of a dictionary I could usually get the essential sense. Later when my formal education in English was much improved I

realized that though I guessed the right meanings of the words, their pronunciations that I made in my mind were often wrong. For example, while reading about weather I would frequently come across the word ‘humidity’, but I pronounced the ‘hu’ in it as in ‘humming bird. But these errors did not matter for my purpose.

I read these science books in a rather active fashion, trying to compare it with real life whenever possible. The process would give me a lot of pleasure. When I read in a little book with a lot of pictures about how an automobile works, I could not check up with the things said about the engine. But there were many trucks moving in Boxhirhat road, and suddenly my observation of these became much more acute. These trucks had their wheels and shafts and gear boxes quite visible. I tried to match the descriptions in the book with the actual movement of front wheel while being steered – how the gears at the rear converted the sidewise turning of the shaft to the forward or backward turning of the wheels. After I read a book on light, naturally I was charmed by the picture of the rainbow in the book. But it also made me look for the rainbow after a shower of rain, and I now knew where to look. I was aware that the books were written for American children and not someone in Chittagong halfway across the world and I could not possibly relate to everything, but I was charmed by the books anyways. It never snowed where I was, but I still loved the beautiful pictures and intricate symmetries of snowflakes in the books. A book titled ‘Growing Up’ clarified to me the remaining confusions about the beginning of a baby, its development from a tiny cell in the mother’s womb, and its birth. The disjointed things I have been hearing or even reading in other types of books piecemeal had been creating those confusions. But by now I had developed a firm confidence on the science books in the USIS Library and similar ones elsewhere, as opposed to other sources of knowledge.

The third library I gained access to within a matter of months was the British Council Library that had newly started by the side of the Municipal Public Library. I immediately became a member in the

children's section. I ended up using this library throughout my life -- there was a branch in the Dhaka University campus where I was a student and later a teacher. Actually, I met at the Dhaka British Council Library two very friendly and helpful staff members whom I had first met, when they were much younger, at the Chittagong branch. Mr. Joinul Abedin was the Librarian of the Dhaka Library, and Mr. Wahab was the Chief Assistant; and our friendship continued. Mr. Wahab being in the front desk would greet both me and my son Kushal whenever one of us arrived at the Library, and then he would enquire about the other. He would often relish comparing the father's and the son's reading habits in elementary school.

As if to reinforce the science books I was then reading, I was lucky to be able to visit two interesting science exhibitions within a few months of each other. One was the Annual Exhibition of the medical school – the same place where I would face a pandemonium by the students not much later. But this was a great educative occasion for the common people. I heard about it at home, and soon my sister Tunu and I walked the short distance to the medical school. Groups of students were displaying and explaining exhibits of medical interest. There were plastic models of human body and its parts; and there were also actual human internal organs preserved in big jars. Our first look at them were a bit unnerving, and so was the oppressive odor of the formalin used as a preservative. But soon our curiosity got the upper hand, and we were looking at the guts, liver, lung, heart – healthy and diseased. The explanations made the topic both lively and grim at the same time. We were perhaps the only children there, we did not ask any question, but were benefitted by what others asked. The unusually formidable parasites living in a gut, for example, needed quite a bit of explanation. But demonstration of various systems such as blood circulation or digestion on models made things quite interesting.

The other exhibition, with a brighter feel, was titled 'Atom for Peace', and was actually a floating exhibition on an American ship that had been calling on various ports of the world, now on ours. It was an American

attempt to convince the world that atomic energy is not a force for destruction; rather, it can do wonders for peace-time prosperity. It was only ten years since the tragedy of Hiroshima and Nagasaki; and the world was still extremely concerned and scared of this new type of energy recently unleashed. The arrival of the floating exhibition had been widely advertised in Chittagong, and we went to see it in a big family group.

The exhibition demonstrated through animations and models how nuclear reactors work generating electricity and producing radio-isotopes. The latter was shown to be very useful as a radiation source and tracer. To make it more interesting the animation was done through many small light bulbs appropriately going on and off. Local demonstrators had been trained to explain everything in Bangla. I particularly remember how an exhibit showed a model of a chicken which was successively fed with different types of chicken feeds, with tracer radio-isotope mixed with the feeds. A radioactivity detector later was brought near the chicken to see whether this produces the characteristic sound of a detector and shines a light to indicate its radioactivity, and thus the contribution of that particular feed. The same was done on the chicken's egg to see whether the egg is being improved by that feed. It was quite dramatic with all the sound and light and the resultant bigger chickens and bigger eggs. I was satisfied that I did understand something out of it in my own way and that gave me a lot of pleasure. I even tried to help others at home to understand – an urge that was developing in me, urge to try my understanding on others. These early exhibitions gave a new push to my recent habit of reading science.

Though I had now a lot of books in the libraries to borrow from I could not yet afford to buy a book of my own, write my name on it, and re-read it whenever I wished. Whatever small collection of books I had, all came from the books I kept receiving as achievement awards at annual ceremonies of the school, and occasional books gifted by Yunus Bhai. There was a very good bookstore named 'News Front' near our school. They carried some recent books on science and science fiction. I could

not buy them, but I loved to browse through them anyways. But my days of poverty soon came to an end – I won the Primary Scholarship. Despite all the distractions, Grim Master and others managed to keep me focused on the most important reason for my existence in 1954 – the Primary Scholarship Examination. On the D-day we had to go to another school to sit for the exam on a neutral ground. I guess whole school was praying for us. Our religion teacher, however, took the additional measure of taking us one evening to visit the shrines of various saints to seek their blessings, including the patron saint of Chittagong – Badar Shah. When the results came out, I found myself at the top of the list, coming first among all candidates. My picture was in the local newspapers. Most crucially, it gave me a scholarship of 25 rupees every month for the next year. I was now able to buy a book of my choice any time, the average price of a paperback being around 2 rupees.

It was decided that instead of going directly to my ultimate destination – Chittagong Collegiate School, I will make a detour for a year for the sixth grade in Government M. E. School. This would allow me to sit for the next Scholarship Examination – the Minor Scholarship, at the end of the sixth grade. I jumped at this prospect. Being a government school, M. E. (Middle English) School was a much more organized and modern school, with more emphasis on English as the name suggests. It was on the slope of a hill facing the road; but a much higher and sprawling range of hills full of bushes was right behind it to as far as we could see. The place was a kind of a mystery to us; according to the rumor there lived a Hindu holy man deep into the hills. We would occasionally venture only a short distance into the bushes, mainly to collect wild flowers to decorate our school on festive days. Actually our school was an adjunct to a Teacher Training College which it served as a practice school. We were a part of a complex of institutions. In front of us on the other side of the road was the big campus of Chittagong College, the most important educational institution of the town. (High schools – 11th and 12th grade – are called colleges in South Asia. Some of these colleges like this one, would also offer bachelor degree courses).

Let me tell here the last thing first of the M. E. School. At the end of the year I appeared in the Minor Scholarship Examination, and got the scholarship, this time coming second in the list; disappointed not to be first. The amount of monthly scholarship was a decent 50 rupees, and that too for the next four years. Now I would have enough cash not only to build up my little collection of books, but also to indulge on my other projects. One of my additional pleasures in reading now was to go through classic works such as Gulliver's Travels, Robinson Crusoe, and Treasure Island in the original. I read these repeatedly for the next few years – every time doing a better job at it. This became possible because I now had all these books in my collection. I treated this as a great treasure to relish from bit by bit whenever it pleased me. It was at this stage that I got admitted to Chittagong Collegiate School, with which I had a relationship from my early childhood, thanks to Yunus Bhai; and which now became my stepping stone to the world. This was my seventh grade, and the year was 1956.

Rituals and joys

‘A – ke - la

We will do our best

This was the ‘Grand Howl’ of the wolf cubs in our Cub Pack. A group of 9 to 11 year old boys, we would be squatting in a circle on our toes and fingers, our face upward. Our Akela (Cub Teacher) would be standing at the center. Shouting those words to Akela we would be honoring him, and also taking a vow. Actually the characters come from Kipling's ‘The Jungle Book’ where Akela is an old wolf and the young scouts were pretending to be wolf cubs. I was doing this in front of the scout den of Collegiate School though I was still in Lamarbazar Primary School. This became possible because of a special permission I got from Quazi Shaheb, the scout teacher of Collegiate School. Yunus Bhai's teachers and friends in that school knew me from the time I was a very young boy because of my frequent visits there with him. I was attending most of its scout activities anyways as an observer. For example, when in 1952

Quazi Shaheb led a contingent of Collegiate School scouts including the 13 year old Yunus Bhai back from the First Pakistan National Scouts Jamboree in Karachi, I was there to welcome them. They had travelled more than a thousand miles in a train over India to reach Karachi, which was in the western wing of Pakistan. On the way they visited fabulous Red Fort and Tajmahal in Delhi and Agra in India and later many famous places of West Pakistan. On that day of return they sang their jamboree song, shouted some new yells, and said a thanks-giving prayer. Everything I saw and heard from Yunus Bhai and other scouts strengthened my resolve to join this group soon as an active member.

My opportunity came when I attended an event of the scout troop celebrating the birth anniversary of the poet-philosopher Iqbal, who wrote in Urdu language and was the spiritual source of the concept of Pakistan. I asked permission from Quazi Shaheb to say a few words about Iqbal, and got it. I began with some famous lines from his poem:

China and Arabia are mine,
India is mine,
The whole world is my motherland
As a Muslim I shine.

Yunus Bhai had coached me well for the occasion and my talk was a great success. Quazi Shaheb was so impressed that he invited me to be a regular member of the Collegiate scouts in its Cub Pack. Thus began my scout life which continued to be a great experience for the next seven years. On those early days what a joy it was to be able to join all other wolf cubs and sing our signature song while jumping around. It translates roughly to

We are the cubs, we are the cubs,
Wolves' cubs at that.
A tiger's force we exert
When our task is set.

Every Sunday we would be in our scout den and had a lot of fun from scout games. Sometimes we would be joining the seniors in more

involved tasks like hikes. Dressed in the scout uniform we would hike five to six miles and back often going through villages, bushes, sea beaches and even footpaths of a busy road. On the way we will be on the lookout for opportunities for a 'good turn' such as helping an old man carry a load or guiding a blind person to cross the road. Though camping and travelling became commonplace in the latter days of my scouting, those do not compare with the thrill of the very first one as a cub. We the scouts of all ages made a train journey of a few hours to a rural field in a place called Hathazari, which would be our camp site. I remember even the novelty of packing a bag suitable for scouting. The smell of the bag, dominantly that of a combination of hair-oil, shoe polish and a soap, was then first recorded by my nostrils, and was to return in many subsequent repetitions.

Onboard the train when all the songs were sung, all the yells were shouted out, it was the turn of Quazi Shaheb to give his wise words. Sharply dressed as a scout master and sage-like, he always spoke with emotion from a moral high ground. 'This whole thing is an education for life', he would say, 'When you go about doing chores in the camp, and have fun in the scouting way, the main point is to help the people – not to disturb or annoy them. Let them love your uniform, and welcome you wherever you go. When you are done with your camp, remove all signs of it from the site, even the small hole of the tent should go'. Quazi Shaheb was a guru to all his scouts, especially to Yunus Bhai, his right hand boy in our scout organization. Our three-day camp in Hathazari was full of fun, duties and adventure; but Quazi Shaheb's words were the guiding principle in everything.

One annual event of the Collegiate School scouts was very much my favorite. This was the 'Earning Week' organized to raise some funds for our scout activities. For this we would be divided into several groups each taking a different path to earning by working. One group would run a restaurant, another group work as shoe shine boys, yet another group would sell toys and fancy things door to door. At the beginning, I would play a minor role as a waiter in the restaurant. My seniors there were

doing the business plans, buying food or ingredients, cooking in the kitchen, and also doing promotional work. Every group usually made a good earning, because our patrons would pay us more than what the products and services deserved.

Besides Quazi Shaheb, another scout master who charmed me, a bit later in my M. E. School year, was Sekander Master. He was our Bangla teacher there, also our scholarship examination tutor, and above all our scout master. Despite being in his fifties he was an embodiment of energy and liveliness. He talked to us about his life-experiences, made us laugh, and it was from his dancing motions we took our rhythm while singing and dancing the harvest dance, for example:

Come brothers, harvest the rice,
slash, slash, slash.
Wield the sickle, dance along,
slash, slash, slash.

Sekander Master would sometimes provoke us into protesting by giving outrageous conservative opinions and theories characteristic of him. For example, after a free show of the movie, 'Adventure of Robin Hood' as a part of a national day celebration, he told us that he has found the cause of the downfall of the British Empire in it. It was their 'loose morality' indicated by the public display of affection between men and women even long ago in the Middle Ages. Needless to say none of us, his 12 year old students, shared his opinion; nor were we provoked.

My 12 year old classmates were a talented bunch. Binoy, a lanky boy who preferred the backbench and would usually volunteer to pull the hand-drawn fan hanging from the ceiling, was an excellent magician. He could bring out ribbons from an empty can almost endlessly, or let us cut the ring of a string and immediately show the ring to be intact. Zahur, called Pundit because of his scholarly look, had a mesmerizing voice for folk songs.

From which bank of the river, oh!
To which bank do I go,

Whom to ask; where is the land?

This river has no edge, no end.

The river, the boatman, are the symbolic representation of many a heart's anguishes in our riverine country. Pundit and a few other friends like him were instrumental in making me a fan of Moloy Ghosh Dastidar – the famous folk singer in Chittagonean language. Sung in our exceptional dialect, his songs were all the more touching to me. There was a dome-shaped auditorium in the center of the city housing the Chittagong Art Institution, which periodically organized musical evenings. We would attend them, our main attraction being Moloy Gosh with his Chittagonean songs. The river Karnaphuli would often be featured in these folk songs because this river is the life-line and the spiritual pulse of the Chittagonean people. Also present would be 'Sampan', the indigenous boat of Chittagong. The word 'Sampan' is used throughout South-East Asia right up to China to mean a certain kind of boat. It seems to have started in Chittagong, going eastward.

As Moloy Ghosh sings about the origins of the river Karnaphuli and its name (the name literally meaning ear-ring):

Dancing ripples in a gushing creek

Out comes the Karnaphuli from the Lushai Peak.

Bathing beauty, the highland girl, her ear-rings sleek

Loses the ring in the ripples, giving a name to the creek.

Or as he injects pathos in another of his famous song:

I'm a woman in tears, full of agony

Sampan-man, you have beggared me, killed my harmony.

Sampan-man, you sailed away beyond the Kutubdia isle

Here I am by the Halda creek, only a poor man's girl.

Interestingly the Halda, a tributary to the Karnaphuli, flows very near to our village Bathua.

Ramesh Sheel, however, was the most coveted singer, but he rarely appeared. He was a natural poet with little formal education, Chittagong's very own bard. Once in a while we would hear him sing.

My sampan, swimming like a swan, goes in an upstream run,
Who will come with me, better hurry thee, to my fun-sampan.

Or in his more characteristic theme, giving voice to the poor men, for example to a victim of a particularly bad time.

My friend, you tell me where to go
How can we keep alive, please show.
The dark monsoon has washed away everything I know
My children are missing three meals in a row.
Wish I could take poison, can't afford it though
How can we keep alive, please show.

These songs, these tunes have never far from my hummings, even today.

The next year, soon after enrolling in Collegiate School, I met my new classmate Burhan Siddiqui – another talented singer. He became my best friend and still is. We dreamed of becoming air force pilots. He ended up becoming the chief of police of the country and a top bureaucrat; and I something very different. But all along he remained a folk singer par excellence. It is, however, his signature song in our 7th grade days which went on and on in me:

Don't cry my little flute
Stop your wailing tune,
My bamboo flute, how can I tell you
Your tune makes me swoon.

When I was ten I wrote a long skit titled '20 Boxirhat road' using a lot of similes and symbolisms. It basically introduced various members of the house highlighting the most gripping parts of their character. I depicted our house as a radio broadcasting station. The skit was highly praised at home and in the school – most of all by Grim Master. This inspired me

to write similar pieces just for the fun of it. My writings no longer remained confined to those required for my school and examinations.

Our house 20 Boxirhat road had an annex that we named Number 2. I had been living there with my two elder brothers since I was ten. When still in my 5th grade, something was taking shape in our annex Number 2 that combined perfectly for me the rituals and joys of a different kind. It was the formal building up of a youth club before my very eyes. My uncles, brothers, and their friends decided to launch a club very formally to take up various creative works. The club was named *Mahafil-e-Nao*, which simply means ‘Youth Forum’. A slightly older friend of both Salam Bhai and Uncle Sobhan was elected the ad-hoc president, and Uncle Sobhan himself was elected the ad-hoc secretary. They conducted the early preparatory meetings almost weekly in our Number 2. Every detail of democratic norm was followed meticulously. Meeting minutes were kept. Members waited till a quorum was achieved, then an agenda was followed. Speakers asked for the president’s permission before speaking. A proposal would be formally put forward by someone before it can come for discussion, then it would be put to vote. All these were strange rituals to me, but I found them captivating. During the drafting of the constitution, there were endless debates on some of the clauses. I learned many legal jargons just by listening to the debates.

For some reason unknown to me *Mahfil-e-Nao* was short-lived. But it left a permanent impression on me and came handy when I took lead in similar endeavors later in life.

Politics, politics

From my early childhood I was surrounded by political talks in our house. The debates revolved around the conservative and in-power Muslim League, the liberal Awami League (People’s League), and the left-leaning parties.

Soon I noticed parallels of our in-house debates outside the house. There was a municipal local government election that underlined the national

as well as local issues. There were processions, slogans, posters and banners. I happened to have already met the two candidates in our ward. The Muslim League candidate Mr. Kamal was a local organizer of a children's movement Mukul Fouz (Flower-bud Army), and I had attended some of children's fun-rallies he organized in our neighborhood. The Awami league candidate Mr. Gani had visited our house to discuss the election strategies of the local party with Salam Bhai. Soon I saw both candidates again in their respective street corner meeting. The one of Mr. Kamal took place right in front of our shop one evening, and the one of Mr. Gani just two shops away two days later. What I enjoyed most were the songs sung praising the candidate and the party – mostly parodies of popular movie songs.

I had another regular source of knowledge in politics – the daily Bangla newspaper *Azad* (Free) which we subscribed. My addiction to the newspaper, whatever I could understand of it, began with the sports news – mainly the football league. But soon my focus moved to politics, and international politics at that. I got quite familiar with names like Eisenhower and his secretary of state John Foster Dulles because the newspaper was always mentioning them. But highlighted most were the exciting things happening in the Muslim world (1953-54). For example, I was intently following the Egyptian revolutionary leader Gamal Abdul Naser, who had overthrown King Faruque. Nasser became a charismatic popular leader not only of Egypt, but also of the Arab world.

Another story that intrigued me was the rise and fall of famous Iranian Prime Minister Mossaddegh. I was so interested that I remember asking Salam Bhai the things about him that I did not understand from the newspaper. I found Salam Bhai very critical of CIA for the Mossaddegh affair. What I could gather from him and day after day from the *Azad* is that Mossaddegh was a fiercely nationalist leader who after being elected dared to nationalize Iranian oil-wealth and tried to kick out foreign imperialist interests. The latter were using the king of Iran – the Shah – for their purpose. There was a power struggle between Mossaddegh and the Shah; but a CIA-instigated street coup in favor of the Shah unseated

Mossaddegh and undid all his achievements. This was the Shah I had gone to see some years before with Yunus Bhai's school team, when he visited Chittagong. We carried small Iranian flags and chanted 'Long Live Shah-in-Shah of Iran (King of the Kings)' waiting under scorching sun for hours just to have a glimpse of him. Now I detested him, and detested CIA, whatever it was.

After the death of Jinnah (the founding father of Pakistan) and the assassination of Liaquat (the first prime minister), the leadership of Pakistan central government became the prizes of palace games among a few bureaucrat politicians, perhaps with the army itself working from behind. Everything, however, was being done within the cover of British formulated Government of India Act of 1935, as Pakistan was yet to draft its own constitution. The man who was the winner of the game for the moment was Governor General Golan Mohammad, an erstwhile top bureaucrat, who dismissed the prime minister Nazimuddin, an ex-prime minister of British undivided Bengal and ex-chief minister of East Bengal in Pakistan. He also dissolved the elected constituent assembly of Pakistan, and appointed a hand-picked new prime minister, not very known in politics and at that time the ambassador to U.S.A.

It was with the new style of public relation of this new prime minister Mohammad Ali Bogra, that my fascination with what is happening in the country's politics first began in a child-like manner. His last name Bogra was an acquired one to distinguish him from an important namesake in politics. He came from a place named Bogra in our province, though he did not speak our language Bangla, belonging to an aristocratic family that had settled here in the past. No one in our house liked him politically mainly because of the way he was picked up, and because many thought that he was there to serve U.S. interests. But I found him more impressive than the other politicians, perhaps because I had actually seen him at close quarter once. Informed by a friend in our Municipal Primary School that the PM is coming to Chittagong in the morning train I went to the railway station from the school with that friend. On the platform there were some policeman, dignitaries, party men waiting to welcome

the PM. When the train arrived there was a slight crowding near the door and people were chanting ‘Long Live the Prime Minister’, ‘Long Live Pakistan’. But nobody minded when a small boy sneaked in right to the front. So there I was when the PM in a white suit came out and was led away by his people. I was thrilled to see the Prime Minister right in front of me and was quite impressed too. This was reinforced when I started to actually listen to him once every month on the ‘PM’s Monthly Radio Broadcast to the Nation’ – a practice he introduced.

It became a monthly routine for a small team in our house consisting of my elder brothers and Mannan Master to walk for five minutes to Haji Bashir’s cloth store to listen to the PM at 7 in the evening. (we still did not have a radio at home). I would insist on accompanying them. The PM would speak in English followed by a Bangla and Urdu translations. The reason I could get some sense from the Bangla version and some food for thought too, was a travelling seminar the other members of the team conducted on our return journey from the cloth store. I would be an intent listener of their analysis. Often the main topic of PM’s talk would be the constitution-drafting for the country then in progress. Our concern was how much say our province would have in the governance of Pakistan, because the other four provinces that comprised the West Pakistan were now having all the privileges in economy, bureaucracy and the armed forces despite the fact that their combined population was less than ours and so was their contribution to the foreign exchange earnings.

The other issue which came prominently in all analyses was the PM’s foreign policy which to many was a total surrender to U.S.’s wishes. Yes the U.S. was giving us aid, they said, but the aid was all flowing to the military and to the government’s pet projects that the country hardly needed. I, however, was not worried where the aid went, because it came to me in a pleasant form – in the shape of big milk powder and butter oil cans distributed to the school students. There was the beautiful handshake emblem of USAID printed on the can. And there were plastic

tube full of little balls of candies with a paper U.S. flag the size of a big postal stamp on top of the tube.

All these political issues soon came to a head when the provincial legislative assembly election in our province was declared. The 1954 General Election was a great experience even for us the children. At the approach of the election, the term which started to loom high was 'United Front'. The Muslim League, which led the government, became known in our province as the party of the rich, the powerful, and the old aristocracy; and was seen to be highly discriminatory to our province. There was a popular demand for a united front against Muslim League so that it could be squarely defeated. Easier said than done as the opposition was divided in their ideologies. Eventually a united front was painstakingly formed. It was mainly depending on the popularity of two charismatic leaders – Bhashani of Awami League, and Fazlul Hoque, another ex-prime minister of undivided Bengal of British time (better known by the title given to him by the people long ago – 'Sher-e-Bangla' meaning Tiger of Bengal). A brand new party was quickly created under his leadership called KSP (Peasants and Workers Party) Despite their differences, all groups in the United Front came up with a manifesto of '21 Points'.

Thus with 'United Front' two other words became everyday talk in all quarters, to raise slogans and to cheer for, even among the young boys in our Primary School. These words were 'Hoque-Bhashani' (the two main leaders) and '21 Points'. The 21 Points is a long list, but even I could recite from memory and make sense of some major points. They were: Bangla as one of the two state languages of Pakistan; full provincial autonomy for our province; an independent foreign policy for the country; a common electorate instead of the communal electorate that existed then, introduced by the British; and the transfer of Navy HQ to Chittagong. The last point, which aimed to give a better participation of East Bengal in the armed forces of Pakistan, was my personal favorite. I loved naval ships. Yunus Bhai's friend Mohammad Hossain Bhai had left school to join Pakistan Navy as a seaman. He had invited us to visit

his ship 'PNS Babur', a cruiser, when it had anchored in Chittagong Port. That was the beginning of my fascination with naval ships. If the naval HQ indeed came to our city then I would be living very close to our major fleet !

Muslim League, the ruling party, was not sitting idle in the election. Prominent leaders of the Pakistan Movement came to campaign for it. They had their public meetings in Laldighi Field and I attended most of them. Of course I attended even more meetings of United Front. This was a wonderful opportunity for me to see and listen to legendary figures from both sides all of whom were already household names all over British India for their part in the struggle for independence of India, before Pakistan was born. Then most of them became instrumental in creating Pakistan. One particular scene I remember vividly. This was when the famous stalwart Fazlul Hoque was introducing the United Front candidate from our constituency – Zahur Ahmed Chowdhury – and embracing him. The eighty plus old heavily built, tall and barrel-chested 'Tiger of Bengal' embraced the young labor leader – very lean and thin – saying to the crowd 'If you want to vote for me, then vote for Zahur'.

It was not just the fanfare and speeches of election that I was busy absorbing. Thanks to all the talks going round me, I was also getting inklings of some of the intrigues in the background. Most of these were the results of the nomination process within United Front. Every party in the front expected a number of candidates to be nominated from that party. There was an agreed upon formula, but even then there were serious problems in individual cases – so much so that even the existence of United Front was sometimes threatened.

The weeks before the election were a thrilling time. There were processions all the time. The whole city was full of posters and election symbols – 'Hurricane Lamp' for Muslim League and 'Boat' for United Front. The symbols were important because many illiterate voters had to depend on the symbols in the ballot to identify the candidate. One would never see such big hurricane lamps made of bamboo structure lined by

colored papers; and such big boats – often decorated real boats taken out of the rivers. Another background sound was the almost constant appeal from loudspeakers carried in horse carriages, always the same words in the same tone – ‘In the coming general election please vote for the United Front candidate, the comrade of the poor, the friend for the oppressed Zahur Ahmed Chowdhury, and help him to win the struggle’. The appeal for the Muslim League candidate Rafiuddin Siddiqui used exactly the same adjectives, and added contributions to the Pakistan Movement. The latter was a senior leader, already the chairman of Chittagong Municipality for long. I met him when he had visited our Municipal Primary School as the chairman.

The result of the election was beyond anybody’s imagination. Muslim League was almost wiped out of the provincial legislative assembly, only a handful of its candidates being elected. It was a total win for United Front. On the election night I waited in front of our shop till very late to see the local winners going in small processions as a kind of thank you parade. Zahur Ahmed Chowdhury, of our own constituency, was the first one to pass – shaking hand with people on the road-side.

United Front’s euphoria after the win, however, was short-lived. Fazlul Hoque formed the provincial cabinet but it lasted only a few months. The central government dismissed the cabinet and suspended the new provincial assembly. A clause from the British Raj days was invoked, bringing our province directly under the central government through a governor appointed by it. This clause was Section 92A of Act of 1935. Another term thus got included in our political vocabulary, ‘Section 92A’, and remained in my memory for ever, this time with disdain. Obviously people’s will had no value to our rulers, and everyone lost interest in politics. Needless to say that, a mere child whose excitements in politics were only reflecting the surroundings, I quickly went back to other interests.

My curiosity in politics was revived in the next year in another form when Yunus Bhai became active in the student politics of Chittagong

College, soon after he got admitted there. He was elected the secretary of one of the major student parties – USPP (United Students Progressive Party).

The election of the students unions was eagerly looked forward to not only by the student community but also the politically aware citizenry of Chittagong, and to some extent the whole province. It was essentially a proxy battle between the conservative Muslim League establishment and the left-leaning progressive opposition. While USPP represented the latter, the former was indirectly supported by the other student party named ‘Students Welfare Association’ – ‘Welfare’ in brief.

The fanfare of the election day was no less than that of the national election, though this one was confined within the college campus. I was there to witness the important event from the beginning to the end. For both sides it was a great opportunity to display the oratory skills of the leaders. The two parties faced each other in their respective camps surrounded by posters, festoons, loud speakers etc. – USPP near the college gate, and Welfare under a big old tree at a quite a bit of distance. Fiery speeches were made. Though most of the time I was sitting in the USPP camp, I spent some time in the Welfare camp too listening to the speeches. Welfare was accusing USPP of being pseudo-communists bent on destroying our democracy, our heritage and our religion. According to them USPP was acting as an agent of India helping in realizing the latter’s political and cultural design on us. USPP dismissed Welfare as nothing but another front of Muslim League clique so recently summarily rejected by the people. But the most enjoyable parts to me were the parodies of the popular songs, so much so that I still remember them clearly. These were improvised instantaneously by USPP on the tune of very popular songs of Bangla movies; and were sung many times over only on the election day. The rough translation of one begins:

Listen my friends, listen,
Here is the Welfare Story,
Their lust for power and vengeance

make the story quite gory.

Or,

Sorry Welfare, we are afraid
This is going to be your last day,
Sheltering under the Neem tree
You can not wish this fate away.

But the election result did not match the predictions in the song. Welfare won most of the cabinet posts including the all-important General Secretary post of the Student Union. Yunus Bhai himself was elected, but his party USPP was defeated.

My merely passive interest in various kinds of politics had its first exception next year when I was in the seventh grade in Collegiate School. That happened suddenly by jumping through the school window to join a rally protesting the invasion of Suez Canal by the Anglo-French Army. That was in November 1956. In July that year Colonel Nasser, the revolutionary leader of Egypt, felt confident enough to nationalize Suez canal. Egyptians saw the Anglo-French Suez Canal Company which was controlling the canal as an instrument of imperialism having a stranglehold on the country. Britain and France reacted strongly to the nationalization. Eventually their army landed in Suez and soon threatened to topple the Nasser government. It was at that stage that the world-wide protests reached its peak, including that in our country.

My action that day was prompted by two factors. A procession of protesting high school students arrived on the road behind our school and was exhorting us very loudly to come out and join them. The other factor was the teacher who was teaching in our class at that time – Muzahid Mia whose left wing politics we were well aware of. As soon as the sound of protest was heard, our teacher switched his subject and started giving us a speech on the Suez crisis. He said ‘This is the time to stand by the side of that lion’s cub Colonel Nasser to resist the forces of imperialism; Nasser cannot be finished because we will not let that

happen'. He all but told us that we should join the protesters. But to join them was not going to be easy because our headmaster, an ex-Army officer, was anxiously guarding the verandah that covers all classes in the front, walking back and forth along it. Some of us made quick decisions and chose an opportune moment when the headmaster could not see. I jumped through the big window behind. The fall was quite high, and then a barbed wire had to be breeched before I could join the rally with bruised limbs and a torn shirt.

Soon afterwards circumstances forced the invasion army to be withdrawn from Egypt, and within a month the British Prime Minister Sir Anthony Eden had to resign, thoroughly discredited for his Suez adventure. I felt that somehow my protest had contributed to this.

My imaginary journey

Yunus Bhai participated in the 8th World Scout Jamboree in Niagara On The Lake, Canada, in 1955. He was 15. On their return journey, they drove through Europe and Middle East. They bought three Volkswagen minibuses in Germany, and drove through Germany, Austria, Yugoslavia, Greece, Turkey, Syria and Iraq. Before that they had flown to the Jamboree town stopping on the way in Holland, U.S.A, and some cities in Canada. On the return journey they crossed the Atlantic in a ship, stopped in London and then went by train to Germany to buy the cars. They stayed in tents, schools, and hostels. They had a car accident in Yugoslavia needing several scouts to be hospitalized and one of the three cars to be abandoned. The delays caused by this created a temporary fund crisis, and they had to go without even minimum food for days.

In my mind I followed Yunus Bhai and his fellow travellers during the whole journey through the series of letters he wrote to the family. The letters were so vivid that I felt I was making my own imaginary journey, re-enacting everything in my head. I was then a sixth grader in M. E

School and had just discovered the pleasure of studying maps meticulously. This went well with my imaginary journey.

Many of Yunus Bhai's letters were on picture post cards, every available space of a card filled with his miniature handwriting. The picture told a lot more. The letters gave us a taste of the sceneries, cultures, and even languages of the countries they were passing through. In the Jamboree in Canada a Pakistani scout sometimes would be followed by very young kids chanting 'Davey Crockett, Davey Crockett'. Yunus Bhai explained in his letter that the kids were comparing their fur caps (called Jinnah Cap in Pakistan) with that of Davey Crockett's cap. Now I and the other kids at home pretended to be Davey Crockett.

Many of the letters were written from tents in the middle of nowhere while driving through Alpine roads or Yugoslavian villages – giving real elements of adventure. A smattering of exotic languages came too. The most famous line from Bollywood songs at that time was perhaps 'Mei awara hu' from the film 'Awara'. the line means 'I am a tramp'. As Yunus Bhai wrote, many in the roads of Turkish towns would greet Pakistani boys by singing the line, but in their own language – 'Abar ayam'. So for a period it became 'Abar ayam' for us too. Another time we learned to say 'Thank you' in Greek – 'Eskharisto'.

The 15 year old globe trotter got a hero's welcome when he returned home and we got a fantastic story-teller for many days to come. But the things he brought us were not any less exciting. These were all small tidbits and souvenirs, but were sufficient to bring a romantic air of another world right within our rooms. Even a simple thing like the U.S. boy scout scarf was a great attraction. Its woggle had a deep shiny copper color and was shaped like American national emblem, the bald eagle – pretty exotic to me. The little rubber statuettes of native American warriors, each one in a different war-dance wielding a hand-axe, could take us immediately to a long-lost world. The inevitable little wind mill from Holland was now sitting on our desk and a miniature wooden shoe was hanging from the wall. We enjoyed turning the wind

mill slowly with our fingers. The exhibit number one of course was the model microbus, perfectly navigable – a gift of the Volkswagen company. This one was an exact replica of the car which they drove through Europe and Middle East.

