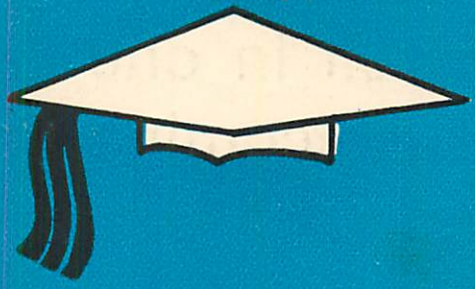
Dow Medical College

Convocation Souvenir



D.M.C.S.U. 1975-76

MESSAGE

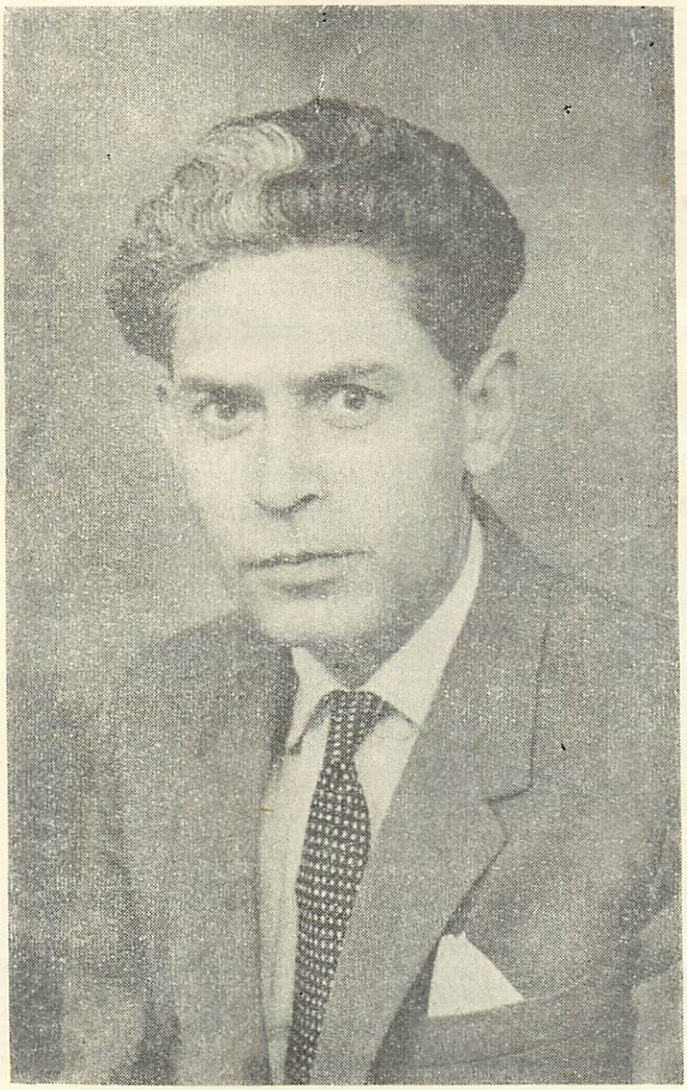
It gives me real pleasure and satisfaction to see that the college Students Union has taken the responsibility of holding Annual Convocation for the award of M.B.,B.S. degrees from this year. I am indebted to President Hamid Zaki and his most understanding and hard working associates for this very progressive and encouraging step forward. It would be a great day in the history of our Students Union and will be highlighted. I am sure, it is an example of service to the cause of education incorporated for a healthy integration with the extracurricular activity. The committee members A'aur Rehman, Azizur Rahman, Javed Ehtesham Ali, Zia Moizuddin and Khalid Naseer deserve special mention for their hard work in compiling this Souvenir.

I wish the fresh graduates every success, and many many happy returns for the day.

(PROFESSOR A. WAHID)

Principal & Chairman, Academic Council,
Dow Medical College & Civil Hospital,
Karachi.

CHAIRMAN



Professor S. A. H. Rizvi

MESSAGE

I am very happy that Dow Medical College is having its first Convocation on the 29th instant.

Convocation is always a memorable occasion in the academic life of any teaching institution.

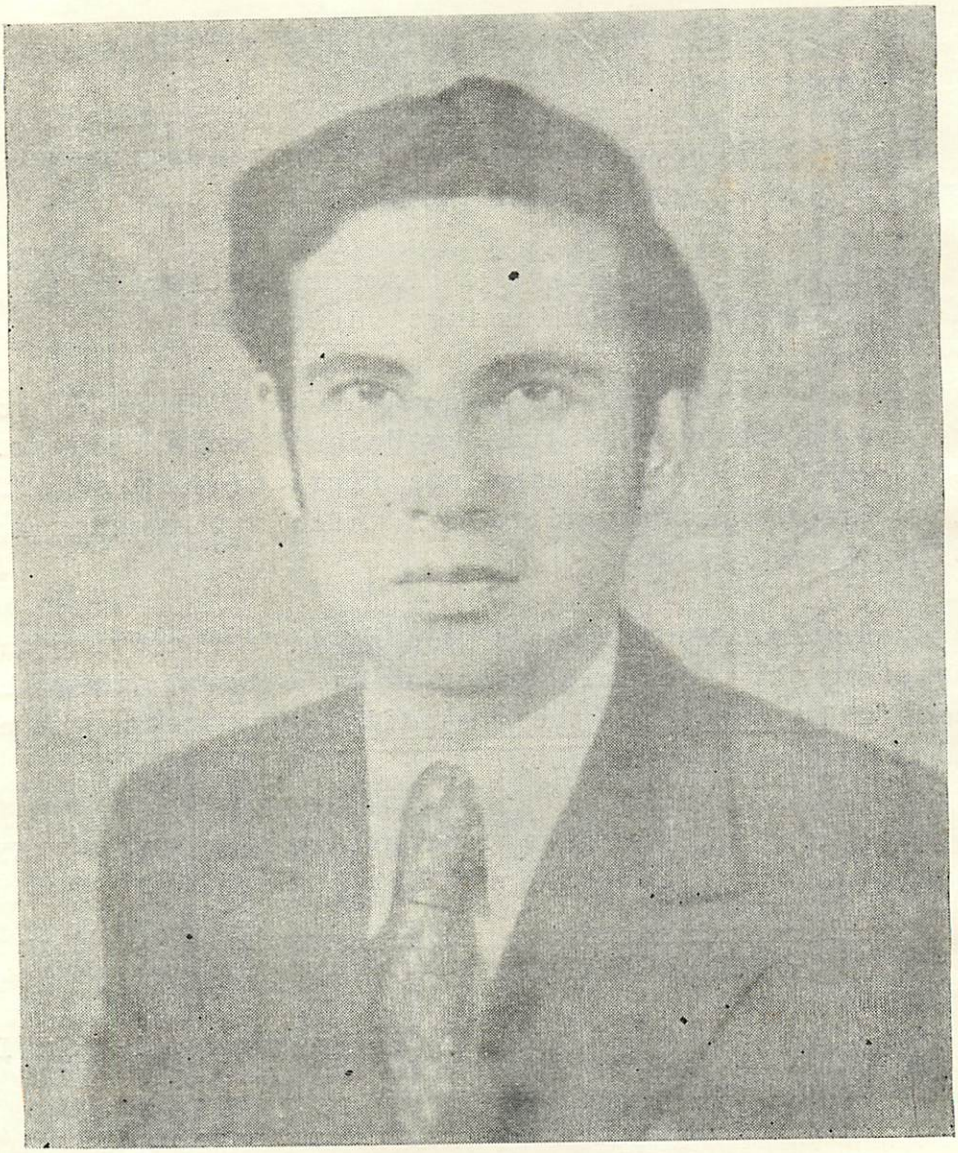
It is particularly a happy occasion, because it is being organised by the Students Union of this college. I have no doubt that this being the first time every effort will be made to set in traditions, which will be fitting of this great institution.

My best wishes for those who will be receiving their degrees on this occasion, not only because they have successfully completed their studies, but because the path ahead is evenmore difficult.

May God grant them the courage, wisdom and energy to mitigate the miseries of the suffering humanity.

(Professor S. A. H. RIZVI)
CHAIRMAN,
Convocation '75

PRESIDENT 73-74



Dr. Aftab A. Qazi

MESSAGE

Fellow Students,

It gives me immense pleasure to know that the Students Union is holding the first ever Dow Convocation.

On the eve of the first Convocation, I congratulate all my friends who have graduated and entered the practical arena of life. The responsibilities of Pakistani doctors are of paramount significance, for you are Muslim and Pakistani doctors and are not only accountable to humanity but also to God, the Ultimate Being of the universe. You symbolise the intellects of Pakistan, and through your knowledge, the darkened path of our national life needs to be enlightened.

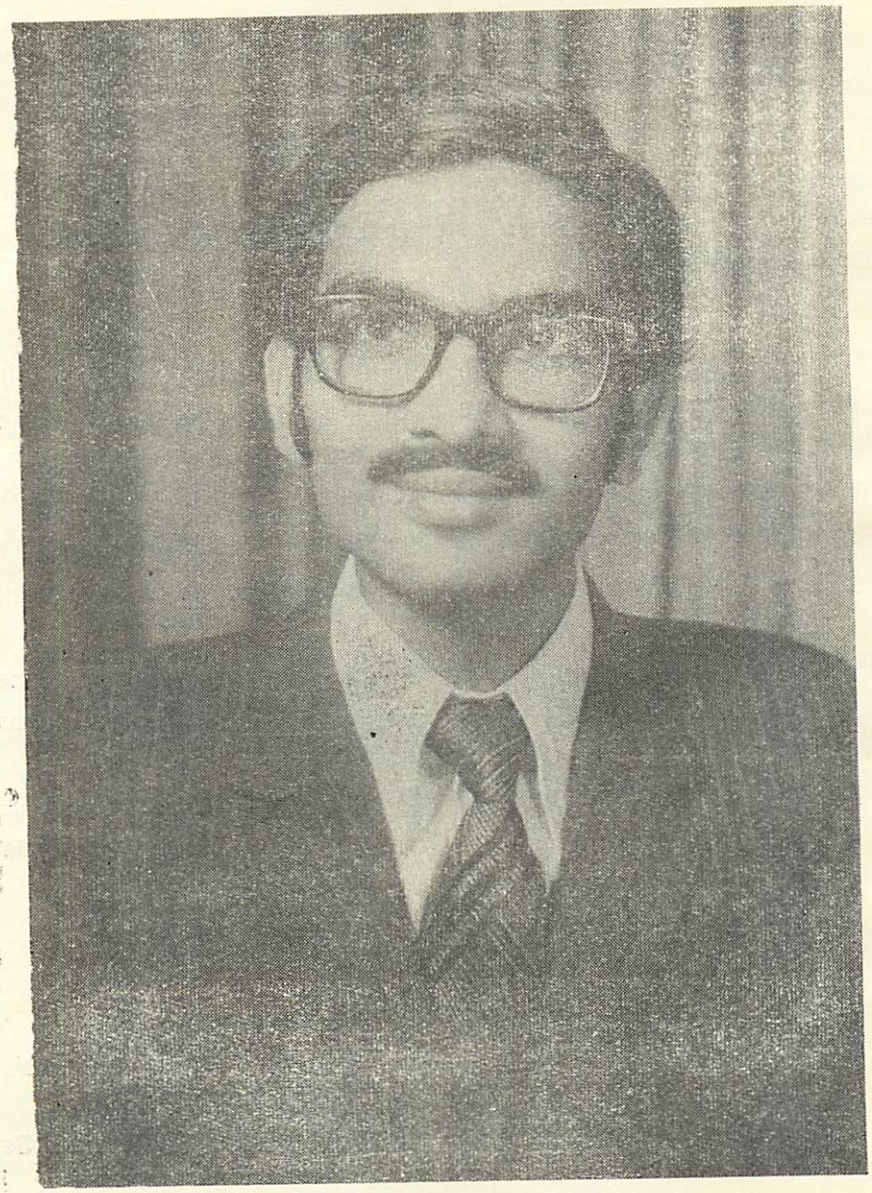
You have been reposed with a sacred trust, for the accomplishment of which, you should forge unity in your ranks, have complete faith in God and discipline in your actions.

Go forth and s rive for the glory of Pakistan and Islam.

Pakistan Paindabad.

(AFTAB AHMAD QAZI),
President,
Dow Medical College Students' Union
(1973-74)
Member Syndicate, Member Senate,
University of Karachi,
Karachi.

PRESIDENT 74-75



Misbah-ul-Aziz

MESSAGE

Fellow Students,

It gives me immense pleasure to congratulate you all on the occasion of first ever convocation of this coveted institution. This convocation was scheduled to be held in the beginning of the year, but due to the most unfortunate episode of continued postponements, it is being held now.

The students of Dow Medical College in general and those effected in particular are very well aware of the consistent efforts of the Union to resist postponement of examinations which prove to be detrimental to the smooth running of academic session.

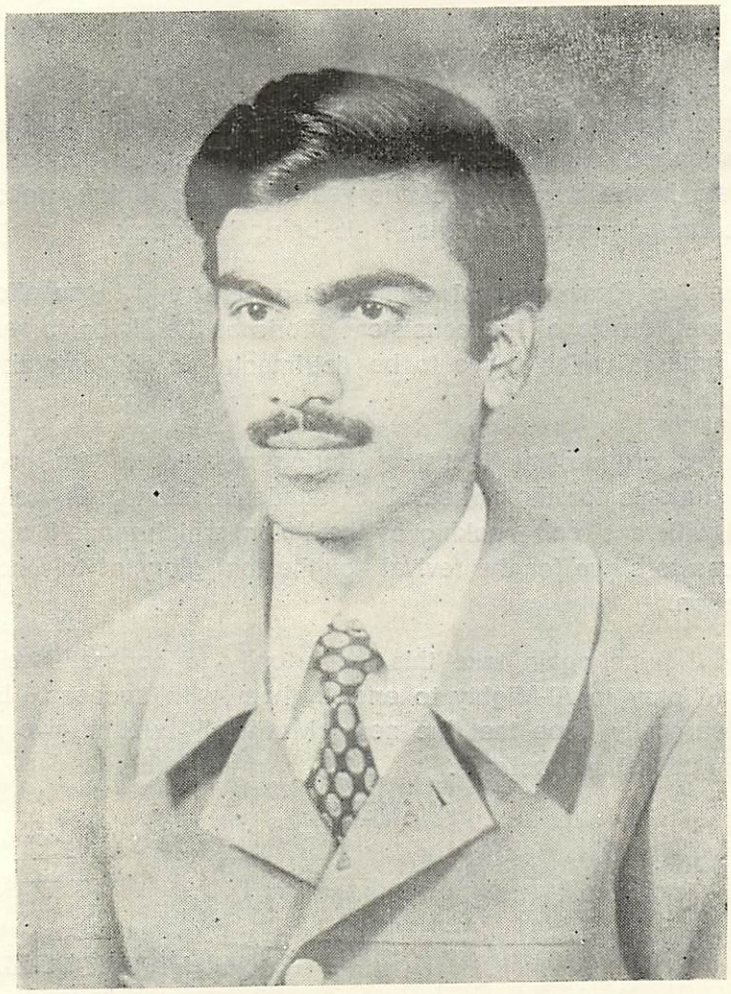
I am, however, proud of the fact that during my tenure the once incoherent efforts of the students for the upheavel of academic standards of the college were provided with a strong backing by the Union, which made it a salient feature of its programme to strive for the revival of the lost glory of this coveted seat of medical education.

In the end I once again take this opportunity to congratulate those receiving degrees and pray to Al-Mighty to endow them with success in their future career, and I earnestly hope that the new "Mesiahs" would give an exemplary performance as "Muslim Doctors".

AMEEN.

(MISBAH-UL-AZIZ)
President,
Dow Medical College Students' Union,
(1974-75)
Karachi.

PRESIDENT



S. Hamid Zaki

MESSAGE

Fellow Students,

On this auspicious occasion when some of our colleagues have successfully completed their medical education, I congratulate them on my behalf and on behalf of the Union. The occasion calls for special rejoicing on the part of Dow students, as it is for the first time that the medical students in Pakistan, on successful completion of their studies, are being awarded degrees in a separate convocation.

The young Pakistani doctors have to shoulder the responsibility of serving the ailing nation. I hope you become symbols of devotion and dedication to Islam and Pakistan and I pray to Almighty Allah to make you noble practitioners of the Noble Profession. By your dedication to the cause, you may not only become a beaconlight for medical students but may shine as a ray of hope for the youth of Pakistan. Be firm and unyielding in your resolution for the establishment of a truely Islamic Republic of Pakistan.

In the end I wish you all the success in the life that lies ahead.

(S. HAMID ZAKI)
President,
Dow Medical College Students' Union,
Karachi.

GENERAL SECRETARY

Shaukat A. Malick

A RED LETTER DAY

It has been rightly said that only when you have been in the deepest valley can you know best how is it to be on the highest mountain. Gone are the days of retribution, which had left the image of Dow Medical College languishing in the wilderness. The first ever convocation for Dow Graduates, marks a red letter day in the otherwise apalling memoirs of our college.

It has been for the first time that the students have unilaterally scaled great heights to elevate the standard of medical education which happens to be at the lowest ebbs. The rational approach of the students by irony of fate has met with adversity, thus unveiling the real hands behind the destruction of medical profession. The predicament being faced by the medical profession is invidious and liable to stir a violent manoeuvering for its eradication. The clandestine tactics to ambush the noble manoeuverings of the students has become tacit unmasking the daredevils.

The need of standard medical education has been a subject of exhortation time and again, but nothing concrete has been done for its accomplishment by the omnipotent guardians. Nevertheless, despite all adversities the innovation of a separate convocation for the Dow Graduates shall infuse the impetus and incentives in the students to aspire and achieve the laurels. The graduates receiving their degrees on this auspicous occasion receive our hearty felicitations.

The nation in general and the medical profession in particular has pinned great hopes in them. On their shoulders rests the responsibility of struggle for the glory of medical profession. Their fidelity to the profession shall be a source of inspiration for the posterity. Lastly our heads bow down in gratitude to our teachers for their untiring efforts to impart in us the art of healing.

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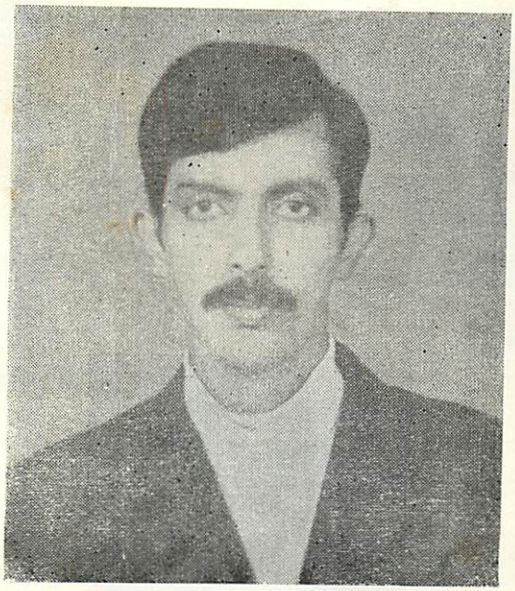

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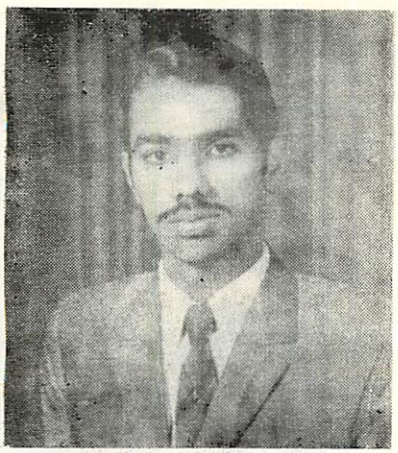

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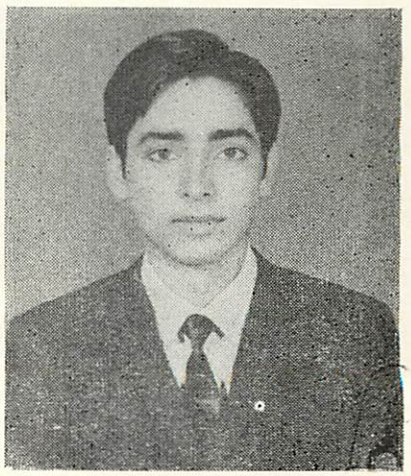

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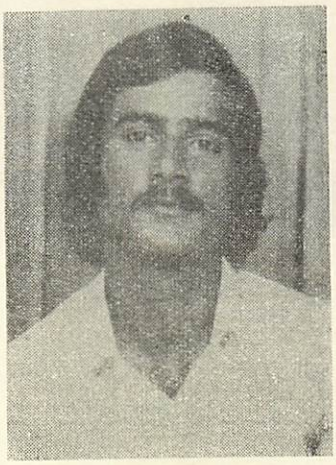

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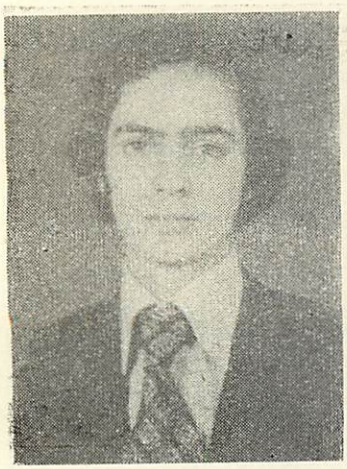

