### Science and Technology

### Old Dhaka And Existing Building Laws

HE new Dhaka and old Dhaka are separated by the Asian Highway road which was previously a railway track. As soon as we cross the road - the narrow roads, very closely built houses, the activity pattern of the people all tells us that we are inside the old Dhaka city.

Like many big cities Dhaka also has a history of the past. As time changes so does the city for the betterment of the environment. When Dhaka became the capital city of East Bengal during the time of early British rule it came into limelight. The influential zamindars, wealthy traders and people with authority built their palatial houses nearby the Nawab's residence. It was built with contemporary ideas of that time. As there was no use of autocars the road widths are of that size as required by the horse-drawn carriages and bullock carts.

As time passes the city grew towards north but now when we look at the same old Dhaka city we find a deteriorating situation. There is a tremendous pressure of urbanization and over population. The large estates of the past influential people are divided into small parcels between their heirs which causes tremendous high density. At the time when the old Dhaka city grew there was no provision of improved sanitation - the kitchen and toilets were built separately and away from the main building. So when the house is divided into inheritors over and over again undue pressure was exerted on these utilities, thus deteriorating the sanitation situation of this part of the city.

The people of old Dhaka are very enterprising, most of them are involved in some sort of small industries. These industries supply their product to our newer Dhaka city and most

of the people involved in the informal sector live in this part of the city. It is natural that every inch of land should be very important and valuable to the old Dhakaites. They use every bit of land between the buildings and the boundary walls, they even use the road as much

as they can. But these old buildings because of many reasons including poor maintenance, dampness, settling of earth etc. are becoming dilapidated, making the life of the users unsafe. So at many places of old Dhaka one can find the gruesome situation where the old building is either being replaced, partly or fully by new construction.

in case of new construction the owners usually follow the design patterns of new Dhaka and for regulations follow the Rajuk law. But Rajuk does not have any specific laws for old by Samia Latif Huq

Dhaka. So the usual four feet set back between boundary wall and building compels people not to abide by the rule because of the high land price and the high usability at that piece of land. Moreover Rajuk laws are more applicable for new construction but after construction Rajuk does not play any significant role. For example a building can get necessary clarifications from Rajuk as a residence but after construction if that becomes a garment industry then there may be interference by the authority.

Rajuk's activities are directed towards the betterment of urban environment of Dhaka city, which also includes the old part. Rajuk can develop the concept of shaving walls in old Dhaka which will enable them to have more open space. Like

two buildings sharing one common wall and on the otherside enjoying an open space of eight feet. As the old Dhaka residents are more neighbourly so for them sharing of a common wall is not a major social problem as the case may be for the residents of new Dhaka. The open space can be again achieved by continuous construction forming the "mohalla" around an open space.

As the building of old Dhaka are characteristic of the past time, the architectural character should not be allowed to be erased. So in the spirit of conservation there can be restrictions for the height of buildings. The front facade of buildings of that part should carry the same style and detail all along the area, while the interior can have modern facilities. For example in neighbouring Bhutan the conservation approach is being

successfully followed. Also in the United States' capital Washington. DC the highest building is the capital and all the other buildings have the traditional facades specially preserved. Any alteration or construction in that part of the city must be approved by the authority which renders expertise to keep the past heritage intacked.

Old Dhaka does not follow any zoning regulations. For example most houses have their shops in the ground floor and residential accommodations in subsequent upper floors. While in case of industrial establishments, the industries are in ground floors, storage on first floors and resident accommodations in subsequent upper floors. While selecting laws for old Dhaka Rajuk has to take measures for this mixed used development. Dangerous industries must not be allowed to operate in residential areas.

The roads of old Dhaka are too narrow because they were built for horse drawn carriages, bullock carts and pedestrians. But in present days we find trucks, cars, buses, rickshaws and different old vehicles ply on the same route. To make smoother traffic movement the peripheral roads may be developed for motorized vehicles and internal area can be crisscrossed by roads for rickshaws, bicycles and pedestrians.

The conscientious in the society believe that the old part of our city must be preserved because it is our heritage. We have to make sure that it can survive even in the future beyond our time. Old Dhaka should be treated with care-by providing regulations specially meant for that part of the city. Now is the time to act.

This article is contributed by the Post Graduate Centre, Architecture Department, BUET.