Some of these items gave rise to my scientific curiosity as well as admiration for their beautiful workmanship. One was an hourglass with two exquisitely crafted glass vials transferring sand grains from the upper one to the lower, ringing a bell when the transfer was complete in exactly five minutes. Another was a round coin-shaped patch of cotton-like material glued to a small plastic card, which also had a very small glass thermometer attached to it. The patch was colored very pale blue when we first saw it on Yunus Bhai's return. But when winter came and air became less humid, it turned pink, and then deeper pink. Then when monsoon came it turned deep blue, and also looked quite wet; and so on year after year. It was like magic to us. The color indicated the level of humidity of the air. Combined with the thermometer it gave us our first weather station at home. I would add other things to this weather station a few years later –my own handiwork.

Perhaps the thing that gave me the most personal feelings of this exotic world of the journey was the blue pair of jeans that Yunus Bhai brought for me. We had never seen anything like it. 'cowboy pant', we called it. I would often proudly wear it to school. But the Head Master of my new school – Collegiate School – confronted me about this one day, because he found it too exotic for school. But being a reasonable man, he did not want to ban it altogether. He rather suggested that the extra length at the legs which I folded heavily in a fashionable manner should go. My shock was as if he wanted my own legs to be amputated. He smiled and settled for the leathery labels from behind to be gotten rid of. My 'cowboy pant' served me well for quite a few years even though I gained height.

On his return I heard Yunus Bhai sing the Jamboree song of the World Jamboree in Canada many times. The last line of the song was 'New Horizons are calling you'. He brought a beautiful plaque in which a boy

in scout uniform is seen to holler these words (written like in a comic) with his two palms formed like a megaphone in front of the mouth. Yunus Bhai painted this whole picture on a slightly bigger scale on a small tin sheet, and nailed it on the wall of our Number 2. The picture remained there for many years for us to see every day. It rang a bell in me— ‘New Horizons are calling you’.

My own laboratory

Do it yourself

It was those children's books telling me in words and pictures how to do things, that inspired me to actually do them and even make lovely gadgets. One disadvantage for me was the foreign origin of most of these books. Ordinary household things available in general stores in USA, for example, were not easily available to me. So I had to improvise. At the beginning, it was mostly the childish games for which I was using some science, mainly to impress the only audience I had – my younger siblings. When I read that the static electricity created in a comb when rubbed against the dry hair can pick up tiny pieces of paper, I could make it happen like a magic. Soon through a lot of trial and error I created a mini-puppet show out of it. Keeping very little gap between the comb and the tiny piece of paper I could make the tiny piece stand on its edge and even make it dance. I could make a chain of such pieces dangling from the edge of the comb. There would be disappointments too. Apparently the writers of the books did not come from a very humid place like ours, and forgot to mention that it would not work in a humid day.

Sometimes I could convert some of our usual preoccupations into scientific activities. For example, we children were very fond of old-fashioned *origami* – the art of folding paper. God knows how many birds, boats, airplanes, ships, ink-pots we made between us by folding papers – mostly the torn pages of our old note books. Airplanes from folded paper were my special favorites because I could actually fly them like gliders. Then when Yunus Bhai joined the 'Air Scouts' and actually rode in one of the training aircrafts sitting by the side of the pilot, the navigation of a plane became a fascination with me. He would often have these special opportunities in the Air Scouts to go to the Chittagong aerodrome (we were still using this word with military connotation) and

fly for a few minutes. He would describe how the pilot pushes the ‘stick’ to make the plane nose-down, or pulls the stick to make it nose-up, or move the stick sidewise to turn. While turning, the pilot simultaneously presses the appropriate pedal to make the plane bank at that direction. I would mimic the pilot in thought-motions almost feeling the sensation of these movements of the plane.

Then the little books from the libraries told the rest of the story. While the pilot moves the stick, he actually makes the slight movements in the elevator or the rudder at the tail of the plane, and does the same at the ailerons in the wings by pressing the pedals. The slightly changed position of these parts can then catch the wind to make the plane itself maneuver accordingly. Some books even showed how we can have such rudders, elevators and ailerons in our paper planes. I could now cut these little appendages in my paper planes, fold these to a different position and get similar maneuver from them while gliding.

Not only did I improve my games by employing science, but I also improved my school studies by employing science to my purpose. I got my first wrist watch while in the 7th grade. Abba brought a beautiful green dialed watch for me from his latest Haj pilgrimage. Up to that point I had to get out of my desk from time to time to go to the adjacent room in Number 2 to have a look at Yunus Bhai’s alarm clock there. But I found an alternative – a lazy way to tell time. The wide corner projection of our roof would cast a shadow on the tin roof of our neighboring house which was quite low. From practice I could tell the time by looking at the edge of the shadow reaching the various lines of rivets in the tin roof. As the seasons changed, the shadows changed, and so I would be forced to recalibrate my times comparing it with my brother’s alarm clock. This would draw my attention to the north-south annual movements of the sun, and made me a better geography student in the process. The most satisfactory things of course were the working models of various real things that I could make and preserve. But these too were mainly for immediate joy of accomplishment and to show them to the people at home. There was no particular purpose or deadline, no

exhibition, or a competition or anything like that. I would do this in my own good time, or keep it unfinished for later if forced by lack of time. But there was always an urge to see what happens next through my action, and that kept me going. Books were a real inspiration and guide as usual. What I enjoyed most, however, was the improvisation part.

In one of my earliest ventures I learned how to make a compass needle by rubbing it in a particular manner on a permanent magnet. Uncle Khagen, one of the goldsmiths working for my father's business, provided me with a strong permanent magnet with which he would separate the iron filings in his workshop. I converted a number of sewing needles into magnets; and by hanging them with thread or by floating a cork stopper in water with this needle embedded in it, I had many compasses around. Somewhat later I used my company-made old scout compass to make a galvanometer to indicate a small electric current by the movement of its needle against a beautiful watch-like scale. For this I placed the compass on a short candle which kept it at the centre of a vertical coil of wire. The melted wax at the lower end of the candle stuck to the base of the coil while the same at the upper end kept the compass fixed. These had been my improvisations. I even found a use for the galvanometer – to measure the remaining strength of an old dry cell. By then I was using many dry cells – old or new – for various purposes.

My science studies at school level came to an end with the 8th grade, as I opted for advanced mathematics after that. We couldn't take both at the same time. In any case the school science courses were confined to 'chalk and talk' devoid of any practical demonstration or opportunity to handle anything. So my science activities remained only for the joy of it till I went to the college (actually equivalent to the two senior most grades in American high school). I soon learned to thematically organize the things I did in science. For example, I planned to have a weather station at home starting with the things we already had – the little thermometer and humidity indicator that Yunus Bhai brought from the World Jamboree. I did not hesitate to add to these exquisite things my flimsily built weather-vane (wind-direction indicator), anemometer

(wind-speed indicator) using ping-pong balls cut in the middle, and rain-gauge made out of an Ovaltin can.

Like many children my telephone-making started with match boxes joined by strings kept taut between the speaker and the listener. Later I graduated to tin cans joined by metal wires. Then I made a real electrical telephone speaker out of carbon rods from broken dry cells and graphite from a broken pencil. I arranged all these in a circuit fixed loosely on a upturned box (ornament box from our shop). The other end of the circuit was an old headphone kept in another room. Just one dry cell provided the power needed. We now had an intercom between rooms. A problem was that one had to bring one's head down very near to the box to speak – everything was so loosely arranged that the mouth-piece could not be touched to bring it near the mouth. Nevertheless this created quite a stir in our house.

Salam Bhai and Yunus Bhai used to take a great interest in my handiworks. But my real cheer-leaders were the younger ones. Tunu and Ayub formed the core of the spectators. Azam, who had been born just before I started my first school, was also an enthusiast by now, and so was Jahangir who had followed him. However, Mainu, the youngest of us had the last say in everything, because he was but 2-3 years old then and insisted on touching and seeing for himself whatever he thought was engaging. Before Mainu came, we had lost two brothers in succession in their infancies – Mosaddek and Abu Rashed, from some mysterious disease that no doctor could explain. This had been a huge blow to us.

Many of my works were only three dimensional models made of clay representing chemical reactions or in one case a nuclear reaction – the fission of uranium nucleus. I would make small clay beads, color them to represent various atoms or various particles within nucleus, and then burnish them too. The net effect would be quite impressive. The purpose of these, however, would be as if to demonstrate some points to myself. But other similar small things would not be such passive models but useful instruments for further exploration. One such thing was a simple

microscope which needs only a clear bead of glass and a contraption to hold the object very near to it. The problem was that I could not get a nice transparent glass bead without blemish from the ‘optical stores’ as the books suggested. I had to depend on Tunu’s bead-necklaces – finding one bead clear enough for my purpose. I could magnify things like a human hair or cells in a thin onion layer to up to 100 times or so, and draw the magnified view on a notebook. But because of the limitation of clarity of the bead the image would be rather foggy. Another optical thing I made did not have even this difficulty, because it did not need any kind of glass whatsoever. It was a pin-hole camera I made with a shoe box. Concentrating on the two opposite sides of the box which had the smallest surfaces I made a pin-hole at the centre of one, and cut a rectangular area on the other. The latter was made into a screen by pasting a waxed paper there, whereas the pin-hole served as an effective lens. Directing the pin-hole towards any lighted object one could see a beautiful image of that on the screen just like a colored photograph, albeit upside down. The image came much better if the screen was kept under darkness.

The most difficult, and the most impressive things I made were, those which moved. These included a steam engine using the rocket principle and an electrical motor – both of which rotated continuously. The challenge here was to have a suitable low friction bearing to allow such a rotation smoothly enough. I had to try various improvisations, and found the best solution in the doctor’s chamber near our house. Dr. Banik was our family physician and a family friend too. My brothers and I would often visit his chamber to read a newspaper from Calcutta he subscribed to. His assistant Uncle Ranjan would be cutting little glass ampules containing distilled water to be mixed with medicine powders to be injected. The cut head of an ampule would serve me very well as a bearing as the pointed end of nail sticking up would fit snugly within this glass head and any rotating part where this glass head is embedded would turn very smoothly around the nail.

Until this time there was no distinct place in our house which I could call my laboratory. I was working wherever I could, and depositing everything – the components or the finished gadgets – in shoe boxes or other such boxes hidden under the bed. This dramatically changed for better when I acquired a charming piece of furniture especially made for my laboratory. Once an approval for this was obtained from Abba and my elder brothers, I designed it in consultation with Yunus Bhai and Yunus Mistry. The latter was an accomplished carpenter, a family friend, whose workshop was not far from our house. ‘Mistry’ is actually a title for a craftsman, and Yunus Mistry took very seriously the task of giving shape to my dream furniture. This cabinet made of teak wood would be a combination of some open shelves at the upper part, and other closed shelves within a safe below. The top of it provided a reasonable platform to do my works while standing in front. One of the compartments was especially made for ‘dangerous chemicals’. I continuously monitored the progress in its making at Yunus Mistry’s workshop, till it took its pride position in our house. From then on everybody referred to it as just ‘The Laboratory’. The name stuck for many decades wherever we were, long after it ceased to be used for its original purpose.

Soon I had another lucky break. One of Yunus Bhai’s school friend, Selim Bhai heard about my interest in practical science. Being an electronics enthusiast, he used to subscribe to a few magazines such as ‘Science Digest’, ‘Popular Mechanics’ and ‘Popular Electronics’, and would take up some of the projects suggested there. He gave me some of the old issues and many useful and expensive things such as spool full of insulated thick copper wire; and an assortment of cutters, joiners, clips etc. Suddenly my lab looked more modern and sophisticated, at least part of it did. Thus enriched, I could go ahead with more ambitious tasks such as making the electric motor, which needed a lot of insulated copper wire round three big iron nails – two for comprising an electromagnet, and the other one to form an armature coil that would go round between the former two. Later in life, I lost contact with Selim Bhai for several decades. Then met him again after he retired as a successful

businessman. His penchant for reading scientific and technical magazines seemed not to have left him all this time. Finding that I too was still connected with popular science, he took up again from where he had left me. He began to mail me old copies of the magazines as he once used to do to a 13 year old boy, and often would exchange notes over phone. The last packet from him had come about a week before I got the sad news of his sudden death by heart failure (2016).

Going back to my 13 year old days, Selim Bhai's 'Popular Electronics' came very handy when I embarked on a quite involved project on making a crystal radio set – this time in collaboration with Yunus Bhai and with some help from his friend Ehsan Bhai. The latter already had one such radio set bought from a sailor. Ehsan Bhai was particularly well-positioned for using this because the newly established Chittagong Radio Relay Station happened to be just next door to their home. A crystal set like this uses no power source (neither the mains nor the battery) and has to depend on the strength of the received signal itself. Yunus Bhai and I visited Ehsan Bhai's home to see everything ourselves. The whole thing was an open book for us which we could draw on paper and try to recreate in our house. All we needed were a coil of copper wire, a rough iron pyrite crystal (Ehsan Bhai had a spare), a safety pin whose sharp point springs and presses on the crystal, a headphone, a long iron wire antenna horizontally hoisted like a cloth line, and an earthing connection for which we had to do with the galvanized iron pipe line that supplied water to our house. The radio reception we got was weaker than that in Ehsan Bhai's, because Boxirhat is far from the relay station. It was at this stage that some 'Popular Electronics' articles helped with suggestions of improvements; and after many trials and errors we achieved a reasonable result. In spite of having a 'Radio Room' all along, this was the first radio in our house; and lo and behold it was of our own manufacture.

The 'dangerous chemicals' for which I designed a separate compartment within 'The Laboratory' came from Uncle Khagen, the goldsmith who had supplied me the strong permanent magnet before. I used

hydrochloric and sulphuric acids given by him only a few times to make gases, and that too under his supervision. I got other components for my chemical works from various sources. The zinc came simply from the broken dry cells. Near our house there was a famous old-fashioned store for enormous varieties of ingredients of indigenous medicine, herbal concoctions etc. I could buy things like soda bi carb, potash, copper sulphate from there. For example, I electroplated an iron nail with copper by running electric current from dry cells through copper sulphate solution between the nail and a lump of copper wire. Though this copper coating on the nail soon peeled off easily, I had enjoyed doing this as a great achievement. Most of my chemicals were not dangerous at all – just things like vinegar, lemon juice or tincture iodine often available at home. Gazing at the containers I used, nobody except myself would call my activities anything to do with a chemical laboratory, because it involved only Horlicks bottles, ink bottles, discarded tea cups and saucers, and such other things. I hardly ever handled a proper test tube or a beaker or a gas jar till I was in the college chemical laboratory much later.

Whether these were kept within shoe boxes, or within ‘The Laboratory’, all my scientific handiworks were meant for home audience only. Things changed when a close school friend Shamsul Hossain suggested that I do a solo science exhibition at our school; he volunteered to help me organize. Shamsul was a natural organizer, especially of exhibits of any kind; no wonder he later became the Director of Chittagong University Museum. We collaborated throughout our life in many activities. The idea of a solo science exhibition at the school was an exceptional one. But we got the school’s permission alright, with the common room and some open space in front as the venue for the exhibition. I worked arduously for several days before the event, to make my things exhibition-worthy. Most of them were anything but robust, but transportation as well as repeated demonstrations needed them to be a bit sturdy. The touch and go nature of some of my exhibits kept both Shamsul and me on our toes while making them work for the continuous

flow of spectators – students, teachers and others. The exhibition was a great success. I never dreamed that my things done in fun would ever get so much attention.

But this was only a temporary stir in the conventional concept of science education that our school followed. At best, the students would be required to understand science theoretically without truly trying to see or do anything, and at the worst it was simply rote-learning. The teaching of other subjects too followed more or less a similar pattern. There was a school laboratory, but the students hardly had any access to it; and in any case it was filled with glass cases with expensive instruments and demonstration-pieces carefully protected out of any human touch. I always found a big gap between the science I love and the science I was taught – and this would give me a serious dissatisfaction.

Reading the books from other countries at the libraries I could make some guess about science education, or education in general, in those countries. Soon there was an opportunity to bring some of the flavors of that kind of education at our school too. A series of new geography text books had been introduced in our schools. These were published by Silver Burdett Company of U.S.A, and were adapted to the needs of our country in our language. But the main appeal remained unchanged; the texts, the pictures and the suggested works all created a total immersion in its subject. In our 7th grade the book was titled ‘The Southern World’, teaching the geography of three continents – South America, Africa and Australia. I loved the way the book took us to different worlds – to the potato farmers of Andean plateau in Peru for example – through the interplay of text and photos. It drew our attention to the smallest details in the photos, and asked interesting questions. – all helping to create a vivid mental picture. I enjoyed this new approach while it lasted. But it was too much of a departure from our conventional approach, and did not go well with our examination system. The teachers complained that the books were not structured enough, and all the facts and figures were not conveniently presented in one place – one had to look hard for these. The books were withdrawn by the Text Book Board after a few years.

Playing soldier, and writing moon-journey

Chittagong Collegiate School was a great place to be at in the mid-fifties, as it had been throughout its 180 years of existence. It had more than compensated its inability to defy the country's conventional education system, by offering wonderful extra-curricular opportunities to its students. One would not find another school with such a sprawling campus and a continuous field big enough to host several full-fledged sporting events simultaneously. The main building was flanked by various other smaller ones in the ample space around, one of which housed the Scout Den – the hub of so many activities and adventures. An even bigger one housed the paraphernalia of the Junior Cadet Corp (JCC). Ours was one of the only two schools in the country in which it was compulsory to be in JCC during the last two years in the school and to go through a rigorous military training. A huge investment was made for this in each of these schools – one in the western part of Pakistan and the other in the eastern. Some of my friends would complain about the rigor and the distraction of it; but to me it was a wonderful experience, never to be forgotten.

As soon as I started in this school, there was an initiative to form a military band with the junior students. I was one of the lucky boys who were selected for it after a preliminary aptitude test. I opted for the side-drum, the three other options being big-drum, bag pipe, and bugle. To teach us to play side-drum one instructor (drum major) would come to the school from the local army garrison two days a week. To practice on any surface for the rest of the week we were given two beautiful drum sticks. Soon I became inseparable from my sticks; and my practice went so well that I became a de-facto assistant to my drum major. The basic building blocks of the side-drum playing were called 'Rules' – Rule 1, Rule 2, Rule 3 etc. I can still play any of these rules impeccably more than a half century after I finished those few months of training; and I can also recite the chant that went with it. Thus, for example, for Rule 1 the chant was:

Por daga daga dam
Pam daga daga dam
Pam por-ram
Porram pam pam.

We were looking forward to a gorgeous band; even our colorful uniforms were ready. But for some reasons the band was never formally installed. All those efforts by the drum majors and the trainees came to nothing. But not for me – this being the only musical training I ever had, I relished it enormously.

My two-year stint with JCC came somewhat later when I was in the 9th grade. Our feeling about it had been best described by Belal Bhai, a schoolmate and a close friend of Yunus Bhai, in one of his instant song compositions. From a much younger age Belal Bhai had made a name for himself by his ability to compose rhymes and songs appropriate for any occasion. This one tells about their pride when they had been in the second year of JCC, and translates roughly to:

Class ten, class ten, class ten
Best in the trade, never afraid,
Flawless student;
Rifle in hand, looking grand,
'Cadets, Attention!'
Class ten, class ten, class ten.

In JCC, the formal military designation of our group of 9th and 10th grade students was as a 'company' of cadets divided into four ' platoons'; each of the latter again divided into three 'sections'. Each of these formations was led by a 'non-commissioned officer' from among us having appropriate insignia while in uniform. I was only a section commander – a corporal – and therefore, would have to salute some of my classmates who were platoon sergeants or even the company sergeant major. Every day after the normal school hours we had to attend two hours of military training – one hour spent in parade and physical exercise, and the other in military tactics and war games. The first one

involved rigorous drills, but the second one was more interesting and a lot of fun. The rifle parade particularly, was tough because in spite of being only 14-15 years old we had to carry a standard issue army rifle or more often a wooden dummy of the same size and weight. The tactics and war-games involved lectures and actual activities dividing ourselves into two warring armies trying to outwit each other. It included the usual fares of camouflage, patrol, coded messages etc. The two hours of training would usually exhaust us completely; but this was well-compensated by a sumptuous snack afterwards – a full bowl of rich mutton curry, to be wiped off with two heavy Turkish breads (*paratha*).

Our life in JCC revolved around our three *ostadjis* (honoured teachers), non-commissioned or junior-commissioned officers of Pakistan Army, deputed to our company as instructors. They lived in our school campus and took care of everything in JCC. Only one of them was from our province. Though a Bengali, he too would stick to Urdu language when instructing us. We raised the issue of Bangla being an equal state language now (according to the newly adopted constitution), but were told that Urdu still remained the army's *lingua* as it had been throughout the history of old India, the language having been originated in the army barracks. But this does not mean that our relationship with *ostadjis* was rigid or formal, actually it was quite the opposite. This was especially true about our chief *ostadji* – Sergeant Major Nazir. When we just said *ostadji* we always meant him. He was from Azad Kashmir (the Pakistani governed part of Kashmir, the disputed territory in the rugged Himalayas), and was then almost at the end of his long army career.

Though he pretended to be a great disciplinarian in the parade ground, *ostadji* actually treated us as his own long lost children whose childhood he had missed, being deployed in far-away lands by the British Indian Army. The thing he would enjoy most was to talk about his native Kashmir, and about his battle exploits at the Burma front during World War II. Those had been desperate battles where Japanese formations were attacking wave after wave, but *ostadji's* battalion somehow could hold its own. It was there that *ostadji* seemed to acquire a great respect

for Japanese valor and patriotism, and he would refer to it often in our training in military tactics. I drew special attention from him as a keen listener and participant during his talks on this topic – asking questions, adding my own opinions, as I had more information than my classmates about the conflicts in the Burma front, gained from other sources. *ostadji* would become particularly emotional when he blessed us for some reason or other. He would then wish us to be a general or a colonel in the future.

Our greatest day in JCC came with the ceremonial Parade Day. We had been practicing and rehearsing the whole ceremony for months. My friend the company sergeant major had been trying out his voice of command perhaps for the thousandth time. No less a person than the General Officer Commanding (GOC) of the 14th Division, the only one in the province, would take our National Salute. At the command ‘Company, National salute, Present arm’ we held the whole weight of our well-polished rifle in front. Not a shred of shaking, which would have brought the whole sky crumbling down upon the head of the culprit later in the post mortem. Then with another command – off we go in march-past at the rhythm of the Army Band from the local garrison. There would be detailed analysis of the whole event in the following sessions of JCC.

Ceremonies apart, the real immersion in the JCC life came with our two camping periods during the two years. Each camp lasted two weeks and was held in a village high school campus very near the hills in the cantonment area. The camps would give us a taste of army life from the early in the morning till the bed time. All the rituals and rigors would be strictly followed. We even had to take turns in the sentry duties keeping us awake in front of the camp for a good part of the nights. One especial experience stood out in the camp life. This was the war games in the difficult terrain of hills, valleys and bushes. All those theoretical trainings in JCC would come to fruition here at last.

While I was basically playing soldier in the camp, the ‘scientist’ in me was not fully absent. I would utilize this opportunity to spend long hours under the open night-sky, especially during sentry duties and the journey just before dawn to the nearby mosque for the early morning prayer, for sky gazing. This was the time I could identify and consistently follow the movements of some planets, stars and constellations. With some previous knowledge I could now follow the easy to gaze astronomical wonders – Orion resembling a hunter, Cassiopeia resembling the letter ‘M’, the Pole star and the seven stars forming the dipper shape, the dipper rotating around the Pole star as the night progressed, the bright planet Venus appearing as the Morning Star etc. It was wonderful to share these experiences with friends. The camp was also the time when we reinforced our bonding with the classmates talking about our earlier childhood in various environments, sharing our inner thoughts and so on, much more heartily than before – bonds which in some cases would last life-long.

My renewed interest in the sky did not come out of the blue. My imagination, like that of many others, had recently been fired by the launching of ‘Sputnik’. The news that a small man-made sphere has been launched into space and was now revolving our earth once every 90 minutes like a second moon, made us ecstatic. This was October 4, 1957; and from then on the Russian word sputnik became a part of our vocabulary (the word meaning ‘fellow traveller’). The excitement was all the more because it was the Soviet Union that achieved this feat. The news said whenever sputnik was passing overhead people with a good radio receiver were hearing its distinctive broadcast of a ‘beep’ sound. Moreover, some people even claimed that they could have a glimpse of sputnik as sun-rays are reflected of it just after sunrise or just before sunset. This news was the reason that many of us started to keep a sharp eye at the sky at dusk. It so happened that Tunu and Ayub noticed a strange little white dot just barely seen moving in the sky, and raised quite a hue and cry because they thought it was sputnik. We all then saw it, but its slow speed immediately cancelled that possibility. For a few

days we repeatedly saw it without knowing what it was. Only some time later we came to know that it was but a local weather balloon.

The first sputnik was followed within a month by Sputnik-2, this time with a live passenger Laika, the dog. The fact that Laika survived the shock of the launching and was doing well while revolving around the earth was confirmed by radio signals coming from the sensors in its body. We were quite euphoric, only to be sad some time later when Laika died as the temperature within Sputnik-2 eventually shot up. There was, however, less science and more geopolitics in the newspaper coverage of sputniks. The space race between the two superpowers drew a lot of attention. For the moment, the soviets were in a firm lead. The first sputnik-like American satellite Explorer I was in orbit only early next-year 1958. All these, however, put the space-bug permanently in my head, making me hungry for more news about the space, particularly about the possibility of man's landing on the moon. The idea came to the forefront since the day the first sputnik had been launched.

To try to satisfy my curiosity about the possible space travel I bought the few books on the solar system and space, available in the bookshops here. What I readily got were paperbacks of science fictions – there were no dearth of science fictions on space travel including the classic written by H.G. Wells 'The Man in the Moon'. Written in 1901, when much of the modern knowledge on the moon and the space had already been available, Wells' fiction was not, however, very scientific; and nor were the others. I was looking for something more state of the art. In this respect I rather found a movie being shown in the morning shows of a movie theatre here quite instructive. This was 'On the Threshold of Space', made in 1956. This showed how test pilots were flying in the stratosphere, an upper layer of the atmosphere where no airplane goes. A rocket would eject a pilot in the space there and he would parachute down back to the earth. The essential thing there was to survive the elements of the open space which resembled the outer space in many ways – the space suit worn by the test pilot being the most crucial thing. The movie was actually depicting some genuine exercises in the U.S.A's

‘man in the space’ program. At that point I could buy a book which discussed the problems of space travel and what to expect while on the surface of the moon. To consolidate my perceptions of all these things I decided to write a children’s story about an imaginary journey to the moon.

Here I kept my imagination limited to the current scientific possibilities and actual facts we know. I named this short story ‘Just Returned from the Moon’ and sent it for publication to the children’s page of the newspaper *Ittefaq*. In this story I, along with a few friends, rode a spacecraft capable of launching itself with its very powerful rocket engine, and which later landed on the moon. We then came out on the moon wearing our space suits – which were modeled on the movie I saw. My description of the moon followed the book I had bought on the solar system. Accordingly I made up some interesting events and feelings experienced by the moon-travelers – such as enjoying the scene of an earth-rise looked from the moon. My story was selected and published in the Daily *Ittefaq*, first time I published anything. The vital thing for me was that I very much enjoyed writing it, and my attempts to find out the facts I required for the writing was part of the fun. Over the years I found out that like reading and doing science, writing science is one of the best pleasures in life I could have.

Our republic: hopes and despairs

On 23 March 1956, Pakistan got a long awaited constitution and became a republic at last. This event with a lot of festivities and euphoria, and some hopeful experiences of the next two years or so, made me quite optimistic about our country. I was also basking in the general good feeling of the people around me – especially that of my politically conscious elder brothers and uncles. This optimism had not been there when the just-elected United Front government in our province had been dismissed summarily only two years ago. Now the United Front itself was no longer united, Awami League getting out of it after a long

disagreement with KSP. The provincial assembly, however, was soon restored; and first a KSP-led United Front government, and then in a year or so, an Awami League government was installed here. Muslim League became weaker in the western provinces too, as a large number of assembly members left the party and formed a new party – Republican Party.

At the centre, the real powerbroker Governor General Golam Mohammad and his chosen Prime Minister Bogra demonstrated quite a feat by concocting a very strange combination of a cabinet popularly referred to as the ‘Talent Cabinet’. It had no connection with the constituent assembly, and consisted of chief of army (General Ayub Khan), the all-powerful governor of East Bengal of the section 92A time (Iskander Mirza), some top businessmen, and some very important politicians of parties at loggerhead with each other – even Suhrawardy, the main central leader of Awami League, the last prime minister of British undivided Bengal, and Fazlul Hoque (‘Tiger of Bengal’) of KSP who was dismissed from the post of chief minister for sedition only months ago. The experiment, however, did not last, nor did the fulcrum of power Governor General Golam Mohammad himself. One of the members of the talent cabinet, Iskander Mirza, became the new governor general. He fired Bogra and asked Chowdhury Mohammad Ali, another of the talent cabinet, to form the new cabinet. A new constituent assembly had been elected by the provincial assemblies in the mean time. He formed a representative government with Muslim League from the west, and United Front and the minority community’s Congress party from the east. Suhrawardy led a very forceful opposition in the constituent assembly. It was under these circumstances that the impossible had happened. All these diverse elements not only within the government but also across the aisles came together and endorsed a constitution for the country.

It was not easy at all. Every side had serious misgivings about the constitution. There had to be a lot of compromises – many gives and takes. The country became an ‘Islamic Republic’, but the Islamic

character was limited to generalities only, all the secular laws and rules remained intact and there was no attempt to make them more Islamic. Now the republic had only two provinces – East Pakistan and West Pakistan, the four provinces of the west being joined together in ‘One Unit’. The Republican Party along with some others remained vehemently opposed in principle to the One Unit. A formula of ‘Parity’ giving equal representation in ‘everything’ to the East and West Pakistan was agreed upon. Thus we in the east were deprived of our advantage of majority population, and great resentments remained about it, while others in our province hoped that it would actually work. ‘Parity’ became a buzz-word of politics and so was the ‘provincial autonomy’ – there was no clarification about the latter in the constitution. One favorite demand from our province, a point of the ‘21 points’ of United Front was vindicated – the joint electorate of all the religious communities – a positive step towards secularism. West Pakistan was totally against this. But for the moment the great compromises stuck, and we got a constitution, to celebrate our republic.

The immediate practical consequences of the republic to us were mainly symbolic. The existing governor general Iskander Mirza was elected the President – the new post of the head of the state in the republic, though the Prime Minister remained the head of the government as in any parliamentary system. The rumor was that Mirza demanded his own election as a price for signing off on the constitution. The Constituent Assembly now became the ‘National Assembly’. Of more proximate relevance to me was the fact that the JCC in our school came under ‘Pakistan Army’ in place of ‘Royal Pakistan Army’, and our main *ostadji* proudly displayed the new sergeant major’s insignia, a brass crescent and star worn like a wrist watch in place of the royal crown he had worn all these days.

The Republic Day celebration came in a big way. Everywhere the big character banner declared: ‘Pakistan Islamic Republic Mubarak’. ‘Mubarak’ is the congratulatory greeting we use during occasions like Eid celebrations, or marriages. Thanks to Yunus Bhai, on this day of

celebration I became a part of an innovative attempt initiated by him, to create a progressive patriotic fervor among the city people. This was supported by USPP – the leftist student party, and *Kristi Kendra* (Culture Centre) – a left-leaning organization for the cultivation of music. The latter had quite a prestigious musical group led by the famous Hari Pal with his thunderous but exquisite voice for patriotic songs. The idea was to spend the whole day of the Republic Day, travelling in a bus throughout the city playing patriotic music from a tape recorder. The tape recorder used for this belonged to a friend of Yunus Bhai, and was perhaps the first tape recorder people saw in Chittagong. I was present when the songs were recorded at *Kristi Kendra* for a whole evening till midnight. Yunus Bhai wrote some appropriate patriotic messages to be interspersed between the songs, and recorded them in his own voice. To see Hari Pal sing only within a few feet from me was the great thrill for me. Most of the songs were chorus with Hari Pal in the lead. For example, it was a great feeling hearing him sing the immortal song of the Indian independence movement, which is in approximate translation:

How many have sacrificed
Their lives without fears,
On the steps of the freedom-temple.
The story has been written in tears.

I was impressed by some of the new compositions too, which I heard for the first time. For example:

Sound of our claps will reverberate around
In every village, and go sky bound.
Come along friend, give your hand
Let's build the castle of life on this land.

or

Forward, the youth of the world,
Your million souls will make one soul
Defying terrors, defying wars;
Peace is our vow, liberation our goal.

or in a quite different mood

Color of my land gives the clue
All the way it is dreamy blue;
My blue hills and my blue seas
Taking me back to my mythologies.

The bus we travelled in was nicely decorated, with beautiful big-character posters on both sides congratulating ourselves on becoming a republic. We went through most prominent streets of the city. The tape recorder needed a mains power supply. So we were stopping in major junctions plugging in to a shop's electrical sockets through a long cable. Then for about half an hour this would be the location of our musical program coming out of a loud speaker attracting a sizeable audience and allowing many others to listen.

Later that year a river journey to two spots some distances away from Chittagong gave me a different kind of optimistic feeling for the future of our country. This journey took me along with Abba, Uncle Chowdhury and Tunu to the Karnaphuli Paper Mills in Chandraghona, upstream on the river Karnaphuli; and going further upstream to Kaptai where a grandly planned hydroelectric project was under construction. Abba had friends at both places and paid them visits. The paper mill, touted as the biggest paper mill in Asia, was in production for several years, while the hydroelectric project which would be a sort of 'Hoover Dam' for us was still in a very preliminary stage of site development. Our vessel was a small motor launch that plied up and down the river between Chittagong city and Rangamati the main town of Chittagong Hill Tract – the huge district adjacent to ours, full of hills and hill-forests and sparsely populated by various hill tribes. Much of our journey was through this hill district.