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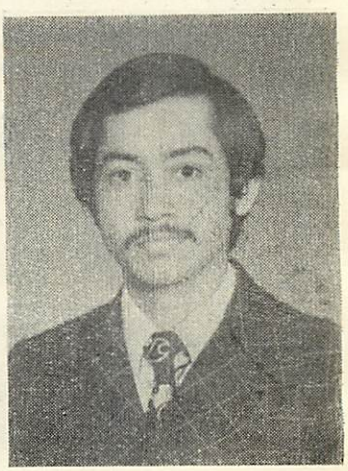

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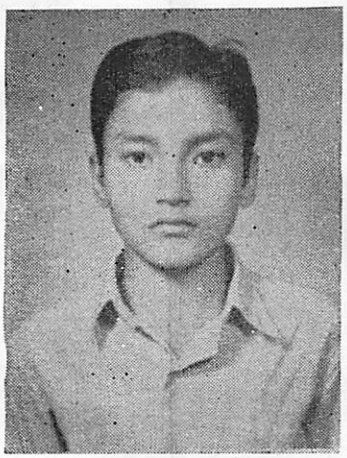

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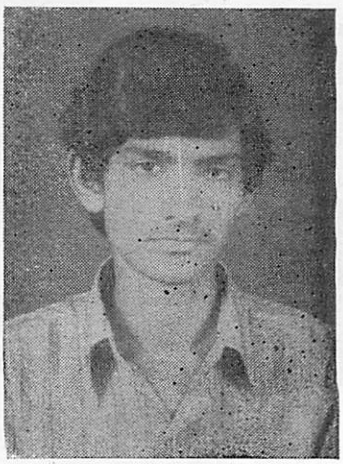
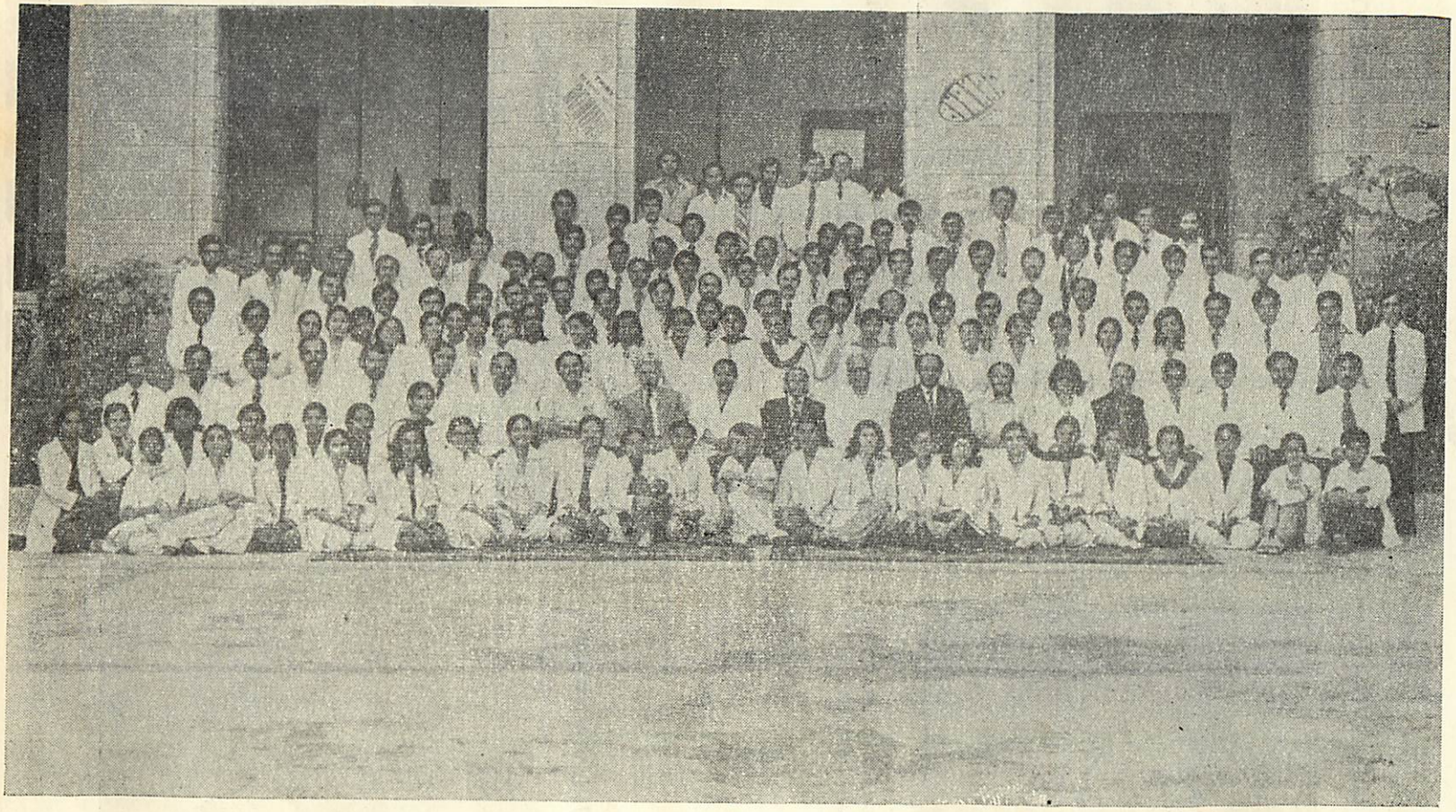


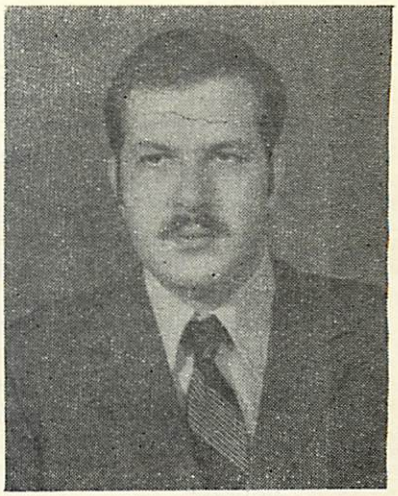
HUSHAM BIN ZAFAR

GRADUATES '75



Dow Medical College

Interview



Dr. SALEEM BAKHTIAR

First Position,

Final Year, M.B.B.S.

A serious, studious and serene person-this is how I had him pictured in my mind before I went to interview him but he was totally different from what I had anticipated. Tall, smart, with an imposing and overwhelming personality, Dr. Saleem Bahktiar topped in the Final Year examination distinguishing himself in Medicine and E. N. T., This is what he said in reply to different questions asked from him :-

Q. Dr. Saleem, were you expecting a position in this examination?

A. Expecting a position! No. I never had a position in any of the previous examinations and this time too I wasn't expecting it either.

Q. Did you study with the aim of getting a position?

A. After taking my E.C.F.M.G., I found the system we are following to be totally different from the American system. The difference was so much that I was really worried about getting through. I hope that answers your question about studying with the aim of getting a position very well.

Q. So you have cleared your E.C.F.M.G. When did you do it?

A. I passed it in July, 1974.

Q. As you said you found the British system of medical education, the one which we follow, to be totally different from the American system. Could you tell what is the basic difference between the two?

A. The basic difference between the two systems is that whereas the British system is based entirely on memorizing and on theoritical knowledge, the American system is the practical application of theoritical knowledge. (In it you have to use your brain and not memorize what is written in the books).

Q. If the difference is so great how is it that many doctors from this college who are completely alien to the American system pass the E.C.F.M.G.?

A. This I shall attribute mainly to the students and partly to the professors who were very kind and taught us what we cannot find in the books available here.

Q. Do you plan to specialize in any branch of medicine?

A. Yes, I have always wanted to specialize in general surgery. I belong to the primitive province of Baluchistan and there one has to have a wider grasp on the subject rather than specializing in any one branch of surgery or medicine etc.

Q. Where do you plan to go for specialization?

A. I'd like to go to a place where I can get the best and the most of training. In my opinion, England is about 10-15 years behind the U.S.A. in the field of medicine. Most of the doctors go to England to get F.R.C.S. because it is accepted here. It is more of a formality than an urge to learn something. I would like to go to the U.S.A. because I feel I shall get the best practical training there.

Q. Do you intend to come back?

A. Yes, definitely. I'd like to make my trip abroad as short as possible. "Go fast! Come back fast—acquire something while you are still young."

Q. Will you join the army if called upon?

A. No, I would not. The attitude of the army is not reasonable at all. They do not allow the doctors to do house job. The period of required service is not specified. Besides, the army is a group of healthy people—you seldom see a sick man. All the doctors are required to do is to maintain the health of these people. In doing so you forget your medicine as it requires continuous practice. If the army becomes a bit more reasonable, allows fresh doctors to do the house jobs, specifies the period of stay in army, and does not give exemptions to anybody then I also would not mind serving.

Q. What do you have to say about the social and financial status of doctors in our country?

A. In our country, doctors are not given the respect which is their due in society. The financial status of young doctors, in my opinion, is quite satisfactory. Young doctors should not run after money. However they should not be exposed to temptations either.

Q. What do you think of the academic standards in medical colleges?

A. The standards are very low. They are far below the required standards.

Q. In your opinion, what are the factors responsible for the deteriorating standards in medical colleges?

A. In my opinion there are three main reasons. Firstly, the colleges do not have enough facilities to cater with the growing number of the students. This is because the Government wants quantity and not quality as it wants to provide the basic medical facilities to the majority of the people. Secondly, the students are not interested in their studies. Thirdly, the teachers have not been really successful in developing the interest of the students in the subject.

Q. What are your future plans—marital?

Government wants quantity & not quality in medical profession

A. Marriage—No, not at this stage. I have nothing to offer now. I shall settle down before I take this responsibility.

Q. Do you approve of doctors marrying doctors?

A. No comments. It depends upon the person rather than the profession.

Q. You must have come to know about "save a human life project". What do you think of it?

A. It is a good project. It should be encouraged and a feeling of self-realization should be created among the students. I congratulate the social section of D.M.C.S.U. on this endeavour and I feel it is high time we direct our social activities in a constructive direction.

—Interviewed by Zia Moizuddin.

Interview

Dr. NUR JEHAN QURAISHI

Second Position,
Final Year M.B.B.S.

Calm, placid and tranquil, Dr. Nur Jehan Quraishy stood second in the Final Year M.B.B.S. examination with distinctions in Medicine, E.N.T. and Special Pathology. With an air of serenity about her, she opines cautiously on various subjects. An account of what she said in reply to the questions asked, follows :-

Q. Doctor, were you expecting a position in this examintaion?

A. I don't really know (she said reluctantly) but may be I was (she admitted).

Q. Did you study with this in your mind?

A. I have always studied to learn and to acquire knowledge as much as I can. But this time I had studied with the aim of getting a position to keep up with my academic record.

Q. You mean you wanted to keep up with your academic record and distinguish yourself once again. Could you elucidate your academic career?

A. Certainly. To start with, I passed my Inter-Science from Hyderabad Board and secured the 3rd position, then in Dow Medical College, I topped in the 1st and 2nd Professional examinations and in the 3rd Professional I got the 2nd position. (Whew! Some academic record).

Q. After knowing how you have been distinguishing yourself in the past —and even this year, I would like to ask you that to what do you attribute your successes?

A. I think that I have been successful because of hard work. I have always been a hard-working student with long study hours.

Q. Do you plan to specialize in any branch of medicine?

A. Yes, I have intentions to specialize in Paediatrics.

Q. Why Paediatrics?

A. Mainly because I have a profund interest for the subject and I guess also because I have a liking for children.

Q. Do you plan to appear in E.C.F.M.G. or already have?

A. I already have. I passed my E.C.F.M.G. at the end of the final year postings in July, 1974.

Q. Do you plan to go abroad?

A. Yes, I plan to go to the States where I shall work for some time and then go to England to get a degree. I might as well take a post-graduate degree in the States (not very sure).

Q. Do you have intentions of coming back? If yes, when?

A. Oh yes, I shall come back but it is premature to ask when. I cannot prognose the exact time; it depend upon various factors.

Q. Being a lady doctor, you are lucky to be exempted from the compulsory service in army. By the way, what is your opinion about this scheme?

A. I think that the compulsory service is not appropriate—at least it is not appropriate in the present form of recruiting fresh doctors without permitting them to do house job. I am not agaisnt compulsory service but the attitude should be more reasonable.

Q. What do you think of the social and financial status of "doctors in Pakistan"?

A. They do not get what they are worthy of, society does not give them the respect which their colleagues get in other parts of the globe. Besides they are also not very well off financially.

Q. Academic standards—a hotly debated topic among the students now a days. What do you have to say about it?

A. There is no doubt that the academic standards are falling and it is mainly due to the fact that individual attention cannot be given to so many students. The number of students being admitted should be curtailed drastically.

Q. What do you think should be done to improve the standards?

A. The students should take interest in their studies. The Health Ministry should reduce the number of students, increase facilities and support the students bodies in their struggle for the improvement of standards.

Q. What are your future plans?

A. I cannot be exact about my future plans now.

Q. What is your opinion about doctors marrying doctors?

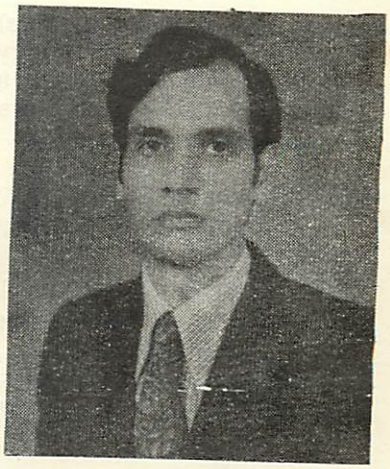
A. I think it is O.K., as doctors can very well understand the problems of their colleagues which other people can't.

Self-realization on the part of students is really appreciable

Q. Before I finish the interview I would like to have your comments about the "save a human life project"?

A. A commendable job. It is really appreciable because it is self-realization on the part of students and efforts to solve a problem which had to be tackled, the sooner the better. Medicines are badly needed in the wards as the poor patients cannot buy the drugs which are not available in the hospital (—— and most of them aren't).

—Interviewed by Zia Moizuddin.



Dr. SHAKIL AHMAD KHAN

Third Position,
Final Year, M.B.B.S.

Frail and lean physically but strong and impressive otherwise, Dr. Shakil Ahmad Khan secured the third position in the Final Year M.B.,B.S., examination with honours in E.N.T., Special Pathology. Gynaecology & Obstetrics. Having a pleasing personality he is very outspoken on matters he feels strongly about such as the loopholes in our educational system. He has his own methods of analyzing problems and offering solutions. Here are his views on different questions he was subjected to :-

Q. Dr. Shakil, the first question which I have asked Dr. Saleem and Dr. Nur Jehan and shall ask you the same is that were you expecting a position?

A. Frankly, not at all. In fact I was rather surprised when I heard the news at the University Campus, the day the result was announced. I believe I had reasons for not expecting one.

Q. Could you elaborate the reasons for not expecting a position?

A. The prime reason for my skepticism towards getting a position was my complete unsatisfaction with the system of education prevalent in our country. There is hardly any direct communication of ideas between the examinee and the examiner. To add to the agony is the part which trivial and irrelevant matters play such as limited time, bad handwriting, disturbing noise, and believe me, sometimes even a bad writing-desk can play havoc.
Another reason for my not expecting a position was that I have always been confused as to what should and what should not be mentioned in answer. My friends advised me that I should follow the conventional method as the examiners prefer answers from textbooks, which they have a likeness for. Whereas I have a deep seated belief in answering the examination questions from any other book which satisfies my soul and lust for learning.

Q. Could you tell me about your performance in previous examinations?

A. Though I have never been in the first three but I have always managed to be in the first ten students in examinations here in D.M.C. In B.Sc. I stood first class first in Biochemistry in the University of Karachi.

Q. Do you intend to specialize?

A. Yes, in internal medicine.

Q. Why specifically internal medicine?

A. I guess because I have a special likeness for the subject; or may be because I have always secured

good marks in medical subjects—topped in Biochemistry in B.Sc., topped in Physiology in First Professional, secured distinctions in general and special Pathology. Also, I have written a booklet "Practical Biochemistry" used by students of medicine, pharmacy and B.Sc.

Q. Have you appeared in ECFMG?

A. Yes I have, and cleared it too. I did it in July, 1974.

Q. Having done your ECFMG, do you plan to go to USA for post-graduate studies?

A. After completing my house job here in Civil Hospital, I would like to go to USA to get acquainted with their advanced techniques and systems which may help me in the course of time to introduce some of them in Pakistan for the benefit of people here.

I owe a duty to my country and I intend to fulfill it

As far as the post-graduation is concerned I would prefer a British University to an American University.

Q. After your studies abroad, will you come back to Pakistan?

A. I shall definitely come back. There is no question of my staying there I owe a duty to my country and I have full intentions of fulfilling it. Moreover, in my opinion, it is unpatriotic for any doctor to stay and serve in a foreign country. All of us owe everything to our motherland and we should realize this. In fact, jobs or study programmes in a foreign country should be looked upon as a means of friendly communication of ideas and knowledge and not, as a means of migration and switching nationalities.

Q. Tell me Dr. Shakil—will you join the army if called upon?

A. Well, I am a peace loving citizen basically and I am opposed to the very idea of maintaining armies in any part of the world. Unfortunately today the set up of the world is such that armies have become inseparable from the existence of human race. At present, as a fresh medical graduate I am reluctant to join the army.

Q. Could you explain as to why the doctors are so against the very idea of serving in the armed forces?

A. As far as I can see, there are three reasons for this attitude of the fresh doctors. Firstly, there are no learning facilities which are vitally important for them. Secondly, the future of doctors serving in the armed forces is far from being bright. The period of stay is not clearly defined and at the end of this service they find themselves competing with doctors junior to them for jobs in the civilian sector. Lastly, the period of service in the armed forces is not considered to be an experience in hospitals—here as well as abroad.

Q. How do you visualise the social and financial status of fresh doctors in Pakistan?

A. Fresh doctors, specially those serving in government hospitals, are hardly independent financially. They are still dependent on their parents for their livelihood and those who want to marry and set up a family unit of their own, it is impossible to make both the ends meet. And for those who need financial assistance for post-graduate studies, the future is bleak.

About the social status I think the fresh doctors are not given the respect which is their due.

—Interviewed by Zia Moizuddin.

ROLL OF HONOUR

The following doctors distinguished themselves in the Final Year examination by securing distinctions in subjects mentioned against their names :

Dr. Saleem Bakhtiar	— Medicine & E N.T.
Dr. Nur Jehan Quraishi	— Medicine E.N.T. & Special Pathology
Dr. Shakil Ahmad Khan	— E.N.T., Special Pathology, Gynaecology & Obstetrics
Dr. Adnan Abdul Khalifa	— Gynaecology
Dr. Sohail Aijaz Ahmad	— Special athology
Dr. Mohd Adnan Siddiqui	— E.N.T.
Dr. Mohd Tariq Shaikh	— E.N T.
Dr. Sabiha Haque	— Special Pathology
Dr. Gulnar Parveen	— Special Pathology
Dr. Sanobar Kadri	— Special Pathology
Dr. Amjad Iqbal	— Special Pathology
Dr. Azam Baig	— Special Pathology
Dr. Naseer Ahmad	— E.N T.
Dr. Zeba Faiz	— E.N.T.
Dr. Faisal Rashid	— E.N.T.

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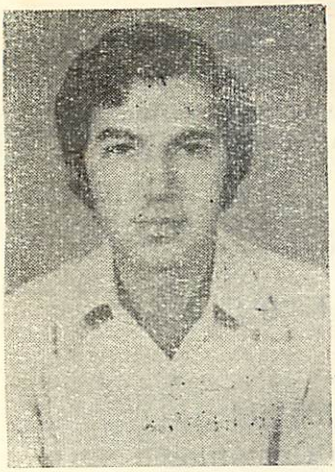
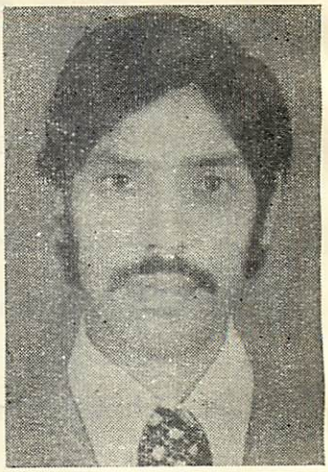
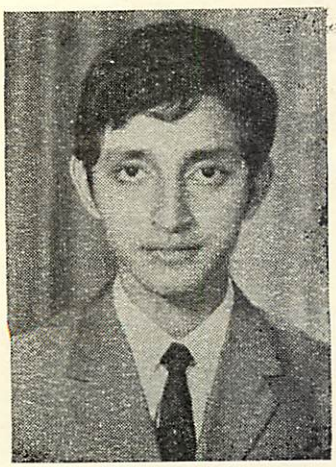


Dr. Azam Baig

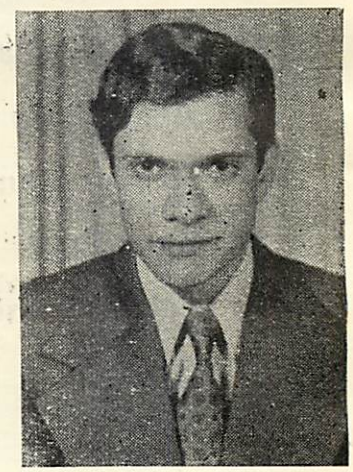


Dr. M. Tariq Shaikh

Dr. Sabiha Haque



Dr. Adnan Siddiqi



Dr. Naseer Ahmad

THE CONVOCATION

By

AISHA SIDDIQI
2nd Year M.B.,B.S.