## When a Hobby Turns into a Public Service

by Raffat Binte Rashid

11 TOU sound better than you look," this is usually the first reaction of two friends meeting for the first time but regularly in touch with each other - over radio. Talking



Network -(SEANET) meet annually in a convention. This year the Seanet Convention '93 was held in Dhaka from November 19 to 21. The pleasure of actually seeing a friend for the first time, someone whose voice you have known, is beyond words. With this thrill and excitement in mind hams meet at mutually set place every year. The SEANET convention held for the first time in Penang, Malaysia in 1971, has always since then been an opportunity for radio amateurs to meet in person. This is when they have "eyeball QSO's" meaning eyeball contact at

These meetings are extremely informal. Each year the event is organised by national amateur radio societies in various countries in the region. specially in the ASEAN countries. Dhaka was an exceptional choice this year especially since BARL (The Bangladesh Amateur Radio League) got its recognition only recently. The SEANET annual convention provides an excellent opportunity for radio amateur operators from Asia and throughout the world to mingle socially, it is an enjoyable and happy event as well as helping in the development and promotion of amateur radio in the region.

Even though amateur radio in Bangladesh has been a sporadic event and the enthusiasm dates back to 1965, but the majority of people may be except for the ones involved in it, are completely unaware of this unique hobby. It is a hobby that serves the public as a voluntary, non-commercial, communication service especially during natural disasters or other emergencies. Amateur radio experimentation is yet another reason many people become part of this self-disciplined group of trained operators, technicians and electronics expert - assets to any country no doubt. All this without consideration of any type of payment - solely for personal interest.

Post and Telecommunication Minister Tariqui Islam on the occasion of the SEANET '93 convention held for the first time in Dhaka emphasized the need for this extraordinary hobby, "Radio amateurs can play a vital role and help determine actual effect and damage during natural disasters and calamities." Tariqui Islam referred to limited regulation of radio waves and said amateur radio, a modern scientific medium could develop wider and firmer global friendship through its multiple and unregulated use.

D H Rankin, Chairman International Amateur Radio Union (IARU) region III said that for some it is a hobby and for others a life long passion. When hams are on air they talk no business, no politics but only personal friendly conversation. Doctors, engineers, diplomats, businessmen anyone can be a ham, "the radio amateur does it

because he likes to do it, many of them are better than the professionals but they do not use the radio for money - that's the big difference". he explained.

In Bangladesh this has been slow to start, and proper promotion should be given because geographically Bangladesh is so disaster-prone. Communication with the affected areas is almost non-existence and it is on these occasions that the importance of a amateur radio is felt, Rankin explained.

Rankin, who has visited Dhaka for the fifth time, thinks that the decision to hold the convention in Dhaka has been a very good one. There was a need for amateur radio in Bangladesh. "However this being a new place the attendance might not be large as in previous years but these annual eyeball QSO's "are always good fun," he said.

A ham is a considerate, loyal, progressive. friendly, balanced and a patriotic person, because radio signals do not know any territorial boundaries. Hams have a unique ability and responsibility to enhance international goodwill. Everytime he puts his station on the air, a ham becomes an ambassador of his country.

The world for radio amateurs is divided into three regions, region I includes Europe, Africa and Middle East, whereas North, Central and South America is region II and the rest of the world i.e. New Zealand. Pacific Islands across to Iran. Afghanistan are all under region III. This year in the annual convention of region III or SEANET a total of 27 members from abroad and 30 from Bangladesh is attending. "Actually there is no restrictions regarding taking part to these conventions because the world is our registration pad and we are here to meet friends," said Dr K N Singh. Educating and exposing the general public in Bangladesh about amateur radio is maybe the main aim of this convention, he be-

"It's a happy occasion we have done everything possible for our friends here to make their visit a memorable one, said Saif Shahid BARL president. Big antennaes have been set up on top of Hotel Sonargaon, the venue of the convention, an incessant flow of enthusiasts kept registering in. Everyone was in a very casual and happy mood. The secretary of BARL Niza-

dhury believed that SEANET convention would only allow more opportunities for the hobby here." In Thailand 40,000 amateurs received their license in only three years time," he said. The next SEANET annual

convention '94 will be held .....in Malaysia Many might question why give a mere hobby so much importance? But when a hobby turns · into public service, why not?

# Women, Science and Technology: Looking Ahead

HE world of science is traditionally not one in which women have worked, or one which has placed value on women's knowledge and skills. As the twenty-first century approaches, science and technology are perceived to have an increasingly important role to play in dealing with the fundamental problems of human and environmental wellbeing. At the same time, however, the definition and practice of science and technology have become restricted by the geographic an cultural priorities of the North, which increasingly control the institutional framework within which science and technology works; the political/socioeconomic language -- capitalism -which governs communication; and the operators, who are principally men.

