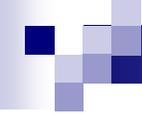


Salam

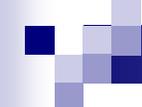
As I know him

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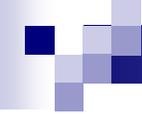


Salam Joined Government College, Lahore as a Professor of Mathematics in 1951 and at the same time he was the chairman of the Math Department at Punjab University. All graduate teaching in Math took place at Punjab University where students from different colleges came to be taught at the graduate level.

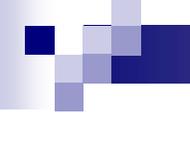
Salam succeeded in revising the curriculum of the master degree in Math. The old curriculum was outdated.



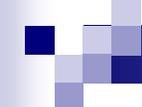
Salam remained at Government College from 1951 till the beginning of 1954. When he left his course was assigned to Riaz who was appointed as lecturer at Government College after completing his M. A. in 1953. Salam was an external examiner of our first paper which may loosely be called Methods of Mathematical Physics for the MSc degree in Physics at Punjab University. He set the examination paper; it was different from the routine exams. Students were surprised by the questions on the exam. It was hard to change Curriculum of physics because the



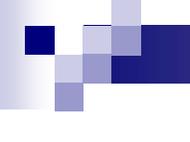
old guard did not want to change it, they did not consider Quantum Mechanics to be a relevant part of Physics. Salam's popularity among students was mixed. There were many, who appreciated his modernizing influence, but there were others who wanted things to remain unchanged.



At that time Quantum Mechanics was not part of the regular curriculum in physics or math. So Salam suggested to teach an evening course in Quantum Mechanics outside the regular curriculum. After 3 or 4 lectures only two students left – me and my brother Riaz! He decided to discontinue this course. In the last lecture when he decided to discontinue the course, he asked me what I was doing for MSc project. I replied that I am measuring the ionization loss of the cosmic ray mu mesons. He told me that this is not the way to state a problem, you must state why you are interested in doing the experiment. On the basis of the conversation, I consulted the literature and

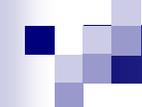


found that according to Bethe-Bloch theory there is a logarithmic increase of ionization loss for relativistic particles. At the time there was a controversy between two sets of experiments so there was an interesting reason to perform the experiment. When I wrote the introduction to my project and explained why it was interesting to do this kind of study, my professor, who was a student of Lord Rutherford, in 1930's appreciated my discussion. Anti - Qadiani riots occurred, as I recall, in 1953. Martial law was imposed for the first time in Lahore during these riots for the purpose of controlling them. In retrospect, the military

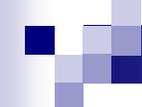


developed a taste for power during this time. As you know, this has a far – reaching impact on the subsequent history of Pakistan.

When I was young lecturer in physics department in the mid-50s, a professor from Karachi University, trained in classical British tradition, came as an examiner. He told me that he did not regard Professor Salam to be a physicist, only a mathematician.



This should give you an idea how Salam was regarded by the establishment in physics. It was 56 – 57 period; a period which gave a new direction to both pure physics and technology. Suptnik was launched by Soviet Union in 1966; an event which took west by surprise. It was a triumph of existing knowledge and that of organization. In this era, the military and economic anxiety were displaced onto the issue of technological competitiveness leading to militarisation of space.



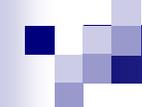
It was also a period in which a basic law of physics was discovered viz weak interactions can distinguish between left and right. It gave a new direction to the subsequent development of particle physics culminating in the standard model. As Riaz has discussed, Salam played a crucial role in this period. This was pure physics; in fact demonstrating a close connection between theory and experiment. But for the establishment of physicists, anything which does not involve tinkering with the apparatus is not physics.