Its an occasion both solomn and gay
Where each trickling moment lay
The final verdict
Of enchanting, gruesome and lost moments
Each patient moment spent—
While passing through the gruelling
experience
Each day, each week, each year
and now—

Those who have been patient enough to learn
All thats got to be done
Have been declared fit
To go out and fight with feelings,
skills and wits

Its a gathering of such
With promises of full-fiilling the Oath
And with each bowing head
Its the acceptance of responsibility
Of lost past moments
And moments yet to come

And we all wish them good luck

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Advent of a new era

by

Javed Ehtesham Ali

The separate convocation for the Dow Medical College, marks the advent of a new era, fulminating with ecstacy. It has poured the new wine of its vital spirit into the old bottles of tradition. The phase of academic renaissance, through which the Dow Medical College is passing, holding of such a convocation is indeed a milestone and a source of inspiration.

In the annals of medical profession, the Dow Medical College emerges as the undisputed pioneer by setting such a coveted precedence of separate convocation. The Dow Graduates who are receiving their degrees on this auspicious and unprecedented occasion deserve heartiest felicitations. It has been rightly said that care renders the head that wears the crown. Naturally, the organisers receive appreciations of the highest consideration for transpiring this nebelous idea into a reality, through their inordinate and fidelous endeavour. Holding of a separate convocation will infuse a sense of competition among the students and open the vistas for devoting their time to studies which hitherto had been quiescent and dissipated. Awarding of gold medals for highest marks in individual subjects has provided yet another avenue for exploring the aptitude of the students and shall tremendously contribute towards elevating the honour of medical profession which unfortunately happens to be at the lowest ebbs. Inhumation of the horrible memories left by our perfidious predecessors through decades, takes place with the advent of the new era. In essence it has perfused the dynamic values to the foundered academic life.

The present result which has made the inimical minds frenzy, reveals the fact that unscruplousness shall never transgress the jurisdiction of academic canons. The saying that the inn that shelters for the night is not the journeys end, undoubtedly holds good so far as the improvement of academic standard is concerned. To array the whole set up, a thorough reorientation is sin-qua-non. Every effort ought to be made to provide facilities concomitant to the numerical strength of students, and commensurating with standard requirements. Hoping to reach the destination in one stride, would appear only too ridiculous.

The times to come shall see greater transcendence and through the fidelity of those manoeuvering, a place worth its name shall soon be discovered in the comity of medical profession of advanced nations.

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Dr. Azizur Rehman
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Dr. Abdul Malik
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Dr. Abdul Majid Noormohamed
Dr. Abdul Majeed
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DOWLITE

INTERNATIONAL

79

with Compliments
from
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10/10/79

بسم الله الرحمن الرحيم

هو الذي خلق لكم ما في الأرض جميعا

Inspired by the Message of Quaid-e-Azam Mohammed Ali Jinnah: Unity, Faith, and Discipline, under this insignia of "service is human," the Magazine section 1978-79 presents.....

DOWLITE
INTERNATIONAL '79

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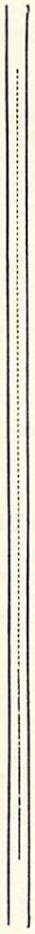

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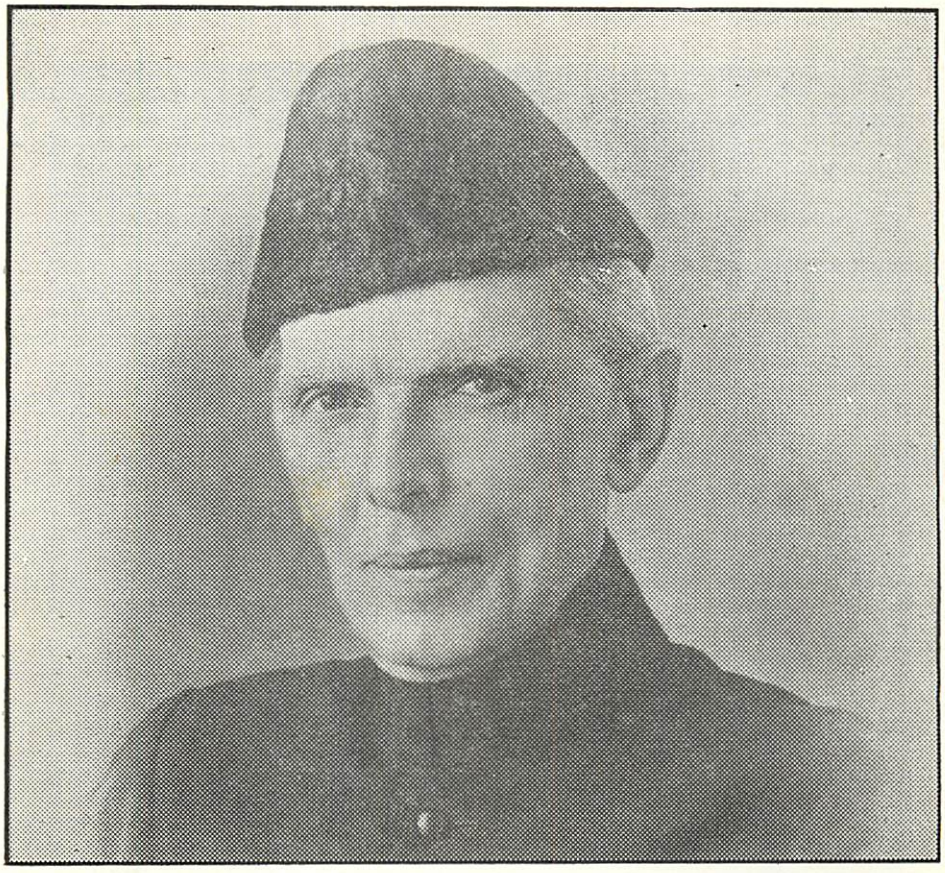

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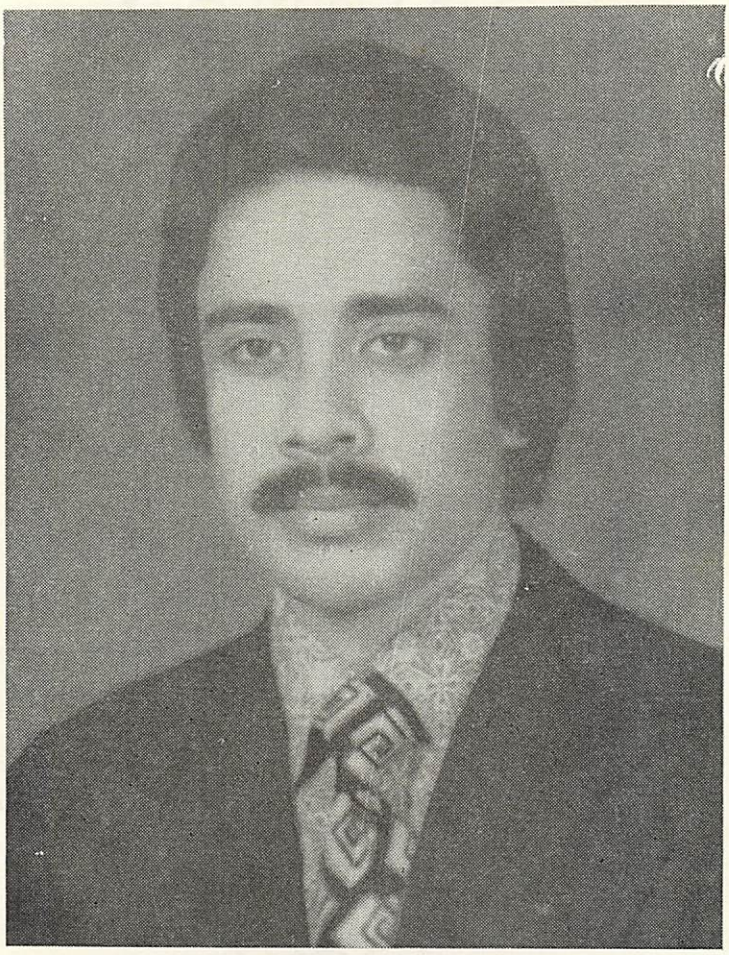

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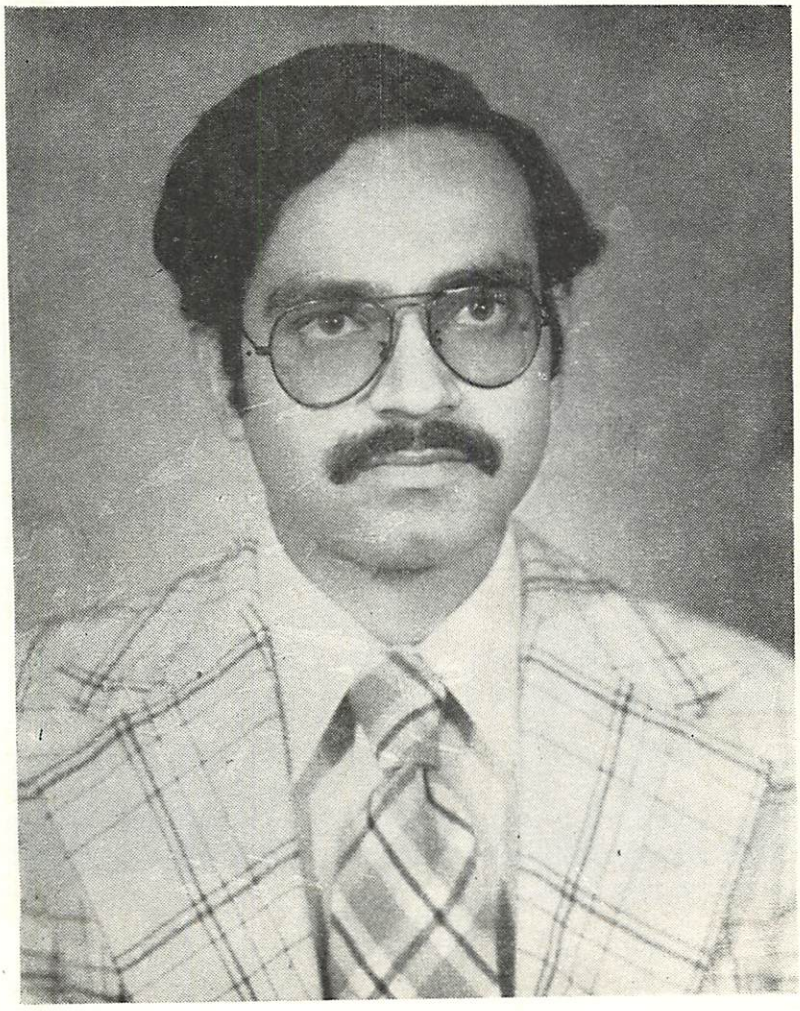

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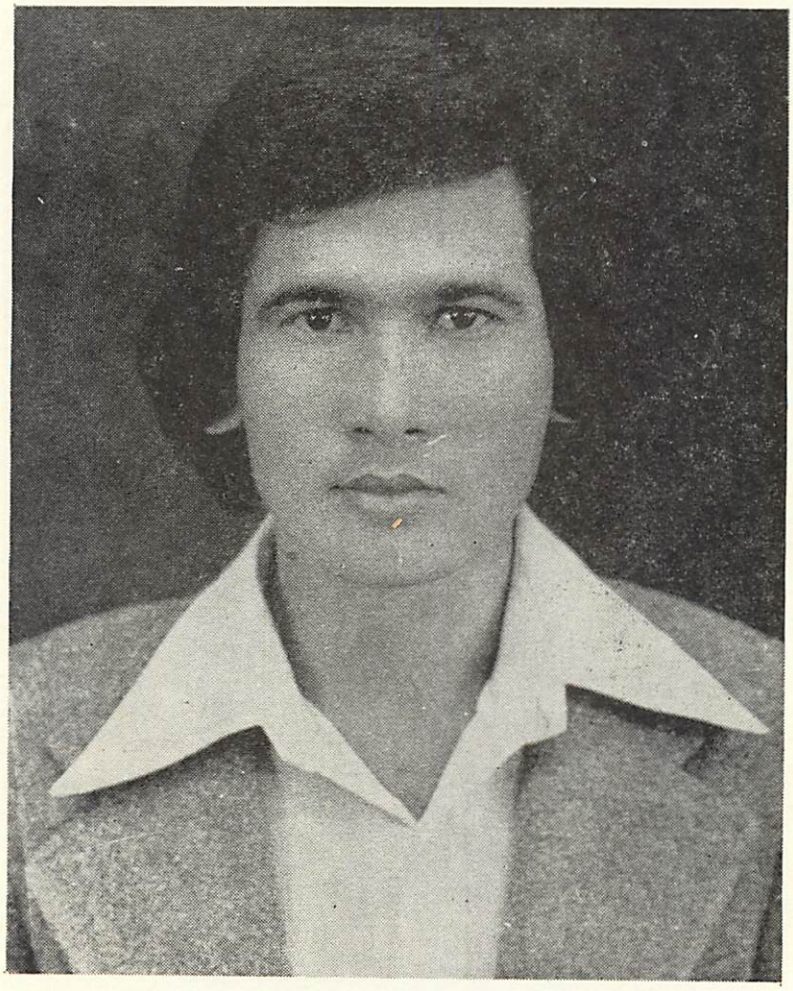
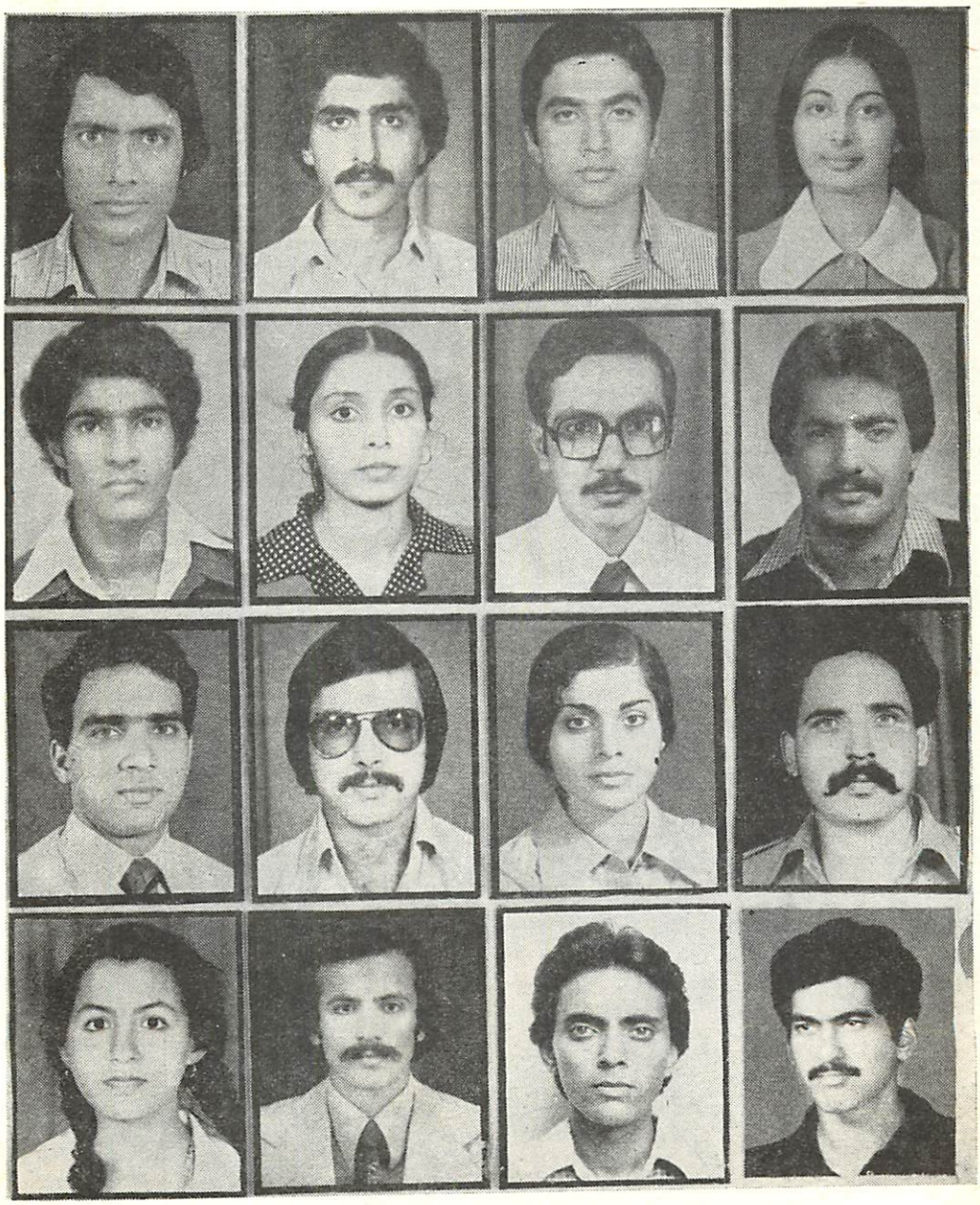


ANIS-UR-REHMAN

WHO IS WHO, CAN YOU TELL?



Now a world or two about the future. It was a general consensus that test cricket without the Packerites had fallen to a very low ebb. Now that an agreement has been signed between the Australian Cricket Board and the World Series one hopes that Test Cricket would regain its previous standards. Has Packer decided to disband W.S.C. for the cause of traditional cricket or is it that his goal has been reached can be anybody's guess.

What about the possibility of another Mr. Packer coming up and buying the game? Sponsorship can be good for any sport but auction can prove to be a bad practice. Infusing true professional spirit within the limits of sponsorship is the only thing that can save the game from such perilous circumstances in future. If this is not done then we should all be aware of the fact that "history repeats itself".

badly overshadowed Packer cricket. On one particular day only about 500 people watched the "Supertest" while about 20,000 saw the Australia-India match. Night cricket, however came to Packer's rescue. This innovation met great spectator support and in this way some of Packer's reputation was salvaged.

While all this was going on in Australia, the unrealistic cricket bosses of Pakistan declared Packerites as ineligible for the Anglo-Pakistan Tests. What happened in these Tests is a story which better not be retold. After the English debacle the Packerites were reinstated into our national side through the courtesy of a new cricket administration.

On the Australian scene the W.S.C. circuit was in its second season. The number of Packerites had swelled to about sixty. Packer cricket also started receiving public support which coupled by television backing resulted in financial gains for W.S.C. Packer's first objective of disrupting test cricket was achieved in the first W.S.C. season. His second goal of making large sums of money was gained in the second year of the World Series. Packer now was not just another man on the cricket scene. He was the man incharge of the driving seat of this game.

Now let us probe into the results of the Packer invasion. First and foremost of these is that professionalism has gained a new lease of life in the game of cricket. This is of special significance in the closing decades of the twentieth century where professionalism has become the watchword for the survival of any sport. Next we come to the innovations that Packer has infused into the game. Of these night cricket and the new system of T.V. coverage are very commendable. Packer cricket has also helped new names, specially the spring backs to come into limelight. Kepler Wessels and Le Roux, for instance, have grabbed the opportunity given to them by W.S.C. with a great degree of success.

On the debit side W.S.C. has snatched names oike Viv Richards, Tony Grieg, the Chappells, Lillie and Roberts out of the test venues. This, however, has proved to be a mixed blessing as worthy replacements emerged very quickly. It is difficult to say whether people like Hogg and Botham could have ever made their test debuts without the Packer affair.

A serious charge that W.S.C. faced was that it had created the problem of spectator indiscipline. What happened during the recent tour of W.S.C. Australians to the West Indies is now a black spot on the cricket history. There was hardly a day on the tour when there was no bottlethrowing incidents. The height of it came at Sabina Park where the spectators caused a lot of damage to the stadium and the "Supertest" had to be abandoned.

Another very significant aspect of the World Series Cricket was the Packers domination of all the Packer recruits, no less than thirty had some credentials to fast or medium pace bowling. This domination had resulted in many unwarranted injuries to the batsmen. To complete an innings unhurt in the World Series was quite unusual. Cricket for W.S.C. was nothing short of war. The miserable plight of the batsmen in the Supertests can be judged by the fact that only five centuries were scored in five matches. This, when compared with the fortysix centuries in twentysix tests during the last year makes things rather clear. Batsmen which included folks like Walters, the Chappells, the Richards, Lloyd, Barlow and Zaheer, just to name a few, could score at an average of only a fraction over twentyfour. Was it because of poor batting or because of "safety first" attitude by the batsmen. Majid Khan, who is known to be a good player of genuine pace, became a victim of this very act of war.

In short it can be said that Packer Cricket was a lot different from the traditional Test Cricket. Some of the critics even go on to say that it was not cricket but merely a circus. The two forms of the game can rightly be compared with Rubgy League and Rugby Union. The names no doubt are similar but nothing else is.

CRICKET OR CIRCUS

By
AAMIR ZUBERI
1st Year

Is Packer and Cricket synonymous? This is the big question hovering around the cricketing world. Did Packer launch World Series Cricket (W.S.C.) as a well wisher of this game of glorious uncertainties or as a mere money spinner? Has he deserted his allies and left some of them in the lurch?

To find an answer to these questions let us take a stroll into the years gone by. Cricket between the wars and before, an era to which the critics refer as the golden age of this game, was the sport of the English Lords. To them cricket was a favourite pass time and nothing more. These people, called the gentlemen of cricket, could hardly be described as the technocrats of the game. A few swash-buckling crossbatted heaves and back to the pavilion they went. The entire burden of the game was put upon the weak backs of a few professionals, who were treated as nothing more than the paid servants of the so-called "gentlemen". All sorts of privileges were enjoyed by the amateurs. The most unjust of these was that no professional was allowed to lead England in Test Cricket. With the passage of time the different branches of the game became more and more specialised. A player was no longer just a cricketer. He was either a batsman, a bowler or a wicketkeeper. The gentlemen failed to adjust themselves in this "age of specialisation". Coupled with this more and more money was being poured into the game which forced amateurism to die. At last, in the early sixties the amateur-professional distinction was declared null and void. Here ends episode number one of the Packer drama.