From our small cabin on the upper deck of the launch, right behind the Master's helm, we could see the wonderful sceneries of the river, the sampans sailing, passengers of our launch embarking and disembarking at frequent river stations on both sides of the river, using flimsy planks as

jetties. At the same time a lively conversation was going on in the cabin drowning the low thudding monotonous sound of the engine. This gave me some ideas what we were going to see in the paper mill. But the main theme that came again and again here and later while in the mill itself, was a riot that took place two years ago in this mill. This was between the two groups of workers – the local Bengalis on one side and the settler Urdu-speaking minorities that also included most of the management on the other. About a dozen men on both sides were killed and so was the Urdu-speaking general manager of the mill, an expert in the trade, named Khurshid. This was a great setback not only for the mill but also for the country hinting at the great rifts and the seed of serious disunity. Coming to the exact place of the tragic incidence these sad thoughts made everybody quite upset.

Even when we were still at quite a distance from the mill, there were clear tell-tale signs of it in the shape of frothy white wastes covering the water surface moving downstream in the current, and the pungent unpleasant odor of it. But the mill itself was very impressive – a virtual hill of stacked bamboos at the edge feeding bamboos to the production line to be crushed with a thunderous sound and then with the help of a huge amount of chemicals to be turned into white pulp. Thin paper was coming out of the other end of the mill in great rolls. All those bamboos were coming from the mill's hinterland the sprawling hill-forests, precisely the reason for the mill to be here (it did not take much time to denude the forest of bamboos at that rate). At that moment, however, the only feeling I had was that of pride to have the greatest paper mill in Asia so near to our home.

On our journey further upstream to Kaptai the scenery became really idyllic – the river became much narrower with nothing but hill-forests on both sides, their canopies almost touching each other all but obscuring the sky. We could get glimpses of arboreal creatures, most prominently monkeys. At Kaptai we were the guests of an engineer, a friend of Abba, involved with making housings and roads for the project. From his hillside bungalow we could already see and feel what a huge enterprise

this was. But when our host took us to the site of the planned dam and explained everything, only then did we realize that what we were seeing was nothing in comparison with what would be coming. One of the biggest earthen dams ever made in the world would obstruct the river-flow creating one of the biggest manmade lakes ever seen. Much of the countryside would be lost in it – hills, forests, hamlets, bazars, everything; even the district town of Rangamati would have to be relocated. Soon a company from U.S.A. would take over and everything would proceed fast, as our host explained – the dam, the spillway, the power house and so on. Standing at the dam site surrounded by bulldozers and people wearing helmets, I was imagining a very glossy future for our province – electrified and industrialized – maybe not too different from what I had watched in the documentaries in the USIS Library.

But I would immediately be pulled back to a very different present reality – an exotic one, and no less lovable for that. On our return journey we made a short stopover at Chitmorang – a riverside bazar of the tribal people. Uncle Khair Ahmed (Abba's half-brother) had a log-transport business in a nearby place within the hills. There he kept his two trained elephants to drag logs from the forest to the riverside to be floated and carried downstream by the current to the sawmills. We visited the elephants and their *mahuts* (elephant handlers) in their forest home walking through the hill slopes for some time. The *mahuts* told us the details of the whole process, including the control and the upkeep of the elephants, while we were being treated in a lunch with them. Then we saw a demonstration of how the elephant drags the heavy logs through a rough terrain going up and down without any form of road – a job which only an elephant can do here.

Within the few months of the Republic Day there was an additional reason to be optimistic, so far as we were concerned. Suhrawardy, the Awami League leader, became the Prime Minister of Pakistan (September 1956). He succeeded Chowdhury Mohammad Ali, who was the architect of the great compromise and the constitution, but was

unable to continue because of the further rise of the Republican Party in West Pakistan. Awami League from East Pakistan and Republican Party from the West with a few minor parties had sufficient majority to allow Suhrawardy to form a government. Suhrawardy was widely regarded as a people's man sticking to democratic principles. Moreover he was our man, with his political base in East Pakistan. I noticed an expression of euphoria about it at our home, as well as in the newspapers. Salam Bhai was the most enthusiastic one; I even accompanied him to a small meeting of party workers and students in which the PM spoke while he was visiting Chittagong. It was a very plain and homely affair – the PM trying to elaborate his policies to the several hundred mostly young men in a rather cramped room. Surrounded by the crowd in that hot and humid room the PM was sweating profusely and some students tried to help by shaking big hand-fans near him.

Suhrawardy now became a staunch believer in the principle of parity between East and West Pakistan, and tried sincerely to undo some of the discriminations to East Pakistan. But he drew criticism from his supporters in the East for declaring that 95% of the provincial autonomy as sanctified in the 21 points of United Front has already been achieved, whereas in reality little had been done. His other big abandonment of the 21 point-promises was his highly west-leaning foreign policy instead of a neutral and independent one. The resentment was so high within the left wing of his own party led by no less a person than Moulana Bhashani (of Hoque-Bhashani fame), that the latter ultimately splitted the party, creating a new left-leaning National Awami Party (NAP). All these, however, did not deprive Suhrawardi of his basic support of the people of East Pakistan, and he remained our PM.

While sticking to his pro-west foreign policy, Suhrawardy also befriended communist China. At a time when most of the powerful western countries did not even recognize the People's Republic of China as the legitimate government of China bestowing that honor to the right wing government ruling only over the island of Taiwan, Suhrawardy visited People's China, had a very friendly talk with Mao Tse Tung and

the Prime Minister Chou En Lai. Soon Chou En lai paid a return visit and came to Dhaka, our provincial capital (January 1957). It was during Chou's visit, and my witnessing the event personally, that my enthusiasm with my country and its Prime Minister reached new heights.

I have been hearing so much of the Chinese revolution at home and at school that it became like a dream-story – a poor giant of a nation, ravaged by foreign powers, deep in a superstitious slumber, was awakened by Chairman Mao and the revolution. (My knowledge about the price the Chinese people paid for the revolution came long afterwards). I accompanied Yunus Bhai to Dhaka to see and hear Chou. The whole city was in a festive mood, beautiful arches declaring eternal friendship between Pakistan and China – in Bangla and English. Yunus Bhai and I joined a huge crowd in the airport to welcome Chou arriving with Suhrawardy, and later in the stadium for the public meeting there. In front of the stadium full of people Chou's speech was directly translated into Bangla by the chief minister of East Pakistan, Aatur Rahman Khan. The most exciting part of his speech for me was his mention of the recent Suez Crisis and specifically the spontaneous protests of the people of East Pakistan in Dhaka and other cities. I felt proud that I was a part of that protest.

Actually the whole atmosphere of that public meeting gave me an electric feeling of self-importance as a nation. Seeing and hearing the revolutionary hero, having the whole proceeding in Bangla, seeing Suhrawardy by the side of Chou as our prime minister – I felt the thrill of the moment. The Chinese cultural event that we enjoyed at the same stadium in the evening, was a big performance on a big stage by the huge troupe that had accompanied Chou, and gave another proof of the vitality of China.

As yet another example of the fickleness of Pakistan politics, Suhrawardy's government did not last more than a year. Republican party withdrew its support of him. Many said this was because President Iskander Mirza was not having his way with Suhrawardy. After an

interlude of only two months when a government headed by a Muslim League leader I.I. Chundrigarh was tried, another had to be formed with Firoz Khan Noon of Republican Party as PM. This one strangely was a grand coalition— almost all the major parties of the two provinces being represented in it. There was a good reason behind all the parties' eagerness to be within the government in spite of their serious differences in policies. Every party wanted to jockey for a position of power both at the center and provinces at the crucial time when the first nationwide election was going to be held soon in 1958.

The most ridiculous and sad situation was created in our own province of East Pakistan, so much so that it did not need an adult to be amused and worried by this. At that time it was the Awami League led government that was in power here. While both Awami League and KSP (by now KSP had abandoned even the pretension of being the good old United Front) were coalition partners at the center, they were at each other's throat here in the province thanks to a very narrow difference in their strengths in the provincial legislative assembly. As a part of the coalition agreement at the centre Fazlul Hoque ('Tiger of Bengal'), the founder of KSP, a very old man by then, was appointed the governor of East Pakistan. On that capacity he dismissed the Awami League government here with the doubtful pretext that it no longer carried the majority in the assembly, and brought in a KSP government. That triggered an ultimatum from Suhrawardy threatening to withdraw Awami League from the central coalition. As a result, Governor Fazlul Hoque was summarily dismissed, and the new governor promptly reinstated the Awami League government in the province. All these happened within 24 hours! The KSP chief minister enjoying power for only one day even happened to have the appropriate name Abu Hossain, a character in the Arabian Nights, a poor man who was made a make-believe caliph for one day by the real caliph just for fun. We were amused at this similarity. The whole episode was repeated within a few months, only this time it took three days. NAP, the leftist party that had been created out of Awami League, withdrew from the government and brought it down.

The KSP government this time lasted precisely three days till NAP restored its support bringing the old government back again!

It did not, however, remain a laughing matter for long. Every opportunity was used to try to unseat the government of each other by the two major parties. Next time the speaker of the assembly Abdul Hakim, who belonged to KSP, was declared by the party in power Awami League to be mentally incapable, and was prevented bodily from attending and presiding over the assembly session. Instead, the deputy speaker, Shahed Ali, belonging to Awami League, presided over the session that was due to consider a no-confidence motion against the government. During the proceedings, pandemonium broke out, and the deputy speaker was injured from flying paperweights and other such missiles thrown by some members. He later died in the hospital. This was in September 1958.

The politics in West Pakistan was not peaceful either. Politicians of every stripe were being accused of corruption and unethical practices. But even then the people were patiently waiting for the imminent national election – hoping that this would sort out everything. And then suddenly a bolt came out of the blue. On the 7th October 1958, Pakistan Radio cancelled all scheduled programs and President Iskander Mirza gave a speech to the nation. He abrogated the constitution, declared martial law, and banned all political parties. In the speech, the president did not forget to mention all the perceived corruptions, the musical chair game of the government changes, and of course the ‘murder’ of the deputy speaker – blaming the politicians for all these. Everybody at our home was stunned. Only Salam Bhai uttered something – ‘Alas Suhrawardy, alas the election’. Most of the major political leaders were arrested. A martial law cabinet was formed with the army chief General Ayub Khan as the prime minister, and army generals in the major cabinet posts. But Ayub Khan did not trust the president and within days three newly appointed ministers who were also army generals met with the president, forced him to resign, and immediately exiled him abroad. General Ayub Khan became the president and martial law administrator.

He remained the president for the next ten years, depriving the country of a real democracy, wielding dictatorial powers in various guises. The country's history, and to some extent things around my own life, became inevitably joined with the continuous anti-Ayub political agitation – predominantly a student movement that began some three years after that military take over.

I was in ninth grade. For the moment, our life remained visibly unchanged after the declaration of the martial law. The people initially welcomed the punishments for the 'corrupt' politicians and bureaucrats, and the discipline that was restored in the affairs of the state. Others knew better. Our teachers no longer dared to discuss politics at school. There were no sign of politics anywhere. We heard that a colonel from the army had been posted full time in Chittagong College and was "advising" the professors. I, however, was busy with scouting, Junior Cadet Corp and other persuasions, rather than politics. Most of all, the all-important school final public examination at the end of the 10th grade – the so called Matriculation Examination – was right around the corner.

Glimpses of the world

A welcome party for diversity

The Second Pakistan National Boy Scout Jamboree was held in Chittagong at the end of 1958; it was a memorable event in my school life. We, the Chittagong scouts would play host to four thousand scouts not only from all parts of the country, but from some foreign countries too. The event was so important for the people of Chittagong that the huge open field at the edge of the city which housed the tents of all those scouts came to be known as ‘Jamboree Ground’, and still is known by that name, some six decades later.

The Chittagong scouts took their job seriously, and as one of them I joined full time to train myself for the role, along with many enthusiastic scouts from various troops. I had just finished our annual exam for the ninth grade, and had all the time to meet other scouts in the campus of Chittagong Muslim High School for our trainings and rehearsals. I loved most the learning of songs and dances from all over the world, which we would perform around the camp-fires of the jamboree. Actually most of these had been popular among the scouts all over the world, and each had an interesting history of its own.

In general, fun was the name of the game – many of the songs being devoid of any meaning, others were sung in spite of the language not being understood. Thus we learned a Punjabi song (language of the Punjab region of Indian subcontinent) which found its real fame in South Africa:

‘Serr geya baba lassi ka kotara’... which roughly translates to
‘Splash’- spilled the buttermilk from the bowl,
‘Gulp’- swallowed the buttermilk from the bowl.

Or consider the song complaining about the mistreatment of a farmer's buffalo – a north Indian song:

Why did you beat my buffalo?
What did it do to you fellow?

Or something totally language-less and meaningless:

Ging gang goolie goolie goolie goolie watcha
Ging gang goo, ging gang goo

We were told that this was composed in 1920 by none other than Lord Baden Powell, the founder of the boy scout movement, for the first world scout Jamboree. He borrowed its tune from Mozart's Symphony number 1.

Another song was my favorite because of its strange but beautifully pronounced French lyrics. Originating in Quebec, Canada, it had become extremely popular throughout the French-speaking world and beyond. It does have a meaning, but none of us, not even our teachers, had any clue of it.

Alouette, gentille alouette
Alouette je te plumerai

Of course we also rehearsed the carefully choreographed presentations of our own colorful culture of Chittagong. We learned how to play hosts to thousands of scouts from home and abroad – acting as guides, helping them in setting camps, etc. Already we were getting used to work as a team with boys we did not know before, scouts from various schools of Chittagong.

When at last all the tents of the four thousand scouts had been pitched in the jamboree ground, it looked like a tent city with its own roads, bilanes, and facilities. The plan was to put the scouts from various places in close neighborhoods. Our Chittagong Collegiate school troop was thus placed in the 'Khyber' sub-camp, named after the mountain pass connecting north-western Pakistan with Afghanistan, more than a thousand miles away from us. Our closest neighbors were the scouts

from Hyderabad, Sindh in West Pakistan. Helping them organize their stuff in the jamboree ground, we became friends from the beginning. The full extent of the diversity assembled on this ground became apparent to us when the next day President General Ayub Khan inaugurated the jamboree and we all marched past him. All parts of Pakistan were represented, though most of the scouts came from the various districts of our own province. Those from West Pakistan were varied in their languages and cultures, and even appearances. We knew about the cultural groups and languages; but this was the first time we actually saw the diversity of our country first hand. Of the foreign contingents, the biggest one was from Iran. Iranians caught our eyes not because of their number only, but also because they were almost grown up men, quite tall and well-built, almost like a platoon of soldiers. Others were small contingents mostly of young boys with a few senior scouters. These included Japan, Afghanistan, and Somalia. Immediately after the inauguration, the jamboree ground was opened to the public, the visitors from Chittagong city and beyond – men, women, boys and girls of all ages. This remained the picture of the jamboree through its whole duration.

The East Pakistan Scouts Association, which was in charge of everything, was not coping with the management that well. Scouts and visitors alike were having difficulty in finding their way because the maps of the ground were not displayed; places and roads were not well-marked; and a central public addressing system which should reach all corners of the jamboree was not in place. Suddenly I was amazed to see that the Association had commissioned a team of young volunteers led by Yunus Bhai to redress the situation. They, on their part, had invited some of us to help. I found Yunus Bhai frantically writing posters, street signs and place signs in thick paper boards almost with the same urgency as he used to do in his days of student politics in the high school. Also not only an all-encompassing public addressing system was in place, but from it we could hear the voices of Yunus Bhai and several of his friends, continuously saying the same things in Bangla, Urdu and

English, guiding the scouts to various facilities and advising the visitors too. The discipline was soon restored and we felt that this was really our show.

To me the most attractive events of the jamboree were the nightly camp-fires at our sub-camp. Here around a huge fire all of us could join together in singing those global songs and also had a chance to present our own show reflecting the local culture – songs and dances interspersed by numerous ‘yells’ often very funny. All these performances freely used a quite remarkable variety of dialects and local characteristics of various districts of East Pakistan. But more exotic to us were those presented by the West Pakistani and foreign contingents. For example, I was amazed to see how a Punjabi folk tune had been adapted in a dance to give messages of solidarity, something we find in our own very deeply ingrained folk styles. In this the main singer made a statement in sing-song Punjabi following the tune, and the chorus would come back every time accompanied by loud clapping – ‘Hei-jama-lo’, which all of us could join in. Then there was the tribal ‘khatak’ dance emulating that of a tribe of the same name from the frontier region at the Afghanistan border. The real frontiersmen would usually do this dance going round and round in circles within circles, with a raised rifle in hand. The boys from that area did the same motions with colored handkerchiefs instead. Many of our own dances were boatmen’s dances, harvest dances, tribal hunters’ dances etc.

The yells were the most participated items in the show. They came in numerous languages and dialects and many of them seemed to be instantaneously improvised to appreciate a certain moment. First the initiator would jump up and teach us how to respond to his yell. If there was a meaning in that yell at all, he would also give that meaning. Then would come his full-throated lead-yell, and our response, a very loud one indeed. Many a time this would be nothing but asking ‘How did you enjoy it?’ in a strange dialect and voice; and answering it in the same strange tongue – ‘Excellent’.

The Iranian scouts were the most popular foreign ones all over the jamboree because of their visibility for big number and distinct features. More importantly they had a lot of things to exchange with things from other scouts – Iranian souvenirs, caps, badges, scarfs etc. One of the ways the scouts would interact with each other in a jamboree is through such exchanges. It would, therefore, be quite normal here to approach another scout from somewhere else, a total stranger, and ask him ‘Anything to exchange?’

The scout troop I visited more than once at their own camp was that from Japan. There were a dozen boys roughly of my own age, led by a scout master named Mizono San. San stands for Mr. and comes after the name). I noticed the way Mizono San ordered his boys around and grumbled in Japanese about their shyness to speak in English with us – a familiar scene because our own scout master used to do the same. As fate would have it, in only six months’ time I would be spending a lot of time with Mizono San in his own turf, and would become a kind of a disciple to this very interesting personality.

We spent those jamboree-days as if in a trance, making new friends, and savoring the company of the old. As the closing day approached and our days of bonhomie were coming to an end, a feeling of sadness descended on us. We tried to stay cheerful though. For example, when the four of us - Burhan, Shamsul, Shayesta, and I - had to go for an errand out of the jamboree area to a busy city street — we were completely oblivious to the fact that the surrounding crowds were city-folks and not boy scouts. We formed a chain by entwining each other’s arms, and sang while jump-dancing like little children our jamboree song in Bangla:

Jambo Jambo Jamboree
Our own jamboree
jam-bo-ree.
They came from near,
They came from far,
They came from everywhere,

In a heart-stealing spree.
Jam-bo-ree.

There was a postscript to the jamboree for me. One of the new friends I made there was a boy named Moshtak from West Pakistan. He came from the small town of Muridke near the city of Lahore, in Punjab. Once back home he maintained a regular correspondence with me, sometimes asking for advice in his studies. We often exchanged gifts by post, but the ones sent by Moshtak would often be quite remarkable. For example, reminding me that the decorated small knives of Muridke were very famous he sent me a folded knife with my name engraved on its beautifully crafted valuable stone-cover. On another occasion he sent me a big packet of roasted vermicelli to make sweet dishes during Eid festival, even including a recipe. Our whole family became fond of Moshtak, often exchanging greetings; and Muridke became a sort of familiar place to us, only through his letters. I never visited the place, nor did I meet Moshtak again.

Mingling of the eastern hearts

A few months after the jamboree our family moved from Boxirhat road to a new house we had been constructing in a well-planned residential area at the edge of the city. We named this still unfinished house *Niribili*, meaning ‘tranquil’. I preceded others in shifting to the house to prepare better for the all-important matriculation examination early next year. This was especially important for me because I would have to compensate for the two months I would go without study, away busy in scouting. Recently I had applied for a place in the Pakistan scout contingent to the 10th World Jamboree in Philippines and the 2nd Nippon Jamboree in Japan, and got selected. Yunus Bhai, applying from Dhaka, where he was a university student, was also selected. Since learning this news I was flying like a bird in my mind, and could not wait to go. My teachers, however, were a bit cautious in their support to this venture. In the competitive world of the public examination I was one of the few hopefuls of my school to be in the merit list of 30 most

successful school matriculates of the province (Yunus Bhai had that honor in his time). Losing two valuable months of preparation, and missing the ‘Test exam’ which was a dress rehearsal for the real thing, my prospects for getting into the merit list would be in jeopardy. But I was not worried about that, nor were my family members. I was in the preparation mode for going abroad as well as for the examination.

All the members of the Pakistan contingent to the World Jamboree and Nippon Jamboree met in Chittagong, because our journey would begin from here. It had 11 members in total, of whom four of us were boys, the rest were adults – rover scouts and managers. The contingent leader Tarique Ismail Khan was a senior member of the Civil Service of Pakistan (CSP), the prestigious cadre of high bureaucracy. All but three were from West Pakistan – predominantly from the Punjab region, including the leader. We spent the few days in Chittagong and the first days of the journey to know each other, because we would have to live and work together closely the next two months. Whatever were our age and stations of life, we were all scouts, sharing all the chores of camp life in the jamboree together, while having the honor of representing our country as a team in these great world assemblies of scouts. Our kids’ group within the contingent had Tanvir, Enam, another Enam, and me. There being two Enams, we started calling one of the Enams Mote (fat one) because of his relative plumpness. Soon every one of us got a nickname of his own. We became quite an intimate group; I even learned to understand a bit of Punjabi dialect, to get into the inner world of the three Punjabi speaking friends.

First stop – Rangoon, Burma (now Myanmar), on a July day of 1959. While taking this flight from Chittagong to Rangoon, I achieved three firsts in my life in a matter of hours – my first air travel, first visit to a foreign country, and the first look at a culture the stories of which colored my early childhood. The DC-3 was a small airplane which seemed to keep its nose high while on the ground. It was quite an emotional experience for me to set foot in Rangoon. My folks in our village with their nostalgic memories of the city used to refer to it as

‘Rongoom Rongila’ (Rangoon, the colorful) in Chittagonian dialect. One of the earliest rhymes I learned as a child was about a little girl who went to Rangoon (again in the same dialect):

The tiny mynah with tiny legs
‘How could she go to Rangoon?’ her mum begs,
Leaving her parents to wail,
Leaving her shiny bangles to pale.

But the recent realities for Rangoon seemed to be not as luring as the rhyme suggested. Soon after arriving at the airport. in a speech at the welcome-lunch, Colonel Tun of Burmese Army, our official host, narrated the tumultuous events during recent years in Rangoon and Burma. He said ‘At one point even this area where we are sitting was not under the control of the Burmese government’. Actually Karen National Army, one of the many armed groups fighting against the government and against each other, had temporarily occupied a part of the capital.

Yunus Bhai and I had another host there, Mr. Ezahar, a family-friend, who was a contractor for civil constructions. We spent a night at his luxurious home in the suburbs of Rangoon, spending most of the next day sight-seeing with him and visiting some places where people from our area lived. In spite of all the nationalistic changes, Rangoon was still attracting many of people from Chittagong even in 1959. But they did not seem to mix a lot with the local people, as our forefathers used to do in the good old days of ‘Rongoom Rongila’.

During our two more days in Rangoon a local scout troop belonging to the Ismailia Shia Muslim community were our hosts, and constant companions. This was also an immigrant community, but had adopted many of the ways of the Burmese people, including their names. They gave us a good introduction to Burmese culture, taking us to Pegu, the capital of an old kingdom, and to the villages around. Some of the Burmese ways such as the clothes of men and women, some parts of their food habits such as their love of dried fish were not totally strange to me, as our older generations, influenced by Burma, had adopted these.

Travelling in the towns, villages and the market places it seemed to me that the alternative cultural environment they offered to our more rigid society might have had acted as an attractant to our elders. The basic simplicity and welcoming nature of the general people, women working independently in farms and businesses in their flowery grabs, opportunities to make oneself useful in so many sectors, might have made this land 'Rongoom Rongila' to them.

A bigger four-propeller airplane was taking us to Manila after a short stopover in Bangkok, when a sudden announcement by the pilot was made of an unscheduled landing in Saigon, Vietnam. Some minor repairs were necessary before we could proceed to Manila. The repair took one full day and gave us a wonderful opportunity to have a glimpse of the city which was then very much in the news. We were still in an era when airplane passengers were a pampered lot; and we toured the city of Saigon for the whole day, courtesy of our carrier Air France.

Back home, newspapers carried stories on skirmishes between Viet Cong communist guerillas of South Vietnam and the right wing government forces backed by hundreds of American military 'advisors'. Though the actual buildup of the American forces had not yet begun, Saigon was a city where things were getting hot by the day. But we found a beautiful tranquil city instead. I even ventured into a few bookshops in the city centre and found pictures of Ho Chi Minh on the cover of quite a few books, though the fighting was supposed to be against his supporters. I was most impressed by the Vietnamese women toiling in marketplaces street-side food stalls in their long dresses and the typical conical hats made of palm leaves and bamboo material. Many of them must have travelled from the villages with fresh vegetables and such.

The experience at the Manila airport was startling; photographers with cameras flashing welcomed us at the stairs of the airplane, some offered Coca Cola, others asked for comments. Actually, organizers and journalists were receiving the various scout contingents from different parts of the world arriving for the jamboree. Manila by night, with its

bright lights, was quite impressive, but we soon arrived in Los Banos to take our place at the slope of Mount Makiling, a desolate place, where we had to build a shelter for us from scratch. Scouts from many other countries were doing the same around us. There had been a torrential rain recently, and the whole ground was very muddy; and it was still raining occasionally. Under the circumstances, our tasks of pitching the small tents we carried (two scouts to live in each tent) and making a dry and firm enough floor under the tent to sleep on, became quite challenging. Braving the mud roads to bring rations and trying to cook were also not easy. But it was a lot of fun. And with everything, we had to keep up the show, such as greeting the neighbors, attending the inauguration ceremony in the grand arena, and receiving visitors at our camp.

The empty mountain slope was transformed into the microcosm of the whole world as if by magic. Filipino boy scouts were everywhere, their camps occupying grounds in every direction. But even more than that it belonged to the visitors who came in their thousands starting from when we were only pitching our tents. The majority of them were girls and the young women as well as the whole families. So we were conducting all our chores under the curious eyes of them always eager to start a conversation, offering to help, with cooking for example. Almost all of them being fluent in English, communication was not a problem.

Once things settled down a bit I was making my own friends among the neighboring camps and beyond. One of the camps I used to visit most was that of the scouts from Abra province of the Philippines; they granted me an almost honorary member status. I came to know much about their country and people, especially young people, from these new friends of mine. The boys seemed to be highly influenced by Americans; even their haircuts were that of American GIs. It did not stop there; many of the boys said their ambition was to join the American army, which was technically possible because of the special relationship between the two countries. I also noticed many commonalities between Filipino and our society – our rural background, paddy fields, struggling life. A

Filipino boy I befriended was Manuele, who came from another province, Isabella. Roughly of the same age, we had one thing in common – that was to talk non-stop about everything under the sun. We even had the same body stature as was shown when he gifted me the Isabella scout blazer coat he was wearing, and that fitted me perfectly. Later this blazer made a small story of its own.

Manuele's blazer was of a beautiful green color, with a smaller collar, slightly resembling a Mao-Tse-Tung-coat. It had an applique on its front pocket with the monogram of Isabella scouts. After returning home I regularly wore this during the winters. Later still, when I grew beyond its size I tailor-made another blazer of exactly the same color and style. Only this time I used a beautiful picture of an atom from a science magazine as the applique, in place of the scout monogram. This second blazer lasted me for many years, even becoming a kind of a trade mark of me while campaigning in my student politics days in the university; often getting transferred to one or the other of my party-mates who would then be sporting it.

Manuele insisted on teaching me some useful Tagalog (main Filipino language) phrases. He had to explain the slightly different uses of frequent words like Mabuhay ('welcome', 'long live' or 'cheers') and Salamat ('thank you', 'I am grateful'). While teaching the greeting phrases like Magandang umaga ('good morning'), Magandang hapon ('good afternoon') etc. he did not forget to teach me Magandang dalaga ('beautiful girl'), a phrase that he thought would come handy to greet our Filipina visitors; and also Guapo ('handsome'), so that I understand in case some of them return the complement.

The Abra scouts loved to talk politics as much as we did. Much was about their love-hate relation with Americans. Though they loved everything American, many did not like the permanent presence of American military base here. President Garcia was popular among them because he brought down the renewal time of the relevant military treaty from 99 years to 25 years. But Manuele did not like Garcia at all. He

thought Garcia and his Nationalist Party were corrupt, and would not last. His preference was for Vice President Macapagal of Liberal Party who, Manuele predicted, would defeat Garcia easily in the next election in 1961 (the prediction came true).

Our neighboring camp belonged to the Malayan scouts, The ones fluent in English were the ethnic Chinese. The ethnic Malaysians were comparatively shy. But once I talked with some of them, I found them to be more like our folks – rural in temperament, religious and suspicious of the British colonial rules under which they still lived (the situation changed dramatically after independence). Our neighbors on the other side were the French scouts. Our barrier with them caused by the absence a common language evaporated when they started to sing: *Alouette, gentile alouette...*

and we joined in. The common bond of those songs and the scouting in general brought us nearer.

But a common language did help as in the case of our interaction with American scouts. A common language, the common books we read, and common movies we watched, made us feel quite at home in the American camp. Even the songs we sang with them had much more familiar ring, for example in songs like:

She'll be coming round the mountain
When she comes ...

Or

Pack up your troubles in your old kit bag
And smile, smile, smile ...

The common language became a common mother tongue when I met Himangsh Basu in the Indian Camp. He was from the Indian side of the old Bengal with the same Bangla language. Actually his family had come from our East Bengal, but they migrated to the Indian West Bengal during the partition. So we had a lot of talks to catch up. Sometimes you can meet your own neighbor only in a neutral ground. That was what had

happened with Himangshu and us, as it was extremely difficult to travel between India and Pakistan.

After the Philippines, Japan. We arrived in Tokyo almost a week before the second Nippon Jamboree, and stayed another week after the jamboree. So we had some time to see Japan. But the first day after our arrival was a sort of technology day for Yunus Bhai and me. We rode the subway to the show-rooms of the Japan's electronic giants in the famous Ginza street. We wanted to see the transistor radio very recently commercialized. We had been hearing at home that radios had become portable, as small as a notebook, and could be powered by only a few small dry cells. We even had with us a newspaper clipping of the picture of the smallest radio in the world – the size of a girl's palm, made by Sony. We bought two transistor radios – a National which was the size of a notebook, and a Sony which was the smallest one in the paper clipping. Back home I got the stewardship of the notebook sized radio in its beautiful leather jacket usually hanging from my shoulder like the small flat bag of the bus-conductor. For a few years in Chittagong when such radios were still a rarity, I would become quite noticeable exuding music from my body wherever I went.

We spent our second day in Japan in sightseeing guided by a very attractive and friendly young lady from the travel agency who also gave us our first taste of Japanese English. For example she would often say things like 'Prease show right' (please look right). She was always very active guiding and helping us, or helping the driver of the bus in navigating. When the driver would be backing the bus in a busy road she would be helping by calling from behind 'Orrai, Orrai'...., which I thought was a Japanese word. It was only later that I realized she was actually using English – 'All right, All right'. Japanese did use a lot of English words in their day to day conversation, inevitably converting all l's into r's.

This introduction to English-Japanese talks was useful because our subsequent days would be spent in the close company of Mizono San

and his boys from hayku ni-ju roku (hundred two-ten six) meaning 126, the 126th Tokyo scout troop. Mizono San, the reader may remember, was the scout master I met at Chittagong Jamboree; and was now our host along with half a dozen of his scouts. Mizono San's English was limited, but he could make himself understood by a combination of English and Japanese words, and numerous gestures. Being an emotional person, he would often touch his forehead in desperation and say some Japanese words to himself as if to blame his fate for our insularity. Some of my fellow Pakistanis, including our leader, privately called him 'Moznu' instead of Mizono – the mad tragic lover of a famous Persian poem. But for the rest of us he was a great teacher, from whom we learned about Japan.

I was Mizono San's favorite because I could use some Japanese phrases and words right from the beginning. Before starting this journey Yunus Bhai had given me a little book titled 'Japanese in a Hurry'. It had these phrases for various common occasions and also an English-Japanese wordbook. I almost memorized the phrase part of the book absorbing some of the syntax rules. This also endeared me to the boys of hyku ni-ju roku – all somewhat younger than me. Their young age was reflected in the way they were called – Kachchan, Nurchan, Mikachan, Tetchan and others. These were their shortened names with 'chan' added to make it an affectionate one. Nurchan was Mizono San's son; being the youngest he would not talk much with us, but always had a shy smile on his face. Kachchan became a friend of mine quickly. Others were also friendly. Kachchan hardly cared about the language barrier; he would freely go on talking in Japanese with gestures interspersed by plentiful English words. Somehow my occasional use of Japanese phrases convinced him that I would understand most of what he was saying. I did the same thing going on speaking anyways. To keep up his flow I would nod dutifully as they do in Japan, saying 'hai' (yes) or 'so desu ka ne' (is that so) frequently as he spoke.

One day Kachchan gave me a gift of scout scarf and tried to explain the Japanese writings on it and their implications. He did this in a long

monologue of Japanese, English, and gestures. Two names came again and again in it – Akihito and Michiko. Of course I knew they were the crown prince and crown princess of Japan, as of late they had been very much in the news in our country too. This was because of their famous marriage; Akihito meeting Michiko, a commoner, in the tennis court and falling in love. It had been unthinkable for an heir to Japanese throne to marry a commoner. Naturally the prospect of their marriage shook the Japanese royalty and the aristocracy to the core; they employed every means to prevent it. But the people loved it and the marriage did take place in 1959, only some months before Kachchan's gift to me. Kachchan managed to make me understand the significance of his scarf – a commemoration souvenir of their dream marriage (in time they became the emperor and empress of Japan, and have recently abdicated in favor of their son).

Only days after I received the scarf I saw the crown prince in person, inaugurating the Nippon Jamboree, and what a circumstance it was! We were in a huge open field in Aibano, by the side of lake Biwa; and all of us, thousands of scouts, were marching under heavy shower. Prince Akihito, a handsome young man, also did not have any roof over him. He was receiving our salute protected only by a thin raincoat and an umbrella. The rain forced us to march in a lackluster fashion, and at one point we saw the prince bow down to take out his shoes to get rid of the accumulated water in them – everything was so informal. What a change from the days only a decade ago, when common people were not supposed to even gaze directly at the emperor, and everything about the royal family had been so prohibitively ceremonial.