As a result of the world dominance of northern interests, the northern-defined scientific and technological model. although restricted by the parameters described, has come to be regarded as providing the complete body of explanation for natural phenomena. The large number of Southern academics educated in Northern institutions has spread this dominance. It should not be forgotten, however, that the current model provides only one mode of explanation: Western medical science, for example, with its focus on the physical, has almost completely ignored the complex interrelationships between mind, body, and illness which have been the basis of many 'traditional' forms of medicine, including the

Science and technology are, in current practice, described in a language which denies the fact that they operate, like all modes of explanation, within a cultural framework. It assumes universal truths which only a 'scientific' approach can begin to unravel. Frequently used words like 'objective', 'rigorous', 'control' and 'testing', have helped to develop the perception that science and technology are value-free, and that they operate outside of the societies in which they are based. The world 'scientific' has itself come to describe an approach which is disconnected from everyday life, with the consequence that indicators of scientific and technological efficacy do not take into account the reality in which people live. Issues of personal development, wealth, poverty, and access to and control over technology, are not 'scientific' and are therefore not measured.

The apparent divorce of the scientific model from its social or cultural rots means that the potentially destructive roles of science and technology are not challenged, nor are the bases on which they rest. Science and technology cannot, however, be separated from the dominant economic system of the late twentieth century: capitalism, which revolves around the amassing of profits and the development of power bases. Although the idea of scientists and technologists working together globally to find solutions to the world's problems is inspiring, the reality is one of

many different units racing independently towards goals drug cures for AIDS and cancer for example — that are defined principally in terms of profit potential. This reality is supported in current scientific literature, where technical innovation and change is seen as a function of

competitive markets. Other societies have had, and still have, other wavs of explaining phenomena which are valid in their own right, and which have contributions to make to solving the world's problems. In the past, and at local level, science and technology has been shaped by grassroots women and men within informal and extra-institutional environments in non-Western societies, and within non-capitalist systems. These different forms of understanding need to become integral parts of the future science and technology model in order to ensure sustainable and equitable development. Without the inclusion of priorities shaped by other non-Northern experiences, science and technology will continue to operate destructively, unchallenged by different types of explanation.

In order to explore the gender implications of science and technology decisions and actions, it is necessary to question the goals and the mode of operation of the current science and technology models. The selection of priorities for the majority of scientific and technological research is carried out by a small number of people in positions of power within multina-

#### by Helen Appleton

tional companies. These people are usually men whose priorities will be directed by company profits, by government and market pressures, by national concerns, and even by personal glory. Their work does not reflect the qualitative values of everyday life, of the household, neighbourhood, or community.

less central to the demands of the market: women, the elderly, children, people with disabilities, and the entire domain of non-human nature. The concentration of intellectual and financial resources over the last fifty years into space research, arms development, and nuclear power needs to be viewed critically in terms of the possible needs of these 'other' groups,

The way in which the dominant science and technology model operates also has implications for women. Power is concentrated in the hands of those most successful at raising money for their work and in obtaining the best financial returns, who are mostly men. Their interests are best served by confining their operations to a relatively small group of peo-



They have no experience of, or remit to develop, scientific and technological agendas that take account of the needs of groups

### Agricultural practices of women in land reclamation project

N Bangladesh women are not allowed to work in open fields because of both the conservative religious beliefs in the rural areas and the belief that women are not physically strong enough to do agricultural work. These views have meant that it is very difficult for the women to buy supplies

or sell their products. The Land Reclamation Project (LRP) is a collaboration between Bangladesh and the Dutch government, which began in 1986 an experiment to test the viability of rehabilitating des-

titute women through agriculture. The project found that, contrary to popular beliefs. women could manage most agricultural work by themselves, except for operations like ploughing. By adopting innovative indigenous technology and through training they can manage even activities

needing heavy labour. And they have very good repayment

Although mainly successful, there are still some problems to be solved. Some of the women have to travel long distances to the farm; so accommodation close to the farm is needed. The newly reclaimed lands are saline, so only monsoon rice crops can be grown, and that cannot provide for a family for the whole year. To improve this situation the women are trying to adopt soil improvement and salinity management measures to grow a second crop. They are now experimenting on an LRP research plot, but there is no guarantee that after completion of the training they will be given land of their own. In addition to crop production activities, off-farm income-generation activities are being investigated. A number of activities were considered in light of the limited marketing facilities and business expertise of the women, and petty trading, bamboo products, poultry keeping, livestock rearing, fishingnet making, paddy/rice processing, and mat making will all be investigated further. But before any of these ideas can go ahead, the women will need loan facilities, training, organization, and help with marketing, and transportation.