A few years later the circket history entered perhaps one of its most explosive decades — The Seventies. It started off with the players' demands for a greater say in the monetary affairs of the game from all around the cricketing globe. Just as a big turmoil was knocking at the door of this sport, one-day cricket came to the rescue of the game. Instant cricket brought more spectators into the arenas and this naturally meant more money for the players. Things thus started to quieten down a bit — at least for the time being. At this juncture in the history of the game three new stars rose on the cricket horizon. They were Tony Grieg and the Chappells—Ian and Greg. They restarted the player's fight for a greater share in the money that was being poured into the game by the sponsors — Benson and Hedges, Cornhill, Prudential, John Players and Gillette just to name a few. Ian Chappell was seen taking his pants off midpitch during a Shields game in Australia to press for his demands. Six Pakistanis threatened to boycott the Aus-WI tour of 1976-77. The English cricketers also started creating trouble in their domestic cricket. All this coupled by a number of minor incidents created an atmosphere required by Packer to explode his bomb.

Kerry Packer, a T.V. boss, had been refused rights for test cricket, inspite of being the highest bidder, just because his was a private network. He decided to take his revenge on the Australian Cricket Board (A.C.B.) by disrupting test cricket in Australia. To gain this objective he bought the services of the top cricketers of the world at fabulous prices.

The World Series Cricket (W.S.C.) story came to surface during the Aussies tour of England in 1977. The Test and County Cricket Board (T.C.C.B) which controls the game in England immediately deposed Grieg, a Packer recruit, from the highest post in cricket — The English Captaincy. However, the T.C.C.B. wanted to play safe and did not remove the Packerites from the English side until winning the Ashes.

The first W.S.C. season coincided with the Indian tour to Australia. The visitors

road roller for a couple of miles before yielding to the agony of my body. Enough for one day!

Dawn of the next day found me lying in bed, utterly exhausted with an aching back, pulled hamstrings, and sore feet.

"At this rate I will need a mobile unit from the CHK to accompany me", I gloomily conjectured. But an inherent coach-like voice piped up inside me with hackneyed statements like, "If at first you don't succeed, try, try and try again". And so I ruthlessly eliminated all sane thoughts advising me to desist from this slow but steady path to self destruction.

Subsequent days of the week saw me improving slightly to give me a glimmer of hope. I learned to bear the stares and giggles of the ignorant peasantry gazing on with cracks like "PT master" and "Beevee say bhagta hay".

At long last, the day of 'Le Grande Race' arrived. The participants assembled at the starting point and the rules of the race were read out. The situation was extremely tense, to say the least, till eventually the starting whistle was blown. We were off, all fifty odd of us, full of vigour and vitality, determined to snatch a piece of glory.

After one mile of running, I was panting like a poodle; two miles and I could hardly keep my lungs from bursting; three miles and I felt like a middle-aged man suffering from arthritis. Needless to say, after four miles I dropped dead in my treads. To put it in gentler terms, I decided to take a "short break" or an "interval". All around me I could hear cries of "Oxygen, Oxygen" and "water, water". Even boys of Herculean proportions were dropping down like flies.

Rolling in the dust I contemplated my sorry state amidst gasps and wheezes. Any temptations to carry on were quickly dashed by an approaching vehicle which stopped by my side.

"You guys the mobile unit from Civil Hospital?" I asked in a dazed voice.

"No, but we can drop you there. You look terrible. What happened?"

"Oh! the spirit of jogger-mania overtook me. But that's over now."

MY BOUT OF "JOGGER-MANIA"

By
MIRZA SHAHZAD HASAN
1st Year

Of all the forms of sports avidly followed by its fanatics, one is so inexpensive and yet so demanding as jogging, for some athletic-maniacs, is 'a way of life', as sports magazine writers would enthusiastically point out. It is "the stream-lined way of health." It can also be a non-stop flight to physical and mental ruin — as I unhappily discovered one miserable week long, long ago.

It all happened one fine morning on my college premises as I strolled casually out of the dissction hall. There I was quietly whiling away my time when to my immense misfortune as I later discovered, my gaze settled on a notice board which read :

"ANNUAL ROAD RACE"
Entries invited
COME ONE COME ALL

Somewhere deep inside me a dormant volcano of emotions erupted. In its effusive outbreak it compelled me to march briskly to the gymkhana room and scribble my name in the entries' column. Leaving that office, I sensed an excitement, an elation that knew no bounds. What is six miles? I thought. It is but child's play. Ah! I was soon to see how mistaken I was. My first delusion came when I learnt I would have to run in shorts. "Shorts!" I bellowed to a friend nearby.

"What did you expect, pyjamas?" he retorted.

"Atleast that outfit wouldn't get me booked for indecent exposure," I tentatively suggested.

On coming home I broke the news to my family and was at once met with wise cracks galore: "Fleet-footed fatso faces the furlongs", was one.

"Where is my camera? I would not let such an opportunity pass without a ceremony", came another.

So much for the moral support. I trudged upstairs and fished out a ragged old pair of jeans from my closet. I must admit that I am not endowed with the greatest of sartorial skills, and so I simply snipped off the legs and tried on the remainder. It was hopeless, but it would have to do. The T-shirt and tennis shoes were no problem. Finally, a head band for that "Bjorn Borg look".

"Ah! yes," I thought, admiring myself in the mirror, "I would surely outshine the likes of Zatopec and Normi; I would eclipse the greatest feats of John Walker and Akni Bna with effortless ease."

After selecting the site and time for my daily practice jogs, I strode out early one morning and started warming up. Nervously I approached the deserted road and peered around to see if no early bird was peeping. Then I took a deep breath and took off. To my utter amazement, I collapsed within two minutes. "Maybe I am pressing too hard", I thought. So I checked my pace and assumed and managed to continue the pace of a

mulate the faltering heart, drugs to restore consciousness, drugs to ease pain. But death is still a part of life and we cannot forestall it indefinitely. We can only prolong the process of dying. In the other words we have merely developed a new way of dying — slow passage via modern medicine.

Unfortunately in our society this problem becomes more active since our laymen don't understand these terms.

Hippocrates pledged physicians never to use drugs to produce death but we seem to have forgotten that he also forbade the administration of remedies to those beyond hope. We have got zealous doctors who would apply last technique to prolong what virtually can be termed as 'No life nor death'.

Dr. Walter Alvarrez, emeritus consultant in medicine at Mayo Clinic, believed that something should be done to moderate these zealous doctors who like to keep treating strenuously long after all hope of a cure has gone. They should think "will what I am now ordering do the patient any good?"

This acute question becomes more pressing when instead of old patient, we have to come across a young patient. Every doctor knows that in most cases of serious illness in childhood he must keep fighting for a cure until the very end.

The older ones who have run their race and are now suffering from the tortures of failing heart or crippled joints or series of strokes are often glad to go, but what about younger ones?

The most sobering statement of the problem appeared in 'CA' — The Bulletin of Cancer Progress in 1959, in a paper by Dr. Edward Rynearson of the Mayo Clinic. "You are standing at the bedside of a ptaient dying of untreatable cancer. The patient has already undergone radical surgery, chemotherapy and radiation. Despite all the impressive ministrations science can provide he is still dying and still suffering. There simply is no treatment now, for there is no treatment for death.... There are too many instances, in my opinion; where such patients are kept alive indefinitely by means of tubes inserted into their stomach, veins, bladders — with the whole sad scene encompassed within the cocoon of oxygen which is next thing to a shroud". Doctors have agreed that these 'extraordinary' measures are futile and only prolong the patient's suffering and the family's distress.

Dr. Rynearson says "Hardly ever have I met any lack of understanding on their part. Hardly ever do they wish to have their loved one maintained indefinitely in a tragic interlude, of more and more suffering. In most instances, the patient by now has a full understanding of the factors involved and is usually asking for relief of pain, not prolongation of distress."

Who can then say that 'Heroic measures' must still be applied to prolong the patients life?

New medical advances such as radiation therapy, oxygen tents, iron lungs, intravenous feeding etc., are 'ordinary' or 'extraordinary' measures. Well these may be ordinary but not obligatory.

When the doctors, the family, the patient and his spiritual advisor are agreed that the struggle is hopeless 'the physician should do all he can to alleviate the patient's suffering and make no effort to prolong his life.'

Specialists in Geriatrics (the medical cure of old people) also believe that the patient

SHOULD DOCTORS ENDEAVOUR TO AVERT INEVITABLE DEATH?

Condensed by
PARVEZ B. NAYANI
Vth Year

'An old man with hapatic crrhosis is deep in hepatic coma and obviously dying, the medical team at his bedside succeeds in bringing him out of the coma — only to await the fatal haemorrhage or still another coma that will bring death.'

'A 70 years old patient with advanced and rapidly spreading bronchial carcinoma develops pneumonia, penicillin cures the pneumonia and restores the patient to the longer ordeal of dying from carcinoma.'

A patient of terminal cardiac infarction, snatched out of the jaws of death twice with the help of Digitalis and other cardiac stimulants awaits the third and final as well as fatal attack due to coronary thrombosis and cardiac infarction.

The examples cited above are only the few of numerous cases confronted daily by the men of medical profession through out the world in medical, surgical and neurological wards or operation theatres. The question arises :–

"Are we justified in applying extraordinary measures merely to sustain a spark of life in an old, hopelessly ill patient whose time to die has come unmistakably?"

"How long is the doctor obliged to continue his struggle when there is no hope of recovery and death is inevitable?"

The same question at different angles :

"What about the emotional strain this imposes, for no good purpose on the patient's family or friends?"

"Is the doctor really prolonging 'life' or is he only prolonging the act of dying?"

These different queries destined for the one and only one question mark are the burning issues of immense discussion on ethiological and philosophical grounds among medical circles in western countries and Japan. There are two terms widely used in these discussions, "Euthanasia, literally easy death, the deliberate termination of life, and is forbidden by mediczl ethics, religious codes and the social laws. The other term is "Dysthanasia", which means difficult, painful and undignified death. Specifically, it is the deliberate postponement of merciful death for days, weeks, sometimes years, when everyone knows that the borrowed time will be spent only in misery."

The doctor practising at the bed side has to come across such inevitable instances where he is hopeless as well as helpless. In recent years modern medicine has lengthened the average life span, and we have a greatly increased population of old people. Because we are better able to cope with the chronic illnesses and degenerative diseases that come with old age, most of these people are alert, vigorous, capable of enjoying their lives later years. But there is another side. Today we have many folks who are only technically among the living. They are lying in hospital beds, barely breathing in oxygen tents, their wasted bodies nourished through nasal tubes, their bladders drained by catheters. We have drugs to sti-

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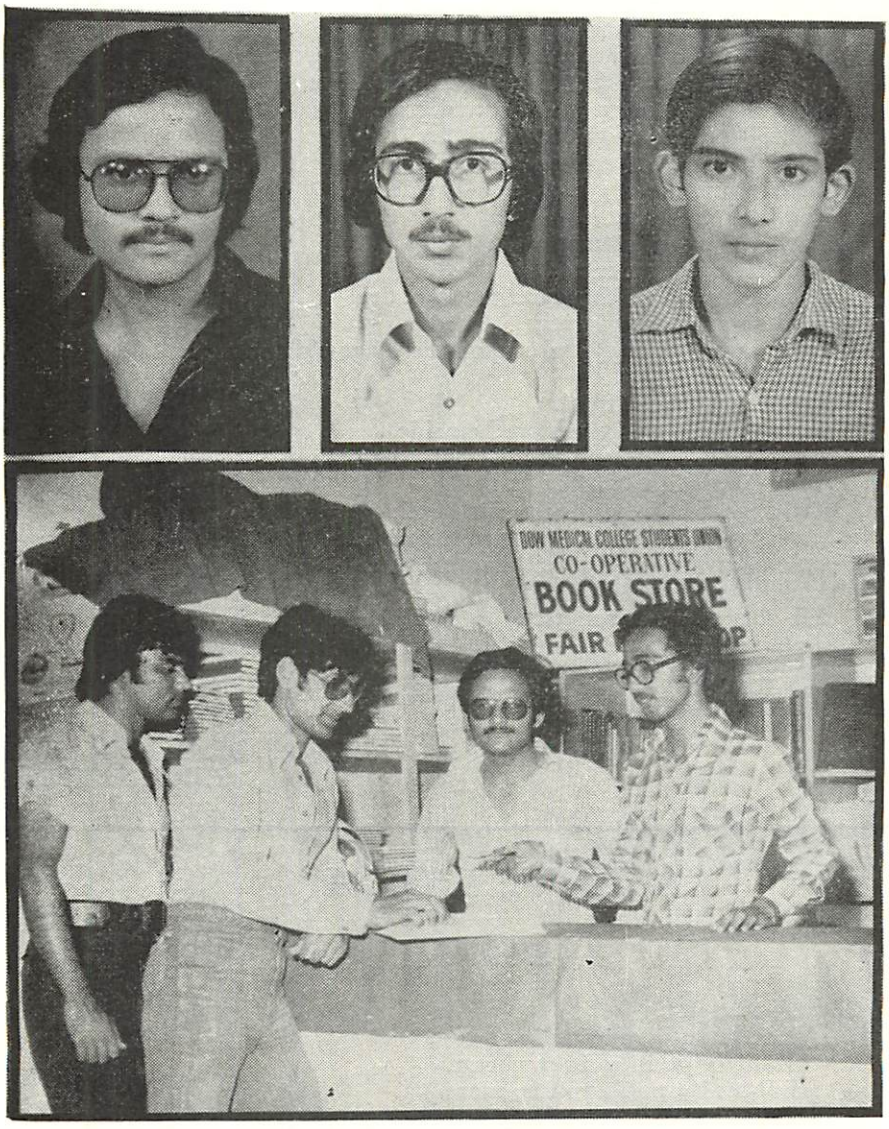


Rauf Usmani and his Associates
A Moment in the Co-operative Book Store.

THE FAITHFUL TREE

Fresh prints tread familiar routes
Covered by wheels of changing times.
Each step brings closer the memories
That haunted yester years.
Here and there float away soft petals,
And mingle with other love-me, love-me-nots.
By the path stands a tree, old and grey,
In the shade of which they once lay.
Now, under the branches, time defied,
Lie two unmarked graves, side by side.
The bark knife marks
Of the forgotten names,
Which only winds recall,
A warning to ears that hear the sad tale,
A lesson to passing lovers,
Who, unsuspectingly, take upon these age-old ventures.

But no one pays a heed.
And why, when nature's on their side
When there'll always be new petals to pluck
And new paths to walk.
And new trees to put their name to ...
... and the same tale ... to turn their ear to.
As long as the sun dawns the east
And dusks the west,
Life or death won't matter,
If only it be togetheri
Seasons may change, as do names ...
The paths, the petals, and the tree remains.

(NOOR KARIM NAGJI)
IIIrd Year M.D.

A LOVE POEM

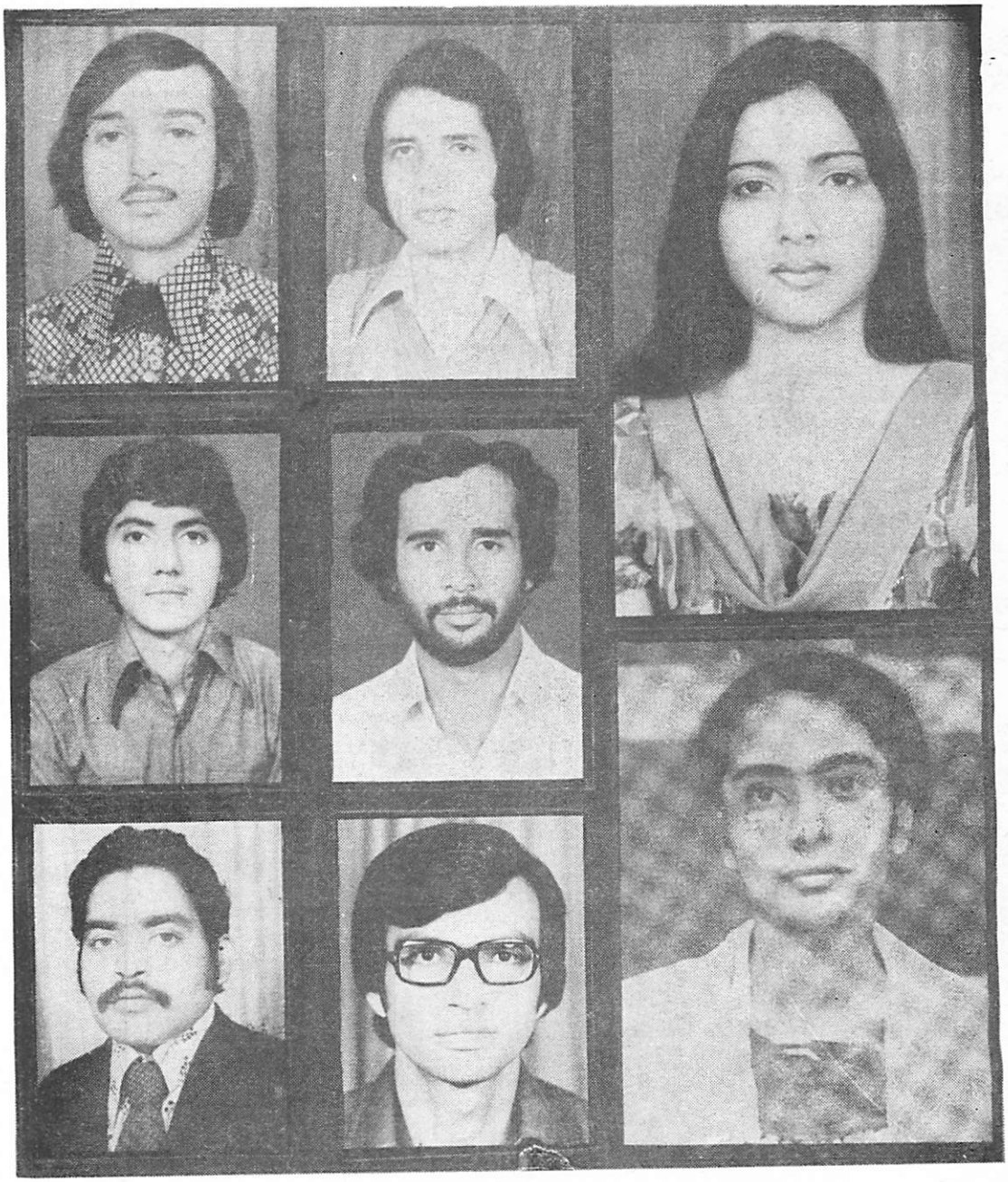
A.S. PUSHKIN

I loved you.
Love still, perhaps has not
Entirely perished in my heart.
But let it trouble you no more.
I do not wish to sadden you with anything.
I loved you silently, hopelessly;
Now pining from joy and now through jealousy.
I loved you
So sincerely, so tenderly,
As God may grant that you be loved by another.

(Translated from Russian)

CLASS REPRESENTATIVES

GIRLS REPRESENTATIVES

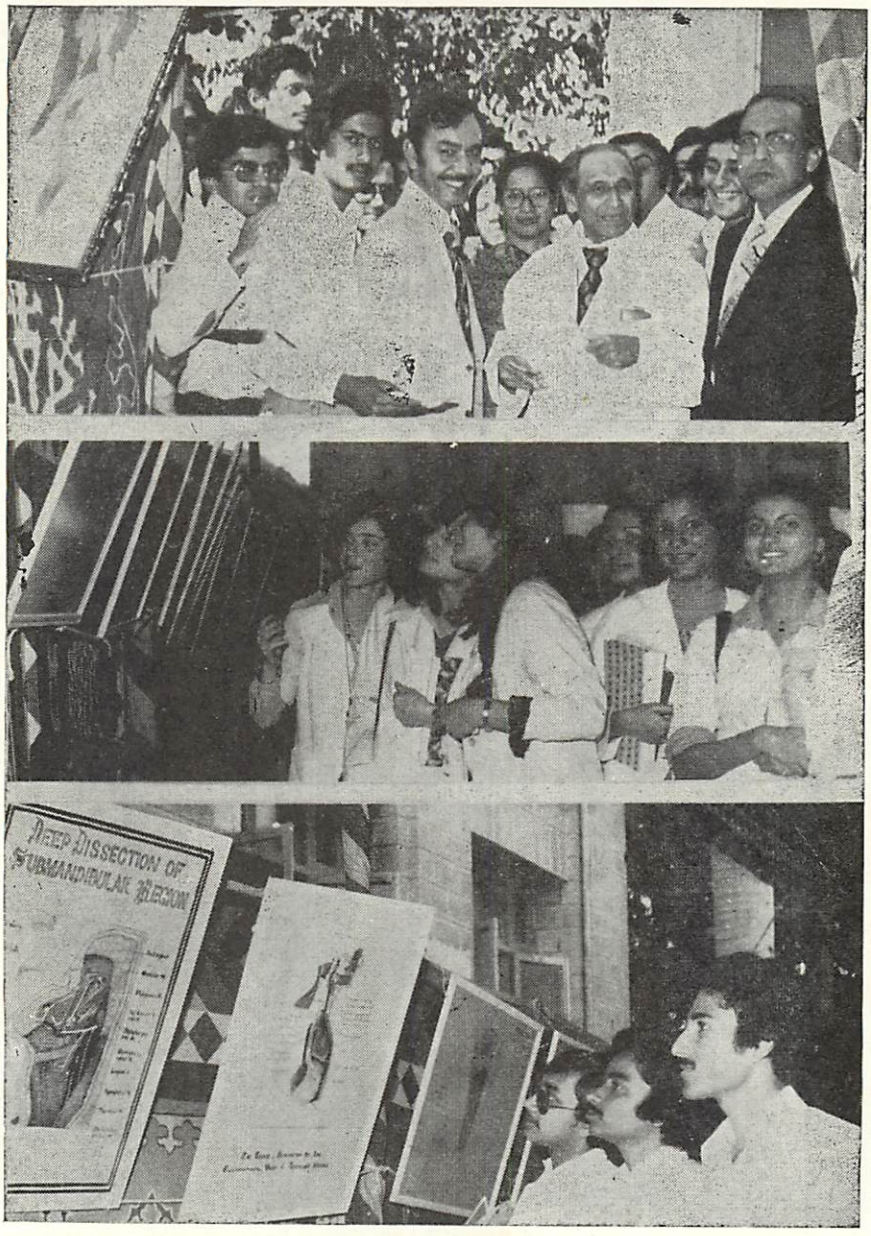


HANIF 1st year
IMRAN 2nd year
BAWA 5th year

SAQIB 3rd year
TANVEER 4th year
IDREES 5th year (old)

PCR ZEENAT
GCR SHADAB

AVP ANATOMY CHART COMPETITION



Science and art are servants of Life,
Slaves born and bred in its house.
Rise, O thou who art strange to Life's mystery,
Rise intoxicated with the wine of an ideal,
An ideal shining as the dawn,
A blazing fire to all that is other than God,
An ideal higher than Heaven—
Winning, captivating, enchanting men's hearts ;
A destroyer of ancient falsehood,
Fraught with turmoil, and embodiment of the Last Day.
We live by forming ideals,
We glow with the sunbeams of desire !