The Nippon Jamboree was a slightly smaller version of the World Jamboree except for the fact that the weather's non-cooperation went to the extreme in Japan. There was a typhoon warning when we had settled down and the tent-city of the jamboree was getting really animated. We had got quite cozy with Oserai San, a scout master who was working in the jamboree head quarter called 'hombu' in Japanese. He would often visit our camp looking after our needs, and his English being

exceptionally good, he became a very friendly figure around us. Now he brought the warning that a serious typhoon was expected within a day and we must take all the precautions, which he explained how to do. Accordingly we strengthened our tents and removed most of our gears to a more protected place. The typhoon, when it came, was much more severe for all these preparations to be effective, and our flimsy tents blew away like toys. We had to take shelter in the huge military style sturdy tents of the nearby American scouts. Actually the American scouts in the jamboree mostly came from the local army garrison schools and perhaps that was the reason the man in charge of the American camp nearest to ours was a big man addressed as 'Sergeant'. The morning after the typhoon it was quite a sight to see thousands of boys with their bare body toiling to rebuild their camps and clear the debris, as we did ourselves. Neighbors were helping each other; doing these physical works singing together was but another of the scouts' cheerful ways. Things very quickly came to the normal, and we merrily went about savoring this wonderful assembly of world scouts.

We resumed our tour of Japan with Mizono San and our friends of hayku ni-ju roku after the jamboree. The tour was designed to give us a deep touch of the beauty and culture of Japan, going to ancient cultural centres – Osaka, Nara, Kamakura; and places of idyllic natural beauty – Hakone, Nikko and even Takarazuka, the site of the traditional all-female theatre troupe. In most places we stayed in Japanese style inns sharing Japanese style of life – sleeping on floor mats, eating from a low table, appreciating ikebana (flower arrangement) and rock gardens. We became Mizono San's wards like Kachchan and others – some of us even learning to practice the Japanese ways of greetings. Spending about a month in this environment I became so used to some Japanese etiquettes that even some months after returning home my friends would laughingly point out that I was habitually bowing slightly when greeting them or saying goodbye to them (Japanese custom is bowing more fully). 'Sayonara' is the Japanese word for goodbye. Some sayonaras can be

quite painful as I felt when shouting this word to Kachchan-Nurchans and Mizono San while waiving from the stairs of the airplane.

Our eastern journeys were not yet quite over as we had a good tour of Hong Kong, Bangkok, and Rangoon (again), before returning to Chittagong. These were all old cities still holding on to their traditions. But signs of modernization were there, especially in Hong Kong whose dazzling modern commercial quarters and tall buildings beyond the seafront were competing for attention with its old Chinese and colonial buildings. Our opportunities for mingling with the eastern hearts, however, had come to an end, for the time being at the Tokyo airport.

A ‘gentlemanly’ approach to the science-world

I enjoyed a kind of celebrity status during the last three months of school after coming back from the journey. Teachers would make me speak about my experiences before the whole school, and then in our classes and in the Scout Den. Even *Ostadiji*, being a fan of the Japanese, made me speak about ‘Japanese discipline’ in front of the whole company of cadets. But my teachers remained skeptical about my prospect in the matriculation exam because of this serious distraction caused by the journey, I proved them wrong and got the coveted place in the merit list (the 26th) early next year. This gave me the credential to get admitted into the science stream of Chittagong College (actually my part of it was equivalent to the last two years of American high school).

During those days this transition from school to ‘college’ was considered a big transformation in one’s life. This fact was impressed upon us when the principal of the college, Mozaffar Ahmed, a professor of English, started his welcome speech by addressing us as ‘Ladies and Gentlemen’. Though we were all teenagers, he reminded us that henceforth we would be considered as adults, and we should better approach our studies and behavior with adult responsibilities. But according to the tradition set by our predecessors we would tend to interpret the adult responsibilities as a license for not carrying any bag or books, holding a slim little notebook

between our fingers instead rather disdainfully, and picking and choosing which classes to attend so that one had ample time for political activities and other 'creative' works. I had a slightly better expectation from the formal side of the 'college' especially its science education, and therefore, did not submit fully to this tradition. I even spent a part of the vacation before starting 'college' learning Pitman shorthand writing from a private vocational school, so that I could take verbatim notes of the professors' lectures (in practice, I never had to use this skill). Instead of the traditional little notebook I carefully improvised an unconventional aid – a full-size clip-file with hard plastic covers to hold loose note sheets for various classes. On the inside of the covers I affixed the pictures of great physicists Newton and Einstein, and our own Abdus Salam. Abdus Salam, the famous Pakistani physicist, was still in his thirties but was already our pride because of the high honors he had gotten and also because of his attempts to create a love of science among the youth in the country (he shared the Nobel prize in physics in 1979).

The big classes in the classic old lecture theatres did attract me a lot, and so did the professors' attempts in impressing us with dramatic demonstrations in the class. The switch of the medium of instruction from Bangla to English was also quite exciting. Another big change was that we 'gentlemen' now had a few ladies as our classmates. But unfortunately the ladies were too lady-like preferring their seclusion in the 'Ladies Common Room', coming out only when the professor was approaching the lecture theatre to make a bee-line behind him for their reserved front-bench there. And they would come out in the similar fashion behind the professor to return straight to their common room.

The proceedings of the classes, however, were interesting to me at least at the beginning because of all the novelty of studying science in a formal manner. We could now regard ourselves to belong to an exclusive club with our own cryptic scientific terms and shorthand. I was particularly charmed by the young botany professor Obaidullah. In his enthusiasm for botany he formed for some time a virtual tribe of us with its own tribal customs and habits. Thus we would be using scientific

names in Latin for most living things in our everyday talks – relishing a cup of *Camelia sinensis* instead of just tea, for example. As members of this botany tribe we would find things to talk about animatedly where others would not find any. For example, picking up some blades of grass from the college lawn during a chance meeting, the professor and we would start discussing the family of grasses including all the important cousins they have in their great family of *gramineae* – rice, wheat, corn, sugarcane, and so on.

In a way I was also trying to improve my ‘childish’ home laboratory of my school days into a more ‘gentlemanly’ laboratory. Not much could be done in the physical sciences except to improvise simpler version of our ‘college’ lab experiments with much simpler apparatus such as replacing the precision stop watch by my normal wrist watch and still getting an approximate result. This helped in clarifying various issues of an experiment in my own time. One advantage of our new house *Niribili* being quite close to the college was that I now had some of my friends visiting and had fun sharing lab-work and discussing pros and cons of those improvisations. We could do even better in biological sciences, because I had a quite good microscope bought in Hong Kong while returning from Japan Jamboree, and also improvised a good dissection table at home for looking into the insides of frogs and cockroaches.

Six or seven of us formed a regular group which was referred to as ‘the group behind the stairs’, because we usually would meet in a comparatively peaceful corner behind the stairs of an auditorium. I was the one who would bring up scientific topics there. Others had their own favorite topics. Some of the interesting endeavors which I later took up and would mention in this book had their germination during these chats. My friend Shafayat could say the same, because he mooted the idea of forming a pop music band first in this group. Within a year or so he would go on to establish ‘Zinga’, the first recognized pop music band of our province. We had a Burmese friend named Stalin Hla Sein, who used to bring fresh information and ideas about Burmese and regional politics. Some of the scientific topics I would introduce to this group could be

quite bizarre, as I was then reading about topics in physics like relativity, cosmology, and quantum theory.

One of the classic book I tried was ‘The Mysterious Universe’ by Sir James Jeans. This was written in 1930 when quantum theory was still quite new. The theory had to be conceived because of a crisis in the 19th century classical radiation theories including that of Jeans. Jeans was shaken by how the quantum theory was creating a new reality completely foreign to the classical make-up of our experiences. He was also shocked by the rejection of ether by Einstein’s relativity theory. But he then sought solace in the parable used by Plato in which chained men are condemned to see only the shadows of reality, and only philosophical inquiry can reveal the reality to them. There were other books that were much more fun, like George Gamow’s ‘One, Two Three, Infinity’. He had all the concepts of modern physics in it, but all in a fun way. Being himself a creator of the Big-bang and expanding universe theory who, would be a better person to hear about it from, than the very funny George Gamow?

I wished our formal ‘college’ education in science would mention some of these modern developments at least as a motivational backdrop of the regular studies. Nothing like that ever happened. This disappointment was even greater when in two years’ time I got admitted to the physics department of Dhaka University. I had somehow beaten the exam-oriented ‘college’ education system in its own game by making to the merit list of the next public examination known as Intermediate exam (intermediate between school and university) – this time having 9th place in the science stream; and here I was in the university. Physics department of Dhaka University was still quite famous because of its world class research work in the period between 1924 and 1950, which included fundamental contributions to quantum theory and theory of magnetism. But even with such a rich recent history, we were not given, as newcomers, a prior taste of these even in a cursory manner to develop a far-sighted view of physics from the beginning. This hurry through the maze of the immediate details without any reference to the background

story or the ultimate destination shocked me, and, I am sure, acted as a disincentive for many.

I would amusingly contrast this to the approach taken by our college principal, a professor of English, when he conducted our first classes on English literature. The first time he came he hanged a huge map of England and said he would read Shakespeare's 55th sonnet with us. This was the first thing in the anthology of English literature we would be taught. The principal would deal with only this sonnet, and the rest of the anthology will be taken care of by other professors. He began with a discussion of the time and culture of Elizabethan England (hence the map), Shakespeare's life, and his comprehensive contributions. It took two classes before coming to the sonnet itself, and then we had the first reading:

Not marble, nor the gilded monuments
of princes, shall outlive this powerful rhyme,

The detailed discussion of the 14 lines of the sonnet took another two classes, and then the principal took his leave from us.

I always thought our science professors could learn a few things from this principal. If I overdo, I would rather overdo on the principal's side. It was this kind of dissatisfaction that led me to look for alternative narrations of science and if possible to try to contribute to it myself within or without the formal education. Some of my later efforts were colored by this desire.

Between science and politics

A periodical in science

My first year in college (basically 11th and 12th grades of high school) was particularly remarkable because of the birth of *Biggan Samoeeki* (1960) – a popular science monthly in Bangla that I started to publish then, and am still publishing. The word *Biggan Samoeeki* simply means ‘a periodical in science’. From then on a good part of my time and energy have been invested in the voluntary task of writing for it, and editing and publishing it. This was all the more so because within a decade we could transform this magazine into a hub of activities which would constitute an important part of a vibrant people’s science movement. But in those early days when I had been but a 15 year old, it was quite a task for me to print a four page tabloid every month and to give it a decent circulation, based only on the support of my friends, in and outside college.

I had toyed with the idea of bringing out a periodical for children from my 8th grade in school, but it did not materialize then. One reason for such a desire was my fascination with the very acts of printing and publishing, seeing these in close quarters from Yunus Bhai for the student party USPP, and his friend Shakoor Bhai for a literary magazine. Later when the method of our science education, and the amount of current science information reaching us, would not match my expectations, I saw a scope for a regular science magazine of our own. Using whatever sources I could gather I was already writing occasionally on science in newspapers to my great enjoyment. So without thinking too much about its sustainability I embarked on the publication. To survive after a few plunges it would require a regular source of fund and also an official license from the government according to the Press and Publication Act, which had become extremely stringent during those days of the martial law. Though for all practical purposes it was a one

man show, the *Samoeeki* posed itself to be something very collegiate. My name was there as the editor and publisher, but it declared boldly right at its title 'The messenger of the Young Scientists Forum'. From the very second issue it added another identity to itself – 'The pathfinder of the science movement'. 'The forum', 'the movement' etc. had been very much in spirit at that stage, rather than in reality.

For the content of the magazine we kept our options wide open, bringing in every day science in its simplest on the one hand, and introducing great contemporary theories of science in a popular manner, on the other. For me the most important part was the editorial which we rather pompously titled 'From the pen of the Young Scientist'. In the very first one of these editorials we talked about our objective – 'to create a scientific attitude in everyone, encouraging them to read and think about science beyond their text books'. Apart from the editorial comments, the other feature for which I could take much freedom in writing was the one titled 'Think New'. It could be quite imaginative and funny too – developing an idea which was waiting to be realized. Being a myopic myself with eye glasses for all time use, one of my early entries for this feature was an adjustable-focus eyeglass, that could be enabled at will to convert ultra-violet or infra-red light into visible light to reveal the unseen. For good measure, there would be a mini-wiper to prevent fogging in the rains; everything to be powered by the bio-electricity from the face.

Gradually I could attract some contributions in terms of articles from friends, teachers and even from some well known scientists from Dhaka University. The first two years of the *Samoeeki's* publication took place from Chittagong, and our communication with the writers elsewhere had to be through letters only. These writers did not even know that the editor was a teenager. We got very good reviews from the national press. Many appreciated our courage in daring to bring out a periodical in science, and almost all assumed that it was in mature hands. All these boosted our self-confidence and made us quite optimistic about the *Samoeeki's* future. We created a network of representatives of the

magazine in every district and in every large high school and university of the province. Many of them were my old school friends, many others were identified later through mutual friends.

We wanted from the beginning to make it a chronicle of interesting things happening in the scientific world. And what greater happenings there could be in the early 1960s than the drama of men's adventures in space. After the Sputnik days both Soviet Union and U.S.A. had put separate man-made objects in the sun's orbit. Later, Soviet's Luna 2 sent to the moon actually crash landed on the moon – first time a man-made object reached a target in the space; and Luna 3 went round the moon and went on sending the photos of the other side of the moon which we could never see before. Yuri Gagarin, a Soviet cosmonaut, created history in 1961 by going one full round of the earth and coming back safe – a feat which was repeated next year by the American John Glenn orbiting the earth three times. We were excited and hungry for more detailed news of space explorations to use in our periodical. USIS (US Information Service) delighted us by responding to our request for more news. They started to send us by post not only news reviews on these, but also plastic half-tone blocks to print photographs, thus saving us the cost of block-making. More usefully, they started sending us free copies of famous popular science magazines – 'Science Digest', 'Scientific American' and 'Popular Science'. Thus our sources of information about scientific developments were much strengthened. Later still we got similar help from the British Council with 'New scientist'.

Now our major worry was how to make the *Samoeeki* talk about the works of our own scientists within the country. This was very essential to create enthusiasm in our readers but was not easy to do. Very few of our accomplished scientists were ready to write about their own works in a popular style for the general readers. We could gradually make a dent in this area too, starting with the 13th Pakistan Science Conference in Dhaka, February 1961. The tone of the conference was set by Abdus Salam, its General President, by delivering a very unconventional inaugural speech. He was a world famous theoretical physicist, but chose

his theme as 'Science in the struggle against poverty'. He made a case here in a rather sharp economic argument how an investment in science was essential to bring a change even in a poor country like Pakistan. He showed that nothing short of a cultural revolution, turning towards a scientific and technological future, would do. He urged all concerned especially the scientists to usher this revolution, to fulfill their social responsibility in this. Many years later, when I had an opportunity to talk closely with him, Professor Salam told me that he regarded this Dhaka speech as one of his best; and Salam was world famous as a popular speaker. This had been a game changer for our young periodical too. Not only did we find the theme for our 'science movement' – the struggle against poverty – but we found a good start for our direct science journalism, a life-long hobby I would take up for the sake of our *Samoeeki* from now on.

There were more practical sides of running a monthly periodical involving the financing, printing, and marketing. For financing we had to basically depend on the few small advertisements obtained through the interventions of friends and well-wishers. The price of the magazine had to be kept low to keep it affordable to the target readers. A low budget was possible because of the extreme cost-cutting. There was no paid staff, everything was done as a labor of love – fund raising, writing, editing, organizing, assisting in printing, promoting and marketing. For the first few years I had to do most of these single handedly except for the writing contributions from other authors. Then a couple of friends lent hands in things like advertisement collection, printing supervision, and marketing. The rest remained my responsibility forever. Things like copy-editing and proof-reading became a sort of second nature to me, till today.

I decided to cut some of the printing cost by taking a very unconventional step, that would also save some of my time and trouble by allowing a part of the printing supervision at home. We bought Bangla printing types and the cases to keep the types– one letter in each compartment. Then a compositor would handset the metal types into

words, sentences, and pages. We are talking here about the traditional letter press system which was based on such type setting by hand, not much different than from what Guttenberg had invented in the 15th century. This was the usual method of printing in our country at that time, and I became quite familiar with it; with things like type setting, block making, page make up, combining several pages into ‘galleys’ tightened into place, proof-reading after taking an impression from it, and so on. Now all those cases of types arranged to be hand-set by a compositor, were placed in the garage of our house. A professional compositor would visit for a few hours after his day-job and set types for the *Samoeeki*. We would finalize the composed metallic ‘matter’ after repeated proof-reading at home, before that could be carried to the press for printing. This arrangement lasted until the operations of the magazine was moved to Dhaka, as I myself had moved from Chittagong College to Dhaka University. Our printing method eventually changed with the advancement of the technology in the country. We graduated to automatically set lino-type machine using a keyboard, then moved from letter press to offset lithography disposing off the metal types, and still later to computerized printing. The shape of the *Samoeeki* had changed by now from a tabloid to a book shaped magazine with an artistic cover.

On the finance side, a more sustained help came early from an unexpected quarter. Professor Ahmed Hossain used to teach us Bangla drama in Chittagong college. He was an admirer of *Biggan Samoeeki* and would encourage us a lot. Sometime in 1961 he was suddenly transferred to Bangla Academy (an institution for the development of Bangla language) first as its Cultural Officer and then as its Secretary. Soon after taking the new job he asked us to apply to Bangla Academy for a grant for the periodical. Thanks to his support we started to get a small monthly grant which saved us from being too dependent on the very uncertain advertisements. Though our shoe-string budget did not see much improvement, the national recognition entailed in the Academy’s decision helped us later to get subvention from other prestigious

organizations such as Unicef (United Nations Children Fund). That gave our efforts a sort of stability.

Though it took a lot of time and trouble we did get our license, but not before some drama. The press clerk of the district magistrate's office processed some of the papers we submitted for the license, and saw an opportunity for himself noticing my tender age. He tried to extort money from Abba saying that a serious criminal case would be started against me under martial law for running a press without license. Failing that he filed a court case, to harass us. Fortunately the additional district magistrate who would be the plaintiff in this, could be approached and convinced that there is really no case to pursue. He happened to be the elder brother of a friend of Yunus Bhai in Dhaka University. The case was withdrawn but only after it was actually put up in the court, and I had to attend with my lawyer – in the same red brick court building which I used to pass every day to go to my elementary school. So much for my early and so far the only, brush with the court; and that was for *Biggan Samoeeki*.

What *Biggan Samoeeki* did on a quite permanent basis, was to change my lifestyle. It occupied more and more of my time, but then I turned those activities for this magazine into my major means of socialization and relaxation, as well as of pleasure. Much of those things concerned writing and doing the background reading for such writings. Even in things like copy-editing and proof-reading I could find a peculiar kind of pleasure. Then there was some active science journalism to do talking with the scientists, visiting their labs, interviewing famous people. Through all these I was delving into other branches of science and things like science history beyond the physics, chemistry and mathematics that I was doing for my own studies at the university. These also brought me some recognition as a commentator on issues such as education and development of science. I found myself among the newspaper contributors, in the speaking circuits of the seminars, and as an occasional participant in the science programs of Radio Pakistan, Dhaka; even though I was still but a junior student in the university. The scopes

got wider in later years in various forms while our activities around *Biggan Samoeeki* took more and more the shape of a countrywide movement, as its very first issue had boldly prophesied on its title.

In my early days in the university I had met Bhuinya Iqbal, then a high school student, but already with a lot of interest in printing and publication. Surprisingly he had good contacts with many famous names in our literary landscape and also many not so famous ones, helped by his curiosity and inquisitiveness about such people and their contributions. He introduced me to some of them and also to his hobby of collecting and reading rare old books – a strange hobby for his age. He knew well an obscure street in the older part of the city where such rare gems would be available. My chance meeting with Iqbal became the beginning of a life-long friendship, and more immediately gave a very enthusiastic co-worker for *Biggan Samoeeki*. Shamsul Hossain, my old school friend who had encouraged me to organize my first science exhibition, was in Dhaka now for his studies. He also lent a hand in the regular publication of the magazine by making journeys to USIS and also to the printing press, gathering resources and doing a part of the printing supervision. We even changed the press to take it near his house. Thus with Iqbal and Shamsul on board, the *Samoeeki*, for the first time, had a sort of team effort behind it.

Shamsul and I had revived some of our old hobbies together, during the time he spent in Dhaka. One of these was to visit historical places and museums in and around Dhaka. Dhaka was full of history having been established as the capital of the eastern wing of the Mughal empire of India centered in Delhi during the early 1600s. When the British East India Company and other western powers came to India for business and gradually took over as rulers, Dhaka was a great center of commerce for them. Then there were rich relics from the British colonial time, even some relics reminding of the small community of Armenian Christians who had settled in Dhaka. It was a great joy for the two of us to make expeditions into these, into the old artisan quarters of the city and the old ‘factories’ belonging to the English, Dutch, French businesses along the

riverside. These had been used to export the very fine ‘Muslin’ cotton cloth, for which Dhaka was world famous during the 17th and the 18th centuries. The experiences from these expeditions came handy for me when much later I was commissioned by the Museum of Dhaka to research and write a book on the technological history of Dhaka.

In my own university department I was witnessing another kind of history on a daily basis. The Physics Department was housed in a historical redbrick building of beautiful Indo-European architecture called Curzon Hall – named after the British Governor General who by partitioning Bengal made Dhaka the capital of a new province Assam-East Bengal, in 1905. The building was originally built to house important offices and the council assembly for the new province. But later was given to the university when the new province had to be abolished in 1911 in the face of a huge movement against the partition of Bengal. The decades of 1920s to 1940s could be described as a kind of golden age for our Physics Department in Curzon Hall and also for a few other science departments housed in buildings of the same style in the Curzon Hall compound. Much of the work done during the time could claim to be of world standard. Thanks to one young professor Satyendranath Bose in 1924 the Physics Department here could find an honored place in the development of quantum mechanics, the predominant modern theory in physics. It is now common knowledge to any physics student that all fundamental particles are classified into Fermions and Bosons. Bosons are carrying the name of Satyendranath Bose because they follow Boses’s quantum statistics – his very fundamental contribution to physics.

Although our teachers were not referring to this history much in our classes, there were all the reminders of the Bose’s time around us – old lab equipment designed by him, furniture, photographs etc. and we felt very proud of our scientific heritage. The most potent reminders, however, were Ganga Da and Hiralal Da (Da – or “elder brother” - stands for a mark of respect) two old lab assistants who used to work with Bose personally. They kept up the Bose legend in a gossip sort of

way. It was almost impossible at that time to contact anybody in India where Bose was spending his retired life in the city of Calcutta, his ancestral home. But we tried our best to gather information and write about the life and works of Bose for the *Samoeeki*. Later when it became possible to write to him, and to send copies of our magazine to him, he would make warm comments and send words of advice for us. He wrote a remarkably elaborate letter to me as the editor of the *Samoeeki* which remained a treasure for us forever. In this he profusely appreciated our efforts, and referred to his own early attempts to popularize science using Bangla language while he was in Dhaka. He mentioned the club he had helped to form called 'Group of Twelve' which would meet every week for this purpose and would publish a popular science magazine. Bose's letter was undated, but from the postmarks on the envelope we could know that it had been posted only a week before he died in February 1974.

'Down with the Ayub monarchy'

My two years in Chittagong College had been spent under the full blown martial law. But still there were clandestine student politics there, and I got elected to the nominally apolitical college students union actually with the support of USPP (United Students Progressive Party), the party I had joined. This had been Yunus Bhai's old leftist party. As the magazine secretary of the union my responsibility was to edit the college literary magazine *Anweshā* (Thirst for knowledge). This was a prestigious and very enjoyable task, giving me a place in the long honor-list of successive editors whose names were printed in the magazine. But a shock was waiting for me in the shape of undeclared censorship by the college authorities – censoring everything that did not match the ideas of the martial law administration. Actually there had been a colonel from the army always physically present in the campus poking his nose in everything. The worst of the censors came when I wrote my editorial of *Anweshā* on the theme of the centenary celebrations of our greatest poet Rabindranath Tagore (Nobel laureate in literature 1913). Tagore was a

taboo to the regime mainly because he was a Hindu, and the tremendous influence of his writings on the Bangla speaking people was perceived by the regime as a threat. This created an impasse. I could not accept the fact that such a great event as Tagore centenary would go uncelebrated in my *Anwasha*, nor would the authorities budge. The whole students union stood by me on this issue. At last a compromise was mediated by our principal by having me add several other important events of 1961 along with the centenary in the editorial.

In general Ayub's regime was having its way in all sectors in the country. All dissenting voices were completely silenced by bans, arrests and repressions. There was nothing that could be called political opposition. This was the case from October 1958 to February 1962, when the first protest showed its head. Students of Dhaka suddenly came to the street and demonstrated against the martial law. On that morning people were surprised to see a graffiti with huge capital letters in English painted on the boundary wall of the secretariat building, the very hub of the government, saying – DOWN WITH THE MARTIAL LAW.

All these were unthinkable in those days of military rule, fearing the harshest of punishments. But the 'February Movement', as it came to be called, escalated, and the anti-Ayub demonstrations got quite out of hand. The rumor was that the Governor of the province General Azam Khan, originally one of the linchpins of the declaration of martial law, refused to order to shoot the demonstrating students. The rumors could very well be true, because Azam Khan by then had become a very popular people's man in the province, and Ayub sacked him some time after the 'February Movement'. The explosive part of the movement gradually died down, but a simmering agitation by the students continued even though political parties remained banned and helpless. A single theme came out of it characterized by a slogan first raised then by the students and became ever louder through the duration of Ayub regime – 'Down with the Ayub monarchy'.

This was the scenario when I shifted to Dhaka and got admitted into Dhaka University, some months after the ‘February Movement’ of 1962. Technically speaking my admission was in one of the halls of Dhaka University – Salimullah Muslim Hall (S. M. Hall). Our university was designed on the model of Oxford University in Britain with its ‘halls’ used as the ‘colleges’. A hall would therefore be the major venue of the student’s individual studies, and his/her participation in the social and cultural arena of the university. In short it was the place for building up one’s personality, and not just a place for lodging. That is how the hall authorities led by the faculty members acting as the provost and the ‘house tutors’ worked; and the various facilities for study, sports, cultural and social activities of the hall were organized. The most important institution of the hall was the Hall Students Union elected by all the resident and non-resident students belonging to the hall.

Every hall had its cherished traditions and special values which it wanted to uphold. But S. M. Hall was the premiere hall in many respects – mainly because it was traditionally attracting students with leadership qualities important in all vital sectors. It was housed in a two-storied building spread out in quadrants with well-trimmed gardens as the inner courtyards, closely resembling a Mughal emperor’s palace. Its shining ceramic domes on the four corners of the building had been quite a landmark of the area. But it was because of its famous alumni who almost monopolized the bureaucratic and political leadership of East Bengal for many decades, that it occupied an elite position among the halls. Its students union would be informally regarded as the main voice of the whole student community of the university. Naturally when I arrived at the hall and started to share a room with three other roommates, I was actually arriving at the hot bed of the political and cultural undercurrents of the province, most importantly of the simmering movement against the ‘Ayub monarchy’.

Soon I got acquainted with renowned leaders of the various student parties, and of course paid my courtesy visit to the Vice President (VP) of the students union, its chief student executive Mr. Khurshid Hamid –

everybody would refer to him simply as Mr. VP (he later became a top diplomat of the country). He belonged to the party called NSF (National Students Federation), whose politics was the opposite of my own party EPSU (East Pakistan Students Union), the mother party of my college day's USPP. NSF was a conservative party now in power in the hall, while EPSU was a left-leaning party; but that did not deprive the VP from the respect of EPSU members, or of any other student for that matter. There were two other important parties - 'Students League' - allied to the Awami League of national politics and 'Students Force', another conservative party, but, unlike NSF, only slightly right of center. All of the parties seemed for the moment to make a common cause of their anti-Ayub stand. Therefore, there were two common slogans for all - 'Long live the student unity' and 'Down with the Ayub monarchy'. But they were all competing fiercely to get more members from the newcomers and to win the next elections of the students union. These, everybody thought, would put them in a better position to influence the national politics, as Ayub had just allowed the political activities to begin again.

None of the student parties, however, were very monolithic; there were many shades of opinion within the party. I soon found this out about the party I supported - EPSU. In general it was for socialism, a solidarity with the socialist world and that with the poorer nations struggling against colonial or neocolonial powers. It also strongly supported secularism and provincial autonomy in the country. But there were many different undercurrents within the party - both political and cultural. Living in close proximity with each other it was very interesting to discuss and debate with young people with such fine structures of the same general political thinking. Some were devoted communists - very loyal to communist party hierarchies, some were liberal democrats, some were skeptics, some bohemians, and so on. All in all S.M. Hall was a wonderful place to develop friendships and camaraderie, some of which lasted lifelong. A minority of these young people were thinking of a vocation in their subject of study (mostly social sciences, literature and

humanities in S.M. Hall) or in their political or artistic persuasions. But the majority had only one ambition – to compete in the Central Superior Service (CSS) examinations to qualify for the central government cadre services which would ultimately make them top bureaucrats of the country. The cadre services included foreign service, civil service, police service, accounts service, taxation service, customs service, etc. approximately in that order of preference by the candidates. Therefore right from the beginning they would be busy preparing for the CSS exam which would come in four years or so. Though I had absolutely no fascination for those jobs, I enjoyed interacting with my friends about their CSS preparations – especially in the required fields of current affairs, general knowledge, and English proficiencies apart from their major fields of studies. They would be well equipped with the various CSS preparatory books and of course with the current issues of famous international weeklies such as *Time*, *Newsweek*, and *The Economist*. But, however busy they were with these and other studies, a part of their mind would be occupied by the thoughts of the political future of the country in the absence of democracy.

The simmering anti-Ayub movement suddenly turned into a boiling one in August 1962. This was triggered by the recommendations by an education reform commission known as Sharif Commission. The students, mostly the college (upper high school and beyond) students, thought that it would make education difficult for them and had been engineered by the government to stop the anti-Ayub movement. It triggered an almost continuous student strike and occasional general strikes causing a total stoppage of the city, and non-stop student meetings and processions against Ayub regime. Most things were coordinated by an ‘All Party Action Committee’, though much was spontaneous. Our early morning classes of the day would start as usual, but soon a group of striking students would arrive at the class and start to make a speech much louder than that of the professor, and would raise slogans until it would be impossible to continue with the class. Many of the students would then end up in the meetings and processions. The

movement reached its peak on 17 September, when a general strike was declared. Some of the processions went violent, the car of a provincial minister was attacked and burned, and in the subsequent police firing a school student was killed. Fearing further escalation the government gave in and declared that the Education Commission's recommendations would not be implemented. With this victory won, students had to end this phase of the agitation which came to be known as 'September Movement'. 17 September would be celebrated in the subsequent years as the 'Education Day', each time giving a new impetus to the anti-Ayub movement.

President Ayub had changed his strategy by then. He gave a new constitution through a hand-picked constitutional commission, ensuring in it his continuous rule; and lifted martial law establishing a constitutional government. But before everything else he introduced his own brand of democracy calling it 'Basic Democracy'. Arguing that Pakistan is climatically 'too hot' for the western style traditional democracy, he touted that his version would suit the 'genius of the country'. In the basic democracy the universal suffrage would be applicable to only the village level election of the lowest rung of the local government called Union Council. The local government representatives thus elected would be called Basic Democrats and there would be 40,000 of them in each of the two provinces of Pakistan. The 80,000 basic democrats would form the electoral college to elect higher bodies of the local government in their respective areas – each level electing the next higher level. But more crucially this electoral college together would elect the President of the country and the members of the national and provincial assemblies in their respective constituencies. Thus by 1960 the electoral college had already been formed, and the president was elected by it in a Yes-No vote, in which only Ayub was allowed to be the candidate. Eventually the assemblies were also elected by the electoral college in a country where the political parties were still banned.

The constitution was promulgated in June 1962. The ban on the political parties was lifted and Ayub formed his own party becoming a politician himself. Actually Ayub took over a part of the original Muslim League through a convention of that party, thus his party came to be known as Convention Muslim League. This being the party in power, many other elements flocked to this party too. And of course, the overwhelming number of members of the national and provincial assemblies elected by the basic democrats now joined this party.

December 1962 was my first experience of the S.M. Hall Union election, which now attained an additional significance because of the revival of mainstream politics in the country. The Dhaka University students in general and S.M. Hall student body in particular had always been regarded as a major political opinion leader. Though designed as an internal representative body to run the cultural corporate activities for the hall, its actual impact went far beyond that. I was nominated by my party EPSU to be a candidate for the post of Reading Room Secretary. Our panel was headed by the candidate for VP – Jamil Akhter who already proved his worth as a working journalist of very progressive outlook. During the campaign much was spoken about EPSU's credential in the face of political crisis in the country, and its support in the struggle of the oppressed people of Africa, Asia, and Latin America. Of course we had to refute the allegation by the other parties that EPSU was just serving and taking its cue from the communist regimes of Moscow and Peking.

S.M. Hall had many campaign rituals which I found quite engaging—campaigning door to door in the hall, small indoor meetings in one or the other of the student rooms, addressing meetings in the campus, visiting the non-resident ‘attached’ students at their houses etc. But the most exciting parts of the campaign were the ‘platform meetings’ every night for a week in an open corner of the hall, each party in its own designated place. Here the candidates and party leaders would be making speeches, answer questions from opponents, and chant slogans in between. ‘Down with the Ayub monarchy’ was the major theme, in its various renditions. Apart from the candidates’ credentials such as high performance in

academic or other areas, capability to make convincing speeches in Bangla and English counted a lot. That year's deciding factor in the election would be the party's role in the recent anti-Ayub movements. On this point some mistrust had been created. Already there were signs of clandestine communications between some parties and the Ayub regime. The most suspicion was on NSF, our major opponent. NSF was still making anti-Ayub noises, though many thought this was just for show (they would soon become Ayub's party in the university).