When Salam was awarded the Nobel Prize he received honors from many places. It was odd for the government of Pakistan not to honor him. General Zia – ul – Haq was the military dictator at that time. Quaid – i – Azam University, decided to award Salam an honorary DSc degree. We dared not hold the convocation at the university campus because of fear of the anti – Qadiani right-wing student organization which had tacit

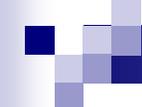


support of the government at that time. So the event was held in the National Assembly building. I was acting dean and wrote the citation for the Vice Chancellor, and the degree was conferred by General Zia – ul – Haq. Then Professor Salam gave a speech on the unity of forces. Afterwards I talked to Salam and told him that he gave a very good talk. Salam replied that the top civilian adviser for the general who was sitting in the front row slept through the entire talk! He realized the hypocrisy of entire event. This also shows the unconcern of the establishment for anything which contributes to human civilization entirely due its intrinsic value. No wonder that the establishment lack a vision.



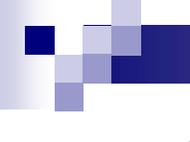
Salam has lasting influence on Pakistan. The ICTP really hoped to sustain the particle physics group at Quaid – i – Azam University because of the interactions many of us had at the ICTP. It helped to reduce the isolation that many of us felt.

Salam was a government adviser during General Ayub Khan's reign, a period of about 10 years. Ayub Khan has tremendous respect for Salam. He was also an advisor to the Pakistan Atomic Energy Commission (PAEC). Together with Dr. Usmani, the chairman of PAEC, he started training program which sent students



abroad in various branches of physics where choice of specialization was left to the student. It was an important program. The people trained at that time, played a crucial role in the development of science and technology in Pakistan.

I met Salam last time in 1993 in Trieste. I saw him in his office for a very brief period. He asked me where I am in Saudi Arabia. I told him I am in Jeddha. He remarked I wish you were in Makkah. I noticed that he has become very sentimental. Salam who had fantastic self confidence; to see him in such a state of sentimentality was very



painful. Each of us is a dot on the fabric of time. Each of us dies alone. Individual condition is tragic. This is our fate; we cannot do anything about it. The affection and love of family; the good deeds done, the creative work and above all that illusive thing called inner peace give the strength to bear this eventuality. After seeing Salam, I had a feeling, somehow inner peace has alluded him, as he had all other things.

It is perhaps a coincidence that inner peace also alluded Chandrasekhar – a great astrophysicist from the subcontinent. In his diary (letter section of Physics Today Sep. 2006) Chandrasekhar wrote the following “ I recall that during my first year in Cambridge (in 1930 – 31), I saw Eddington,



going by on the other side of the street, smoking his pipe as usual, looking so confident and serene. And thought to myself: how wonderful it must be secure in one's accomplishments with the recognitions of one's fellow scientist. And I thought of being [a fellow of the Royal Society], a gold medalist of the Royal Astronomical society, and being famous. I suppose that I have all the tangible recognition that Eddington had at that received. But in my heart I have none of the serenity that I thought I saw in Eddington's face, 45 years ago" His not finding the peace, shows the complexity of human life.

To conclude

During my course in particle physics, I usually tell the students that there are few things for which this country can be proud of ; Salam's work is one of them, but here in Pakistan we tend to disown him. I am sorry to say that with few exceptions, it does not make any impression, upon them. This apathy towards the intrinsic value of knowledge by the youth is very disturbing. We have more information less knowledge. Information is first assimilated then used to generate knowledge.



P. R. Mooney: Development dialogue 1999 (Dag Hammarskjold Foundation) has characterized the 21st as ETC century. ETC stands for Erosion, Technological transformation and Corporate Concentration. Erosion includes not only genetic erosion and erosion of species, soils and atmosphere – but also erosion of knowledge and equitable distribution. Technology means new technologies such as biotechnology, nanotechnology, informatics and neuroscience.

Concentration describe the new organization of economic power into the hands of high – tech global oligopolies. Some of Mooney's observation may come through.

I will end my talk with a story.

Oscar Wilde has a unique way of saying things. Prof. Bhamba who was class fellow of Salam at Government college Lahore, told us that Salam read the whole work of Oscar Wilde. When we were students in early 1950's at the same college, we also read Oscar Wilde. It seems that in mid 1940's and early 1950's Oscar Wilde was popular writer. I do not know whether any of our students has ever heard of him.

Oscar Wilde was sitting in his club drinking to forget the failure of his play. Somebody came to sympathies with him. Oscar wild said “ ***Play was a success, audience was failure***” Audience in Pakistan was failure, Salam was a success.



Thanks