ERYTHROBLASTOSIS FEOTALIS

ASIF ASLAM
(IInd Year)

"Mismatched blood" said the doctor
And closed the case.
No one seemed to hear
The half-dead foetus
Mumbling tiny half-unspoken words.
He seemed to whisper :
"My father sowed the seed of dissent
My mother murdered me
Even before I was born.
I heard the world of daylight
Beckoning to me
But before I could make it
Her toxic blood came sweeping in
with a mad frenzy.
I was poisoned
By my very life substance.
There will never be
Any
Life
For me."

Not only blood
But people
Can be
Mismatched to life.
Incompatible.

IQBAL'S
THE SECRETS OF THE SELF
(ASRAR-E-KHUDI)

Showing that the life of the Self comes from forming ideals and bringing them to birth.

LIFE is preserved by purpose :
Because of the goal its caravan-bell tinkles.
Life is latent in seeking.
Its origin is hidden in desire.
Keep desire alive in thy heart,
Lest thy little dust become a tomb.
Desire is the soul of this world of hue and scent,
The nature of everything is a store-house of desire.
Desire sets the heart dancing in the breast.
And by its glow the breast is made bright as a mirror.
It gives to earth the power of soaring.
It is a Khizr to the Moses of perception.
From the flame of desire the heart takes life,
And when it takes life, all dies that is not true.
When it refrains from forming desires,
Its pinion breaks and it cannot soar.
Desire keeps the Self in perpetual uproar
It is a restless wave of the Self's sea.
Desire is a noose for hunting ideals,
A binder of the book of deeds.
Negation of desire is death to the living,
Even as absence of heat extinguishes the flame.
What is the source of our wakeful eye ?
Our delight in seeing hath taken visible shape.
The partridge's leg is derived from the elegance of its gait,
The nightingale's break from its endeavour to sing.
Away from the seed-bed the reed became happy :
The music was released from its prison.
What is the essence of the mind that strives after new discoveries and scales the heavens ?
Knowest thou what works this miracle ?
'Tis desire that enriches Life,
And the mind is a child of its womb.
What are social organisation, customs, and laws ?
What is the secret of the novelties of science ?
A desire which realised itself by its own strength
And burst forth from the heart and took shape.
Nose, hand, brain, eye, and ear,
Though, imagination, feeling, memory, and understanding—
All these are weapons devised by Life for self-preversation
In its ceaseless struggle.
The object of science and art is not knowledge,
The object of the garden is not the bud and the flower.
Science is an instrument for the preservation of Life,
Science is a means of invigorating the Self.
Science and art are servants of Life,
Slaves born and bred in its house.

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Post-mortem staining in neck has sometimes given rise to suspicion of murder by seeing several parallel marks on one side of neck. (*See fig* 1.) These are due to position of the head after death. If the head be turned to one side the skin of the dependent side is thrown into folds. In these folds the skin's under certain degree of pressure & no stain can form there, the tissues between the folds are not being compressed show staining. The result is the formation of parallel marks suggestive of pressure by fingers (Throttling). In the same way pressure from tight clothing will prevent the development of lividity in that area and mistakes are made by the inexperienced when white band on the neck produced by a tight collar, beaded threads or ornaments on the neck is taken as a mark of strangulation which is most marked when neck swells due to putrefaction.

Sometimes the husband kills his wife by burning, alone or with the assistance of inlaws of the woman, or they kill the woman and later on put her on fire by sprinkling kerosine oil. They later on report to the police that while cooking, her clothes got on fire accidently and she died. In such cases the doctor should perform the autopsy with care and should not wholly rely on the statements made by the relatives and the police. Ante-mortem burning is 100%. The whole body is burnt. If any skin is left there will be blisters with vital reactions. The blister will contain fluids with albumin and chlorides and in post-mortem burns there will be gas and if little fluid is present will be free of chloride *i.e.,* will have no vital reaction. On internal examination there will be no smoke black particles inside the trachea and bronchi. The blood will not be cherry red as is present in ante-mortem burning due to inhalation of CO_2 and formation of carboxyhaemoglobin.

Burning is accidental and sometimes suicidal. Homicidal cases are also seen. Suicidal cases of burning are usually 100% from head to foot. All the skull hair are burned while in homicidal cases the burning is not 100% and skull hair are not so badly burned. Smell of kerosine oil will be present from head to feet. In homicidal cases there might be signs of assault. *e.g.* fracture of hyoid bone or other injuries or signs of poisoning present in internal viscera. In such doubtful cases the viscera should be examined chemically.

Bruises are frequently seen on throat, chest on both sides of Chinese individual, these are more or less symmetrically arranged on both sides. These bruises if situated on throat alone, may give rise to suspicion of throttling. They are the result of the method of counter irritation practised by the Chinese, which consists of severe pinching of the skin. (*See fig* 2.)

Post-mortem abrasions, except those made by ants, are not common on bodies recently dead, and as yet show no sign of decomposition. These abrasions are difficult to distinguish from ante-mortem ones. It is seldom that a body is exposed to such a violence as would result in the formation of these injuries. The part most frequently attacked are the eye-lids, edges of the nostrils, the lips, back of ears, the axilla and groin. Careful examination will reveal very irregular edges. (*See fig.* 3.)

Not infrequently two oval, brown and parchmentised areas are seen on the front of the scrotum, one over each testicle. These are probably due to the practice of supporting the testicles with a suspender (Langot), constant frictin of moist skin against the suspender causes, more or less, destruction of the epidermis. These areas therefore become dark in colour and parchmentize after death.

A doctor therefore should learn to look from the medico-legal standpoint upon such of his cases as may possibly become the subject matter of judicial investigation.


IV
II
III
I

because it is done by friendly hand and is extracted not by tilting on inside mouth but by pulling it up.

Fabricated firearm wounds are mostly under the clothings. The signs of near fire *i.e.,* singing of hair, blackening and tatooing of skin around the wound is present. The shot is usually a glancing shot with furrowing or abrasion corresponding to the size of the shot. It is either on left upper arm, thigh or calf and never on vital parts like head or chest.

Sexual offences are sometimes made difficult for the opinion of the medical officer. A grown up young girl when seen by the relatives or neighbours in compromising position is blamed to have been raped and reported to police. To prove the charge of rape, the essential ingredients are :

(1) Performance of act with force and against resistance.
(2) Without consent.

Resistance has to be proved by shouting and crying heard by neighbours etc. and biting, scratching and beating has to be proved by the doctor after examination of both accused and victim, unless the victim is terror stricken, exhausted, weak and over-powered by two or more persons.

The girl will have (by means of effort to overcome struggles), bruising or scratching on the limbs especially on forearm by holding hands and thighs for easy penetration. Marks about the mouth are made by the assailant, in his attempt to stop her crying. Local injuries about the labia, vagina etc. are found in virgins in varying extent depending upon the development of the parts. It may be less in grown up girls and slight or nil in adult accustomed to intercourse. Mere vulval penetration within the vulva or labia majora is enough to constitute the crime of rape. Hence the medical officer should mention after the examination whether sexual intercourse was committed or not, after examining the vaginal smear. He should not mention that rape was or was not committed. This will be described by the magistrate or the judge.

Sometimes difficulties in the diagnosis of sodomy, homosexual (between two males) or heterosexual (between male and female) arises. It is easy in a recent case when anal orifice is dilated, irritable and tender to touch with a zone of bruising around the orifice. There may be radial fissures at the mucous membrane of the anus or presence of veneral disease like gonococcal proctitis or condyloma. In grown up person these findings may be minimal and difficult to judge by an inexperienced doctor. Therefore the only evidence of recent sodomy is the presence of semen in the anus. The opinion as to the cause of dilatation of anus should be guarded and merely state that it is inconsistent with the entry of the penis.

Many doctors who have not examined the anal orifices properly in the life are misled by the appearances after death when the sphincter is relaxed and may make mistake during post-mortem examination. An extremely difficult examination is in connection with divorce when the woman alleges abnormal sexual intercourse against her husband. The anal orifice can be quite lax following child birth, particularly if there has been a perineal tear and healed fissures and old haemorrhoids may be a normal finding, making it extremely difficult to say for certain whether the allegation is true unless it has been a persistent practice.

False charge of sodomy has been reported in small children after applying starch or egg white on the trousers and anal region. I have seen a case in which the father applied his semen on the anus and trouser of the child. In small children fabricated charge can be proved by negative findings of the anal region *i.e.,* no bruising, oedema, scratches or tear at anal region and no pain.

In all such cases, in telling such secrets, the doctor should be careful to tell only the proper authorities (police) or (the Illaqua Magistrate) and to mark all letters containing such information 'Private and Confidential'. In case the doctor hides such information, the body may be exhumed later on which may be of great mental torture to the relatives and the doctor who attended the patient may be in real trouble.

Fabricated injuries or fictitious injuries or invented wounds produced by a person on his body himself (self inflicted) or caused by a friendly hand (self suffered) sometimes come to the casualty department with the object of :

I. *To support a false charge against another person with ulterior motive like :*

(a) To charge an enemy with assault or attempted murder.
(b) To convert simple injury into grievious one.
(c) To bring charge of ill-treatment or beating by officers during detention in prison or police custody.
(d) Injuries inflicted by girls to bring charge of rape.
(e) Recruits to instill irritants in the eye or by a medical or para medical man to inject T.A.B. to get fever and escape military service or avoid march on the front line.

II. *To avert suspicion e.g. :*

(a) To destroy evidence of certain injury which might connect the person with a crime.
(b) By an assailant to show that he was acting in self defence.
(c) By a watchman or policeman acting in collusion with robbers to show that they received injuries while defending the property. Or by servants in case of theft or by messenger carrying money, for the same reasons.

Fabricated wounds are often incised wounds, occasionally stab and sometimes bruises. The use of marking nut juice or other irritants to produce artificial bruise is not uncommon in our country. Contused or lacerated wounds are rarely fabricated on account of pain and force required to produce them. Still more rare are the fire-arm wounds and burns.

Self inflicted injuries are commonly seen over those parts of the body which are easily accessible, such as neck, outer side of left upper arm, the front of the left forearm, the front and outer side of the thighs and front of the abdomen and chest, so as to simulate strangulation, defence injury and rape etc.

The fabricator usually produces only that much injury as he thinks necessary to confirm his story. He is usually careful to avoid doing any serious harm to himself. He will never inflict injury on his face or private parts. The injuries therefore are usually multiple, superficial half-hearted and not situated on any vital parts of the body.

Careful examination of clothes will reveal that the clothes are not correspondingly damaged, they are cut in a way incompatible with the number, length, direction and nature of wounds as the fabricator rarely injures himself through his clothes. (See figure.)

When examining injuries, one should look for not only recent injuries but old scars also. Multiple scars of different ages when present on various parts of the body for which there is no satisfactory explanation add to the evidence of being fabricated.

In case of dislocated tooth the fabricator will have no injury on the lips corresponding to the teeth inside and of the blow outside the lip. The laceration of the gum will be less,

IMPORTANCE OF FORENSIC MEDICINE & PIT-FALLS IN MEDICO-LEGAL WORK

Prof. UMER KHAN

The Medico-legal Officer is mainly concerned with the topics such as injuries, assaults, poisoning, criminal offences and unnatural deaths. Any doctor in the Government service even in the remotest dispensary of the province may be asked by the police to solve such problems as a dead body found in a well or a canal in a putrifying condition, whether the person fell down in the well or canal and died or was killed and then thrown in it.

A woman may complain that she has been raped. Medical examination will reveal it if she has been raped or it was a false charge. Similarly a fabricator may have a self inflicted or self suffered injury to support a false charge with ulterior motive or to avert suspicion from oneself. If properly examined will be detected and hence save the innocent persons from punishment.

Thus Forensic Medicine plays an important role in guarding the safety of each individual in the community, and also in ensuring that any accused person is not unjustly condemned.

The Law in every corner of the World requires medical men and women whether in Government service or not to assist it in laying bare the facts in connection with offences against the person or rights of the individual or of the community. The medical practitioner is therefore liable to be called upon at any time to give evidence as a medical jurist. It is consequently advisable that he should learn to look from the medico-legal standpoint upon such of his cases as may possibly become the subject matter of judicial investigation. He should therefore make a habit to note carefully everything likely to be of medico-legal importance.

Professional secrecy learnt in the course of professional activities is therefore, not only a moral but also a legal obligation and any violation of such secrecy, which results in injury, either social or material, to the patient makes a doctor liable to be fined heavily unless divulgence of the secret was called by the Law, which he should divulge under protest.

As regards professional secrecy and the crime is concerned the doctor should be very cautious. It may happen that a doctor is called to treat a patient, who learns in the course of his examination, has been guilty of an offence against the law. The doctor owes to his patient the obligation of secrecy, on the other hand the authorities have the right to look to every citizen for help in preservation of law and in the detection of the criminal. It may be a matter of difficulty to determine at what point the doctor's duty as a citizen becomes more obligatory than that which he owes to the patient. If the crime is of a very serious nature for instance, murder, the proper authorities (police) must be informed. In lesser crimes the doctor will be guided by the dictates of his conscience, always bearing in mind that he is not a detective or a policeman, that the detection of crime is no part of his proper duty. In case of attempted suicide, if called in, he would of course attend to the patient, but no legal obligation rests upon the doctor to report the incidence to the police or other authorities. If however the patient dies he should inform the police or request the relatives to do so.

In case of attempted abortion it would be injustifiable for the medical man to give information to the police, but it is quite a different matter if he ascertains that she has had the aid of an abortionist or a nurse or she died on account of abortion.

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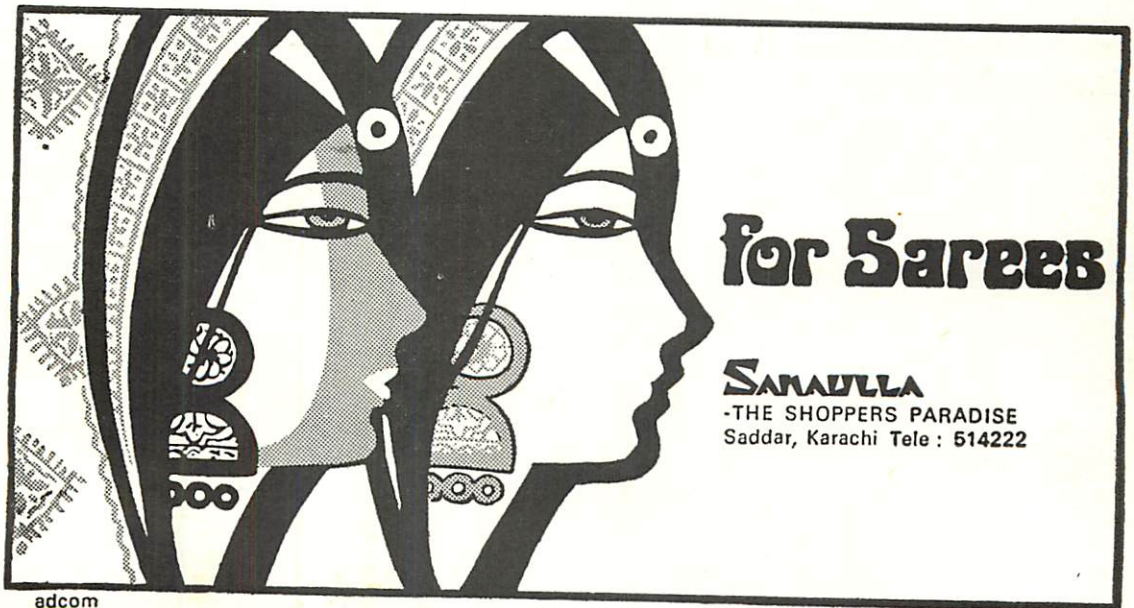

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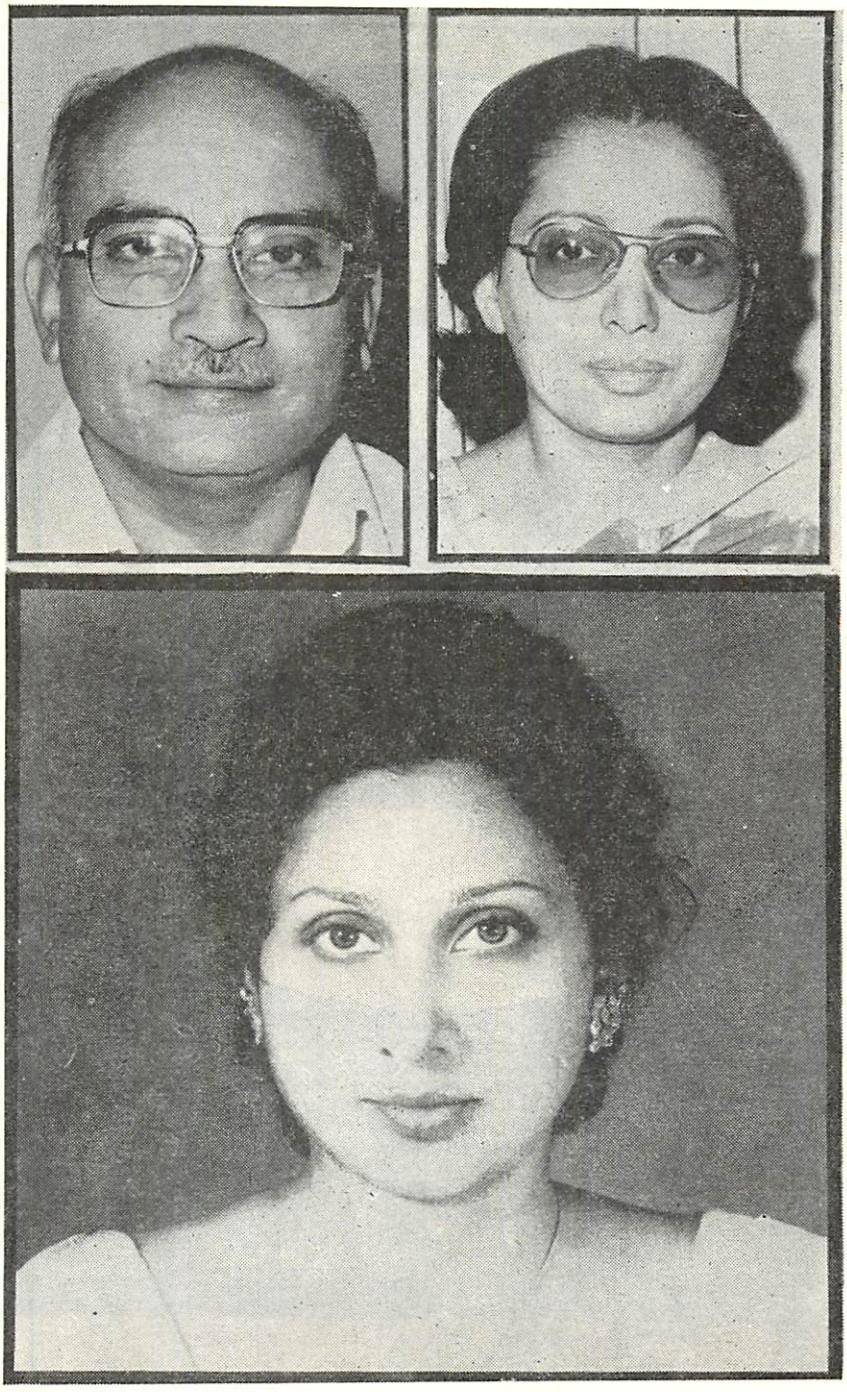
dying of incurable cancer and that, dying of chronic and degenerative disease of old age present the identical problem.

If everything has been tried and has failed we have no other alteration. One geriatrician says "This problem is getting more pressing all the time, I have dedicated my life to taking care of old people. I want to keep them healthy, alert and vigorous. But when their hour is come I intend to devote my energy to keeping them free from pain instead of prolonging his misery called 'life' ".