When just before our election EPSU claimed that it had a 'bombshell' in its campaign arsenal, everybody got curious. The bombshell that was revealed was a letter by a hotel manager in Rawalpindi, Pakistan's provisional capital. It said that one Mr. Hasnat and two friends, all from East Pakistan, had been guests in the hotel on certain dates (ostensibly to parley with President Ayub Khan). Hasnat was the president of NSF, and the two others were its senior leaders, and they denied that they had ever visited Rawalpindi. All these campaigns, even the 'bombshell', did not help us in the election. NSF and its coalition partner won the election. But EPSU became a formidable force in S.M. Hall from then on, winning every hall union elections from 1963 to 1969, the period when the anti-Ayub movement gained its pace and ultimately dethroned him. In the meantime, however, we had a long way to go. I became more active in the process of building up the student-opinion against the regime. On the same day as our hall election of 1963 came a shattering news that Suhrawardy, the great leader, had died in a hotel in Beirut, Lebanon. The nation lost the helmsman of democratic politics behind whom it could rally, and faced dark days ahead.

Ayub's regime was using every means to bring back the old communal politics of the colonial time, and it cleverly engineered a bloody communal riot in Dhaka city to divert the anti-Ayub movement. It took advantage of the incidence of a theft of the sacred hair of the Prophet Muhammad from a mosque in the Indian administered Kashmir. For the whole month of January 1964 the city saw the public killing of minority Hindu people, burning their houses and business concerns, and also

killing anyone else including Muslims who tried to save them. Ayub even tried to justify this as the anger of the people. Such barbaric scenes were unthinkable at that point of our history, and the whole province led by the opposition political parties and the intellectuals stood up against it. We in S.M. Hall formed 'Resistance Teams' to guard potential victims and the refugee camps, as did other students. The whole resistance was highlighted by the big red letter banner-heading in the most popular newspaper the *Ittefaq*, sayings 'East Pakistan Do Resist'. The government came under tremendous pressure and the murderous riot was stopped within the month of January.

The students' anger to the regime was expressed within months at the convocation ceremony of the new graduates of Dhaka university, presided over by the Governor of the province Monem Khan as the chancellor of the university. Monem Khan, a sycophant Bengali politician whose only task was to please Ayub, was detested by the students. At the convocation ceremony some of the graduating students jumped on him and foiled the whole proceedings. The picture next day prominently in all newspapers of the gowned students attacking the gowned governor and the police trying to move the governor to safety, made a huge political statement. The very harsh reaction from the regime made the political impact of the event even more far-reaching. The degrees of many of the graduates were cancelled and they were expelled from the university – all of them leaders of various student parties. Those who could be found were arrested. At that time I happened to be the roommate of three senior students who had received their degree that year. One of them Zakir Ahmed was a close EPSU comrade (later a judge in the high court). He was one of the protagonists of that drama and one whose degree was cancelled. So I had all the insider stories of that very thrilling incidence soon after it happened, and the follow-up too. There was an arrest spree of the student activists, and many of my friends in S.M. Hall ended up in jail. But soon they had to be released, and even the degrees and the studentship had to be given back by court's

order. The whole episode was a great setback for the regime and its public support went steadily downhill in the province.

At the very beginning of the next year, 1965, Ayub had to face a presidential election. Normally it would have been a clean sweep for Ayub – after all it was those 80,000 basic democrats who would reelect him. But these were different times and many of the basic democrats had been swayed to the opposition cause. The opposition parties formed a coalition called Combined Opposition Parties (COP), and decided to put forward a single candidate against Ayub. It was agreed that if their candidate won, the new president would immediately take steps to formulate a democratic constitution with universal suffrage. Some hope was created that Ayub could be defeated at his own game. The candidate they could all agree on ultimately was Miss Fatima Jinnah, the sister of Jinnah, the founder of Pakistan. Never married, she had been a close aide and very active political companion of her widower brother through the struggle for Pakistan and during the one year that Jinnah lived after the creation of Pakistan. Then she completely withdrew herself from public life, though extremely revered by the people who used to call her ‘the mother of the nation’. Now COP brought her back to politics, and even the orthodox Islamic elements within COP agreed to set aside their own edict of unacceptability of woman leadership in Islam. Miss Jinnah became even more popular by giving her consent to lead the struggle for democracy; and there was a popular upsurge in support of her. We turned our S M Hall election, just before the presidential election, into a preparation for the latter. We followed COP and put a combined panel of candidates with VP from EPSU, against NSF which was now very much a part of the Ayub campaign; and we won handsomely.

Though it was only the votes of the basic democrats that would matter, the campaign was a general one – with both General Ayub and Miss Jinnah travelling across the country, addressing huge public rallies, and of course also addressing meetings of the local basic democrats. It was expected that there would be an influence of the public upsurge for Miss Jinnah on the basic democrats, and many were predicting a win for her.

Students left their classes and spread out to contact the basic democrats at their homes. For example, a small group of us visiting a remote area spread ourselves to seek out the basic democrats of the area – an exercise that took our whole day walking through village mud roads. But all these hopes were in vain. Ayub still won with 64% of the votes. , It became obvious that he had been using his power as president to the utmost level to gain the critical votes.

The election victory did not allow Ayub any peace of mind for long. The public upsurge that people saw during the election showed that he was quite vulnerable. To prevent further erosion of his grip over politics, Ayub took a novel but risky strategy. He started a war with India and tried to put the whole nation into a war-frenzy state. The actual war was confined to West Pakistan. He first provoked skirmishes across the line of control in Kashmir, and also in another completely new front in the wetlands of the ‘Run of Kutch’ just south of Pakistan, parts of which Pakistan used to claim. But these gradually escalated to a full scale war by August 1965, involving fierce tank battles on the Punjab planes on both sides of the border. Some called it the greatest tank war anywhere since the World War II. Both the armies penetrated deep into each other’s territory and occupied vast inhabited areas. In particular Lahore, the great city and capital of West Pakistan, was threatened, and Indian advanced forces reached the outskirts where an irrigation canal was the last line defense of the city. But this attack was ultimately repulsed at great human cost.

Though we were far from the war front, the patriotic fervor and war-frenzy took over here in East Pakistan too. In the short run Ayub’s political strategy worked brilliantly, putting an end to the anti-Ayub movement for the moment. All news now was war news, and more than that war propaganda. But there was also a genuine feeling of pride especially when the valor of East Bengal Regiment, the very limited representation of our province in the army, proved to be instrumental in the defense of Lahore. There was, however, a sense of complacency within the regime that India would not extend the war to a two-front one

by attacking East Pakistan. Perhaps it was because of this that our final examination for graduation continued during the war. Actually it was precisely on the first day of our practical examination in the physics laboratory that an air-war started with the bombing of some of each other's cities – still only in the west. Now we saw some semblance of war effort around us in the shape of anti-aircraft guns and walls of sand bags placed near all important buildings; and at night a complete blackout of the city carefully covering the windows of all houses. Air raid sirens and activities of the civil defense were common, even the arrest of some so called 'spies'. Obviously these were meant to keep the war-fever high, as we never heard about any actual raid.

Both sides soon got exhausted, and, in September 1965, sued for peace after 17 days of war. The loss of life (some 4,000 soldiers) and properties were severe on both sides, and no side could claim victory. However, Ayub succeeded in distracting the people and putting the opposition in disarray; but only just. Soon this would prove to be the trigger needed for the start of his steady fall. As for me personally, I had to get a little more concerned than usual with the twists and turns of this fall, because that December I was elected the Vice President of the S M Hall students union.

My days as Mr. VP

The anti-NSF coalition in the hall election last year was now a thing of the past. Every student party was preparing to contest for the leadership of the students union in the changed postwar situation. The S M Hall unit of EPSU had recommended my name as its VP candidate in the next election and it had got the nod from the central leadership of EPSU. I felt flattered, but a bit scared too. Traditionally the S M Hall VP was expected to run some student affairs and also a to be able to speak for the whole student community gaining their attention and trust. Making impressive speeches, of course, was a requirement, and I was already a familiar figure in doing this for EPSU. But lately with the movement going, the VP's participation in active politics was becoming more and

more a norm. That would be a big commitment to make in those uncertain days, especially when my real passions were science and science journalism. Strangely, these very proclivities might have contributed to my nomination in the first place. I just had graduated with a first class and already had made a name for myself in writing and speaking about science, and even as an editor. Such things also counted in getting elected as VP, particularly in S.M.Hall.

Our election campaign was going well, and EPSU had a very good prospect of winning. But early in the campaign even before the last date of submission of candidature, we faced a catastrophe. The ultimate origin of this was neither recent nor local. It was nucleating for some time in Moscow and Peking, eventually causing the final breakdown between the two giants of the communist world – Soviet Union and China. Their relations had gone sour due to the Soviet leader Khrushchev's deviation from Stalinist policies. Mao in China favored the Stalinist line. Now it developed into a bitter enmity that also made communist parties in other countries side with one camp or other. In some cases the left-leaning parties were polarized into pro-Moscow and pro-Peking factions. The latter happened in our leftist parties and their front organizations including the student supporters. We knew who stood where in the central leadership of EPSU, those leaders who wanted to be very correct in their political theories and in their relations with either Moscow or Peking. The rank and file of EPSU was hardly bothered by this division. But suddenly this became a great issue in the Council Meeting of EPSU, and after tumultuous altercations and even some violence, the council failed to agree on a united Executive Committee of EPSU. Sadly EPSU got formally divided into two parties – nicknamed Moscow group and Peking group.

This happened when we were facing an election in the hall in which the unity of our party was of prime importance. The main leaders of the Peking group belonged to our hall and therefore in general EPSU here was leaning towards that group. But there were dissenting voices, and we even faced the possibility of two competing panels of candidates from

EPSU. I, along with some friends, tried to keep up the call for unity and dissuade those who wanted to put up an alternative panel, and we succeeded. After all, most of us had been close personal friends for years.

The national press gave a lot of attention to our election, reporting prominently on a daily basis. As a VP candidate I had to make one major speech every night at the platform meetings. There were several fronts on which we had to put up our arguments and plans. The governance of the university was deteriorating fast under a vice chancellor who was serving Ayub's politics in everything. In some halls Ayub's student party NSF had established a reign of terror, with the vice chancellor's tacit support. We declared to boycott him in our hall if elected. We also had to explain our next strategy in the anti-Ayub movement. The international solidarity with the struggling people of the world was also a pivotal concern for EPSU. We had to answer some uncomfortable questions at everyone of these meetings – for example, about the division of EPSU following the break-up between Moscow and Peking.

The result of the election was a mixed one. I won as VP, but about the half of the other positions went to NSF. I now had the unenviable task of running a student union while boycotting the vice chancellor; with a basically hostile hall authority in the person of its provost, and half of the cabinet from a regime-supporting party. My personal relations helped a lot. The provost Mofizuddin Ahmed, an accomplished chemistry professor, knew me as his favorite student. Most of the NSF members of the cabinet were old friends who held me in good esteem, and were often happy to leave the hall affairs to my judgment and ability. So in general we had a workable cabinet while still maintaining our differences in the political sphere.

My personal routines changed drastically with the assumption of the office of the VP. I now lived in the designated VP's room, would regularly attend the union office, and receive people in both places. Though most visitors would be fellow students from the hall, there were

many other visitors including journalists. Even among my hallmates I lost my usual name to go by, becoming simply Mr. VP instead. Tasks to attend included student welfare activities and cultural activities. The hall had a sizeable team of employees who also needed union's help for their welfare. Sometimes the younger students looked up to the VP for guidance, mentoring, or help in conflict resolution. I actually enjoyed getting involved and trying out my ideas. The best reward of all these was to know and make friends with so many bright young minds. For decades afterwards I would bump onto old S.M. Hall men who would hug me, show me respect, and try to help me in whatever way they could, just because once I had been their VP. But things then also made me a subject of constant scrutiny within and outside the hall. Criticisms took many forms. For example, one day an anonymous message in English was pressed through my doors – 'Mr. Vice President, too good is no good'.

As the tradition had it, VP of S.M. Hall was automatically included among the public notables of the city, receiving regular invitations to the various political, socio-cultural or welfare circuits. Similarly delegations from various organizations would come to propose collaborations, or co-sponsorship of an initiative. There would be goodwill delegations too – mostly from universities in West Pakistan. A delegation from the student government of the University of California at Los Angeles, U.S.A. was surprised to find the extent of our concern with the international politics.

Surpassing all these routine things the S.M. Hall VP was a political animal to the larger community of the university. His positions and comments on political issues counted as those of an important opinion-leader, and there was no dearth of issues on the national and international front at that time. When we took over the students union in January 1966, the war between Pakistan and India had just ended by the signing of a peace treaty by President Ayub and the Indian Prime Minister Lal Bahadur Shastri, both sides agreeing to go back to the prewar positions. The treaty was mediated by the Soviet Prime Minister Kosygin and took place in the Soviet city of Tashkent (in Uzbekistan). Lal Bahadur Shastri

suddenly died from a heart attack there the day following the signing, and we saw in the newspapers the historic picture of Ayub and Kosygin being among the pallbearers. The people of West Pakistan, very warlike against India, were mortified by the Tashkent treaty. Zulfikar Ali Bhutto, Ayub's rabble-rousing foreign minister, under whose watch the treaty had been signed, now became the champion of the angry people condemning the 'cowardly capitulation' of Ayub. He resigned and later started his own party – the Pakistan People's Party (PPP). Now with West Pakistan in an anti-Ayub movement too, this became the beginning of the end for Ayub. We did not question the peace treaty, but pointed out how the war proved the vulnerability of the defense of East Pakistan, which had been totally left at the mercy of India.

Before leaving Ayub, Bhutto had successfully converted the president into adopting a completely new foreign policy oriented towards China. During the war USA had refused to supply arms to Pakistan, and Pakistan now became heavily dependent on China for arms and for geopolitical positioning against China's archenemy India (they had fought a war in 1962). Ayub now became a new fan of Mao's China, vocally expressing his love for it, and adopting pro-China policies. This could not but influence our pro-Peking political parties and Peking group EPSU – making some of the EPSU leaders softer towards Ayub. Its rank and file, however, did not have any illusion about Ayub; but still suspicions lingered on, and the task of the VP to explain it away to all was made difficult to that extent.

The happenings in China itself created further confusions within the ranks of our EPSU. The Cultural Revolution in China, 'The Great Proletarian Cultural Revolution' to give its full name, had started. It was Mao's attempt to discredit his own state and party leadership to reinforce his own authority and the idea of pure revolution, by asking the youth to dismantle the leadership. His simple instruction to them was 'Bombard the Headquarter'. Hundreds of thousands of young 'Red Guards' were let loose on the cities, institutions, established party leaders, and all people in authority including their own teachers and parents; waiving

Mao's 'Little Red Book' – a collection of his important quotes. It was an exciting scenario for all of us who had been inspired by Chinese revolution. But soon, when the extent of destruction, and deaths it caused even for humble people like teachers became known we had to criticize it in spite of the ideologies of our own EPSU.

The whole of left politics had a feeling of losing initiative to the Awami League Leader Mujibur Rahman when the latter's 'Six Points Demand' caught the imagination of the people of East Pakistan. It was a demand for an unusually extreme form of autonomy for the provinces. Mujib first presented the demand in February 1966 in a conference of opposition parties in Lahore, West Pakistan, but it was rejected off hand by almost all as too radical for the unity of the country. Even many in his own Awami League were skeptical. But Mujib boldly went ahead with it, first making it a program for his party and getting elected as the party's new president, and then leading a huge movement with this demand which the party called 'the charter for the survival of the Bengalis'.

Issues that prompted Mujib to put forward the six points demand were not new – it stemmed from the exploitation of East Pakistan by the rest of Pakistan. Most parties in East Pakistan, particularly the left parties and EPSU, had been vocal about the exploitation and the need of complete autonomy right from 1954. Bhashani, the leader in the left even had declared as early as 1957 that the province would be ready to say goodbye to Pakistan unless such autonomy was agreed upon. Notably several young economists from Dhaka University, such as Rehman Sobhan and Anisur Rahman, later put forward a proposal for two separate economies for the two provinces of Pakistan to avoid further exploitation. Mujib's six points demand now took this further. Till recently the leftist parties, and EPSU among the student parties, were the champions of autonomy and also of the protection Bengali culture, whereas Student League, the Awami League student front, was more busy projecting itself as a liberal democrat party pursuing a middle course avoiding 'the danger' of socialism and any radical politics. Now things changed overnight.

The six points demand offered the control of only defense and foreign policy to the federal government, bringing everything else to the province. The provinces would have two separate easily convertible currencies; or a single currency with adequate measure to prevent transfer of capital between the provinces. The provinces would have separate bank reserve, taxations, and currency policies as well as separate foreign exchange accounts. They would be the sole authorities to collect tax from which they would give the due portion to the federal government. East Pakistan could keep its own militia. The defenseless situation of East Pakistan during the recent war provided an argument for the six points demand, and the movement for it.

We in EPSU got perplexed by the speed with which things happened and the way people responded to the six points movement. We were for it in principle, but for us the provincial autonomy was important mainly to change the fate of the poor; autonomy for the benefit of our own capitalists and own bureaucrats and such other privileged classes only, did not make sense to us. But the public mood was different. It was in these circumstances that we were trying to explain to our fellow students our position on the six points demand. Ayub regime's reaction to the six points was very fierce, he himself threatening to speak in the 'language of weapons'. The regime jailed all important Awami League leaders including Mujib. Such repression only strengthened the movement, which culminated in a violent general strike on 7 June 1966 in which 13 people were killed. After that there was a lull in the movement, which lasted for many months – but it was more like a calm before the storm.

In July 1966, I was a part of a student leaders' delegation to West Pakistan. This was on the invitation of the Bureau of Tribal Agencies of West Pakistan which was responsible for the welfare of various tribes in north-west and western parts of that province; and they wanted a closer understanding between us and the youth in the tribal areas. The visit, however, gave us some opportunities to feel the political pulse in the more remote, marginal places in West Pakistan. But on this occasion I

noticed something interesting about our own people. Before leaving Dhaka for this trip we had been briefed by some very senior Bengali bureaucrats of the government in their offices here. They advised us to talk frankly about the six points demand with our West Pakistani counterparts and officials there, explaining to them how the public opinion here is overwhelmingly for this demand. Later in this trip when I visited some Bengali officers in Islamabad, the newly created city as the federal capital of Pakistan, they told me exactly the same thing. Obviously the six points demand was very much in the Bengali officials' mind.

Perhaps whoever among Bengalis had to work closely with their West Pakistani counterparts, the sense of discrimination and exploitation were deeply felt by them. I remembered that long ago Mohammad Hossain Bhai, the friend of Yunus Bhai who had left school to join Pakistan Navy as a seaman often used to complain about severe discrimination the Bengalis in the navy suffered. During my journey for World Jamboree, the contingent leader, a high-level bureaucrat from West Pakistan, would often lament about how God had forced them to live with such strange people as Bengalis with strange language and culture. He would be totally insensitive about our feelings. On the other hand I had wonderful close friends from West Pakistan like Mostak before and now in the university among my class mates.

From our talks with the students and officials in the North-west Frontier region and Baluchistan region in West Pakistan, where we travelled widely including in the great cities of Peshawar and Quetta, we realized that Ayub regime had gone very unpopular there too. But this was not so much for Ayub's decimation of democracy, but for humiliating the nation by capitulating to India. Students in general seemed to be quite apolitical, and they had only hazy ideas about East Pakistan. But the local officials and politicians we met showed quite intense interest in the recent six points movement, because the Pathans and Baluchis who formed the majority population in these regions themselves felt exploited

in the combined province of West Pakistan by the dominating Punjabis. Many were curious to know what exactly happened on 7 June.

These regions or parts of these had a sort of 'free for all' atmosphere, because of the unruly and independent attitude of the tribes here. For example, when we travelled through Khyber Pass to the Afghan border, we found very few evidences of the Pakistan authorities' control and it was visibly a heaven for black marketeers and free raiders. Then in Dara Adam Khel we saw skilled people making imitation Kalashnikov automatic rifles and very modern-looking revolvers in little cottage industries in every household. Obviously the laws of the land were not applicable there. The state of Swat, where we went next, was a semi-independent monarchy whose ruler's son was married to Ayub Khan's daughter. In the famous Swat Valley with its beautiful river surrounded by ice-cladded mountains, one could enjoy the beauty of Switzerland. Badshah Shahib, the nonagenarian ex-king, the father of the present ruler along with his younger son engaged us into a very polite and hospitable conversation. But when we were out of the palace in the bazar a tribesman came forward to me and without any comment untucked my shirt. This reminded us that every tribesman was ready to police his customs and what he thought was the religious edict. No wonder, now almost half a century later, Swat could be controlled for months by a local Taliban demagogue; and even after his control was over Malala Yusufzai (later Nobel Peace Laureate), a local school girl, had to pay dearly with a bullet in her head for her love of education.

My last days as VP (till January 1967), were spent in a political stalemate – the six points movement gaining silent strength, Ayub in a threatening mood, and leftist politics including that of EPSU finding it difficult to decide its own strategy. My immediate worry was that our present ambivalent political situation might reflect unfavorably on EPSU during the next hall election, and that might include my tenure as VP. My worry was proved to be needless. As the outgoing VP and the senior campaigner in the election, I had the satisfaction of witnessing an even bigger victory for EPSU this time.

Savoring the science institutions

My time in the physics department in Curzon Hall and the other departments around was as enjoyable as ever, even when I had to perform my duties as the VP. Moreover, another great institution of science was added to my regular places of work – Atomic Energy Centre (AEC) Dhaka, which was a few minutes' walk from Curzon Hall. I was now a graduate student in physics, and had taken up a research problem for which experiments had to be done in AEC. My curiosity in multi-disciplinary science, and my role as a self-styled science journalist made me take a bit more interest in these institutions – at both of which I would work professionally soon.

The Curzon Hall complex with its various departments became quite a familiar place to me knowing many of the students and faculties. The geology and zoology museums were a kind of gold mine for me – the former with the collection of rocks and fossils, and the latter with that of the local fauna. I was proud to be close to some of the renowned professors; some were my teachers, some others I interviewed more than once for *Biggan Samoeeki*. One of the latter was Quazi Motahar Hossain, Professor Emeritus of statistics. Now in his eighties, he was a legendary figure – our foremost scientist in statistics, a great writer of Bangla literature, a leader of our progressive intellectual movement of 1920s, even a chess champion of the province for many years. I would mention another personality who could personally be credited with the establishment several institutions. He was Kamaluddin Ahmed, Professor of biochemistry whose one work I first came to know as a child in an American children's book titled 'The story of wonder drugs' that mentioned 'Ramnacin' as a new antibiotic, Ramna being the idyllic location of our university. Kamaluddin had discovered this antibiotic as a young post-doctoral researcher.

My work in AEC involved taking advantage of an important facility of nuclear physics there – the 3 Mev Van de Graf generator, a reasonably

powerful particle accelerator as the low energy accelerators went. My job was to see how neutrons are scattered by sulphur nuclei in a target of pure sulphur that we made. I had to depend on an expert employee of the Atomic Energy Centre who ran the accelerator, and I had to wait for the occasional machine times I got. The campus of AEC also housed the eastern branch of the Pakistan Atomic Energy Commission. AEC had another important facility in a small building of its own – an IBM 1620 computer, the first computer ever in our province. Though I did not really need the computer for my calculations, it was fun to use it anyways, again with the help of the experts who managed it. After my examinations and the submission of thesis, my work both in AEC and Dhaka University came to an end. But AEC, which was then growing fast, allowed some of us to join as Scientific Officers, even before our Masters result came out. I could honor their trust in me by getting a first class this time too; and thus got confirmed in my new job. I resigned six months later to join the physics department of Dhaka University as a lecturer.

My whole time in AEC both as a student and as an employee was a wonderful exposure to a modern scientific institution. What made more attractive was the frequent visits and lectures of Professor Abdus Salam, the scientific advisor to the president and a guardian figure to the Atomic Energy Commission. Salam would bring some of his fellow scientists from the international arena to speak at local conferences. We could, therefore, meet with and listen to some legendary figures and Nobel Laureates. Actually Salam always tried to build bridges between the most advanced sciences of the day and the young scientists of the country. He was a very inspirational figure for us.

In the AEC we were free to explore anywhere and in any laboratories. But there was a small building where we did not have an access. The rumor went that this had some connection with ‘Project Usmani’ – a nickname for a weapon project, Usmani being the powerful chairman of Pakistan Atomic Energy Commission. The rumor hinted at a nuclear weapons development initiative, instigated by the news that both India

and Pakistan were planning to develop nuclear bombs. But the nearest thing to any nuclear energy initiative I saw was a small office of a planned nuclear power plant in Ruppur in East Pakistan. The plant was never built (The project has now been revived some 50 years later, but this is another time and another world so far as nuclear energy is concerned). Its sister plant near Karachi, West Pakistan, however, went into production just a few years later.

There was another institution located in between Curzon Hall and AEC - Bangla Academy. Though not a science institution it was important for me in connection with the use of Bangla language in science. They regarded me as an active contributor to the cause, and used to keep me involved in some of their works. Even when I was an undergraduate student they commissioned me to translate a well-known science book – ‘Heredity, Race and Society’ by L.C. Dunn and Theodosius Dubzansky, two world-class biologists. They wrote this book on genetics in 1947 for non-technical readers but explained all the intricacies of the subject. I was surprised, and felt good too, that Bangla Academy gave this task to me – a student of physics - rather than to a biologist. The book predated the great discoveries of the DNA structure and functions, but its main thesis was very current and relevant, giving a clear scientific rebuff to the powerful people who were still advocating a monopoly of intellect for certain races. This was the first book (translation) with my name on it.

Joining physics department Dhaka University in September 1967 as a lecturer did not make much difference in my environment; I was still with the same friends and acquaintances. Some of them were still students, and a few others already research fellows or teachers. So all of them, including those whom I now started to teach, were very friendly and welcoming. At last I got what I always wanted – an opportunity to teach. I would have even done it for free ! This was also an opportunity to put to test all those ideas about teaching that passionately engaged me during my student life in school and university. I always thought a class should be enjoyable to all parties, but at the same time students should

have a concrete take-away that would serve them well for long. An essential strategy should include a proper context for the topic – its history, relevance, challenges. Similes that could present a complex concept in terms of easier and familiar things are very helpful, and so are anecdotes and witty points. I would prepare meticulously, but would not allow my jokes to be seen as too well-planned. I tried these with my first students who seemed to respond very well. From then on such teaching became quite natural to me – a source of great joy, and also enhancing my own understanding of things.

But there were limitations too. Physics teaching usually involved a lot of mathematical steps. I always faced this dilemma in the class how to let the math alone tell an interesting story as it progresses. Unfortunately I was not among those who could do that instinctively. This perhaps left my more mathematically oriented students a bit impatient. I would be always eager to find out the ‘physics’ in it as quickly as possible. Later when I listened to the speeches of accomplished physicists abroad, I found it somewhat reassuring that some of them would express similar urges – ‘looking for the physics in it’. I would be more animated when talking about an illuminating experiment, especially when that would reveal a new insight. Even our old-fashioned physics laboratories for practical classes could provide me some intellectual entertainment with my students. I felt encouraged when during the next summer recess there was a ‘Summer Science Workshop’ that I attended with some other young teachers. It was supported by the U.S. Embassy which invited several American professors in physics to teach how to teach better. I was delighted to find that even these professors could become exuberant on a very simple point of physics.

All this time in 1966 to 1968 I maintained my contacts with EPSU, S.M. Hall, and the rest. One had to, because this was a difficult time for the national politics, with all of us somberly expecting things of which we were not sure about. Soon another bombshell came from Ayub Khan in the shape of the so called ‘Agartala Conspiracy Case’. This indicted several Bengali bureaucrats and armed services officers for conspiring

with India (where Agartala is located) to destroy the state of Pakistan, and later pointed to Mujibur Rahman as the chief conspirator. A show trial started at the Dhaka army cantonment with all the accused in custody there. I was regularly following the early parts of the court episodes of this high drama, but had to leave home in September 1968 to join my Ph.D program in Southampton University in Britain under a scholarship. The explosive people's revolt blasting out this 'conspiracy case' was still several months away. And the rest was destined to be history.

My short story of the west

The sixties in Britain

When I arrived in Southampton University in a bleak-weathered September day of 1968 my research supervisor Brain Hopkins cheered me up. He said that the weather and some other things there might not suit me well, but physics would be a familiar and continuous thing that would save me from much of a disruption in life. He was right, physics and more generally science, had been a continuous string in me wherever I was and whatever I did. But Dr. Hopkins' worry about the disruption was not necessary because Southampton soon became a home to me in more senses than one. When in physics department of Dhaka University, I had met a postgraduate female student Shamsun Nessa Begum (Moni), we fell in love and decided to marry soon. In the hectic last days in Dhaka, we did not have enough time to inform properly both of our families and bring them on board. So the earliest opportunity of the marriage came during the first Christmas vacation in Southampton, when I had a quick visit home. Moni and I had a family-arranged marriage, and both of us were in Southampton before January. Thus Southampton became the first home we ever had together, and everything there and around became a great source of joy for the next few years.

The research work in the laboratories of the physics department of Southampton university was a rather lonely affair. I had switched to solid state physics looking at the properties of certain surfaces of metal crystals. This involved those lonely works of cutting (with electrical spark saw), orienting (taking x-ray diffraction pictures), and polishing (chemically and with diamond paste) very small crystal surfaces. But even before that I had to learn the art of glass blowing from the very experienced Mr. Joe Lawrenson. I would have to make myself the vital parts of my experimental arrangement out of pyrex glass vessels, doing the repairs and changes as the experiment progressed. The Ph.D.

programs of British universities demanded research from day one, and they would treat you as if you were already a scientist. As I was far from that, I had to have frequent consultations with other members of Dr. Hopkins' surface physics group. They were also my best window to British academic ways and British life. But first I had to tackle their accents. Coming from various parts of England and Wales, they spoke in a variety of accents and they would make no concession for me. The morning and afternoon tea time were the best time to join in a light-hearted chat with others, which could sometimes lead to important consultations. All of us would meet in a weekly group meeting to discuss our progress and problems in research. Often guest scientists dropped in, some of them quite famous ones. This is how, for example, I met John Ziman, the great solid state physicist whose book 'Public Knowledge' – defining science – had been quite distinct. Soon after arriving in Southampton one day in one of those tea room chats I was introduced to a young woman roughly of my own age – Jocelyn Bell (later Dame Jocelyn). I learned that she had just joined our university as a research scientist in astrophysics and had been working for Ph.D. in Cambridge till recently. While doing that she discovered the first radio pulsar, pulsating stars radiating a strange radio wave at regular short intervals. This was a great discovery and for this her research supervisor Hewish got the Nobel prize for physics in 1974, from which Jocelyn was excluded, causing a lot of criticism. But on that day in 1968, it had been a thrill to hear from Jocelyn herself the story about her discovery while sipping tea.

Once the experimental apparatus was set, all my efforts were dedicated to pump it empty of air and gases to the extreme ultra-high vacuum. The idea was to keep my painstakingly prepared sample crystal surface very 'clean' in a vacuum environment, like outer space. I had to apply all kinds vacuum techniques for months hoping to achieve that. What I really got, however, were disasters after disasters. With my rough and ready quality of glass blowing and glass-metal joints, leaks were inevitable, some of them micro-leaks that were very difficult to detect

and repair. These literally became my nightmares. The worst accident happened one night in my absence. A glass-pump fractured and water flowed out through its spiral glass tubes, flooding our floor and going down to the floor below which was the undergrad teaching lab. I had to face a very angry head technician; and escaped the worse by promising to improvise an automatic water stopping device in case such an accident happen again; which I did. Even a very rare power outage in the whole area at a later stage worked against me, contaminating my experimental system, before I could intervene.

One day a student from Denmark working in our group came to say goodbye to me. He said he was going back home because his experimental system broke, and he did not have time left to build it again. Later, whenever I had any serious mishap with my system the sad face of that Danish student would come to my mind giving me a scare. But my latest handiwork seemed to withstand the tests pretty well and would start giving me results, which I would then happily theorize about with the help of the existing literature. On those days and nights of either anxiety or euphoria, I would often listen to an abandoned old radio some previous student had left in the lab. It became a great companion to me continuously providing a background of pop songs selected by the BBC 'Radio One' disc jockeys, or the news from BBC World Service. Then in the small office adjacent to my lab which I shared with another, there were chances of hearty conversations too.

At the beginning, my officemate was Brian Williams, a brilliant physics student but an old-fashioned social analyst. We would often have a very animated conversations about the British society. For example, he would say that Catholics could not be trusted, they had always been conspiring against the English establishment. This was his opinion notwithstanding the fact that his girlfriend was a Catholic. When Brian finished his Ph.D, my new officemate was Gunwant Shah who, though British now, had come from Tanzania. But in upbringing and cultural preference he was out and out a Gujarati Indian. From him I learned a lot about the strange dual lives of Indian businessmen in East Africa who were there for many

generations. For example, he would often whisper to himself in Gujarati language while doing basic mathematical calculations, a childhood habit. This knowledge about East African Indians stood me well when I would bump into many of them, who arrived in England in 1970 – whole families having been driven away overnight from Uganda by the xenophobic dictator Idi Amin. Gunwant and his Welsh wife Christianne became very good friends of Moni and me, and we enjoyed some holidays in their beautiful house in a village near Southampton, in the company of their three year old son Abir. For several months Gunwant and I had a third occupant of our office – Oleg Artmanov, a Russian scientist coming as a visiting researcher from Soviet Union. Oleg's frank and witty remarks about the Soviet system had been my only direct source ever of the insider story of the Soviet Union.

Though we enjoyed the international environment of the university, Moni and I could often fall back on the relaxation of our own cozy Bengali ways whenever we wished. There were other grad students from our place, some with their families. The presence of Sultan Ahmed, my physics teacher from Dhaka, and Ali Asgar, a young physics teacher from the engineering university in Dhaka, were especially important for me for the philosophical outlook and interests I shared with them, and life abroad was a wonderful opportunity for such sharing.