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but the science and technology model does not encourage internal questioning of basic assumptions, except within the terms of the model itself. It is therefore possible to question whether goals are scientifically or technically valid, for example whether or not a particular design will produce a more efficient motor car engine, but not, for example, whether or not a more efficient motor car engine will contribute to the transport needs of those who do most carrying worldwide, who are pri-

marily women and children. Not all scientists and technologists are part of the goal setting: there is increasing evidence that women scientists and technologists tend to be interested in different issues than their male counterparts, and establish a niche where they can carry out consistent, useful work, and pursue their professional careers in a different manner. Women have not vet acquired significant or numerous leadership roles in science and technology though, and at their highest levels of policy and decision-making, these remain almost entirely male domains. In addition, important realms of science and technology, such as physics and engineering, are still largely male pursuits in most parts of the world. particularly in the North, and the interests, talents, and experience of women at the household- and communitylevel are still discounted as being irrelevant to both the advancement of science and technology and the work of career professionals. This means that resources are not put into less popular research agendas, and that objectivesetting is predominantly a male

ple who are prepared to work within the existing power structure. Access to this group is limited, through academic qualifications, to those who are able to speak the same scientific and technical language and uphold the status quo. Groups with interests or concerns outside this range, or with different types of knowledge or experience, are simply not recognised in terms of the existing model they are 'unscientific.

Women, who have different agendas and different ways of working, are largely unable to bring about significant changes to priorities because too few of them obtain the educational qualifications necessary for entry. Their experience is also ignored: an organization's objectives will not, for example, be served by the identification of low-cost or widely available solutions, and yet it is precisely these types of solutions that are employed daily by women worldwide to ensure the survival of families and communities. Potentially valuable knowledge and experience is effectively marginalized because there is little money to be made out of this type of research, and therefore such work does not serve the business interests of powerful science and technology lobbies. These lobbies do not wish to widen the terms of reference of research, to change their ways of working, to examine critically their priorities, or to include the thousands of years worth of knowledge and experience being used daily by the world's women. The dominant science and technology model is one which is practised largely by men, which upholds Northern male values.

Courtesy - Appropriate Technology | Medicine.

## Cloned Human Embryos

### Could Humans be Copied and Mass Produced?

possible to ponder the imponderable: Could humans be copied and maseproduced? Could parents one day choose designer embryos?

Fertility researcher Jerry Hall says his research cloning human embryos — is all part of helping couples who can't have babies. But to some, it eerily echoes science fiction and crosses an ethnical bound-

The Vatican branded his ex-

periment "perverse." There were calls for the 12nation European Community to adopt a ban on cloning human embryos.

In Germany, top politicians on Tuesday denounced the idea and said it must never be allowed in their country. The manipulation of human embryos already is against German law, mainly because such research reminds people of cruel Nazi experiments that sought to create a pure race.

Bruno Menzel, deputy chairman of the Free Democratic Party, said the "artificial production of humans is a horrific idea that must be banned around the world."

At news conference Monday, the George Washington University researcher seemed puzzled that his experiments on short-lived embryos in a petri dish raised the specter of massproducing humans. Hall said such a feat may never be possible and certainly can't be done

"We did not implant these into any women; we did not intend to implant them," Hall said. "No child has been born from this procedure."

Nevertheless, some ethicists say Hall crossed a line when he conducted the first known cloning of human life. They fear that other scientists will now charge across that same divide.

"Once you start tampering with the reproductive process, it's hard to decide about where to stop," said Ray Moseley, director of the Medical Humanities Programme at the University of Florida College of

Cynthia Cohen, head of the National Advisory Board on Ethics and Reproduction, said the research raises "chilling" possibilities for the future. She

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be set. "The fact that there is a total moral vacuum in this whole are is now finally being realized,"

and others called for a morato-

rium on further human embryo

research until clear limits can

Cohen said. The glare of the spotlight is new for Hall, who has worked in relative obscurity for six years as director of Seorge Washington University's in vitro fertilization lab. Until now, he has won scientific awards but not publicity - for discoveries that helped couples con-

The softspoken Hall admits he was surprised "a little" by the uproar after an article about his cloning work appeared Sunday in The New York Times, sparking controversy around the world.

He has appeared on American and foreign TV networks; his office is swamped with interview requests.

Hall and Dr Robert Stillman, the director of the university's in vitro fertilization programme, seemed reluctant targets of the endless questions. They emphasized scientific

details and insisted the ethical questions should be left to others - their personal views weren't important, they said.

But Hall and Stillman agreed that ethical guidelines are needed before scientists attempt cloning normal embryos, which in theory could be implanted in women and grow into babies.

Hall described the experiment as a natural outgrowth of his work to improve in vitro fertilization - or the making of socalled test tube babies - which has become a common fertility treatment.

"Our goal is to help parents achieve pregnancy," he said. Reports AP