With the permission of dying patient if he is able to give his consent, otherwise family members be approached, narcotics should be used with moderation to alleviate suffering, even if the narcotics hasten his death. In this case death is not directly desired but it is inevitable, and proportionate motives sanction measures which may hasten its advent, to make it easier for the sufferer to cross the border of life and death and to live in eternal mercy on the other side of the life.

WE WELCOME



Prof. Noor Jahan Samad, Prof. I.H. Jafri and Asst. Prof. Salma Akram.

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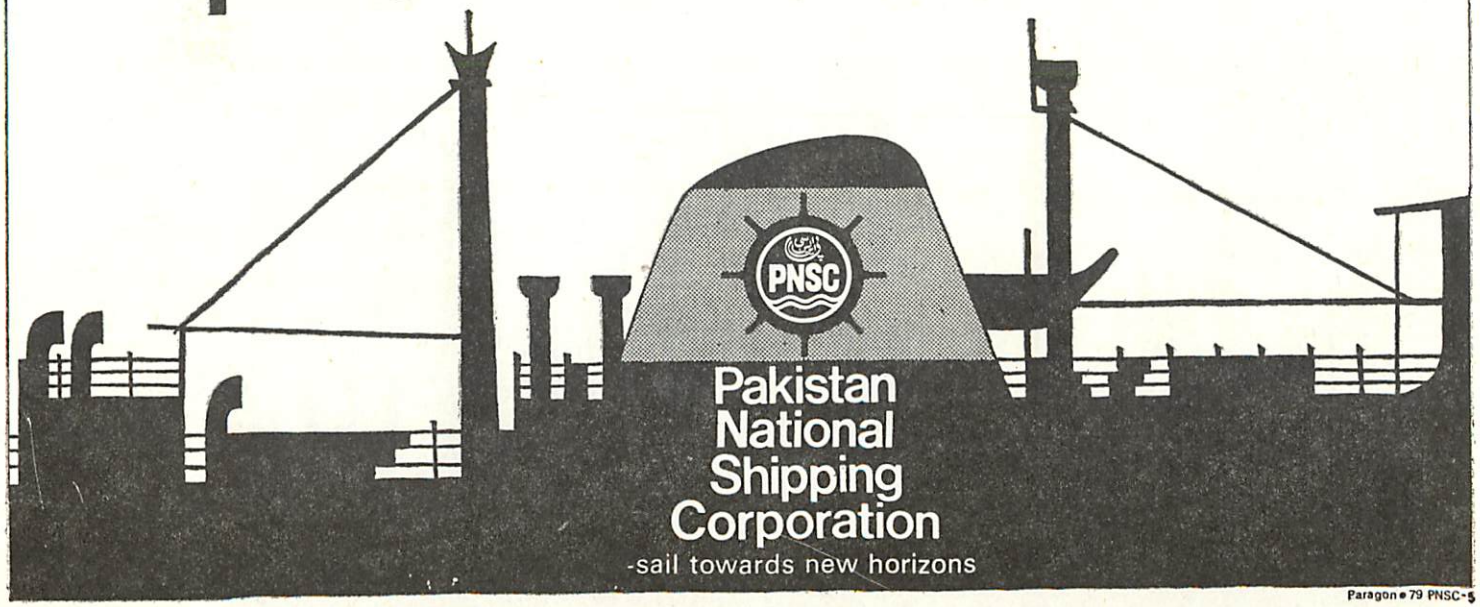
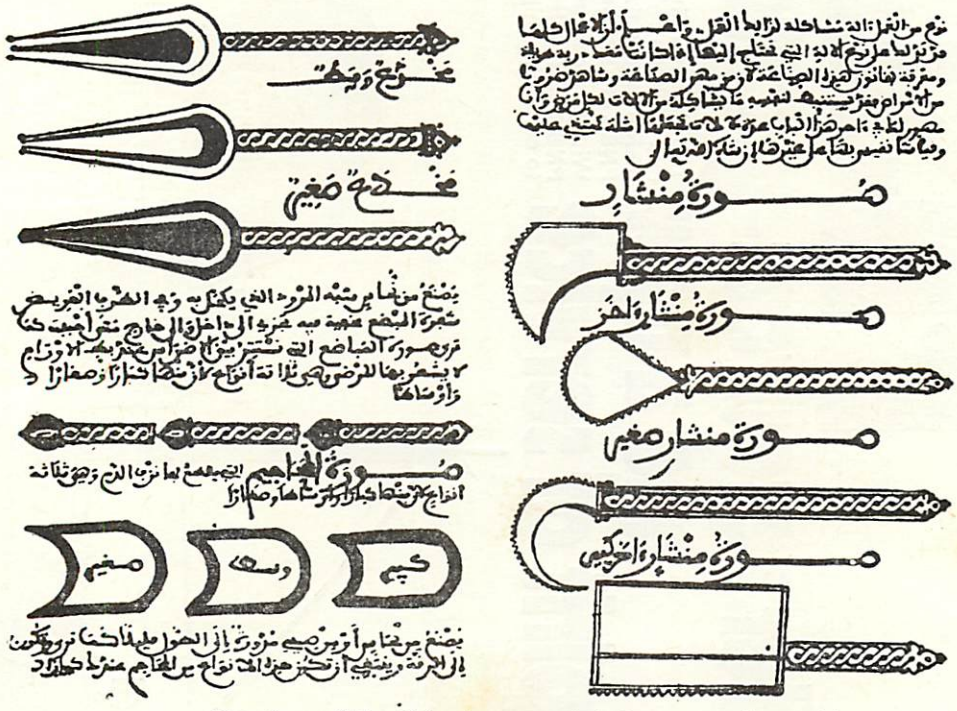


making his personality perfect. He guarantees security to His creation and nothing escapes His supervision. He has full powers to execute His programme. Everything is so firmly bound by the splints of His laws that nothing can deviate a bit from its prescribed role and thus disturb the universal order. He is high above all and far beyond this that any other power be considered to be a partner to Him.

He is the Creator, the Evolver; and brings the created objects to their required forms by subjecting them to various forces of evolution.

Above described are some of His attributes, otherwise all sublime attributes are centered in Him in perfect harmony. All that is in the heavens and the earth steadfastly follow His programme; He is exalted in Might, which He exercises with absolute balance and discrimination."

(From: PHENOMENA OF NATURE & THE QURAN by Dr. S. Abdul Wadud)



.—Page from *Al-Tasrif* showing some of the Instruments invented by ABUL QASSIM AL-ZAHRAWI (936-1013).

But Razi's greatness in the field of science lay in his being a physician of great calibre. His literary works on medicine are more than one hundred, of which 'Hawi' was the most famous one and had its greatest influence in the East and the West. It was a medical encyclopaedia, which was compiled after his death by his pupils from the notes which he had been writing all his life long. At least 25 copies of its Latin translation are now treasured in the western libraries. The first translation appeared in Persia in 1489 and the second in Venice in 1542. His other well-known medical work is 'Almansoori'. Though concise, it was even more popular. Its Latin translation, entitled 'Liber Almonsoris' was first published in Leiden in 1481, then in Venice in 1497 and again in Basel in 1544. Razi also wrote a number of pamphlets on various medical subjects; such as "Dietetic treatment of diseases"; "Stone in kidneys and urinary bladder", the French translation of which appeared in Leiden in 1896; "Colic"; "Differential diagnosis of diseases" etc. But the one that gained most popularity was on "Smallpox and Measles." Its Latin translation was published in Venice in 1445 and English translation in London in 1848. This was the first book in the world that described in details the causes, signs and symptoms, treatment and the prophylactic measures against Smallpox and Measles.

This is just a glimpse of our glorious past in the field of scientific knowledge and research.

At every step the Holy Quran enjoined upon Muslims to explore nature, to ponder over the 'Ayat' or 'significant signs' that lie scattered all over the universe. This provided a stimulus for their activities and made them the super-nation of the world. The stimulus having gone they fell into an abyss, according to the law of rise and fall of nations, as enunciated in the Holy Quran. It is now for the Muslim youth of the world to turn back towards the Quran and also dive deep into the scientific research to regain their past glory, by the application of science to the benefit of humanity.

> "In the earth are clear 'signs' for those who get convinced (after thorough investigation and research); and also within yourself. THEN, WILL YOU NOT EXERCISE YOUR VISION?" (51 : 20-21)

It is only a question of turning towards the Holy Quran, which has got a tremendous appeal for those who think over it. Human beings are bestowed with the faculties of intellect, understanding and appreciation. But if these faculties were given to an inanimate object, that even could not remain unaffected by the Message of the Quran. This assertion is beautifully stated in the Holy Quran itself, when it said :

> "The effective power of this Quran is such that if, for example, We had placed it in the heart of a mountain and had given it the feelings, the mere idea of infringing the Divine laws would have shaken it to the roots and it would have cleft itself asunder, for not being equal to such a tremendous Trust. Such are the similitudes that We offer to men, that they may reflect thereon and realise the immense greatness of this book. (59 : 21-24)

The book is great indeed, as it is sent by Allah, the Sovereign of the universe, Whose authority and control are not shared by any other power; and Who possesses knowledge of the present and the future, visible and the invisible, manifest and the latent, actual and the potential. (It is only from the human point of view that these distinctions are made, otherwise to him everything is visible, present and manifest). Whatever means of growth and development are required for the actualisation of the potentialities of His creation, He provides them within a specified pattern and without reward.

He is the same Allah, besides Whom there is no other Sovereign. His authority reigns supreme. He Himself is the most perfect and flawless, and He grants means to everyone for

in the Western world as Avicenna. He was called 'Prince of physicians' by his contemporaries but he was much more than that. Pharmacist, physician, poet, philosopher, writer, orator and diplomat, Avicenna was an intellectual giant. He was well versed in all contemporary knowledge. His pharmaceutical teachings were accepted as authoritative in the West until the 17th century and still are dominant influences in the Orient.

Avicenna learnt Quran by heart at the age of 10. At the age of 16 he had not only mastered philosophy and sciences but had already made a name for himself as a physician. At the age of 18 he wrote a comprehensive treatise embracing all branches of science. He wrote over 100 books on Islamic teachings, metaphysics, astronomy, philosophy, political questions and medicine. His most important work was the *'Qanon of Medicine'*, a treatise in five volumes. This was of such an exhaustive nature and so perfect in its conception that it remained a standard work for several hundred years and was still used for teaching purposes at the universities of Montpelliar and Louvain until well into the 17th century. The translation into Latin by Gerard-de-Cremone had been universally popular. The 'Qanon' offers a surprising harvest of ideas and notes on surgery that are not yet outdated, and it reflects the guiding principle of Avicenna's life—the attempt to comprehend all the various manifestations of the physical and spiritual world and to bring them together in a harmonious whole. In all 30 editions of 'Qanon' were published, the first in Milan in 1413 and the last in Louvain in 1658.

Avicenna's encyclopaedic knowledge, his enormous productivity and his genius in so many different fields have ensured him a place as one of the greatest sages in the annals of mankind.

Alhazen: Abu Ali al-Hasan bin Hussain Ibn-al-Haitham (965-1543)

Known in the Western world as Alhazen, he was a Muslim scientist of repute. Born in Basra, he made a name in Mathematics, Astronomy, Civil Engineering and especially in Physics and Optics. He was the first to survey and plan the construction of Aswan Dam on river Nile 1000 years ago but the project could not be attempted on account of the insufficient means then available. His famous book *Kitab al-Manazir* was the first comprehensive book on 'Light' (Physics) and Optics. In it he described the similarity in nature of heat and light rays. The book contains the first correct exposition of the Theory of Vision. It explains the various aspects of light, such as colours, optic illusions and reflection, mirrors, twilight, rainbow, halo etc. It introduced for the first time the two laws of refraction. Alhazen also described such things as force of gravity, velocity, space, atmosphere and density. He thus laid the foundation of Physics in general and Optics in particular and paved the way for future research on the subject by later scientists.

Alhazen described the naked eye, anatomical features of the human eye, in sufficient details.

The original Arabic manuscript text of *Kitab al-Manazir* is not available, though the Latin translation and its dependent English translation is still present in different parts of the world.

Muhammad Bin Zakriya Razi (840-932)

He was known in the West as Rhazes. Born in Rey near Tehran. Was a pre-eminent physician and a chemist. As a chemist his name comes next to Jaber Bin Hayan (known as Geber in the West—born 722, the first chemist in history). Razi wrote 21 books and pamphlets in chemistry. He was the first to classify chemistry as organic and inorganic. He discovered the specific gravities of various substances, by means of an apparatus similar to the modern hydrostatic balance.

ar-Razi (wrote about 150 books and pamphlets), Abu Mansoor Mofiq, Abu al-Jazar, Ahmad Jabari, Ali-bin-Abbas, Areeb Qartabi (Obstetrics), Suleman Jaljal, Ibnul Wafid, Abul Qassim Alzahrawi, Muhammad bin-Ahmed Tamimi, Ahmad Biladi, Masawia Mardani, Abul Qassim Ammar bin Ali Moosli (Cana Musali) (optics), Ali bin-Musa (optics), Ibn-al-Haitham (Alhazen) (optics), Abu-Sahal-Mesehi, Bu-Ali-Sina (Avicenna), Saeed bin Habatullah, Ibn Fazl, Zarreen Dast (optics).

Biology.—Abdul-Malik-bin-Qareeb-Asmaee.

Physics and Mathematics.—Muhammad bin-Musa, Ahmad bin-Musa, Hasan bin-Musa (three brothers).

Mathematics.—Ali-bin-Saeed, Hajjab-bin-Yousuf-bin-Matar, Abu Saeed Zarir Jarjani, Habsh-al-Hasab, Muhammad-bin-Musa-Khwarzami (Algebra and Arithmetic), Sabit-bin-Qara, Ahmad-bin-Yusuf Misri, Ahmad-bin-Suhail Balkhi, Ali Imrani, Saeed Damishqi, Ibrahim-bin-Sabit, Jafar-Al-Khazan, Abul-Wafa Buzjani, Hamid Khujandi, Wayan-bin-Rustam Kohi, Ahmad Sajistani, Alberuni, Muhammad Hasab Karkhi, Koshiar, Ali Niswi.

"Namwar Muslim Sainsdan" (Famous Muslim Scientists—by Prof. Hamid Askari.)

Now let us give a brief description of just a few of them.

Abul Qassim Al-Zahrawi (936-1013) :—

He was the greatest physician and surgeon of his time and the greatest Arab Surgeon of all times. At a time when a physician was also a philospher, a theologian, a mathematician, an astronomer, a linguist, and a universal scholar, Abul-Qassim advocated specialization and tended to adhere to medicine and its practice alone. His work *Al-Tasrif,* an illustrated practice of medicine and surgery, a real miniature encyclopaedia of 1500 pages shows Abul Qassim to be not only a medical scholar but a great practising physician and surgeon. The rich contents of *Al-Tasrif* exerted an immense influence on the study of medicine and the progress of Surgery in Europe in the later centuries. In *Al-Tasrif* are revealed Abul Qassim's moral honesty and integrity, his professional dignity and ingeniousness. The book contains descriptions and the earliest pictures in history of about 200 surgical instruments and these were devised by Abul Qassim himself. Of all the 30 volumes of *Al-Tasrif,* discourse 30 on surgery became the most famous and had by far the widest and greatest influence. Almost all the European authors of surgical texts from the 12th to the 16th centuries, referred to Abul Qassim's surgery and copied from it. Discourse 28 is on Pharmacy and was translated into Latin as early as 1288 as Liber Servitoris. It was the fourth medical book ever printed. Today 42 manuscript copies of his original Arabic text and 27 Latin translations in manuscript are treasured in the most important libraries and museums of the world; at least 27 printed editions of his book in Latin, Arabic, French, English and Spanish adorn the rare collections of the most famous libraries; and surgeons all over the world still perform numerous surgical procedures and operations little realising that they were introduced by Abul Qassim 1000 years ago. (Extract from article by Dr. Farid Sami Haddad, Beirut).

Avicenna (980-1037)

Amongst the brilliant contributors to the sciences of Pharmacy and Medicine during he Arabian era was one genius, the Persian Abu Ali Hussain Ibn Abdulla Ibn Sina, known

QURAN & MUSLIM SCIENTISTS

"Our Rabb! You have not created all this without purpose. Glory to Thee! Give us knowledge to discover the laws of nature, to save ourselves from destruction." (3 : 191)

> "Science is in its source eternal, in its scope unmeasurable, in its problem endless, in its goal unattainable." (VON BAER)

It is not possible for any human being to know all or even a substantial part of the natural phenomena around us. The number of phenomena visible to the naked eye and those discovered by the scientific research and explorations, is so great that possibly one cannot even enumerate them; and this forms only a small fraction of what still lies undiscovered. That is why the Holy Quran has said :

> "And if all the trees of the earth were pens and the oceans (were ink) with seven oceans behind it to add to its (supply) yet would not the (infinite) signs of God be exhausted; for God is exalted in power and full of wisdom." (31 : 27)

On the other hand, one can interpret the Holy Quran only to the extent of the knowledge he possesses. The more the human knowledge advances, the more the meaning of the Quranic text becomes clear and the more one gets convinced of the truth of the Quranic Fundamentals. Thus it is imperative that in order to understand the Quran, besides other things, one should be sufficiently conversant with the contemporary scientific knowledge. The Quran thus serves as a guide to mankind for all ages.

Stagnation in the scientific knowledge and research amongst Muslims started only after they forsook the guidance of the Quran which lays great stress upon man to explore nature. The impetus of the Quran having gone, it resulted in their decline in every sphere of life. Today in the glimmer of Western scientific research, the glory of our past is hardly recognisable. So much so that we are made to think that the scientific research started only three centuries earlier. The tremendous strides that the West took in the field of science during the last two centuries are too well known. But on the other hand it cannot be denied that Muslims were the pioneers in the field of science. They made great contributions to the scientific thought in Middle Ages, and this exerted an immense influence on the study of science in Europe in later centuries.

I hereby mention the names of certain Muslim scientists and research scholars whose scientific works and writings were later on translated into various European languages. The sequence of names, given below against various subjects, is more or less according to the various periods in which they lived respectively and not in order of their fame and work in the respective fields.

Astronomy.—Ibrahim Farazi, Yaqoob bin Tariq Naubakht, Masha-Allah, Fazal-bin-Naubakht, Yahya-bin-Mansoor, Sanad-bin-Ali, Khalid-bin-Abdul Malik, Ali-bin-Isa, Umar-bin-Farhan, Ahmad-Kaser-Ferghani, Muhammad-bin-Jabbir-Albatani, Fazal Nairezi, Muhammad Hidazi, Abdullah Turki, Abdul Aziz Qaisi, Hamid Khujandi, Abdur Rahman Soofii, Muslima Behreti, Ibrahim Zarqali, Ibn Yunus.

Chemistry.—Jabir-bin Hayyan (The first chemist in History), Muhammad Kasi, Razi, Avicenna.

Medicine.—Jarjees bin Jabrael, Hunain-bin-Ishaq-Yuhanna-bin-Maswia (optics), Yaqoob Kindi (Geometrical optics), Ali bin-Suhal Ribin, Abu Bakr Muhammad Ibn Zakraya

name it oppressed mankind. So it was an area added to man's distance from God, an obstacle in the path to Him, one which must be taken into account by those who summon men to Islam.

It is true that mankind is wretched and is tired of bearing the burden of its materialistic civilization and luxury. It is true that corruption and dissolution, nervous and mental disease, intellectual and sexual perversion are eating away the body of western civilization, destroying nations and individuals, and are forcibly opening people's eyes to evil and corruption.

However, humanity persists in its bestial excitement, its lunatic intoxication, its uproar and confusion. The present century will pass away before eyes are fully opened, brains are cleared of their intoxication, and humanity recovers from its daze.

The first states of ignorance of divine guidance were connected to the primitiveness of nomadic life, which doubtless had its influence upon them. The traditions and customs of nomadism to a large extent determined people's conduct. Even though these made of the conflict between those calling for Islam and those ignorant of divine guidance a harsh and violent contest, nonetheless it was a clear and explicit one. Human nature was able to respond clearly, from behind the clouds of obstinacy and arrogance; both belief and disbelief were clearly defined. All of this was better than flexibility, indifference and frivolity.

Humanity is today suffering from frivolity and indifference with regard to all beliefs, ideologies and doctrines. It is also suffering from hypocrisy, deceit and baseness. All of these are barriers on the path of summoning men to God and obstacles in the way of righteously pursuing the path of God.

We should not neglect or underestimate these and many similar matters, so that workers for Islam should not be dazzled by favorable factors and fail to equip themselves adequately.

How may they equip themselves? There is only one thing with which they may provide themselves: fear of God, consciousness of the reality of God, direct cooperation with God, and absolute trust in His explicit promise: 'The victory of the believers is a duty incumbent upon Us' (al-Rum, v. 48)

What is required is that a believing group place their hands in the hands of God and then march forth, the promise of God to them being the overriding reality for them, and the pleasure of God being their first and last aim.

Through this group God's way for the realization of His path will be applied. It will dispense the clouds of ignorance from human nature. It will give expression to the will of God that His word be supreme on earth, and the reins of power be in the hands of His faith :

'Many paths and institutions have passed away before you; journey in the land, and behold how was the end of those that cried lies. This is an exposition for mankind, and a guidance, and an admonition for such as are godfearing. Faint not, neither sorrow; you shall be supreme if you are believers. If a wound touches you, a like wound has already touched the heathen; such days we deal out in turn among men, that God may know who are the believers and that He may take witnesses from among you. Truly God loves not the evildoers — and that God may test the believers and blot out the unbelievers."