Southampton was full of excitements for Moni and me. Moni was working as a lab-technician in Totton College about an hour's bus journey from Southampton. The British society around us was at a crossroads. We could see the very traditional and the very rebellious at the same time. From the Pakistan Student Hostel at the elite Knightsbridge area while visiting London we would see the office-going men in impeccable British dress and manners with which we had been long familiar through books and movies – bowler hats, long coats, umbrella folded thin; all walking briskly and silently. Then in the campus in Southampton there were young people giving us a general picture of the permissive society of the sixties at its peak. The traditional divide between the middle class and the working class was still very

much seen around the town with very distinct language, accent, clothes and manners of each. But most of the time we were in the midst of the new generation characterized by free mixing, pop, rock, new folk, and hippie culture. Not that all the young people would like to be identified with this or that movement, but most were influenced by these. The television, the pop concerts, and the other sights and sounds brought home to us the exuberant sixties. A concert by a very young Bob Dylan in the Isle of Wight, an island near Southampton, created a huge craze in the city itself – ‘Let Dylan sink Isle of Wight’ was the cry of the youth. I too got quite carried away with the fantastic pop groups of the day and the singers of the new ballads best represented by Joan Baez.

Having been involved with the running of a students’ union so recently I got curious about the Southampton University students’ union. The emphasis there was on services for student welfare, rather than on politics which was only in the background. But I could feel the undercurrent of student politics among the young labor, or the young conservative, or the young liberal groups with many shades of opinion. For example, a prominent group among labor supporters I befriended was Trotskyites (follower of Leon Trotsky, the Russian revolutionary ousted and eventually killed in exile at Stalin’s orders). I found them politically most active as a group, and soon would be very helpful to our cause too. I would often take advantage of the union’s cheaper student travels. Moni and I had bus trips to various places of England, special student trains to Europe, and even a student flight to USA – all very cheaply. Some of the cultural and travel facilities came through subsidiaries like Pakistan Students Association. This latter association was a socio-cultural one, but not free from our inter-province political debates.

We could utilize those cheap student transports so often because of a wonderful institution all over Europe, including Britain. This was the Youth Hostel Association – of which we became members and great fans. This would offer to backpackers numerous beautiful places to stay – some even in famous castles, country-houses, and picturesque

buildings. They were everywhere— cities, villages, interesting tourist spots, near natural wonders, wherever young people would like to go. Several times a year we would do such hostelling in the rural Britain and almost all over Europe. The company of young people we got there was the most interesting part of it; from British children under school masters, to German ‘Wanderfogel’ (wandering birds as the roaming boys and girls would be called), to American hippies. We would get all the tips and advice for seeing the world at an extreme budget from them.

It was during one such trip in July 1969 that Moni and I watched Neil Armstrong and Buzz Aldrin land on the moon. We watched it on Southampton university student union color TV (most TVs were black and white) along with hundred of students when the lunar module Eagle touched down on the moon. Then we two had to rush to catch the student train to Geneva, where in the youth hostel among a highly multi-lingual crowd we caught up with the astronauts still on the moon. As an enthusiastic follower of the great drama in space right from the Sputnik days, this was a great culmination for me too – witnessed in a rather exotic manner.

One of the charms of these travels was our visits to great museums of Europe and the great architectures. Enjoying arts and architectures was a new hobby I acquired at this time, and I had expanded my readings for simple appreciation of these. This also gave a big boost to my long nurtured interest in the history of science, now witnessed in the various types of science museums. In those days entrance to all the great museums in Britain was free; and those in the continental Europe had high student concessions.

While moving around Europe was cheap, the living conditions for the students with modest scholarships were neither ideal nor very modern. We had to actually put shilling coins in a slot machine to warm up the room for a few hours in severe winter. Later, in the university housing, we would use a small paraffin oil heater to heat up the room. The paraffin had to be carried in jerry cans from a coin-operated dispensing

machine quite a distance away. The kitchen had inefficient gas-cookers run by supplied coal gas. Only later the supply was switched to natural gas. Refrigerator was a rarity in the student housing. We used to keep foods out in the attic to keep them naturally cold. The huge university library was a very comfortable place for reading and relaxation whenever I had time, day or night. *Biggan Samoeeki* was served well by this, the library becoming the editorial office for a good part of its content. Iqbal did the rest from Dhaka getting it printed and published.

Britain in the late 1960s started to see some hate attacks against South Asian immigrants. We would hear from friends about the verbal and physical attacks. Moni and I faced verbal abuses several times in inner city London. All South Asians were vulnerable, but for some strange reason Pakistanis were more so. There was even a name for this among the gangs of perpetrators – ‘Paki baiting’. Different gangs would sometimes have distinctive dress or bodily embellishments. For example, a particularly notorious group was called skin-heads, because of their shaved heads. Serious injuries and even deaths would sometimes be reported. These were inner city gangs; places outside these parts of the cities would usually be quite safe. The law, and the general public opinion, however, were strictly against any form of racial abuse.

Civil rights and hippie peace

Yunus Bhai, in the meantime, had received his Ph.D. from Vanderbilt University, Nashville, Tennessee, U.S.A, and was teaching at Middle Tennessee State University (MTSU) nearby. In the summer of 1970 Moni and I joined him for a month of vacation. We stayed a few days in Tennessee and then Yunus Bhai gave us a memorable tour of the country, mainly in the deep south, but also a good part of the north in his Volkswagen Beetle. Two themes stood out in my mind from this first visit to USA - the sorry state of southern race relations, and the revolt of the American youth in the form of Vietnam war protests, black power, flower children, and all combined. The white southern society was still stubbornly resisting the nominal end of segregation and discrimination of

the blacks, brought so recently through long epic struggles. Strangely, the whites there appeared to be in a nostalgic active relationship with the 100 year old history of confederacy and the civil war. Signs of racial segregation were still quite visible. We saw confederate flags more than American flags. We dutifully followed the usual tourist routes visiting various civil war sites glorifying the confederate valor, grand representations of the civil war events through paintings and three dimensional dioramas called 'Confedorama'. We also watched the ever popular movie 'Gone with the wind' beautifully evoking that nostalgia among the southern whites. But then we did not forget the country music in Nashville, and Jazz in New Orleans, both my favorite; nor did we forget all the great landmarks in the recent struggle for civil rights – the places where change makers like Rosa Parks and Martin Luther King took their first heroic actions.

I was curious to know more about the youth upheavals, , as I was following it for several years before coming to U.S.A. The summer we were there, things were quite tumultuous with huge Vietnam protest rallies and campus violence. The Angela Davies hair was very popular among black youth as a statement of black power. FBI listed Angela Davies, a young black ex-Assistant Professor of UCLA, as one of the ten most dangerous persons in the country because of her connection with the black panther movement. Though limited in actual number of members, this and other black power movements seemed to have a huge cultural influence on the rebellious youth, as we could guess from the musical drama 'Hair' that we watched in New York City. First staged in 1967, this was the vivid tale of the subculture then prevalent among the youth – their angry and irreverent rejection of mainstream America, particularly Nixon administration and Vietnam war. This gave their own interpretation of peace – the hippie peace. The songs of the musical were unforgettable, they perhaps formed the best signature tune for that extraordinary spirit of the time.

Our trip to U.S.A. almost coincided with the Nixon administration's worst act of repression on the protesting youth. This was the killing of

four students at Kent State University in Ohio, when the national guard opened fire on a Vietnam protest there. Angry demonstrations spread across many campuses of the country leading to more police violence and many severe injuries. There were other kinds of protests, especially at campus protest rallies. For example, young people would be sitting in peacefully, and endlessly chanting like a mantra the lines from John Lenon's famous song for the movement – 'All we are saying that give peace a chance'.

Some of my sightseeing in America were like the fulfillment of my childhood wishes, as the readers of this memoir would appreciate. I saw the original 'Spirit of St. Louis' at the Smithsonian Aeronautical Museum in Washington DC. In the Space and Rocket Centre at Huntsville, Alabama, I saw the returned capsules from Gemini and Apollo missions, the rockets which took them to space, the space suits worn by the astronauts, and of course the moon rocks recently brought. I had a look at a first generation nuclear reactor in Oakridge National Laboratory in Tennessee, a real-life version of what I had seen a representation in flickering lights in the floating exhibition 'Atom for Peace' when I was 11 years old.

Liberation war and after

‘Recognize Bangladesh’

My leaving Dhaka for Southampton in September 1968, suddenly took me away from the very tense political happenings in East Pakistan. It was not easy to keep track of what was happening from my new location. Letters, if anyone cared to describe the events in a letter to me, would take at least 10 days to arrive. The news in the British media were scanty. It was impossible to follow anymore the important developments in the country's fate, such as the proceedings of the Agartala conspiracy case. But things were actually moving fast, and in a big way. People's agitation surrounding the conspiracy case culminated into a people's uprising in early 1969 following the murder by the army and police of Asad (student leader), Dr. Zoha (university professor) and Sergeant Zahurul Haq (Agartala accused). The new leadership of the students of Dhaka University under its Central Union and its Vice President Tofael Ahmed was spearheading the uprising, almost dictating the course of the affairs. Tofael Ahmed subsequently became a major national figure in politics. Soon the All-party Students Action Committee even formulated a socialistic eleven points demand to add to the Awami Leagues's Six Points, and it was the combined package which was now in front of the people. Mujib came out of the jail as a national hero, and in a huge public meeting the student leaders gave him the title of 'Bongobandhu' (Friend of Bengal) – and that is how he would be addressed or referred to widely since then. There was no way that Ayub could continue. He handed over the presidency to the army chief General Yahya Khan who promulgated another martial law.

Things became calm as president Yahya Khan promised a national election to be held in late 1970 on the basis of universal suffrage, with East Pakistan restoring its majority in parliamentary seats in proportion to its population. The one unit in West Pakistan got dissolved restoring

its old four provinces. The constituent assembly to be elected would formulate a new constitution and decide the future course of the nation. Awami league campaigned on the basis of the Six Points, and except for a few won all seats in East Pakistan. Provinces in West Pakistan gave a mandate to Bhutto's People's Party, though not so overwhelmingly. The country obviously was highly polarized. Only days before the election a devastating cyclone and tidal wave had killed some three to five hundred thousand people in the coastal East Pakistan; the gross neglect of the central government and the army in providing relief added to the polarization. Mujib, 'Friend of Bengal', now had total leadership over East Pakistan and a parliamentary majority in the overall country; and he insisted that the only way the constitution could be framed was on the basis of the Six Points.

But the army and Bhutto disagreed, and Yahya suddenly postponed the first session of the new assembly scheduled to meet in Dhaka on 3 March 1971. This was like pouring fuel in the fire, and immediately East Pakistan's situation got almost out of control. So far, we had been getting only disjointed news from time to time. Now things got into such a critical stage that we tried to keep contact with friends in London who were actively in Awami League politics and were getting news regularly from home. The students and many others would not now settle for anything other than an independent Bangladesh, the name meaning Bengal in our own language. The students even designed the Bangladesh flag, and within days all houses and offices started to fly that flag. Mujib was more cautious, but promised not to compromise on the Six Points. He put forward the demands in a mammoth public meeting on 7 March. The control of the province effectively passed over to him and to Awami League. The army could not do much about it, but were committing atrocities in the name of controlling mobs. These were hardly reported in the British press. But we saw in the British media news and even TV footages of instances of horrible acts of cruelty to the non-Bengali population – which was quite disturbing. It was in these circumstances that British newspapers carried news about the progress of negotiation

that started in Dhaka among President Yahya, Mujib and Bhutto. Things seemed to be heading towards a settlement.

We were not prepared for what we heard next – there was a crackdown of the army over the civilian population of Dhaka as well as on the Bengali police and militia border guards (East Pakistan Rifles) in the city in the night following 25 March. The news percolated to us slowly over the next few days. There was a huge massacre mainly targeting university halls, teachers' quarters, places where minority Hindus lived, and the slums. Some of my close and revered teachers were killed in the teachers' quarters. To get whatever news I could gather from the government-controlled radio station and Indian radio stations, I had recently bought a Russian-made radio with a very strong shortwave reception. From this I could listen to the broadcast made by President Yahya soon after leaving Dhaka just prior to the crackdown. He called Mujib a traitor and banned Awami League. The British newspapers gave a short news of some Major Zia who came to the radio to declare independence. Some of my friends in London gave more details – they claimed to have listened to a rebroadcast of that by a foreign radio station, where an East Bengal regiment officer named Major Zia, revolting with his troops against the Pakistan army, had declared himself the president of the independent Bangladesh. There was a second broadcast, they said, in which the same Major Zia made the declaration on behalf of Mujibur Rahman, the leader of the Bengalis. This was quite uplifting to us – everything, after all, was not lost. But what depressed us terribly was the picture published prominently on every major British newspaper – that of Mujib under arrest sitting in the lounge of the Karachi airport with two police officers standing on two sides – Mujib with a gloomy, somber face.

We were receiving news bit by bit during those last days of March and then early April. On one hand, the full extent of the army massacre perpetrated on and after that fateful night was becoming more clear. On the other hand, the Pakistan army was still confined to the big cities and cantonment towns, while everywhere else things were still under the

control of those who supported Bangladesh, including government officers, police and East Pakistan rifles, and politicians. There was news that apart from the said Major Zia, several other Bengali army officers had escaped the cantonments, some with their Bengali troops, and boosted up the defense of what were still free areas. Clearly the war of independence had begun.

In Southampton, we the Bengali students met together immediately after 25 March, and swung into action. The first thing was to create solidarity among us and to make our friends aware of the massacre that had taken place, so that a strong protest could be built up here against the Pakistani junta. Gathering news, contacting Bengali students elsewhere in Britain, and organizing protests with as many other students as possible were the immediate tasks. We tried to get the support of the student union – especially those British students active in politics. With their help we hoped to create some impact among the general students and the British politicians.

By the middle of April some details came trickling through the letters of friends who had crossed border to India. Many were doing that, because the army had spread all over the country now – and anybody who had worked for the Bangladesh cause had to either go into hiding or cross the border. Indian government luckily allowed it, so long as the Bangladesh armed efforts could be kept under their strict surveillance. Most of the young people within Bangladesh were now in danger, as the army regarded them as potential freedom fighters. Many of them formed their own guerilla bands in remote, safer areas with whatever weapons they could get hold of from police and other armories. The remnants of the East Bengal regiments under their rebel officers started to recruit and train students and other young people to increase their ranks in the border areas. The best news came on 17 April, many of the elected assembly members of Awami League had escaped unscathed to India, and with their agreement a provisional government took oath in a safe border area in front of international journalists. Tajuddin Ahmed, general secretary of Awami League, became the provisional Prime Minister, his

government operating from Calcutta, and soon became the focus of all our attention because of his leadership qualities under extreme odds.

Now we had a government, and a MuktiBahini (Liberation force) organized in sectors around the country, each led by an officer defecting from Pakistan army, having regular soldiers, police and militiamen in its ranks as well as new recruits from civilian 'freedom fighters'. This helped us a lot in doing what we had been doing abroad in the war effort. It became easier for us to organize protest rallies, by networking on a bigger scale. One event we organized in Southampton University was quite exceptional. We invited the famous Pakistani leftist youth leader Tariq Ali, once the president of Oxford Union, and now charismatic speaker on behalf of the left. He took up the Bangladesh cause though belonging to Punjab from where the most of the Pakistan army came. His influence on the British and Pakistani students was immense, and he was very effective. Bangladesh being now very much a political reality, we could approach everybody to urge their government to recognize Bangladesh and to withdraw military assistance from Pakistan which was using it to perpetrate a continuous genocide in Bangladesh. 'Recognize Bangladesh' and 'Stop Genocide' became our two constant slogans. Any group of any importance – local government, journalists, academia, trade union, parliament members of the southern England area – we approached it to support our cause and to write to the British government to recognize Bangladesh.

Another important thing was to collect fund for the war efforts, principally from the Bangladeshi diaspora. Even the most hard up of them would donate a part of their income. At the beginning there was some confusion about the proper use of the fund. But the task was facilitated by the creation of an official Bangladesh Fund in London on behalf of the provisional government, which was presided over by Justice Abu Sayeed Chowdhury, then vice chancellor of Dhaka University (later President of Bangladesh), who happened to be travelling abroad at the time of the army crackdown.

The first day of May, the International Labor Day, brought a big opportunity for us in Southampton. We could muster enough support among the leftist Labor Party-supporting student organizations to make the Bangladesh issue one of the major themes in their May Day demonstration in London. My Trotskyite friends were a great help in organizing this. Within the bus-loads of demonstrators from Southampton university heading for Trafalgar square in London we Bangladeshis were only a few, but Bangladesh became a major issue of their slogans and speeches on the way. In the square itself we found a huge number of Bangladeshis and their friends from all parts of Britain with Bangladesh flags, huge banners, and other signs with the main theme 'Recognize Bangladesh'. This was only the beginning. For the next months we would be returning there again and again in bigger and bigger demonstrations, each time more and more influential personalities of British society and British politics voicing our cause. The rally at the Trafalgar Square on 1 August was a historic one. It seemed to me that all the Bangladeshis in Britain and around were there –hundreds of thousands of men, women and children; even mothers with babies in strollers.

On a more personal level, my day to day involvement with the efforts was a kind of post-office job. Many of my friends, hall mates, ex-colleagues and relatives had to flee the country to India. Some had joined the liberation army, some in various other war efforts, some others as refugees. For example, Moni's elder brother Akbar Hossain had been a captain in the Pakistan army when the liberation war started. He escaped to India and was fighting as an officer in the liberation army. My friend in S M Hall and EPSU president of the unit Anwarullah Chowdhury was in Calcutta helping the war effort, and earning a living by doing some research work in Calcutta University. There was no way that they could keep contact directly with home, but they could write to us in England, and we could on our part write to their families providing the essential messages in a normal but cryptic language avoiding the inevitable censors, which could also be dangerous to the families. I used to do this

for as many people as I could. Another contact I maintained regularly was with Yunus Bhai in USA. He had joined the great Bangladeshi architect Fazlur Rahman Khan (designer of Sears Tower of Chicago, which was for some time the tallest building in the world) to form 'Bangladesh Defense League of America'. Yunus Bhai was running its information Centre from Nashville from where he was publishing a weekly 'Bangladesh Newsletter'. On the first page of every issue of the newsletter he would draw a cartoon on a current theme of the struggle. I would exchange notes with him, receive the newsletter for distribution, and also learn from their works how to do the same in our place.

One of Yunus Bhai's works was to lobby the ambassadors and other diplomats of various countries in U.S.A, and also politicians of all shades. Globally this task could be better done by the Bengali diplomats who had been in various Pakistani embassies and other missions all over the world, but now had defected to the Bangladesh cause. Such defection happened only slowly, only a few very bold and selfless diplomats defecting right at the beginning of the war. But others took time till Bangladesh provisional government or the donors from the diaspora made alternative arrangements for them. This had been the subject of much criticism among the students. But it was a cheerful day for us when in late August Bangladeshi diplomats came out of the Pakistan High Commission in London and established the Bangladesh mission there. The mission became a symbolic focus for all our actions, and through its interactions with various British institutions represented a tacit recognition to Bangladesh.

Like the cases of all other Pakistan government scholars working for Bangladesh, my scholarship had stopped. Though it was not a disaster for me because of Moni's job, I needed to finish my thesis as soon as possible and try for a job. So my time was quite full; I had to do everything in a war footing. Then at the beginning of December the British media started to give news about a new India-Pakistan war which spilled over into Bangladesh. The guerilla attacks by freedom fighter groups within Bangladesh and from across the border had been much

geared up for some time before that. India now recognized Bangladesh, and the allied forces consisting of Indian army and Bangladesh liberation force fought their way into Bangladesh from several directions. At this stage things were being well covered by the international media. Now, for the first time, we witnessed our war on TV, including the various guerilla exploits deep inside Bangladesh. We were jubilant to see various important cities and towns getting liberated one after another. But at the same time we got extremely alarmed by the bombings on Dhaka by the Indian air force and seeing some of the civilian casualties highlighted by the world media. There was a speculation that there could be a last ditch defense in the city of Dhaka by the Pakistan army, which could cause the death of thousands of people.

This did not happen, Pakistani garrisons surrendered on 16 December, and Bangladesh became independent.

But the great joy of winning independence was marred by a horrible news given by the international media. Precisely at the moment of independence it was revealed that just a day before the army surrender, many of our valued professors, doctors, journalists, writers and other intellectuals had been kidnapped at gunpoint from their houses and executed. Some of them were the best we had. It was heartbreaking to see their mutilated bodies in a ditch in the outskirts of the city, as shown by the British TV.

People's science in an intranquil time

Receiving my Ph.D. in the summer of 1972, I had to stay on in Southampton till the end of that year to complete my contract with the College of Further Education. I had been teaching in the college for some months to keep us going through the last bit of my Ph.D. program. But all these months since independence, I was planning, and revising that plan repeatedly by myself, what should be the revolutionary priorities of the new country, and what could I do for that. I was actually behaving like a child who has got a new toy and cannot stop thinking

about it. I tried to find out the feasibility of my new ideas debating these with some of my Bangladeshi friends in Southampton who seemed to be in a similar frame of mind. I did the same with Yunus Bhai when he stopped by in Southampton on his way back home. At first my thoughts and plans were a bit scattered, what would be an ideal constitution for the country; what should change in the various sectors of the country – politics, education, science, economics, and others. Then gradually they became narrowed down to what I thought would be the most critically important for a revolutionary change of all the people – education and science.

All sorts of models for this came to my mind; the revolutionary Cuban one, the Soviet, the Meiji era Japanese, and so on. Then I also thought about my own experiences with this as a child and as a young adult, how I had grown strong likes and dislikes in our education system. I wrote an article in *Biggan Samoeeki* on this theme titled ‘Bangladesh and People’s Science’. In many ways this article became a kind of working schema for me for the rest of my life.

The main theme of the article was to bring a total change in the way we internalize our education – specially science and technology. Education would be for all, and so to fill up the gaps existing now we should have a totally unconventional institution, a kind of ‘people’s school’ reaching every citizen. Here education would be life-oriented, based on the ‘do it yourself’ principle. High school graduates could be trained and mobilized throughout the country to man the people’s schools. Once we achieve such an ‘education for all’ covering from alphabetic literacy to literacy of essential sciences and arts, the effective difference between a farmer and a botanist would be that of degree, not of kind. One could then freely choose to become either, with full intellectual satisfaction.

I came back to Dhaka on the first day of 1973, Moni returning some time earlier. Physics Department, Dhaka University again became my work place, but now in a totally different environment. Too much had been destroyed in the war, and not just in physical sense only. There had been

too many acts of cruelty, the Pakistan army atrocities had been at a mass scale. Whenever I met an old friend, an ex-student, or a relative the first time after coming back, one common thing was to learn his/her personal wartime story, the travails, the sufferings, the tragic losses, and the constant fear for life that each one of them had gone through. The young were the most affected. For some of them it caused considerable erosion in normal values. Freedom fighters or not, they became trigger-happy now either in political feuds or with angry criminal intent. Values and sense of accountability among many politicians and others turned sharply towards worse. The only focus for hope was Mujib, the Bongobandhu, the undisputed leader of the nation when he returned to an independent Bangladesh from Pakistani prison, and took full responsibility of the government.

But even Mujib's helplessness became apparent when the youth leadership under him – the young turks – split, one part remained with him declaring their ideal to be 'Mujibism' and the other challenging him squarely and vouching for 'scientific socialism', whatever that meant. The Awami League now had a new offshoot political party challenging it, named JSD (the acronym in Bangla for 'National Socialist Party', the similarity of the name to Nazi party is merely coincidental).

It was very difficult to understand beyond rhetoric where lied the differences between Awami League and JSD. What we could see in reality was that they were intent on destroying each other violently – JSD by terrorist actions; and the government by cruel repressions through activists, police, and the newly formed militia Rokkhi Bahini (security force). There was a third source of political violence and consequent government over-reactions - that from various splinter groups of the radical left, who wanted to destroy the establishment, but were also destroying each other. All these sides – JSD, government activists, and the leftists were heavily armed; weapons were in many people's hand, a legacy of the war.

In early 1973, while we had to change house in several parts of the city, I saw how fearful people were because of the frequent sounds of automatic weapons, grenades etc. at close quarters. As a result, even a harmless similar sound was occasionally creating great fear – the sonic booms of our air force's newly acquired supersonic Mig fighters. I received a message from Mr. Nawazish Ali Khan, the renowned TV producer, who knew me from my few previous TV programs. Arriving at the Bangladesh Television (BTV) station, I met Squadron Leader Shaukat of the air force. Together we would go on-air live, to convince the people that the sound was nothing but a trick of physics, and no one should worry. When the plane goes from a speed lower than that of sound to a supersonic one, a shock wave is built up and then released by sending a series of sonic booms to the ground. The squadron leader promised to the viewers that he would create such a sound again the next morning exactly at nine, piloting the plane himself. The next day during my journey to the university I saw many people looking upward waiting for the Mig to come; and Sq. Leader Shaukat did what he promised. Thus I became a part of perhaps one of the most scientifically interactive programs in BTV's history.

The young people whom I was meeting now more and more, and getting close to, were of a different kind. They seemed to constitute the majority in the university and in other educational institutions. They were the ones who would seriously think about our education, and other vital issues. I would be in touch with some of them in the university, some through the *Samoeeki*, and some others through the new voluntary organizations I was coming across. The latter included Brac of Fazle Hassan Abed and GSK (People's Health Centre) of Dr. Zafrullah Chowdhury, organizations and personalities destined to be big names. There was huge optimism about the new country in these young people. They took the current difficulties as only the teething problems.

For our cause of revolutionizing education, a great enthusiasm was created when an Education Commission was formed under the leadership of one of our most famous scientists Dr. Qudrat-E-Khuda. We

saw an opportunity to bring genuine change in our education system in this, and redoubled our effort to bring out our ideas such as those written in my article about people's science. We have been airing these ideas in various ways in the *Samoeeki* and elsewhere, and now we raised these with the commission. Dr. Khuda allowed us an interview, in which he agreed in principle with our main themes of 'education for all' and 'do it yourself'. He said that the commission would include these in its report but would not recommend any ways and means, leaving everything to the government's initiatives. But the initiatives never came.

Obviously we could not expect revolutionary changes centrally done under the circumstances. Then the best thing was for the individuals and groups to try to do what they could. We continued to advocate our ideas through the *Samoeeki*, but we could do more. For this a suggestion came from a young reader, a student of the Notre Dame College in Dhaka, named Kochi. In a contribution to the 'Reader's Opinion' he implored our magazine to play an active role organizing the young people into science clubs. He did not mean organizing clubs in a few elite schools or colleges, but starting a science club movement in which clubs would be peer-organized everywhere, with the *Samoeeki* playing a central role. In the past we wrote about science club as a supplement for individuals to the unsatisfactory science education in the school. But now we decided to take it as a systematic task as per Kochi's proposal. From then on a substantial part of the *Samoeeki* was dedicated to serve the science club movement – advising how to start one, providing suggestions for science club activities and projects, publicizing the activities of the clubs, and making comments on these activities. This encouraged the creation of many clubs – some based in schools or colleges, others organized in a free-lance manner by the youth in various neighborhoods.

At one stage we started a regular collaboration with a developing chain of science clubs called 'Young Seekers'. This had been started by a group of school students in Dhaka city, establishing branches in various neighborhoods of the city through friends actually living there. Now this became the *Samoeeki's* own model chain of clubs, extending the

branches all over the country. These were initiated essentially by the local enthusiasts, while we encouraged and helped through a central advisory committee, myself acting as its chief. I would take a lot of interest in the working of each of the branches, and would visit these whenever I could. There were a lot of cross fertilization among the branches through the *Samoeeki* and through the many joint exhibitions they organized.

In 1974 we organized a camp for science clubs inviting all clubs affiliated with the *Samoeeki*. It was a great event, we could attract many renowned scientists to come and advise the clubs about their works which they presented at the camp. The appeal of the clubs, and our ideas about these providing an essential dimension to science education, were such that we could bring in some of the out of the box thinkers from the scientific arena into it. Abdullah Al-muti had been a legendary name in writing science for the children, with whom I had a long association right from my student life. He became one of our great supporters. Ali Asgar, my friend from Southampton, became another great science club leader, and so did many other remarkable science teachers and enthusiasts. Our science club movement was on its way.

All these very stimulating works with the young people around the country, and my engagements with my bright physics students including some research students, helped me remain oblivious to the lack of progress in the political situation, and that of law and order. But it became impossible not to get worried when one's own dear institutions virtually came in the firing line. Such a thing happened in front of me and my colleagues late in 1973, when we were supervising the student union elections, simultaneously taking place in all the halls of Dhaka University. These included the hall unions and now the focal body – the Central Students Union (DUCSU) for which a direct election had been recently introduced. A government-supported panel of candidates was contesting the main opposition JSD-supported panel. The stakes were high. My duties were in the Fazlul Hoque Hall (F.H. Hall), and the whole election environment was tense but as festive as it had always been;

something very familiar to me. I was enjoying myself being in the same scenario of which I had been very much a part throughout my own hall life. The last part of the election procedure was the counting of votes and the declaration of results by the provost of the hall, who happened to be my teacher and colleague in physics department – Professor Rafiqullah.

The opposition JSD supported candidates won overwhelmingly both the DUCSU and the hall cabinet. It was at that moment that all hell broke loose. There were sounds of huge explosions outside the auditorium, and also the sound of automatic weapon firing within. Total darkness fell on us because of power outage. We ducked on the ground to save ourselves as best as we could. When in a few minutes the light came back I saw some masked men firing blank shots of pistols, and another directing a pistol to the provost's head shouting orders to hand over all the result sheets and ballot papers to them. Collecting all these things in a box they left while firing blank shots, and went away riding the jeep they came with. Everything was done quickly with the precision of a military operation. Later, we found out from colleagues who had been on duty in other halls, that the result was more or less similar for most of the halls. Both in the halls and the central union JSD had won overwhelmingly. Also, similar military style operations were conducted almost simultaneously by other masked groups in all the halls to violently confiscate all evidences of results. There was no explanation or follow up of this elaborate incidence from the authorities.

Since the mid 1974, the law and order situation turned really bad. A famine broke out in the country, something which was unknown here since the Bengal Famine of 1940s. We started to see skeleton-like hungry people on the streets of Dhaka, and then dead bodies lying in the street being collected by charitable organizations. This was no longer a newspaper story for me. It was a daily reality right before my eyes. This was a horrible sight that I never thought we would ever see in a normal peacetime country. In spite of the measures taken by the government and private philanthropists, many died in various parts of the country. Even such a national crisis could neither unite the politicians, nor could it

reduce the political violence, which actually got worse by the day. Many groups were terrorizing the country, and the government responded with violence from security forces, and even with extra-judicial killings.

A total solution for this was tried from the top by the drastic amendments in the constitution introducing a one-party system, banning all other parties but one. This party was a general version of Awami League called Peasant's and Labor's Awami League (BAKSAL), supposedly incorporating everything into it. This accepted as members even civil and military functionaries, chiefs of the armed forces, intellectuals, some leaders of erstwhile parties etc. All but four selected newspapers were closed down, Mujib, the 'Friend of Bengal', was declared lifelong president of the country. He was also the president of this only party BAKSAL. The party and the government became almost indistinguishable; the party executives, for example, having ranks of the ministers of the government. Obviously much was adapted from the Soviet and other communist model. District governors were appointed from the top, who would have complete control of the district administration. They had not, however, taken charge yet. One argument for BAKSAL was that all were invited into the new party, and district governors were selected not all from the erstwhile Awami League politicians, but a few also from the bureaucracy, freedom fighters etc. Nevertheless it was a very strange system and nothing like democracy as we knew it. Many notables from all important sectors, however, hailed it as the only path to national unity and preferred to join BAKSAL with great ceremonies. I came to know about the projected arguments and the spirit of BAKSAL a bit more directly from several old comrades from my student politics days, who were now thriving bureaucrats in the government. They have been busy with training sessions of the appointed district governors now assembled in the capital. One such bureaucrat friend Jalal Bhai was himself a district governor.

In August 1975, I was invited by the British Council to attend the annual convention of the British Association for the Advancement of Science, famously known as the British Association for nearly two centuries. This

institution had been dedicated to create public awareness about science as well as being a general platform of scientists of all disciplines. In inviting me the British Council recognized our efforts in people's science, and it also arranged some other visits for me which might help our efforts. This program would start from the mid-August, so I left Dhaka on 13 August, thus missing a special convocation ceremony in Dhaka University which would confer an honorary doctorate degree to Mujib on 15 August.

While on my way from my hotel to the British Council office, London, on the morning of 15 August, I met a group of Bangladeshis. I knew one of them from before. They had the morning newspaper in their hand, and was surprised that I had not yet heard about the assassination of Mujib, along with almost all of his family members, by a section of the army. A quick look at the first page headlines and the sub-headings showed the sheer brutality of it, and sent me reeling with dizziness; but the group I met seemed happy and was gloating over it. All these made me very sick, and I returned to my hotel. In the London newspapers the detailed news about the situation of our country was scanty. It just said all flights to and from Dhaka had been indefinitely cancelled. The situation was very fluid: I could not rule out anything – anarchy, civil war, invasion by India, anything. My hotel was a small one run by a Romanian immigrant family. The very old man at the front desk shared the news with me, then whispered in my ear ‘Son, there must be Russian hand behind it. Nothing bad ever happens in the world without Russian hand’. Even in that nervous and extremely sad state of mind I felt amused by the single-track thinking of this old man who had perhaps suffered a lot from the Russians during his youth in Romania.

My trip, however, went on as planned; and luckily my worst fears for the next scenario back home did not materialize. My participation in the British Association convention; and the visits to the science museums, science camps for children, and the famous landmarks of the industrial revolution in northern England were very educative for me and later proved to be very useful for our movement. Particularly the meticulous

preservation of those landmarks – the first steam engines, blast furnaces, and iron bridge, among others - according to something called ‘industrial archaeology’ charmed me.