(Al-Imran, vv. 137-141)

EXCERPT FROM

"THIS RELIGION OF ISLAM"

By

SAYYED QUTB

In this brief discussion, we cannot deal in greater detail with the concepts and traces left by Islam in the life, thistory and present state of humanity, traces which were not there before Islam and which have remained obstinately in place, however distorted or blunted, and however distant they may be from the lofty summit to which people attained by following the sublime and righteous path of divine origin.

These few examples we have indicated serve to give some idea of the tens of traces and effects left behind by that path. There are many analogous ones to be found over the space of fourteen hundred years.

Those who summon men to God and His path should not be dazzled by the existence of favorable factors, and forget to provide for the obstacles and barriers that confront them in their task.

This word must concern opposing factors, the obstinate barriers in one's path.

Mankind in its entirety is today more distant from God than it used to be.

The clouds which weigh over man's nature are thicker and denser than before. The previous ignorance of God was based on a general ignorance, simplicity and primitiveness. That of the present is based on learning, complexity and frivolity.

Men were completely dazzled by the conquests of science in the eighteenth and nineteenth centuries. The flight from the church and the god of the church, in whose name thinkers and men of learning were burnt or persecuted, was a mad and panic flight that stopped at nothing sacred.

It is true that science itself, from the beginning of the present century, has begun to lead the great scientists back towards God. Human nature, made wretched by its wandering in the desert, has begun to weary and to return to God. But the dazzlement remains, and this century will end before the wandering section of humanity begins its return from the wastes of godlessness.

The area and scope of worldly life has increased in the feelings and beings of people. It has extended thus because of the means of luxury and comfort produced by modern civilization, and people have come to sense the vastness and weight of worldly life. Science, culture and the arts have added whole new areas to the feelings and life of men.

If all this had arisen on the basis of knowledge of God, of the attributes of divinity and those of humanity in relation to God; on the basis of the profound truth that God has appointed man as His viceregent on earth, has suboridnated to him all the earth contains, and equipped him with all necessary talents and gifts, that man is in all this being tested for the hereafter—had it is arisen on this healthy foundation, the new areas added to the perception and life of men by science and civilization, would have been areas added too to religious belief, bringing men closer to God and His path of righteousness, namely Islam.

But all this arose on a basis of flight from the tyrannical church and a god in whose

age of despotic Caesars, kings, the moral sympathies of those downtrodden people turned towards the party of Islam. They began to forsake their allegiance to the flags of their own monarchs and when they were conscripted by force and driven to fight against the Muslims, they had no heart in the fight. This is the main cause of those astounding victories won by the Muslims in the early period. It is on the account also that after the establishment of Islamic governments in their countries when they saw the social system of Islam in action, they willingly joined this international party and became the upholders of its ideology and set out to other countries to spread its message.

The Terms "Offensive" and "Defensive" are Irrelevant

If you carefully consider the explanation given above you will readily understand that the two terms 'offensive' and 'defensive' by which the nature of welfare is differentiated are not at all applicable to Islamic 'Jihad'. These terms are relevant only in the context of fears between nations and countries, for technically the terms 'attack' and 'defence' can only be used with reference to a country or a nation. But when an international party rises with a universal faith and ideology and invites all peoples as human beings to embrace this faith and ideology and admits into its fold as equal members men of all nationalities and strives only to dismantle the rule of an opposing ideology and set up in its place a system of government based on its own ideology, then in this case the use of the technical terms like 'offence' and 'defence' is not germane. Even if we stop thinking about these technical terms, the division of Islamic 'Jihad' into offensive and defensive is not admissible. Islamic Jihad is both offensive and defensive at one and the same time. It is offensive becaue the Muslim Party assaults the rule of an opposing ideology and it is defensive because the Muslim Party is constrained to capture state power in order to arrest the principles of Islam in spacetime forces. As a party, it has no home to defend; it upholds certain principles which it must protect. Similarly this party does not attack the home of the opposing party, but launches an assault on the principles of the opponent. The objective of this attack, moreover, is not to coerce the opponent to relinquish his principles but to abolish the government which sustains these principles.

A WORLD REVOLUTION

The objective of the Islamic 'Jihad' is to eliminate the rule of an un-Islamic system and establish in its stead an Islamic system of state rule. Islam does not intend to confine this revolution to a single state or a few countries; the aim of Islam is to bring about a universal revolution. Although in the initial stages it is incumbent upon members of the party of Islam to carry out a revolution in the State system of the countries to which they belong; but their ultimate objective is no other than to effect a world revolution. No revolutionary ideology which champions the principles of the welfare of humanity as a whole instead of upholding national interests, can restrict its aims and objectives to the limits of a country or a nation. The goal of such an all-embracing doctrine is naturally bound to be world revolution. Truth cannot be confined within geographical borders. Truth demands that whatever is right on this side of the river or the mountain is also right on the other side of the river or mountain; no portion of mankind should be deprived of the Truth; wherever mankind is being subjected to repression, discrimination and exploitation, it is the duty of the righteous to go to their succour. The same conception has been enunciated by the Holy Qur'an in the following words :

> "What has happened to you? Why don't you fight in the way of God in support of men, women and children, whom finding helpless, they have repressed; and who pray, "O God! liberate us from this habitation which is ruled by tyrants".
> (4 : 75)

Moreover, notwithstanding the national or country-wise divisions of mankind, human relations and connexions have a universal significance so that no state can put her ideology into full operation until the same ideology comes into force in the neighbouring states. Hence it is imperative for the Muslim Party for reasons of both general welfare of humanity and self-defence that it should not rest content with establishing the Islamic System of Government in one territory alone, but to extend the sway of Islamic System all around as far as its resources can carry it. The Muslim Party will inevitably extend invitation to the citizens of other countries to embrace the faith which holds promise of true salvation and genuine welfare for them. Even otherwise also if the Muslim Party commands adequate resources it will eliminate un-Islamic Governments and establish the power of Islamic Government in their stead. It is the same policy which was executed by the Holy Prophet (peace of Allah be upon him) and his successor illustrious caliphs (may Allah be pleased with them). Arabia, where the Muslim Party was founded, was the first country which was subjugated and brought under the rule of Islam. Later the Holy Prophet (peace of Allah be upon him) sent invitations to other surrounding states to accept the faith and ideology of Islam. When the ruling classes of those countries declined to accept this invitation to adopt the true faith, the Prophet (peace of Allah be upon him) resolved to take military action against them. The war of Tubuk was the first in the series of military actions. When Hazrat Abu Bakr (may Allah be pleased with him) assumed leadership of the Muslim Party after the Prophet (peace of Allah be upon him) have had left for his heavenly homes he launched an invasion of Rome and Iran, which were under the dominance of un-Islamic Governments. Later, Hazrat Umar (may Allah be pleased with him) carried the war to a victorious end. The citizens of Egypt, Syria, Rome and Iran initially took these military actions as evidence of the imperialist policy of the Arab nation. They believed that, like other nations, this nation had also set out on a course of enslaving other nations under the yoke of imperialism. It was owing to this misconception that they advanced under the banners of Caesar and Khosro to give battle to the Muslims. But when they discovered the revolutionary ideology of the Muslim Party; when it dawned on them that Muslim armies were not the champions of aggressive nationalism that they had no nationalistic objectives; that they had come with the sole object of instituting a just system; that their real purpose was to annihilate the tyrranical classes which had assumed divine powers and were trampling down their subjects under the patron-

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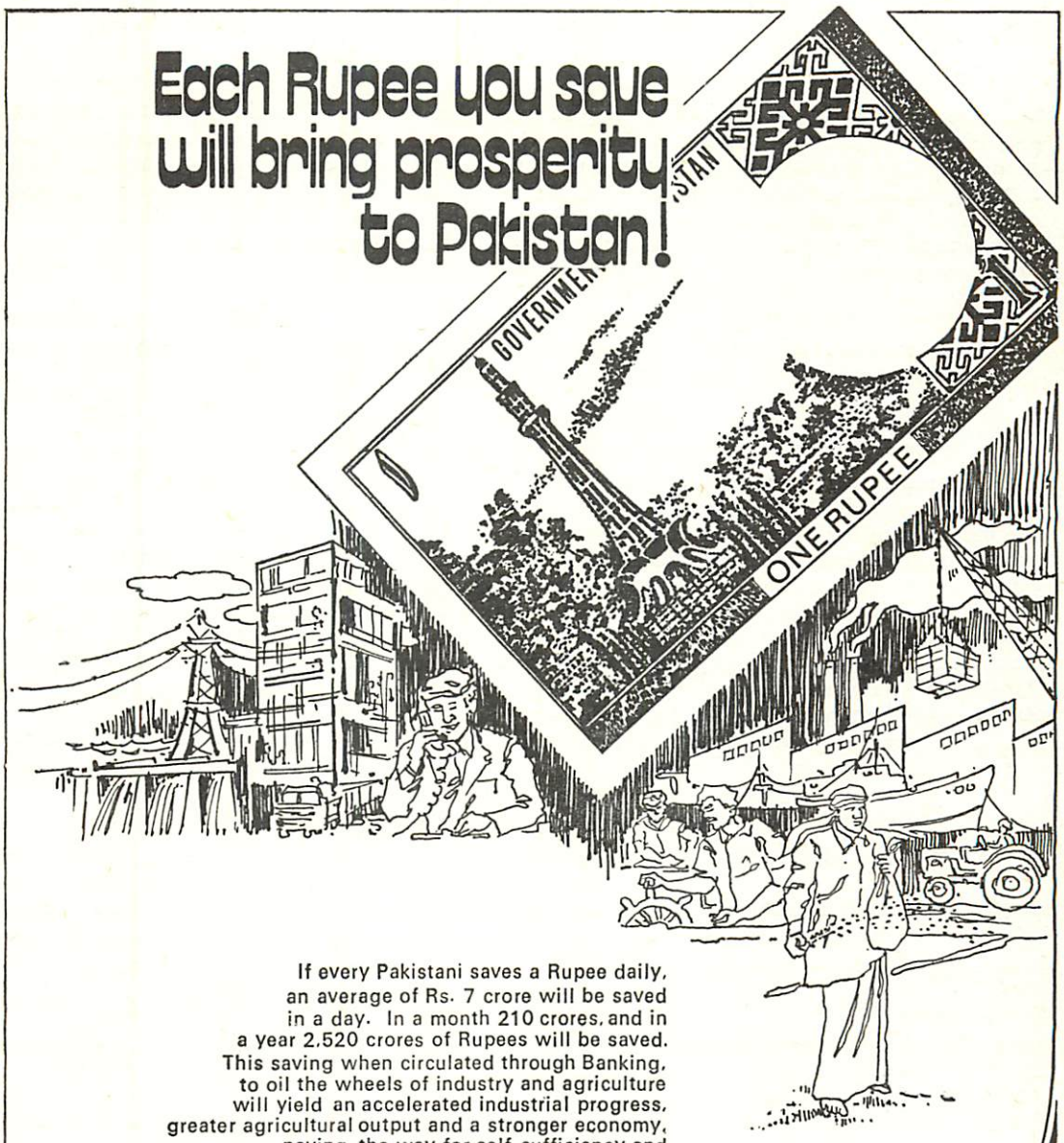

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lation in a proper frame of mind, making full use of the powers with which you are equipped —reason and *Iman*, hope and charity—you can apprehend the truth enshrined in it, and guided by it, can march forward to the glorious destiny that awaits you. But you must deliberately, and of your own free will, choose the path which is pointed out. God could have compelled you to be good if He had wanted. But such goodness would have had no value. Only goodness that you acquire through your own efforts has value. You are free to choose, and if you use your faculties aright, you will make a proper choice.

This, in brief, is the advice that the Qur'an offers to man. It is reiterated in numerous verses. When the *Nabi* grew worried that people did not pay attention to his words and did not try to understand them, he was admonished in this way :

If Allah willed, all who are on the earth would have believed (in Him). Would thou (Muhammad) compel men until they are believers? (10 : 99).

To understand the Qur'an or, for that matter, any other revealed book, it is not enough to have mastered its language. A man may be proficient in the Arabic language and yet the meaning of the Qur'an may elude him. He should approach the Book with a receptive mind free from preconceived ideas and notions, prejudice and bias. He should be serious about human life and the universe in which we live, and should have an intense consciousness of participation in a purposeful cosmic process. He should also be anxious to guard against pitfalls in the way of life and to steer clear of the obstacles which hinder his progress. These are, according to the Qur'an, the essential pre-requisites for understanding the Book. To those who do not approach it in this way, it remains a sealed book. In the stories of the *Anbiya*—prophets recounted in the Qur'an—we are told how those who were not perceptive and alive were only bewildered when they listened to their *(Anbiya's)* passionate exhortations. Some of them frankly confessed that they found their words unintelligible :

O Shu'aib ! We understand not much what you say (11 : 91).

The *Nabi* (Muhammad—P) too, often came across people who were completely unresponsive to his words, while others were stirred, who believed and were prepared to listen. In dealing with the former, he occasionally grew impatient and felt frustrated. The Qur'an counsels him to be patient, forgiving and tolerant. It warns him against the temptation to impose his views on them :

Haply you will kill yourself with grief—if they believe not in this message (18 : 6).

The *Nabi* is assured that if he has placed the true view, in simple terms, before the people, he has fulfilled his mission. More than this is not expected of him. It is not his duty to see that the view is accepted by the people. His duty is only to tell them which is the right path and which the wrong one and to acquaint them with the consequences of following the one or the other. They are free to choose for themselves. God does not want to force people to accept His guidance. He has endowed man with the powers of understanding, judgement and free choice. If man makes use of these powers he can understand the Revelation and can profit by the guidance offered therein. He must bear the consequences of his choice, whether they are pleasant or unpleasant.

To sum up, there is no conflict between Revelation and reason : rather they supplement each other. *Iman* in Revelation and reason together enrich life and make it frutful, provided each keeps to its own proper sphere. *Iman* energises reason and reason orientates *Iman* to concrete reality. Without either, life would be impoverished. Reason without *Iman* is like a well-constructed machine which is not geared to a motor, while *Iman* without reason is only a blind force. The glorious periods in human history were characterised by a robust *Iman* and an active reason. Prof. Whitehead has rightly remarked :

Ages of faith are the ages of rationalism.

They are admonished when they argue about things of which they have no knowledge :

Why, therefore, do you wrangle concerning that about which you have no knowledge? (3 : 66).

Arguing about things of which we have no knowledge leads nowhere. The Qur'an asks us to eschew such unprofitable disputes :

Do not pursue that whereof you have no knowledge. Verily, the hearing and sight, and the heart, each of these will be asked (17 : 36).

The Qur'an lays stress on the value of correct knowledge and advises us to accept it and act upon it. All else is dismissed as mere guess work which is far from being a trustworthy guide to action. As the Qur'an says : "A guess can never take the place of truth" (53 : 28). As rational beings, it is our duty not to stop till we have achieved correct knowledge. To be content with a mere "guess" is to denounce or abdicate our rationality, and to act upon it is to risk self-fulfilment.

The Qur'an gives a sketch of the process of knowing, so far as it is germane to its purpose, which is both scientific and ethical. The process is begun by the activity of the senses, which furnish the raw material of knowledge. The next stage is that of attending when the mind addresses itself to the material reaching it. This is the stage of perceptual knowledge. The sense data are referred to external objects and events and their objective meaning is grasped. In the third stage, through the processes of analysis, synthesis, abstraction and generalisation, the material is converted into knowledge of varying degrees of generality. The final stage is that of comprehension in which the new knowledge is placed and viewed in the context of the whole of human knowledge and experience, and its meaning for human life is assessed. The Qur'an exhorts men to aim at this deeper understanding of the meaning of the *Nabi's* words, whenever he speaks to them. It denounces those who fail to make this attempt and stop at the first or second stage, being content with imperfect knowledge :

And you may see them looking towards you, but they see not (7 : 198).

These were people who appeared to be looking intently at the *Nabi* and listening to him, but their mind was making no effort to grasp the sense of his words and relate it meaningfully to their lives. The Qur'an makes an important distinction between *"nazar"* and *"basar"*. *Nazar* refers to the fact of passively receiving certain visual stimuli. *Basar* is insight, the grasping of the essential meaning of the thing of which the visual stimuli are mere signs. The same distinction applies to other senses, such as hearing, etc :

And of them are some who hearken to thee but will thou make the deaf to hear although they have no senses (10 : 42).

What the Qur'an is driving at is that a man whose mind is clouded with prejudices and preconceptions, will not be able to apprehend the truth, even though it stares him in the face. To apprehend it, he must approach it with an open and unbiased mind, must concentrate his attention upon it and must strive to comprehend it in relation to his genuine knowledge and authentic experience. In effect, the Qur'an recommends them an *aposteriori* approach to Revelation. By implication, the *apriori* approach is not favoured. The Qur'an's position on this question may be summarised in this way : rid your mind of all preconceived ill-founded notions. Give close and earnest attention to the Revelation and have full confidence *(Iman)* in it. Relate the Revelation to the well-established facts of human experience. Project your findings into the future as far as your reason can take you along the high-roads lit by Revelation. Enrich your experience by the experience you have yet to experience. And, in the new vistas and the widened horizons that open up before you, identify the stars of your destiny and address yourself to the problems of life at hand. If you approach Reve-

Reason and Faith (Iman)—The Qur'anic View

By
G.A. PARWEZ

In the Qur'an, human reason is repeatedly extolled. As already stated, the birth of reason in man is referred to as marking a "new creation." It is clearly stated that even Divine Revelation is not to be accepted unquestioningly and uncritically.* Man is exhorted to ponder and reflect over it and interpret it in the light of his reason. "Will they not ponder over the Qur'an?" (4 : 82). Men who find thinking irksome are described in these words :

> *These are they whom God's Law of Retribution has deprived (as a result of their own doing) of the blessings of life and has made them deaf and has blinded their eyes. Will they not then meditate on the Qur'an or there are locks on their hearts* (47 : 23-24).

Reason and Iman

The Qur'an appeals to man's reason and understanding. Its teaching is couched in a language which is lucid and intelligible. "Thus God makes plain to you His Revelations that haply you may reflect" (2 : 219). The great truth to be apprehended by man is that he is the architect of his fate so that what he is in this world and what he will be in the Hereafter depend solely on his own actions. Good acts necessarily elevate him and bad actions inevitably degrade him. His welfare and misery are the result of his own deeds. He cannot shift his responsibility to others.

The Qur'an insists that even success in war depends on the right use of reason. It is generally believed that an army which is inspired with courage and fired with zeal is sure to win. The Qur'an claims that victory falls to the lot of men who remain cool and collected in the presence of danger and whose thinking is not clouded by passion. A hundred such men, the believers, are said to be a match for a thousand unbelievers who are swayed by passion, because they are, as the Qur'an puts it, "a folk without understanding" (8 : 65).

It is clear that the Qur'an assigns an important role to reason in the life of man. The *Nabi* is enjoined not to demand blind obedience from men but to exhort them to think and ponder. The following verse leaves no room for doubt that the Qur'an encourages and approves of independent thinking :

> *Say, I exhort you unto one thing. And what is that one thing? It is that "ye awake, for Allah's sake by twos and singly. And then, reflect"* (34 : 46).

The Qur'an expects man to think and use his power of understanding. If he does this, he will be sure to follow the right path. The point to bear in mind is that the path which leads to success, that is eligibility for a higher plane of existence, can be discovered and followed only with the combined help of reason and revelation. These sources of guidance are supplementary to each other. If they are kept within their proper spheres, there will be no conflict between them. The *Rasul,* therefore, is bidden to say :

> *This is my way. My invitation to you to follow Allah's path is based on reason and insight—mine as well as of those who follow me* (12 : 108).

The Qur'an challenges the opponents of Islam to produce arguments in support of their contention :

> *Ask them,* (O Rasul!) *Bring your proofs if you are truthful* (2 : 111).