I could return home in time to an apparently calm country because the coup leaders, a group of mid-ranked army officers, surprisingly had managed to keep everything under control, and that too by keeping the most of the previous BAKSAL (essentially Awami League) administration intact. This included the large part of the cabinet, and the assembly. They installed a top Awami League leader, Khondaker Mostaq, as president. They changed the army chief too – putting the Deputy Chief Major General Ziaur Rahman there (the same Zia whose rebel voice my friends had heard on the radio four years ago). From the outside everything seemed business as usual, and there was no problem in going ahead with my university teaching and the science club activities, even introducing some of the ideas from the British trip. But the calm was only skin-deep.

Something happened in the first days of November 1975, which we came to know slightly later, and that too with a bang. Moni and I had just moved to an old university house that stood solitary in the middle of a field. Our apartment was on one side of the ground floor of this small building and was all huge doors and windows, full of glasses. We woke up at the sound of Mig fighter jets flying very low seemingly strafing machine-gun fire with terrible sound right on our house and the fields around. There was not much where we could take cover – we just went under the bed. Later we learned that they were actually threatening the army formations camping in the race course grounds very near to our house; responding to a counter coup by the main command of the army under the chief of general staff Khalid Mosharraf – who wanted to restore the chain of command. In accordance to the negotiations that followed, the original August coup-leaders were allowed to leave the country. But they did not leave before engineering another massacre, that of the four top leaders of Awami League who formed the main body of the provisional government during the liberation war– Tajuddin

(provisional PM), Nazrul (provisional vice president), Mansur and Kamaruzzamn (ministers). They were mercilessly murdered within the jail, where they had been under custody since the original coup. It seemed that the great tragedy of the 15 August had not yet played itself out.

The next part of the tragic drama came on 7 November. Khalid Mosharraf, after putting the army chief Zia under house arrest, assumed that post himself, virtually dictating terms to the President Mostaq. But he lasted only a few hours as the army chief, as he was killed by unfriendly troops later on that fateful day, along with several other senior army officers. I had had the opportunity to meet both Ziaur Rahman and Khalid Mosharraf early as war heroes, introduced by Moni's brother Major Akbar Hossain. I had met Zia in London right after independence and had a conversation with him which enormously inspired me. I met Khalid later in Dhaka in an anniversary reception and found that he was full of optimism for our new country. I was not prepared for the different roles and fates they would have in a matter of a few years. During those early November days many of the army troops had been instigated against their officers by a secret JSD party cell called 'People's Army' formed within the troops. They were advised to rise up in revolt so that the distinction between the officers and the troops would no longer exist. I met a few army officers in civil dress who had just taken shelter with the professor living on the apartment above us. They had escaped with their life from the cantonment where some of their fellow officers had been killed by the troops. On the 7 November night we saw tanks rolling along the road very close to our house – soldiers on top with rifles firing blank shots and some civilians who were also riding on the tanks, all shouting 'Soldiers and the masses are brothers', which seemed to reflect a JSD instigated revolt. But then they were also shouting 'Allahu Akbar' (Allah is great) in a manner of Islamic war cry – which was not consistent with the 'scientific socialism' of JSD. The whole thing was dangerous and thoroughly confusing.

Later that night we saw on TV Ziaur Rahman speaking, surrounded by troops. He had been freed from custody by some soldiers. Then the TV showed him making an appeal to the soldiers who had gone out in tanks to come back in peace. He was successful not only to resume his post as army chief, but also to restore discipline and chain of command in the army, making it safe for the officers. He arrested Mostaq, installed the chief justice as the new president, and became the real power behind, as Deputy Martial Law Administrator. Zia himself assumed the post of president later in 1977 and went on to enter politics and create his own party Bangladesh Nationalist Party (BNP), restoring multi-party democracy, and getting elected as president in a well-contested election. Though starting as a martial law dictator, trying to legitimize his assumption of the presidency in a doubtful yes-no vote, ultimately he could bring some sort of democratic stability, and peace and reconciliation in the country after those uncertain and tragic days of Bangladesh's beginning years.

Mass education in science

Science education for all young people

At the beginning of 1976 *Biggan Samoeeki* organized a countrywide science club convention, in the beautiful Curzon Hall auditorium and its very wide corridors and the greens around. This campus was the most important seat of formal science education in the country, but many of the convention participants belonged to humbler places, even from the remotest villages of the country. In fact one of the calls from the convention was ‘Create science clubs in every village’. Initial responses for our science club efforts had mainly come from the major high schools of the cities. We were now trying to be true to our original ambition – to take effective science education to the young people at the grassroots. This is what I contemplated in that article written soon after the independence of Bangladesh on the subject of people’s science. We now fully deployed the two instruments we had – the *Samoeeki* and the science clubs – to this purpose.

Our view was that science education was not meant to be confined only to students opting for or allowed to the science stream in school. Also, we insisted that no education should be based on only the text book. So we made up an imaginary school in the pages of the *Samoeeki* calling it ‘Own School’, and tried to emulate some aspects of it in the science clubs. ‘Own School’ would be run in our way, where all young people could learn and enjoy science by doing it themselves. A few sentences quoted from an old issue of the *Samoeeki* introducing ‘Own School’ could give us some sense of what it was meant to be.

‘Here no one will force you to study anything. You’ll teach yourself convening the school whenever and wherever it pleases you. It will be a fun school. You’ll choose your own subject. If your enthusiasm tells you so, you may even try to learn something which usually older students study. On the other hand, if you’d like to revisit something you came

across when you were younger, no one will prevent you from doing that’.

The ‘Own School’ became a regular feature in the *Samoeeki* suggesting learning materials and activities for that imaginary school. We’d get feedback from science clubs and even individual enthusiasts, about the actual implementation of the suggestions. I saw many efforts in this regard during my visits to the science clubs, even the remote ones – especially on the occasions of their major exhibitions. The publication of reports on these efforts in ‘Own School’ enthused others to go ahead too. Our successful lobbying with the government showing all the innovative works done by the science clubs bore some fruits. The ministry of science and technology took up a program for organizing an annual national Science Week for the youth, with exhibitions and competitions among the participants from all over the country. This gave an additional encouragement to our science clubs which focused a lot on innovative science aids based on easily available materials. The Science Week was the responsibility of the National Museum of Science and Technology, but some of us from the science club movement got involved too. Moni was now working as an assistant curator at the Science Museum, and ended up also working for the Science Week. After returning home from Southampton, she had spent several years completing her studies for a masters in physics and another one in education.

While at a bigger scale the Science Week activities as well as many science club activities were concentrating on the big competition annually and the rituals around it, we stuck to our concept of the ‘Own School’ that would run round the clock for the sheer joy of it. What we actually needed to prove our point was a real school. This would require a separate organization that could take up more regular activities such as establishing schools and running them, as well as other concrete tasks for People’s Science. I had been following the progress of the vibrant NGO (nonprofit) sector of the country, which though still in its infancy, was doing wonderful work. Technically not a NGO, Grameen Bank’s example created by Yunus Bhai in 1976 of building up a grassroots

organization, was right in front of me. Yunus Bhai had joined Chittagong University near our home town as the head of the economics department soon after returning from USA after the liberation of Bangladesh. The university was in a rural area. He transformed a university project in the adjacent village of Jobra into a very innovative agricultural program for scientific rice cultivation, organizing the local peasants. It involved an innovative system of dividing the contributions to and gains from the cultivation into three equal parts – those of the landowner, the cultivator and the provider of all inputs. It was while working in this he conceived the idea of microcredit to save the poor from the loan sharks. He went on to create Grameen Bank for giving very small loans to these people, especially the women, without any collateral and without any legal papers – revolutionizing the whole concept of banking and extending it to the poor for the first time. Eventually the revolution spread worldwide and brought Nobel Peace Prize in 2006 for Grameen Bank and Yunus Bhai. Observing closely the children in the Grameen families right from the beginning, I knew we had to work with the people at the grassroots directly to realize our concepts in education. The first step would be to have an organization suitable to do that.

So we went ahead and formed a NGO mainly with the people around *Biggan Samoeeki* and called it Centre for Mass Education in Science (CMES). For the second time in life, I had to look into the laws of the land to register something with the government. I had to do it in 1960 when I was 15 year old for the *Samoeeki*, under the press and publication act. Now it would be the registration of CMES under the Societies Act of 1861. But while the preparations had been made, the actual formalization of the centre had to be delayed for a year, because I would be away in Sweden for my post-doctoral physics research work in Uppsala University (1977-78).

Uppsala in 1977 was a great place to be, when its ancient university was celebrating its 500th anniversary. My time there was well spent not only from the point of view of my physics research – one on a new kind of solar cell device – but also for exploring a new country and a new

culture; and it came to be helpful for our new organization CMES too. Much of Uppsala University's long history was also the history of modern science. For example, every time I would walk from my work place Teknikum (Technology Institute) of the university keeping its famous old library on my left and the great Uppsala Castle on my right down the hill near the botanical garden, I would be thinking how Carl Linnaeus worked in this garden in 1740s as a professor of Botany. He was the scientist who first classified living things and gave them their scientific names – the system we have followed ever since. Further down I would usually stop at the river and the main church in my casual walks. The river used to define the dividing line between the 'gown' and the 'town', during the older times. The gown represented the elites – the royals, the clergy and of course the university scholars. They historically had an antagonistic relationship with the common folks in the town.

I wanted to appreciate the things characteristically Swedish and Scandinavian as much as possible within the time I had. For that reason I even took advantage of a short course in Swedish language offered to us in the university. It allowed me to make some sense of the newspapers and in general things around me. There were two particularly important takes for me from the Swedish practices – the notion of welfare state, and that of perfect gender equity. Perhaps Sweden was then going through the peak of its legendary welfare state experiment. No one had to worry about a decent quality of life, health care, proper education and, particularly, child care. There would be a special grant for every child born so that no parent had to feel hardship for raising a child. Single mothers would be given every assistance from the state, which would even engage a civil servant guardian for the child.

For me and for some aspects of the future works of our CMES, the most important take was the surprising extent of the gender equity and women's rights that the Swedish society had achieved. Women were to be found in good number in all sorts of responsible works including statecraft. At the same time I saw women driving many of the huge buses which I used to take to go to the city-center. In a visit to a high school, I

saw a practical class in progress for boys, where they were very carefully putting on the diapers on the doll-babies. I was told that at the birth of a baby a long paternal leave was mandatory for fathers as was a maternal leave for the mothers, so that mothers would not suffer any comparative disadvantage in their careers.

My introduction to Swedish gender equity began right on day one at my place of stay – a student dorm. This was a five room ‘corridor’ with a common kitchen, common bathroom, and a telephone that I shared with three young men and a young woman. Later there was another woman, who was the girlfriend of one of the men. Birgitta, the female student, happened to be in charge when I arrived. She was the one who would distribute among us the common chores we had to do, like cleaning. Soon I became a good friends with all of them, and through our dinner-time chats in the kitchen they became my best source of knowledge about Sweden and its young people. My various travels throughout Sweden from the *sommerstugge* (summer house) of my professor in a tiny island in the sea near Stockholm, to the land of midnight sun in Kiruna within the arctic circle, with a glimpse of glacier research in Tarfala nearby, told me much more about the country.

The idea of the very first formal event with which CMES went public later in Dhaka also came to me in Sweden, when I had been invited to the Nobel prize awarding ceremony in Stockholm, December 1977. This was a great opportunity not only to attend this highly coveted ceremony, but also attend a party with the science laureates where I could take a few short interviews for the *Samoeeki*. The exhibition there on the past Nobel Laureates inspired me to write to the Nobel Foundation, on behalf of CMES, to help us organize a similar exhibition in Dhaka. The Foundation agreed to ship a whole exhibition to Dhaka, consisting mainly of beautiful large posters, each on one Laureate’s life and works.

Thus a Nobel Exhibition organized as a joint event of CMES and the Embassy of Sweden in Dhaka, became the first ever public function of CMES, as soon as I returned to Dhaka. Public relation wise it was a

grand affair, the Foreign Minister (who knew me) and the acting Swedish ambassador attending. CMES was in business now, duly registered, but still a long way from its real goal – organize science education at the grassroots. I took on the role of CMES’s volunteer chief executive and chairperson, and that is how I continued even when it later became a large organization.

For the moment, CMES did what we could do best – developing materials for the type of education we were advocating for; and trying to use the mass media for mass education. These efforts to put our theoretical ideas in education into practical use saw an engaging success in what we called ‘Matchbox Literacy’. An idea came to me that we could use discarded matchboxes as a nice literacy aid at a mass scale. For this, one side of the box would display a letter or syllable in Bangla – a collection of such discarded boxes thus providing various letters and syllables, to recognize and to read. Two or more boxes could also be joined together using the slides of the matchboxes – the inner part which would usually contain the matchsticks. By so joining, one could put the letters and syllables side by side forming words, or a group of words. It could thus be a joyful game for word and sentence construction wherever matchboxes were used.

In the *Samoeeki* article we encouraged the science club members to collect used matchboxes, put new labels with letters on these, and use these in the literacy efforts. Then CMES persuaded a match company to collaborate on this project by printing its butterfly trade mark motif only on one side of their matchbox keeping the other side free. The company got many stickers printed with assorted letters and syllables which were pasted on the other side of the matchbox. CMES helped by finding out which syllables should be printed in a higher quantity than others by making a study of their frequency of uses in the words. Through the advertisements of the match company, and through features written in newspapers by CMES, the collection and use of the discarded butterfly brand matches were popularized. The project involved quite a bit of extra cost for the company, and therefore could not be continued for long. But

it created a sense of achievement for CMES in its infancy, when we received good feedback on the successful use of our matchbox literacy.

Mass media for mass education

My personal connection with the mass media had started early, while I was still a student. I would write for newspapers, participate in radio talks and even in occasional TV shows. These were all concerned with mass education in general and science education in particular. By the late seventies their frequency had increased and I had much more freedom to plan my own programs on TV and radio. I tried to involve CMES with some of these, wherever I could. This even became a way to earn a little money for CMES; anything being important at that stage.

Television was the most effective mass media I could use. Bangladesh Television (BTV) was the only station in those days and TV was an extremely popular medium. However, its reach had only recently started to be extended to the people outside the city of Dhaka as the relay stations were coming one after another. BTV encouraged innovative programs, and its program producers would usually be quite receptive of my suggestions for science programs. Some of my programs became weekly features for years. One of which we called (in translation) ‘A Variety of Science’ gave me the opportunity to show interesting scientific phenomena right within the TV studio. It had to be done in live broadcast, because recordings could not be easily done in BTV as yet. Therefore, I had to be very careful with the success of my hands-on demonstrations. In one of the episodes I was talking about very low temperatures and their consequences and uses. I borrowed some liquid air from Atomic Energy Centre. The liquid air is 196 degree cooler than ice and at such cold temperatures surprising things would happen. I could show how it boiled vigorously and evaporated at the slightest touch of the room temperature as it did when poured from the thermos flask. A very soft thing such as a flower could instantly become as brittle as a brick, which I could break by striking with a hammer. I could touch with my finger such a cold liquid instantly; but had to warn the viewers

that if my finger lingered there its fate would be the same as the ‘broken’ flower. These gave a very captivating environment for learning some science and to make people engaged. But in all these my effort was to demystify science; instead of looking like a magic it should look like a logical thing of everyday concern. To emphasize this aspect even more, one of my later programs, which ran for decades, was called ‘The Country and the Science’. This was a science quiz program in which I could bring up various issues concerning our land and our life, giving all kinds of viewers a feeling of intimacy with science, and also a sense of wonder with familiar things.

The focus of all my TV programs had been science education, except for one, whose focus was mass literacy. For me it was not only a change of subject, but also the change of style and tasks, doing thing which I had never done before, or since. But this too was my idea – a literacy program modeled on the American shows ‘Sesame Street’ and ‘The Electric Company’. I used to love their style but now I knew that we could only adapt the spirit of these, not anything of their essential ingredients, nor their technical wonders. We simply were not equipped for that. But I still wanted to make a funny and attractive literacy program even calling it *Okkor Chokkor*, which literally means ‘Spinning with the Letter’. I relied on writing humorous short drama pieces, a few lines of parody – mostly of very popular folk songs and movie songs, and newly trendy pop songs, sometimes even dialogues of a popular movie or theatre; lots and lots of them. Then I sprinkled humorous and rhythmic jingles in between all of these. Everything would be centered around a letter of the alphabet to which one particular program would be dedicated. We, along with our viewers, would virtually be experimenting with what we could create out of that letter – its shape, its sound and its propensity to make words and concepts. This is what our ‘Spinning with the Letter’ was about.

I got our old friend Belal Bhai, now a famous producer at BTV, as an enthusiastic supporter (remember him as the natural poet, rhyme maker of his school days?). It was easy for Belal Bhai and me to get the

‘Spinning with the Letter’ approved by the BTV hierarchy, because it could become a part of a national movement on universal literacy recently declared by President Ziaur Rahman. Actually, the president had created quite a stir by his successive calls for two ‘revolutions’ – one on canal digging, and the other on universal literacy. He personally led both, going round the country. The canal digging was aimed at reviving the thousands of silted canals and clogged river-ways, which was vital for our riverine country. The president made an appeal for voluntary work for this from the millions of youth. Similarly the literacy program would be entrusted on graduating high school students each of whom would teach several illiterates nearby. I was attracted to the ideas of the both not only because of the vital needs each would address, but also the way it tried to mobilize young people in voluntarily zeal for constructive works. These worked nicely to begin with, but soon the government bureaucracy took over; and the latter looked for easy solutions bypassing the need for keeping up the enthusiasm. Though these so called ‘revolutions’ fell far short of their objectives, I felt that the voluntary zeal these attempts created had contributed to the great inspiring effect Zia then had on the youth of the country.

Once started, our ‘Spinning with the Letter’ became quite a demanding task for me; but very enjoyable indeed at the same time. While I was continuously writing parodies in the form of rhymes, jingles, songs, theatre dialogues etc. these needed actions and quite a bit of organization, to be executed in the studio. We involved CMES in it, gathering some enthusiastic students of Dhaka university to help. Some of them were members of an amateur theatre group and I already knew them well through my younger brother Mainu. So they would bring the letter and all the creations around the letter alive in comics or drama skits. But to get a better effect, these needed a lot of rehearsals. Where would those happen? At our university apartment, of course. Our crammed house had served as the office of the *Samoeeki* and then of the nascent CMES, and now it was buzzing with songs and skits as the young actors rehearsed. From writing parodies to directing drama skits –

totally new experiences for me; a lot of fun, but quite effective too. Ours became a popular educational program of BTV, remaining on screen for several years. Considering the heterogeneous nature of the BTV viewers, this must have had an impact on the literacy of many, apart from popularizing the whole movement on literacy through entertainment. Today it seems surprising that a group of amateurs could achieve so much, with little material resources, and fueled mostly by a lot of enthusiasm.

The educational as well as the entertainment value of television was without any equal; but it was not yet a mass medium accessible to all people. That position remained steadfastly with the radio. People in the remotest corner of the country were near a radio set most of the time – even on offshore fishing boats; and it would usually be kept on. Many radio programs had a currency and popularity which would not be possible in any other way. My participation in Radio Bangladesh took place in several different forms. The government-run radio authority had a monopoly in those days through its various stations located in several cities – Dhaka having more than one. Occasionally I would be a part of a live children's program in the weekend mornings – talking science with children. I also did programs for the commercial station of Radio Bangladesh in which a lot of music broadcast and commercials would be interspersed with filler programs. I did those fillers sometimes in the form of a short topic of science, made fascinating enough for the music listeners to stay on. The most elaborate contribution I could make on the radio was to be a part of its daily 'radio magazine'. It would be like a literary audio magazine in which I would regularly have the opportunity to bring in some taste of science literature. A nice part of the radio magazine was that listeners could write to the editor. So one of my tasks was to answer the questions listeners directed to me.

CMES now got a wonderful job to do, not in the mass media, but not very far from that either. I proposed to Unicef, and they agreed to fund, a series of children's books on science that would be distributed to all primary schools of the country. It was to be called the 'Environment

Science Series’. We intended to give the children a joyful taste of science with authentic but attractive text and illustrations. I wrote most of the books, sometimes with help from other experts. I was also the series editor, and planned the illustrations and the tone of the books. Quite a bit of science could create a charming space for the children in some 20 pages of each book. The books (nine in total) were much appreciated for decades and bolstered the reputation of CMES.

The Basic School: ‘our very own’

By early 1981, we could give a practical shape to our original dream – to have a real school of ours – which we called Basic School. This became possible when I met Jean-Marie Hatton, a Frenchman, who was the country representative of the French NGO Terre des Hommes-France (TDH). During our close interaction about the education in Bangladesh at the grassroots he got as inspired as me about our ideas of the basic school. We got a grant from TDH to start one. It was very much based on our ‘do it yourself’ principle with emphasis on life-oriented science and technology. At last it got a real shape by the courtesy of a humble villager Mr. Poni Mia in a village named Suruj five miles from the town of Tangail. He was a social worker, a member of the local union council. He wanted to help the poor children who dropped out of education, or never could enroll; and for that he donated a good piece of land to CMES. It was here on this land that our first initiative took shape, and Suruj became synonymous with our efforts during the next decades; though by then we had spread out with many such schools to various other regions of the country.

Our main pursuit was to make the school something the children could love and identify with. We did this by making it a hub of joyful and useful activities through the practice of their learning. Without that they would still remain in the same situation which had forced them to drop out in the first place. Some years later I wrote a school-song for our system, which said it all.

Our basic school
Our work school
Our joy school
It is our very own
It is our life
It is our dream.

By then we had found out some ways and means to make all these really happen. The students were in joy not only from the joyful school environment, but also from their sense of achievements in learning and doing, some of which resulting in actual products they could sell. The children would learn a part of their science hands-on with a portable lab which we named 'My Lab'. It was nothing but a small box full of easily available things, which could be used for doing science. It was reminiscent of my own 'laboratory' of the school days, which I had built up at home with improvised things. But for many of them one initial challenge was to acquire literacy as quickly as possible and to use that effectively. All the literacy aids we had developed for our imaginary 'Own School', and many others we explored later, came handy. While trying these in Suruj, I had also been doing similar things at home with my son Kushal, beginning from when he was only three year old.

From the time of Kushal's birth, child-development became an interesting subject of my study. It was a great joy now to have some practical experience with Kushal. As for the literacy, reading habit, and curiosity in general, I found the role-playing an excellent idea. I also confirmed the old wisdom that the easiest way to learn a new language is to do it in the early childhood. So my role-playing with Kushal had as many English episodes as there were Bangla episodes. Often I would just lift pages from a book like 'Alice in Wonderland' for such role playing – Kushal becoming Alice and I the white rabbit, for example. Other times I would just make up something such as the scene of Columbus in his ship approaching the new world. One moment we would shout 'Land ho!' and the next we would become the natives welcoming Columbus wildly dancing. Literacy went hand in hand with that just from the temptation of

reading such stories – the sentence first, and letter later – both for Bangla and English, each totally unmixed in its own domain.

But at the finer applications of the methods I found out that every child had his/her own particular propensities and might respond better to a slightly different approach. This was quite obvious when I tried these on Ujal, my younger son, several years after Kushal. I found Ujal to respond better to graphic cues than to theatric ones. He loved to draw and make 3-dimensional models, and appreciated those better as literacy aids. Being left-handed, he could do mirror writing almost as naturally as the correct one – writing as we see it in mirror. Working with Ujal I became quite an expert of advantages and disadvantages (mostly disadvantages) a left handed child has in a world of right handed people. One good result of attaining early literacy in a practicing manner was that Kushal loved to read children's books in both the languages quite early. In Ujal's case it was similar, but instead of text-only books he preferred comic books, including comic book adaptations of classics.

We tried all sorts of aids and methods in Suruj basic school and later in its replications – all very local, very life-oriented, including drawing, modeling, role-playing, games etc. We developed books to go with these. Every aspect of the education had an interesting book with it with interesting titles such as 'Literacy games', 'Five Minute Activities'. 'My Own Book', 'My Book for My Lab', and so on. Of course, our 'Environment Science Series' was always there. Our own approaches to basic education eventually took the shape of two overarching themes for which we coined the names 'Own World' and 'Liberated Literacy'. These continued to be the major themes even when we created higher levels of education including technical skills in our system.

'Own World' meant students would create their own mental and physical world, transforming everything they would be learning into this world of theirs. Doing this would avoid the alienation and the outsider-mentality that contributed to their dropping out in the first place. Thus when they would be following the text books used all over the country, they would

use them more as a model to create something similar with which they can relate better; not stopping at the original text. For example, the text book may give a travel story, or the geography of a certain place; these should inspire them to narrate their own travel story or to explore the geography of their own village.

The 'Liberated Literacy' was also another kind of liberation from the monopolization of the text books. Texts would be everywhere for the children – created through all the works they would be doing, or through activities around them coming in the form of sign boards, posters, work books, account books, shopping list and what not. They would use all these for enhancing their literacy – doing a better job in creating some of those texts all the while. The opportunities for both 'Own World' and 'Liberated Literacy' were multiplied when our school activities diversified into experimenting with 'My Lab', producing things, selling things, designing things, and so on. This became the earliest stage of an integration between education and work. Actually one purpose of the Basic School System would be to take the young people seamlessly and joyfully from the world of education to the world of work.

The students were also doing something called 'Home to Home Work'. This was to work for improving their own environment and quality of life. They would learn in school how to do that and would implement those in their own home and in the neighborhood. Thus the school, mainly through its students, would make the neighbors aware of their environment and help them to have a safe drinking water source, a sanitation system, waste disposal through composting, an adequate tree cover; and such other things.

We expanded a single unit like Suruj to many basic schools; and then for slightly higher level of education and skills, Advanced Basic Schools (ABS) and the Rural Technology Centre (RTC). We gradually had more units like these all over the country. This could not transform or replace any part our mainstream education, but at least it could offer the latter with a working model for change. We provided a second chance

education to thousands of disadvantaged children and adolescents. While we could touch at least a sizeable community of students, there was another group of young men and women who would benefit from this too – the teachers. Trained in this innovative education approach, and taking up a vocation which demanded creativity and scientific enthusiasm, they too profoundly changed themselves. Many of them dedicated their whole being in it with great zeal. Knowing them well and working with them, had been a great pleasure and privilege for me. The teacher-student community of the basic school system now became a very important part of our people's science endeavor.

Girls' Power

Whatever we tried to do in science and education right from the inception of *Biggan Samoeeki* till the beginning of basic school in Suruj, the participation of girls and young women in these was rather limited. We tried our best to redress the situation by making the content and the form of each of those efforts girl-friendly; but could not make much of a headway. This, unfortunately, was a part of the colossal disadvantage of the females in our society – quite obvious in education in general, and anything dealing with science and technology in particular. This situation had been widespread in all parts of the society; urban and rural, rich and poor. But this was extremely pronounced at the grassroots, among the rural poor where females were doubly disadvantaged. We were, therefore, determined to make girls our main focus in the basic school system. We made them a majority among the students. We encouraged them into leadership in all the activities of the basic school including games, science works, home to home work etc. And this brought us face to face with the serious vulnerabilities of one group of rural females – the adolescent girls. When the basic school had been busy with the early childhood education, the problem was not obvious. With the higher school education included, we expected the retention and enrollment of adolescent girls and their continued leadership. But what we got was a large scale dropout of the girls.

We now had direct proof how the girls were being robbed of their adolescence, forced to be confined within home and getting prepared for child-marriage. These were highly entrenched traditional customs disempowering the females. Now there were the added pretexts that the deteriorating law and order was unsafe for an unmarried girl and that the dowry would go up with age. The loss of freedom, and the child-marriage, would not only put a stop to the realization of all potentials of the adolescent girls, but would push them into an uncertain and dangerous life of early pregnancy and virtual servitude to the in-laws.

It became clear to us that our efforts to be successful in the basic school and in the 'education and science for all' program in general, something special had to be done with the adolescent girls. So we began the Adolescent Girls Program (AGP), which soon gave CMES a distinct identity in the area of gender and development. This was a time when a lot of work was being done on the subject of women's emancipation; but none of those had a real look at the problems of adolescent girls, whose plight was the worst of all. Much of these problems arose from the attitude of the family and the society to the girls, treating them as burdens. But being always at the receiving ends of such attitudes, surrounded by taboos and superstitions about their puberty and adolescence, the girls themselves acquired a timid mindset which made their exploitation easier.

The immediate task we undertook in AGP was to try to change the mindset of the girls themselves, through a peer-organized all out effort. We realized that others can help them only if they wanted to help themselves. Therefore, AGP organized them into local associations who would be meeting every week in 'gender sessions' which were basically peer-organized but were inspired by experienced CMES facilitators. It would be here that the girls would discover their potential and get empowered to assert their rights. They earned the respect of their families and the society through assuming leadership in all works with the same ability and enthusiasm as the boys. Moreover, they took up social actions and advocacy to stop the discrimination and repression

they were facing along with their fellow girls and young women. These were extremely uphill tasks given the stiff resistance from the traditional society; but their solidarity and awareness gave them the necessary strength.

One of their most important struggles was against child marriage. Whenever they came to know about a planned marriage of a girl below 18 they fought it tooth and nail mobilizing all sorts of support groups. The law made the marriage of girls below 18 illegal, but this usually would be disregarded by all parties. The gender discriminating Bangla phrase '*Kurite Buri*' meaning 'An old woman by twenty' became the target of attack by the girls; they were determined to prove the phrase to be an utter lie. We made science and technology the cornerstone of the girls power. Irrespective of their formal education, they now had a favorite subject for discussions – sciences that mattered in their life. For example, what happens in their body during puberty, and what were the essential knowledge and practice for their health now and later. They knew for example, how the sex of the child would be determined by the father's DNA, not the mother's – the facts which would now challenge those myths created to mistreat them for not having a male child. Similarly they would realize that a grip on technology could help them a lot in taking their equal place in society. AGP became a program where the girls could familiarize themselves with technology and attain skills for practicing those. All the while, however, the continuation of the education in a school or college would be emphasized.

Who were the girls who started this great move towards empowerment? Many of them grew up with our basic school system as its students, but many more came just for AGP. The latter were students or dropouts from local schools and colleges, or even some who had never enrolled anywhere. The only common thing between them was their solidarity as girls, belonging to poor families and doubly disadvantaged, as they were. But they would not be ready anymore to forgo their adolescence and its exuberance. They started doing 'audacious' things such as playing soccer and having a cross country bicycle race. Nobody in the village ever

heard of an adolescent girl or a woman playing ball games or riding a bike – for the traditional society even these were shocking transgressions. So the girls had to fight for everything from riding a bike to stop their child marriages, each fight empowering them a little further. Similarly they had to fight for conducting their own businesses in the bazar – a tailoring shop, a beautician's parlor, a photo studio, a mobile phone repair booth etc. These became possible with skills learned in AGP, and a strong will to be economically independent, the latter also imbibed in them by AGP.

Personally for me, it was like entering a new world, to be acquainted with the pathos and the aspirations of the adolescent girls and to get involved with their struggles. This also inspired me to write about them sometimes in the media, but more often in the bi-monthly magazine of AGP *Kishori* (Adolescent Girl), and in some of the books we published with their case stories, titled 'Daring to dream', 'Adolescent Girls Power' and so on. Through my works with AGP, I could follow the twists and turns in the lives of many of these empowered girls. For example, China Akhter of Tangail was in dire straits when she joined AGP, with her father totally bed-ridden with a disabling disease and her mother struggling to look after a family of five. She joined in spite of her mother's dependence on her – the oldest offspring at 15. She became a peer leader in AGP, learned necessary skills and with successive small loans from CMES, built up a small dress-making business. Her entrepreneurship branched out to several other fields which enabled her not only to educate all her sibling, herself included, but also to attain a decent quality of life for the family. She married at 25 on her own accord, and took all the decisions of her life herself.

Monwara of Dinajpur was the daughter of a poor rickshaw puller, but she learned to be a photographer at AGP. She was so good at it that we invited her to Dhaka along with a dozen other budding girl photographers to be trained by an accomplished photo journalist of the country. Monwara ended up being the working owner of the best photo-studio in her town – successfully evading several early marriage

initiatives taken by the relatives. But we know Monwara more for the peer leader works she did for her fellow adolescent girls, as a role model and as a front-line fighter.

CMES itself became a trailblazer, nationally and to some extent even globally, so far as adolescent girls' empowerment was concerned. Within a decade of the start of our pioneering work in this sector, the theme became a buzzword of the NGO community of the country. For its part, Unicef took steps to make CMES a partner in its new global initiative for adolescent girls' empowerment. I was invited to an international workshop on this in Pauling, New York in the United States. On a model that we had mooted there, programs were taken in several countries of Africa and Asia. CMES took a leading part in the Unicef sponsored program in Bangladesh called 'Adolescent Girls' Expedition' involving the government and several NGOs. Actually it was not just Unicef; beginning with the TDH-France, we had a succession of international development partners that not only helped us develop our basic school system and adolescent girls' program, but also took initiatives so that we could contribute to international models elsewhere..

Apart from the adolescent girls themselves our gender program empowered many others. One such important group was the adolescent boys whose participation was quite direct, getting engaged in the various activities of AGP by the side of the girls, getting aware and active about the gender issues involved. It was through the mutual understandings and combined efforts of these boys and girls that they could achieve the success they did. The parents of the girls as well as the other local support groups joined in, motivated by AGP and strengthening the girls. The large part of the teachers of the basic schools and gender facilitators of AGP were themselves local young women, who had got empowered through their own struggles, and would be excellent role models for all adolescent girls. They were our main assets acting as friends, philosophers, and guides to all our girls. It was a great joy to see how the inspirations they felt in their work was being transmitted to their friends and families too. I witnessed a curious example of it when visiting a

basic school in a southern coastal village. There I met Minara whom I had known for a long time as a teacher of our system. While talking to her, suddenly I heard a baby voice singing rather loudly and in a perfect tune – it was her four year old son shyly hiding his face in her lap:

Our basic school..

It is our very own

It is our life

It is our dream.

The importance of being renewable

The sights and sounds of the eighties

Very early morning on May 30, 1981, Ziaur Rahman, the president of Bangladesh, was assassinated in Chittagong by a group of senior army officers. Knowing nothing about it, I went as usual to the university in the morning. There I heard a rumor about a helicopter accident with the president or something to that effect, but nothing came in the news media including the radio. By the time I was trying to walk home from the university the road was almost empty, and a friend I met on the way seemed to be very afraid; he said he heard shooting between different groups nearby. It was only a few minutes later at home on the radio that we got an official announcement. The president was dead, killed in his sleep in the government guest house (the century old beautiful ‘Circuit House’ in Chittagong) while on a visit. The only part of the army involved in the coup was the officers of the divisional headquarter in Chittagong, including its General Officer Commanding (GOC) Major General Manzur, actually once a good friend of Zia. Dhaka was without any incidence; what I had heard on the road was just a rumor. The vice president had taken over, and the army chief General Ershad had vowed to crash the coup.

During Zia’s presidency, the country as a whole was quite peaceful with constructive actions being initiated. But there were rebellions within the armed forces, mercilessly suppressed. And now the officers did this. After the assassination the perpetrators made speeches of defiance from Chittagong radio, and kept the city and the surrounding under the control of their garrison. But in a day or two they had to surrender to the forces sent from Dhaka; the coup leader Manzur fled, but was arrested by the police within hours. Mysteriously, the army immediately took him in custody and soon reported that he had been killed by the angry troops while being led to the cantonment. After a hastily conducted court

martial 13 senior army officers who allegedly masterminded and executed the assassination were hanged. The actual history of the whole episode was never revealed.

Zia's assassination created huge public grief as evidenced by the number of the people spontaneously attending his funeral at a short notice – a number unmatched in any other funeral in memory. Within a few months his vice president Justice Abdus Sattar, now the acting president, was elected with a good majority. Zia had left his political party BNP quite popular. But soon the chief of army General Ershad found various faults with the BNP government, demanded a share for the army in the governance, and ultimately forced the president to resign. Ershad declared martial law and eventually assumed the post of the president.

Ershad's bloodless coup and what followed was an almost copybook repetition of the Ayub Khan days of the Pakistan era, and of Zia's reign only a few years ago, with the exception that Zia's martial law had come in a more complicated situation. Like those two, Ershad too lifted martial law after some time, established his own party and became a politician. He ruled as president for nine years until a mass uprising forced him to resign in 1990. The two strong and popular opposition parties – Awami League (now led by Mujib's daughter Shaikh Hasina) and BNP (now led by Zia's widow Khalida Zia) – waged an almost continuous public agitation against Ershad all those years, questioning his legitimacy and the fairness of the presidential and assembly elections that took place under him. In this movement, the student wings of the various opposition parties had been in the forefront. While they were supposed to be united against Ershad, they fought each other too, and the two largest ones – student wings of Awami League and BNP – did it with such violence that life in the educational institutions became very difficult. Added to this was attempts to suppress the movement against him by Ershad's police and his own student party. All this made things really dangerous in the campuses including in ours. One favorite tactic of the police to play havoc with the student demonstrators was to follow the student processions in trucks close behind as if to prevent it from getting violent,

and then hit the students with the truck from behind causing injuries and deaths. Such things angered the students and the public.

Some students were using firearms quite freely in their interparty feuds. Unfortunately these were the ones who got prominence as leading members in those two student parties allied with the two major opposition parties. Deaths and injuries were not uncommon. Sometimes at home in the teachers' quarter we had a hard time taking adequate cover, especially for Kushal and Ujal (a mere baby), during indiscriminate shootings from the streets, buildings, and rooftops. One common scene we would remember long would be from the children's school just opposite to our house. During the change of school shifts we would see a policeman appealing through his megaphone to the feuding student groups shooting at each other across the road, for a temporary cease-fire, so that the children can safely go home. The irony was that the appeal would be made very politely addressing the perpetrators as 'Dear student brothers'.

Ershad's presidency was also marred by his wily politics, often bringing back the religious cards blatantly, and a general mistrust by the people. These overshadowed some of his practices of good governance and some achievements too. He would provide space for innovations by individuals and organizations without trying to politicize it, and often against the vested interest of his own bureaucracy. He even let our university run itself more and less autonomously even though this was the hub of opposition to him – not only the students, but also the faculty and much of its administration. He came up with good ideas of decentralization of the administration and the higher courts. He thus tried to make the government functionaries responsible to elected local governments, to take the government facilities nearer to the people, and to create the possibility of seeking justice from the higher courts too. On all these counts things have moved towards the other direction during the successive later governments, officially democratic but progressively less so in the real governance.

At least in its earlier period, Ershad's liberal and encouraging attitudes helped us in our work both in the university and beyond. I expanded my teaching-learning-research work in the university by getting involved with their corporate facets. I got elected to the university senate –a parliament-like body to debate university policies; and then got elected as the secretary of Bangladesh physical society – an organization of the greater community of physicists and physics teachers in the country. In my latter capacity I teamed up with Professor Harun-ar-Rashid, my senior colleague and an eminent physicist, to review the physics curricula for the schools and colleges. Both of us had strong opinions, but we managed to debate all points among a large section of teachers, and ultimately present something much more effective than the current ones, to be adopted by the physical society. The curriculum was not a mandatory one for any institution, but would be a great help in the improvements.

Though we had been colleagues in the physics department since 1973, I came to know Prof. Rashid much more closely in 1976 when we spent several months together in ICTP (International Centre for Theoretical Physics), Trieste, Italy. Abdus Salam, the famous Pakistani physicist, established ICTP as a center for research and academic interactions between scientists of developed and developing countries. From 1983, and through the eighties and the early nineties, I would spend about two months almost every year there, first in its spring colleges and then as an Associate Scientist. This international center in the north-east corner of Italy became very much a part of my sights and sounds during this period. It was a wonderful opportunity to interact with the physicists from all over the world and to come in touch with great names in physics, and even to study under some of them. The closest contacts, however, were made with participants like myself, and that was one of the main objectives of ICTP. Even the arrangement of putting two participants from two different countries randomly in one room of our hill-top guesthouse 'Galileo Building' was an excellent idea. Every such room was equipped with writing board and chalks. I vividly remember

the friends I made among the roommates during my many visits – Hailu from Ethiopia, Tomas from Poland, Karim from Algeria, Hideki from Japan, for example. I became quite an expert on their countries, cultures, and histories.

Even the environment of the city of Trieste would make one interested in the diversity of cultures. The city was the meeting place of three great cultures – Austrian, Slavonic and Italian. Historically a part of the Austro-Hungarian empire, architecturally it had retained the 19th century Austrian style, when it served as a busy port for the empire on the Adriatic coast (I actually matched a modern main street, building by building, with a 19th century photograph). From the coast line the beautiful city rose sharply on the slope of a mountain ending on a sprawling rural plateau at the top. Though the population was mostly Italian, there was a big minority of Slovenes who spoke a serbo-croat language like the Yugoslavs. A disputed land between Italy and Yugoslavia at the end of World War II, the settlement gave the city to Italy but the outskirts to Yugoslavia (now Slovenia). While in Trieste it was this great diversity which I loved most.

The great attraction of ICTP for physicists, however, was Abdus Salam; for me especially so because he was my idol from the ‘college’ days. He was the Founder and Director of ICTP, now Nobel Laureate in physics (1979), and a champion for the cause of science in developing countries. His presence in ICTP, usually in the company of some great physicists of the day, would be very much felt. He would often be speaking to us and otherwise inspiring us; and we too had easy access to him. I interviewed him for the *Samoeeki* on various occasions. Trieste was a good base for us to visit and work with laboratories in Italian cities. It was also very easy to have day visits in weekends to Yugoslav cities nearby. Once there, one would be in the different world of Marshal Tito’s communist dictatorship. But it had its own attractions – like cheap good meals and exotic sceneries. While in Trieste, sometimes I would take a few days off to visit the TDH people in France – who were helping in our Basic School System. I would usually take an overnight train from Milan to

Paris and meet my TDH contact Jill Daneels. An old friend, she would take me to various TDH groups to speak and interact – all in interesting rural areas of France. Originally English, Jill and her family were bilingual. In Jill's home in Normandy I met her daughter Jenny still in her early teens. Several years later Jenny came to Bangladesh to have her experience with our school children in Suruj. It was a great joy for Kushal and Ujal to have her with them in our house for several weeks.

ICTP not only exposed us to world class centers of physics, it also helped to bring some world-famous physicists to Dhaka. It assisted us in organizing international and regional conferences. As the secretary of the Physical Society and later of the Solar Energy Society, I took this opportunity several times. It would be quite convenient for me to do part of the planning and organizing of the conferences at ICTP talking directly with the potential guest speakers. These conferences in Dhaka created a lot of openings for our work at home establishing valuable contacts and collaborations with universities and organizations abroad.

Renewable Energy

It was in ICTP in the early 1980s that I made renewable energy my research subject. Later in the decade, we also made it an important part of CMES. There had been a surge in research on renewable energy in the industrialized countries in response to the oil embargo imposed by the oil exporting Arab countries protesting U.S. support to Israel in the Yom Kippur Arab-Israeli war of 1973. ICTP took this surge very seriously, realizing also that all kinds of fossil fuels would become unpopular from the point of view of environment and sustainability. The issue of the Green House Effect was coming to the forefront at least to scientists and conscious thinkers. ICTP, therefore, took a program under the leadership of a physicist of Trieste University, also working for ICTP – Professor Furlan. The idea was to encourage scientists of developing as well as developed countries to take up research in renewable energy and to keep them conversant with the state of the art research on the subject. I was lucky to be one of the Furlan's men and women from various countries.

We used to have biennial spring colleges in ICTP, a very good opportunity to ‘recharge our batteries’ (a simile Prof. Salam would often use) for renewable energy research at home. There we would interact with scientists, usually world leaders in the very fast growing branches of renewable energy; and take up some problems practically. My particular interest was in solar cells generating electricity directly from solar light; the nearest thing to the semiconductor physics I had already been engaged in. But the solar thermal energy – the modern way to use solar heat and the efficient extraction of energy of biomass (plant materials, animal waste etc.) were the two other areas I was interested in. It was around this time that two of our senior physics professors Shamsul Hoque and Muhtasham Hussain switched their subject from nuclear physics to renewable energy and took the lead in establishing the Renewable Energy Research Centre (RERC) in the university. Somewhat later the RERC initiated the Bangladesh Solar Energy Society, as a forum for the still small community of scientists working in various renewable energies. These gave us a better platform to do research on a more experimental and practical basis; and also to build up an ‘Energy Park’ to make the subject popular within and outside the university. Later, I had the opportunity to run both RERC (as director) and the Solar Energy Society (as elected chairperson).

It is now a part of history how the optimism and disappointments alternated in the field of renewable energy in the 1980s and later. ICTP spring colleges were very reliable and animated events where one could gauge these changes in mood. Some of the major protagonists of the story would be with us. For example, innovations in the theory and practice of solar cell science would keep us busy in keeping pace. The technology that gave usable shape to them ultimately would be judged by the efficiency and the cost. Thus for a time, the greatest attention was attracted by the thin film amorphous (non-crystalline) silicon solar cells. Both the science and the very convincing presentation by some of its creators made us believe that this would be the energy source of the future. A probable future scenario would be large rolls of thin sheets of

such solar cells getting available in the shops like rolls of cloth. Pieces of any size could then be cut to hang like curtains under the sun to give all the electricity needed. This dream was not realized quite in this form, but some other interesting ones did. One Italian Professor invited some of us to visit and work in his laboratory on solar cells in Bologna. For me the thrill here was two-fold – one very modern one of new solar cell technology, the other was to be in the ancient university which had giants like Copernicus and Galvani in that very campus full of medieval buildings.

It was also quite inspiring to learn from some of the regular participants – by now close friends of mine – who have been renewable energy pioneers in their own countries. It was heartening to see how some of them got engaged within their country programs using the particular need and advantages of their countries. Thus the Indian dash with the solar thermal water heaters and biogas digesters, solar cooking stove use in Nicaragua, Israel's solar ponds (hot water reservoir using various layers of salinity), and Italy's passive solar building architecture, became things to get impressed about. In Bangladesh all these remained basically confined to our university research, the only exception being some very specialized use of solar electricity by remote telecommunications. In spite of the efforts of RERC and the Solar Energy Society, there was no concerted program in our country; the issue of renewability not still receiving much of an attention in any sector. Among other things we were trying to draw the attention of the policymakers through various forums, not the least through organizing exhibitions and international seminars every year – again with ICTP's help. But our energy sector was so entrenched in their fossil fuel based, particularly the natural gas based, power that we could make little impact. However in the meantime we built up a strong network of renewable energy scientists and practical implementers, both globally and regionally.

Often putting on my other hat, I diverted a good part of my time and attention to try to do something about renewable energy in our grassroot works with CMES. We started there with efficient cooking stoves, and

ultimately made small solar electric home systems in the village as one of our major programs. The campaign and extension work for efficient cooking stoves had been an ongoing one for the NGO community in Bangladesh, to avoid the fuel waste and health hazard involved with traditional stoves. CMES joined in through the 'home to home work' in its basic school system. But then it introduced an innovation – a stove that can do without fuel for most of the cooking! I got the idea from my scouting days, when I had tried out a camping trick suggested by one of my books in international scouting, referred to as a 'hay box'. This suggested that if we put a cooking pot with slightly cooked food still hot, in a box and wrap it well with hay, the rest of the cooking would be done slowly by the conserved heat without any fuel whatsoever. I remembered having good result by following this suggestion in a scout camp. We now experimented with the method and found that this worked amazingly, even if we stopped actual cooking using fuel as soon as it just reached the boiling point. Even the most stubborn of the foods would be cooked in two hours or so within that box. While we continued to use the self-made hay boxes within our 'home to home work', we even tried a commercial version made of a neat cube shaped box of styrofoam. For both the versions we coined the name fuel-less 'Um Chula', which literally means a stove that works with the warmth of a quilt. To our disappointment we found out that the cooking culture is one of those habits which does not change easily. The 'Um Chula' remained popular only in our own uses in the CMES community for a few years, but undaunted we developed our version of solar cooking stoves.

This solar cooker followed easily from our cube shaped styrofoam box of Um Chula. We just opened the box up exposing the black painted covered cooking pot inside to the sun's radiation. We could use an aluminum foil reflector pasted on a thin hardboard to give some extra sunshine on the pot. Like most solar cookers it would take several hours to do the cooking slowly in the low heat generated and conserved within the pot. These were very easy to make and use, and we tried to popularize these by organizing seminars where we invited scientists,

notaries and journalists; and cook their midday meals under the sun right within their view in several dozens of those styrofoam solar cookers. A well-cooked lunch would tell the story better than all the speakers who would join the discussions in the seminar.

CMES took part in what became general awareness building movement in the renewable energy. But its role was quite distinct among all others in the sense that it worked more practically at the grassroot level. We did much of it with its basic school system and adolescent girls program – instilling this in the mindset of the rural youth. To extend it further we organized a ‘People’s Science Travelling Troupe’ which performed travelling from village to village, its message covering not only renewable energy but also health, hygiene and environment. An accomplished theater personality and friend of mine S. M. Solaiman volunteered to develop for our troupe some wonderful pieces of short interactive drama full of folk themes and tunes. The troupe itself consisted of local folk artists who became very effective envoys for our ‘people’s science’, taking its messages and the products directly to the people in an entertaining manner. We covered a lot of ground through our ‘People’s Science Travelling Troupe’, so far as the awareness building was concerned.

The most success we got in the practical field renewable energy was with solar electrification through solar cell panels. I could contribute well in its extension because it was also my field of academic specialization. I now gave more importance to gaining some hands-on experience in the designing and implementation of solar electric home systems out of the available technology. An Asia Foundation (a U.S. NGO) invitation to Colorado opened up a new opportunity for me to do that. I spent the greater part of my stay in Colorado in attending a course designed precisely for the kind of training I needed, at Solar Energy Center in Carbondale, Colorado. There I met April Alderdice a fellow course-participant, a graduate student from Colorado. Our acquaintance made April to come to Bangladesh some time later and work on solar and wind energy projects in Grameen Shakti (Energy), a sister organization of

Grameen Bank, for more than a year. We remained friends ever since. This trip also took me to Rocky Mountain Institute (RMI) in Basalt, Colorado; and National Renewable Energy Laboratory (NREL) at Golden, Colorado. At RMI, the brainchild of two great names in renewable energy Amory Lovins and Hunter Lovins, I could appreciate firsthand how life could be based on renewable and efficient energy; and NREL took me through the state of the art research on solar cells. But my imagination was also fired by what I saw in the house of a single woman with two kids in Carbondale – Barb Chambliss.

This being a small rural place, I was a house-guest there in Barb's place. In those few weeks she introduced me to several of her interesting amateur projects. A counselor of people in mood difficulties by profession, she had a herb garden full of common and rare herbs in unwieldy shrubs, and she could find out valuable medicinal herbs from almost similar-looking other herbs. She would describe to me some of the great qualities of these herbs. But most of all I was enchanted by the very exceptional wastebin she had for the disposal of kitchen and garden wastes. Here the wastes could be converted into 'vermicompost' through earthworms. First picked up from here, we could make this interesting technology a major practice in CMES, thus introducing it to our country. More on it later. Barb was a very good example of individual citizens who could participate in people's science for a cause and for the love of it.

CMES was one of the first in the country to take solar home electric system to the villagers. We first did it as a partner of Rural Electrification Board, training their technicians and customers in solar electric system. The greater part of rural Bangladesh being outside the grid supply, there was a huge demand for this alternative renewable source. But there were the challenges of affordability and the availability of expertise. We, along with a few other pioneer NGOs in this sector, addressed the former with monthly installment payment system, and the latter by training local young people in the tasks of the installation and maintenance of the hardware. It was a 'social business' and 'mass

education' at the same time; no less than a change of culture in the utility of electricity. I would often visit remote villages to talk to all concerned. This was the first access to electricity for the villagers, though they regarded this as 'the small electricity' as opposed to 'the big electricity' (from the grid) which could do much more. But we managed to slowly bring about the necessary culture-change, so much so that they would learn to ration the use of electricity following weather forecast. At the same time they now took pride in being the owner of their own electric supply, independent of the vagaries of the frequent outages of the grid.

Our enthusiasm for renewable energy reached a new height with the Earth Summit (The United Nations Conference on Environment and Development) in Rio de Janeiro, Brazil in 1992. At home, CMES had been given the responsibility to organize consultations among NGOs and to prepare a Bangladesh NGO Statement for the summit. This gave us an opportunity to collaborate with a few other NGOs dedicated to these issues. In particular this was the beginning of our long collaboration with Bangladesh Centre for Advanced Studies (BCAS) which had created a name for its research in the domain of Green House Effect and climate change. BCAS could be counted among the global champions for the cause mainly because of the personal dedication of two friends of mine Atique Rahman and Saleemul Huq, who founded the organization and led it.

Rio was a great experience. Even though we were in our Global Forum for the non-government entities, far from the summit of the presidents and prime ministers in another part of Rio, we could feel all the tensions among various nations. More than any time before I felt that science should have been in the driving seat when determining the future of our globe and our species. But for the moment it was not to be. Governments had wide differences of opinion on almost on all issues discussed – the green house gas emissions, renewable energy, saving forests, life-style change-everything so vital. The worst case of disagreement came from U.S.A. in the person of President Bush (the senior). Our protest rallies against such insularity from the most powerful nation told all about the

general mood. The sense of solidarity of the global community that we felt under the huge tents on one of the famous Rio beaches was electric. The Agenda 21, that resulted from the summit, was a reasonably optimistic document, and could be an eye opener for all.

At the conclusion of the earth summit, I was invited to interact with some local NGO activities in Brazil, mostly near Rio. But one of these took me to another part of Brazil, a small city named Olinda near the capital Recife of the north-eastern state of Pernambuco. The local chapter of Ashoka Foundation, an international organization based in Washington DC, U.S.A, of which I was an associated member, decided that this group in Olinda could learn something from our experience in CMES, and could be useful for our work too. So again there I was from the summit environment to the environment of the base of the pyramid. In a somewhat different way the gender problems among the indigenous and mixed races of this part of Brazil was even more acute than ours. They loved the empowerment program of our adolescent girls, and what I learned from them reconfirmed to me that the ultimate answer to the sustainability of our planet is deeply anchored to the fate of this base of the pyramid, everywhere in the world. It is the reason why I never saw any discontinuity between my work as a professor in the classroom or in the renewable energy research center, and my work with the youth at the grassroots level. There was always that crucial common denominator – science for all – for the youth themselves, for the country, and for the globe.

The curiosity of the youth

The young people in CMES came from rather humble background in terms of formal science. But they did not lack enthusiasm for innovations and adoption of science in their work; that was the way they had it in CMES. This encouraged me to look for new technology which they could try out for adaptation. There had been a series of them over the years – some successful, some not so. It would be interesting to mention

two of the early ones here in which CMES could ultimately play a pioneering role in the country.

The idea I picked up from Barb's house in Carbondale, Colorado, would be one. The vermicompost-producing wastebin she used was a normal looking bin, but it had a bed of sawdust and wastepaper with a good number of earthworms. When kitchen wastes were added everyday, the earthworms slowly ate these new foods. The excretions of the earthworm came with various micronutrients and enzymes and formed a highly valued odorless fertilizer with the consistency of the granular tea leaves when dried a bit. Barb would collect this 'vermicompost' (compost made by worms) once in a while and use it in her herb garden. Noticing my enthusiasm with it, she took me to one of the meetings of local vermicompost association, of which she was a member. From there I got more information and some books and brochures on the subject.

It did not prove to be easy to replicate the vermicompost production method in our place. We needed a lot of adaptive research of our own. To begin with, the type of earthworms we had been familiar with were of 'digger' varieties commonly found in the soil turning it up. We needed the 'eater' varieties which one could only find occasionally under dung heaps or in decaying organic materials. We had to take help of our zoologist friends. We planned to do a slightly larger-scale production in spread-out open beds mainly using cow dung, plant materials and vegetable waste. This required a lot of earthworms which we tried to multiply with appropriate food and environment. There were other challenges such as maintaining the correct moisture in the bed (lower moisture would dry up the earthworms, a higher one would drown them); saving them from attack by predators; keeping up the quality of the waste used etc. After years of gradual improvements in the adaptation of this technology some of our graduates of the basic school system could regularly produce, use, and sell a huge quantity of this valuable fertilizer. Soon the technology was adopted by many more organizations and companies, limited only by the availability of the right kind of earthworms.

Another such exotic thing I would like to mention also had its root in a chance meeting. This is about mushroom cultivation, which would neither be cultivated nor would be eaten popularly in our country till recently, except perhaps in expensive Chinese restaurants. A government mushroom center started in late 1980s to make spawns of the oyster variety of mushroom, tried to encourage some farmers to produce this to meet the small demand from the restaurants and foreigners living in Dhaka. Because of the high cost of spawn production the response remained limited. During one of the international seminars on renewable energy that I helped to organize, a young physicist from India Sumana Datta had shown some interest in our CMES activities. It so happened that she later joined a very creative NGO located near the city of Ranchi, India. This NGO – ‘Society for Rural Industrialization’ (SRI) – was mainly dedicated to the development of local poor indigenous people. Thanks to Sumana and her colleague Professor Indrajit Dey, I could visit SRI and see firsthand how it was developing technology for grassroots use almost with a similar objective to that of CMES.

Among other things, I learned at SRI that mushroom spawn can also come from very simple and very low cost rural labs – which could be handled by our trained students of the basic school system. SRI had been routinely doing it for the indigenous people who traditionally loved to eat mushroom from the wild. All the required processes were there – the sterilization, the inoculation of the fungus, the tissue culture – but all in a simple low cost form. Again, with some adaptive research to make it suitable in our case, we started to set up such laboratories in each of our rural units. It was indeed a very satisfactory feeling to see our young scientists of the village doing all those rather sophisticated things and open up opportunities for many others of our youth to grow mushroom to sell. We took up the task of the popularization of mushroom as a regular food, and soon our mushroom was a supermarket item in the cities and small towns. In the meantime consulting various books and using samples brought from abroad, we experimented with other varieties of mushroom and other types of substrates etc. Within decades, many

others – NGOs and private enterprises – took up the similar methods as ours and the whole things became quite commonplace.

One additional role I played in adapting various new technology or variations of them in CMES was to write popular books on them. I would try to bring out the science and technology behind, and also give a prescription of how to proceed – all in a simple language. In such books I could summarize what we developed up to that point, for our student practitioners and for others too. Thus with the increase of demand for the technology concerned, my books on very practical things such as vermicompost and mushroom also became quite popular among enthusiasts. But then I already had created quite a good readership for other books I was now publishing on a regular basis, mostly on popular science. Gradually I became an author persuaded by some major publishing houses in the country, as there was a growing demand for popular science books among young people, and there were not many authors for this they could depend on. One should not, however, think that it was a huge demand, nothing compared to the demand for fiction. Also considering the population, or even the literate population, the readership of anything here was very limited indeed. But I was well connected with the young people of a sort – enthusiastic science students, science club members, my TV viewers, those in CMES and so on; they constituted the major part of my readership. They kept me busy writing.

I tried to write about modern science, even the latest and more difficult concepts of science, in an easy literary style. Then I also wrote about my ideas and worldview, particularly on the subjects of education, science, and youth development. To make better use of my writings over the previous decades in the *Samoeeki* and elsewhere, I sorted them under various interesting themes and got them published as books, updating them wherever required. A few of my books originated from a desire to reflect our actions and movements. For example, one such book was titled ‘Science Club: the Picture of a Movement’ – a kind of scientific documentation of what we were trying to do through our science clubs in

the seventies and the eighties. I thought it would be an inspiration for the next generation of youth. Another such book came out of a radio program I did fortnightly for about two years. The issues discussed in the earth summit, Rio and the Agenda 21, inspired me to think about what we could do ourselves even within our day to day city life. That was the subject of my radio program 'Environment and the City Life'. Actually I had already been involved with some of the things raised there through our activities before and after Rio. Later, I elaborated these themes in a book of the same name.

I developed another habit through which I could meet many more enthusiastic young people face to face - giving public lectures on science and allied issues. Perhaps because of my presence in mass media, students and teachers at various levels and young people with curiosity in the subjects would like to invite me for such lectures. Some of these would be stand-alone, others were on the occasion of larger events. I always enjoyed speaking in such settings, especially when the listeners would come up with a lot of questions. While never tired of trying to meet their curiosities, I usually had my own agenda with them. This was to impress upon them that science education and any education should be an enjoyable experience and not a punishing one. So we should use all our means to make it enjoyable, and that is how to make it effective too.

During the closing years of 1980s there had been one area of science culture where many young people I knew could show me the path, rather than the other way round. This was the use of personal computers for day to day work. We decided to use desktops in the CMES office. So I along with some CMES colleagues, got enrolled in one of the computer training centers that were becoming popular at that time. This one belonged a friend of mine - Quader. I had first met Quader, still a school boy, in the same event where I met Iqbal some 25 years ago. Later a professor of Soil Science, Quader had been one of the early enthusiasts of our people's science from his school days. Now he was one of the few leaders who gave their heart and soul in the popularization of the PC. He started the first computer magazine in the country – 'The Computer

World' (in translation). He was also running a program to demonstrate computers in schools and colleges, and now we were trainees in his computer center, usually a place for younger people.

My most hearty appreciation of the PC came a bit later when desktop publication became possible. Now the printing of the *Samoeeki* and other materials could be done through the computer - the composition, the correction by proof-reading, organizing the pages and so on. Many years ago I had accomplished such nearness by keeping the metallic printing types in their wooden cases right in our house in Chittagong. This time things were much neater. Soon the desktop computer reached CMES's rural units, and it became another very effective technology which our young scientists could toy with, and build their livelihood with.

Always the same old drive

My greater family – all siblings and their spouses and children – would have regular joyous reunions at our family house *Niribili* in Chittagong. They usually happen during two Eid (main Islamic festivals) holidays, but there would be other occasions too. This was particularly important for those of us living in Dhaka permanently – Yunus Bhai, Jahangir (who was a journalist), and I; and others until they finished university education. For those of us the main point of these reunions was to meet Ma and Abba. Though age took its toll, Ma did not change in her mental world. She continued to have her make-believe world. She would very affectionately welcome all her children and grandchildren, but would ascribe a different personality of her own make to each of them. We would try to have a good humored chat with her, often reliving some old memories, without challenging her own notions of the world. Sometimes those memories would cheer her up, and we would have a wonderful time.

Though largely retired from his business life, Abba did not change at all. He was still taking a great care of Ma and would insist that we spend some time with her. When some of us could meet together in Dhaka or

Chittagong while he was there, Abba would love to recount older times, some incidences that occurred perhaps before we were born, or some relatives who were close to him, lest we forget them. It was Yunus Bhai, the busiest among us, who would make it a point to tell Abba what new things he had started around Grameen Bank, or what impact one of his latest works was having on the village people. Yunus Bhai had this wonderful connection with Abba, much more than anyone else among us, perhaps with the sole exception of Bubu, our eldest. Bubu still played the anchor of the family, exactly as she used to during our childhood; only difference being that all our children were now added to her flock. She would keep herself up to date with news about every one of us. She would never miss even the smallest media-news about Yunus Bhai, or a TV appearance of mine or Jahangir's. One mandatory agenda during each of our Chittagong reunions would be to have a crowded lunch or dinner at Bubu's place, everybody attending, merry making, and catching up with the latest news of everybody else.

Most of the time during those reunions in Chittagong we would relaxingly have a continuous 'seminar' discussing all sorts of things – from politics to old times, often only interrupted by lunch, and dinner, which would only change the location of the discussions. Naturally Yunus Bhai would be the center of these, because he would have more news to talk about. After its consolidation in Bangladesh his Grameen Bank was being widely replicated all over the world, and he was in high demand everywhere. Already the prestigious prizes and honorary degrees he received from famous places were too many to remember. What we loved to hear were the small anecdotes about presidents and kings who would befriend him on the one hand, and taxi drivers or travellers at the exotic cities or airports who would recognize him and get excited about on the other. Grameen Bank centers in Bangladesh villages became important destinations for many famous people as well as dedicated practitioners from all over the world – generating other anecdotes. Others among us would not fall behind in their contributions

too to the seminar. Friends would often drop in; I'd compare notes with old pals like Iqbal and Shamsul Hossain.

One reunion we had in 1993 was a very special one. It was on the occasion of a civic reception given to Yunus Bhai by the Chittagong citizenry for his achievements with Grameen Bank. What was very exceptional was that the Citizen's Committee that organized the reception decided to honor Abba along with Yunus Bhai. Renowned people representing various sections of the citizenry spoke highly about Yunus Bhai and Abba, the latter for the civic roles Abba had played in the old Chittagong and for the encouragements he gave to Yunus Bhai all his life. This was very appropriate, as Abba was the main reason why all of us could start our journeys in life the way we did. The day of the reception was indeed a very proud day for Abba. For the rest of us too, it was a very exceptional reunion. The person we missed most on that occasion was Ma; she had passed away almost ten years ago in 1983. Abba too could not witness the highest international honor bestowed on his famous son, he passed away before Yunus Bhai received his Nobel Prize in 2006.

What we enjoyed most during our time together was recalling all the fun we had together during our childhood. Each one of us had an earliest time of our recall. If Bubu or Abba would be present they could push the time to quite further back. Some of my nostalgic memories still was a source of inspiration to me. For me even some material reminders around the house were important – the earlier ones in Chittagong and from then on in Dhaka. For example, all those books I had bought and immediately wrote my name and date on, gave the chronology of my developing interests; the oldest ones I could see were from 1954. There was 'The Laboratory', now only a piece of old furniture, but once the centre-point of my joyful journey in science along with those and other books. The first tabloid issues of *Biggan Samoeeki* now kept in a file could still tell a useful story. The interesting thing was that I found no difference between the tremendous enthusiasm I had felt around these things at the time I was working with these and the same feelings I was having now with my

current works on the same basic theme. The original drive behind my joys and actions seemed never to change. It was always the curiosity, and science took the bigger part of it. The curiosity about other things – people, countries, history, culture, politics etc. were not, however, far behind.

Though some of these were included in my school exercises, I loved to learn those in my own way, maybe in the USIS library, or somewhere else – joyfully all the way. I would get a better satisfaction in my crude experiments with improvised materials out of ‘The Laboratory’, or cutting my own frogs and cockroaches on my own dissection plate at home – perhaps over and above doing what was required in the more organized college lab. This is how my notion of an effective education took root early. Actually I could go along all the way with a regimented education without losing my interest at all, because I always had ‘my own world of education’ to switch to and to relax. After all, the best education one may have is the self-motivated one in joy; and that is why I thought it essential to try to arrange that for others.

It was also those educational experiences that convinced me that science should be the guiding light for all education and thought process. So the science education should be a part in everybody’s life, not necessarily to be a science student, but to be imbibed with the essentials of science – the science for all people. I have been trying to make this a pivotal part of my endeavor – be it in my professional work in the university with the urbane youth, or in my voluntary works for the huge majority of our youth – rural and urban. ‘Science for all’ is a goal which would be difficult to achieve in a formal manner. But even then the formal policies, the reform of education system, actual teaching-learning etc. could do a lot in a large scale. I have been trying my hands in these in my capacities as a professor, a university policy maker, a member in education reform committees etc. But the progress this way was bound to be slow because of the huge conservatism of the systems. On the other hand I could be much more effective as a volunteer, as a free agent enjoying what I have been doing. Perhaps it is because of the same old

drive from my childhood. My biggest asset here was the connection with the youth, and my enthusiasm for working with them. I felt that even the student politics in my university days helped; though the type of politics which ultimately emerged in the country, student politics included, never interested me.

It had been nice to see how our works contributed in the gradual transformation of a substantial part of our young people. It is not that they opted for formal science education in great numbers; different factors – economic and otherwise – determined those numbers. But they came to love science, nevertheless; they learned to enjoy science and to have a scientific worldview. That has been the beauty of people's science. The next part of our journey after 1990 has been even more satisfying as demonstrated, for example, by the effectiveness of CMES as a countrywide practical vehicle for the movement, and the popularity of our TV show 'The Country and the Science' that ran for decades, and became a regular weekly fare in people's homes around the country. But that deserves a separate story of its own.