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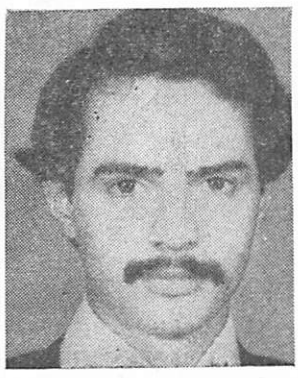

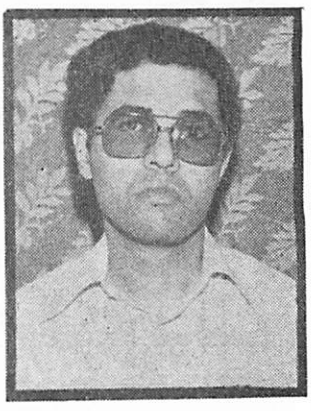

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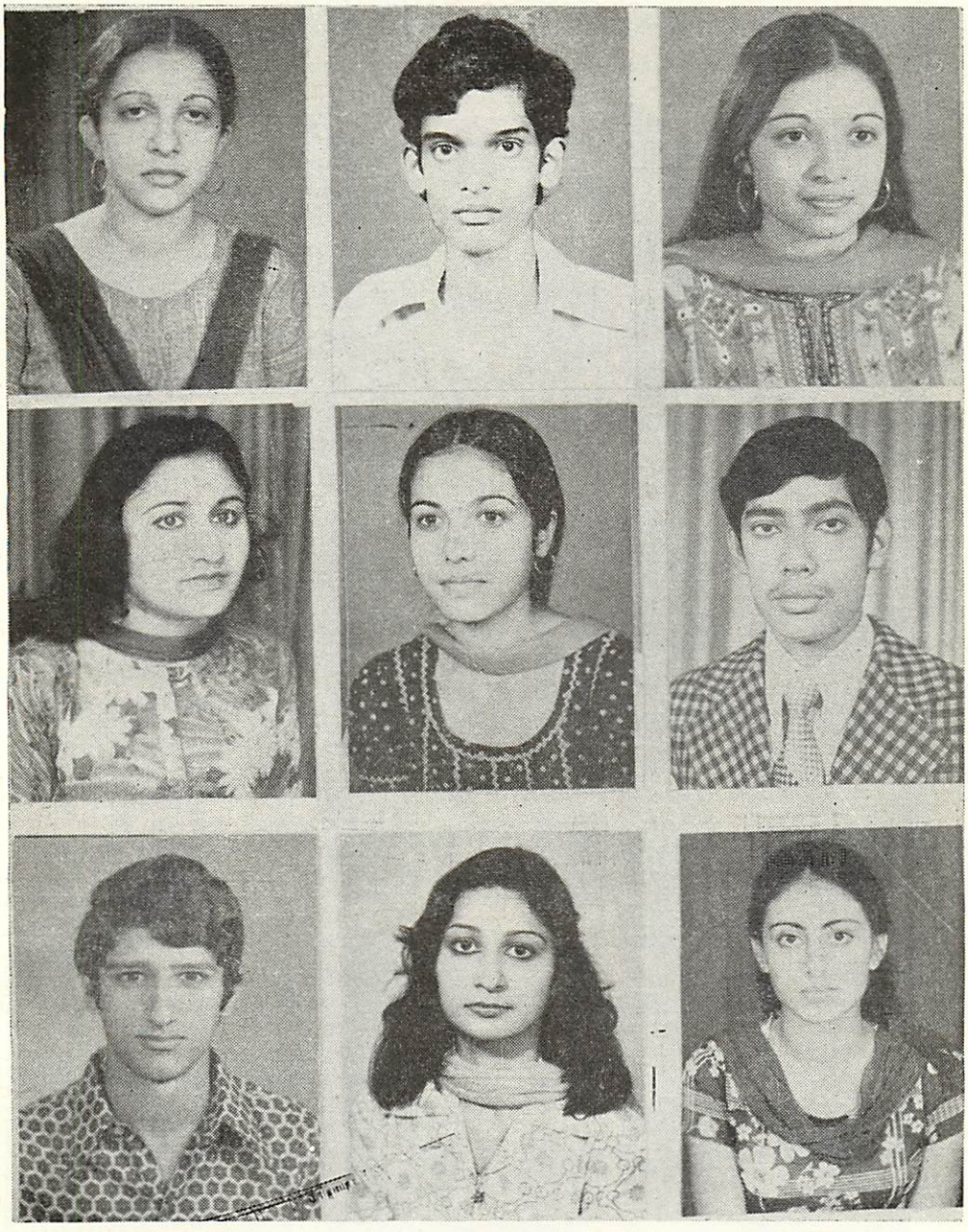

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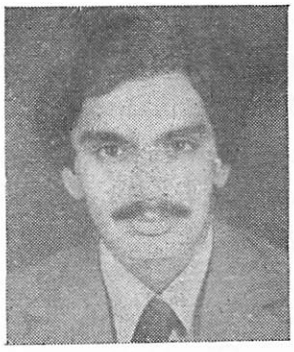

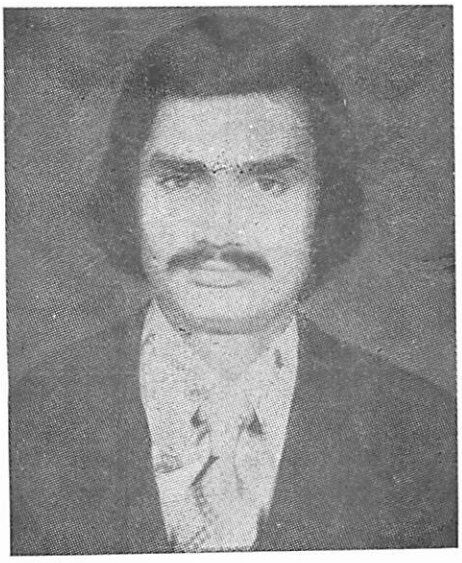

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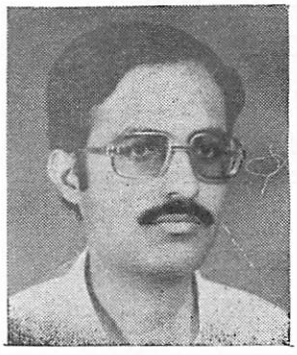

PERWAIZ ALVI
IMRAN BASHIR
KHURSHID ZIA

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Printed at PIDC Printing Press, West Wharf Road, Karachi.

OBITUARY

Death Sees no Season, no reason no clime. Only yesterday they were among us:

TARIQ NAHEED ZAFAR

Now all are gone, the old familiar faces.

We offer our heartfelt Condolences to the bereaved families.

And finally a few words about the Magazine. Like my predecessors I will not endevour to make you realize the problems associated with publishing a magazine. With God's Grace, and the good company I had, things seemed easier. I thank Mr. Sa'ad, Mr. Kamil, Mr. Sayyed and Mr. Hye for their cooperation which extended to the extent of sacrifice. While this magazine was under processing, of the six classes, three were either busy with or preparing for their examinations. As a result, the response regarding articles was not very encouraging, so we had to adopt certain articles from different sources to make the magazine interesting and presentable. I hope you like it.

EDITOR-IN-CHIEF

EDITORIAL

And now when the tenure 1978-79 is faltering like a near-extinguishing flame, memories of the years' incidents flash across my mind. Events flow one by one, baring the facts long lost to oblivion.

I can see the year beginning with thundering emotions. The Solemn Oath-taking Ceremony is ruthlessly mauld. A few days later, an inequitable faracal frenzy is demonstrated in the General Body Meeting. Emotions cool gradually. Meanwhile, inconsequential gigantomachy continues.

In April when the college reopens after two and a half months' forced closure, the violent romps begin again. A surge of incidents not only washes the shores of D.M.C., but sweeps through other institutions as well, and commotion is still galore. Why all this violence? Destinies of Nations are guided by the logical visionary speculations of their founders. Destinies of Nations cannot be changed by infatuation stultiloquy, profanation, surcharged encounters or inconsequential furor loquendi, furor poeticus or furor scribendi. To change a Nations' funebre adversity, a persistent and painstakingly sincere policy based on the founding principles has to be adopted. So instead of dying for rival ideologies or acting as stultified ideopraxists obsessed with ignis-fatuus, let us remove the prepostrous parallex and together strive for the glory of Islamic Republic of Pakistan.

A gentleman once said that, "A man's nature either runs to herbs or weeds; let him seasonably water the one and destroy the other" Thirty-two years have elapsed since independence and all this while instead of herbs, we have been watering the weeds. Only ten years back, we suffered a terrible catastrophe and we came out limping in a hemiplegic state. We have barely made it though, but the situation today is not very different. As Jawad speculates, "the body politic of the nation is stagnant on its surface and it is seething underneath due to apparent limitation". Let us honestly ask ourselves, "Can we afford to follow this unwarrented course for long? No my friends, we cannot. It is still not too late. Now is the time lets rout the weeds our, let us relume the fervour, the zeal, the enthusiasm, the vigour,the determination and the sprit of freedom and democracy in our people; Let us unite and "withmight, smite the furrows" of discrepancies in our ranks, lest we mournfully say tomorrow :

"When the end came or how, we do not know,
Others are wearing the scarlet, that was ours,
And in our castles others come and go
Dreaming our dreams and watching from our towers" *(Preston Clarke)*

And now a word about our atomic plant : Splitting of atom has provided many new horizons for progressing Nations. If our atomic programme means peaceful new openings for us, then there is no reason why we shouldn't continue. We are a poor country with a very few resources. In this era of ever advancing technology we need new avenues to cope with ever burdening demands of power and progress. Let the super warlords say what they will, we simply cannot afford to retrieve or accept absurd limitations.

And now I think is the time to reflect upon the recent changes in the globe. Opression of nefarious forces in certain areas and endevours to restore the pristine glory of Islam all indicate the unsurmountable surge with which the Era of Revival, the Era of Renaissance will manifest itself in the near future. I feel like quoting G.B. Shaw, who very rightly said that, "If any religion has the chance of ruling over England, nay Europe, within the next hundred years, it can only be Islam. I have always held the Religion of Muhammad (may peace be upon him) in high estimations because of its wonderful vitality. It is the only religion which appears to me to possess the assimilating capability to change the phase of existance which can make its appeal to every nation".

FAREWELL

PROF. ZUBAIDA AZIZ

UPON THE GROUND BENEATH, IT IS TWICE BLES

S. AKHTER

I observed a maiden sitting quietly in the Garden of the World. She was young and looked poor. Her small sensitive face was pale and seemed to be searching out the answer to some puzzling question. I turned to my companion and asked him the cause of her worry. He bade me to remain silent and to watch the tableau that was to take place down below.

The dainty nymph of a girl, not particularly pretty, looked around her and, seeing no answer to the problem that was occupying her mind, gave a despairing sigh. She wandered aimlessly here and there plucking flowers at random to make a posy, as if to give herself something to do.

And then with a start she looked up to see that she was not alone. A regal aloof figure was watching her antics with a supercilious smile on her lips. She was dressed in queenly garments and had a beauty that was but skin deep. There were lines of suffering on her face but a hardness in her eye, as if she had learnt how to combat pain. The girl turned and asked her who she was. "I am Love", answered the creation of loveliness with an arrogance of her own.

"Love", gasped the maiden, blushing with joy, "Can you help me? I want love, so that I can find a reason for my life, so that the bareness of my soul is enriched and so that the loneliness of my spirit is washed away, like a painful ache is removed from my being. Can you give me Oove?"

And at the innocence and simplicity of the girl, Love's eyes softened and her cloak of superiority and hauter slipped down. She turned towards the girl and said, "Child, I can give you no joy. I can give you just the pain and torture that will cause you to cry out in anguish, an agony and despair that will cause you to shed a million teardrops of sorrow into the night of loneliness. I can only give you a brief ecstacy that ends in betrayal, that leaves the soul sobbing in anguish and the heart broken beyond repair."

"Why", trembled the girl at the dire fate of Love.

"Because, child, I have lost the powers to give happiness to all. Very soon my name shall be linked with Sorrow only. My two rivals, Wealth and Beauty are very popular today. Everyone turns to them. People no longer need me, for I am inconvenient to them. So I cannot help you my dear. Ask not of me what I cannot give", and the girl wa left alone.

"That is not true" I argued with my companion. "Love is not Sorrow or Pain. Love is not being crushed by Wealth and Beauty. Love is happiness, joy and eternal. And my companion looked at me pityingly and asked for silence. I turned to look into the garden once more.

The maiden was somewhat disheartened and looked upset. She stood undecidingly in the middle of the garden and was thinking deeply when something attracted her attention. A smart and fashionable figure was strolling down the path. She turned towards it but before she could speak the elegant and well-dressed person spoke "I am Friendship", she said "You may not know me for I have just taken over from my father. He was an oldfashioned man and believed in Sacrifice and Eternal Friendship. Now I am much more modern and people like me more."

"Oh" said the girl, a bit timidly "And can you help me? Can you get me a friend, someone to share all my worries with, someone to talk about my difficulties".

"I'm afriad not", said the brisk woman decisively. "Not that I don't want to help you, but you see — you're too sensitive, too possessive. You'd make too many demands on me. You'd expect friendship to be forever and sacrifice and all that stuff. You'd want a person to repeatedly reassure you of his regard and to be ready to do anything for you."

"But is that so very bad", asked the girl unhappily. "Don't know about that, but it won't do in this modern world with the modern concept of friendship. You'd be a burden — I really must go .... " and the efficient woman walked away.

"But, I said angrily to my friend "this is all wrong. Friendship is not as it is portrayed down there. It is Sympathy, Kindness and Joy all rolled into one. It is an answer to loneliness. It is .... "

"It was", said my companion sadly. "Once upon a time, it was".

And the maiden looked around her helplessly and tried to control the tears which would but gather in her eyes. She walked towards a poor, sad figure lost in thoughts.

And it was near the pool that she saw an old man sitting with his head bowed down in sorrow. His body was weak with suffering and his face was lined with pain. She turned towards him, for being a sensitive creature, she could not see anyone in trouble. "Who are you and what is your sorrow?" She asked softly.

"Child" trembled the aged man, "I am Truth and my pain is such that it is causing my soul to die of an incurable disease. All my life people have tried to crush me, but due to my kind friends Courage, Honesty and Justice I always managed to shine as a light in the darkness. No one could harm, "the old man gave a despairing moan, "Alas, they are all dead and my enemies, ah so many — Greed, Corruption, Evil Avarice .... are increasing in strength day by day".

"Can I help you?" asked the tender hearted maiden, for the lonely story of the old man seemed similar to her own.

"No, child — you cannot help me, and besides", the old man smiled painfully "Association with me will give you more Pain than Joy for you are a sensitive creature. By my side you will taste such bitterness, that you will wonder at the reason of your existence. Go child and live in your dream world. It may give you happiness. I cannot".

"Look" I began hotly.

"Patience, my friend", said my companion. "Think before you speak, when is the last time you saw real truth?"

The young girl was crying now and the unhappiness in her tears smote a cry from my heart too. "Do you mean to say that there is no place for this child, young, sensitive and poor in this world of joy and happiness?" I asked. My companion pointed downwards.

A sturdy being with a wise twinkle and a compassionate smile was bent over the object of our observation. "Come, child, it cannot be as bad as that", said a cheerful voice.

"It is bad", sobbed the girl. "It is very bad. I cannot have Love as I am plain and poor. Friendship wants nothing to do with me as I am too oldfashioned and clinging and

Truth will not help me because he fears I am too sensitive to be with him. Where am I to go?"

"Well child, you could come with me but it won't be a very enjoyable experience. I do have companions but they might bore you". said the kind person. "Who are you?", asked the girl trembling between her tears with uncertainty.

"Why, Knowledge, of course", said the sturdy man smiling down at her. "You're welcome to come with me for my doors are open to all but I now live in the Valley of Loneliness. Want to come?" And the girl smiled and clasped the outstretched hand and walked away happily.

"She was a sensible one", said my companion. "I have seen others who preferred the brief ecstacy of Love or to become a burden on Friendship".

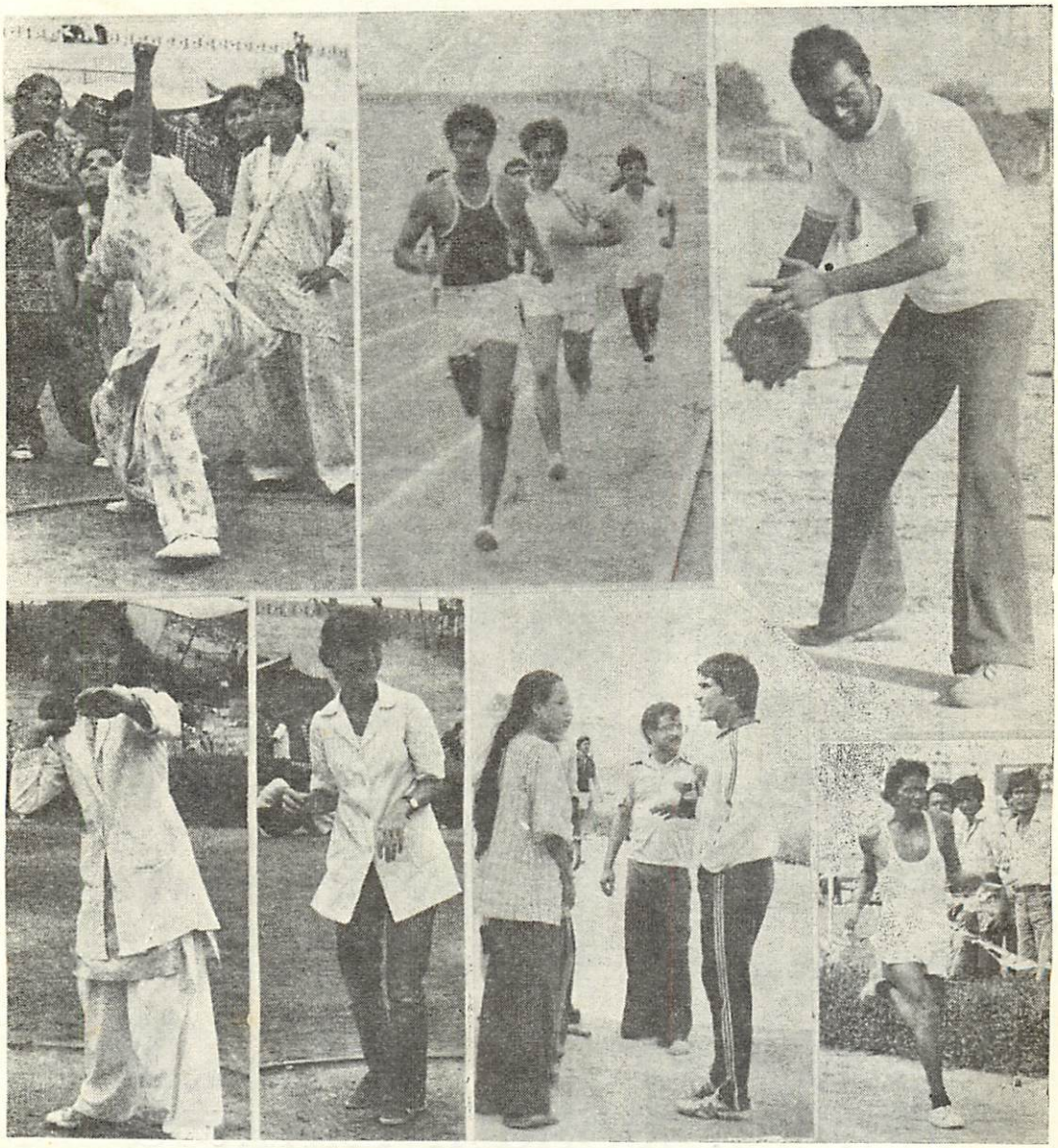
"Do you see this sort of thing, often?" I was forced to ask.

"Oh! Yes" said my companion. "Practically every day".

"Who are you?" I questioned curiously.

"Life", asnwered my companion and I was alone.

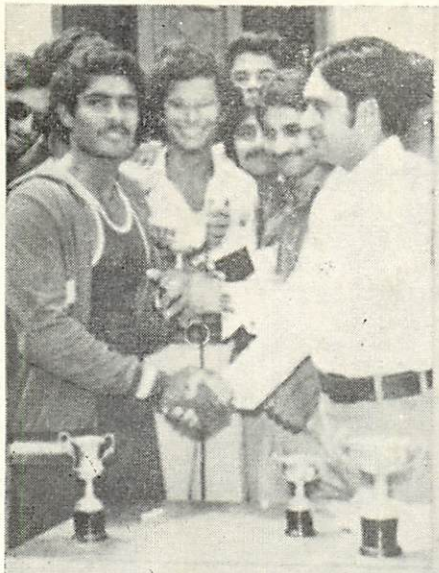
PROCEEDINGS OF ANNUAL SPORTS



PROCEEDINGS OF ANNUAL SPORTS

WINNERS OF ANNUAL
ROAD RACE

WINNERS OF ANNUAL
SPORTS



MEET D.M.C.

Chow, Outsider, how do you do ?
Shall I introduce D.M.C. to you ?

I accept it gives the impression
Of a fun and laughter exhibition

But these are the new times you see
And we like doctors full of glee.

The canteen crowd makes you sour ?
But it is the lecture hour.

So it comes as no surprise,
Lecture halls are three but canteens five.

For two of them are playing ball
And the rest jumping rope around the hall

Dear outsider don't run from this mess
I assure you all the maniacs are harmless.

The audience shouting laughing and gay
Are they showing a comedy, you say ?

But one thing you wouldn't understand
In here where knowledge should expand

Unless one is happy and gay
Knowledge would just slip away

And just throw a rocket or two
Its to keep our friends awake, we do !

That if in the exams you founder
Atleast you'll be fit as a compounder.

That's the way to identify,
And remember red or blue dye

Do you say, You'd rather not ?
Come on, don't talk such rot.

Of cheerful groups happy and gay
Chattering, laughing and talking away.

O.K. then lets start our trip,
But first of all a coke we'll sip.

Traditionally here time you pass
When you are bored in the class.

In the dissection hall we see
A group ever so loud and merry

But on closer inspection is seen
The rope is a cadaver's small intestine.

Did you ask about a movie hall
Complete with stage mikes and all

Dear Outsider, our lecture hall
To take all students can't be small

So if we pass comments and shout
Of what the lecture is about

Now pack and tie label and seal,
Because the pharma people feel

Cobweb or fishing net
You must make a bet

Patho slides make one so sore
'Cause trouble sought at the core.

Now from this world of woes
We go to a world of arrows and bows

Murdered bodies and suicide cases,
Cadavers with staring faces.

Who killed him, why and how,
What is his condition now

Medicine ENT, surgery
Interesting subjects to study.

Is so much of proportion
It fills you with strange emotion.

Social evenings, movies and picnic
Where you can have your pick.

With world of debates, acting and song,
Our extra curricular list is long.

Every sport under the sun
Is played in DMC for fun.

Gone are the days of the modest healer
Today's doctor is a friendly feller.

Of cure and healing he doesn't rave
What a cheerful fellow to send you to your grave !

Hanging, throttling and cut-throat,
Lovely topics on which you'll dote.

Bodies bleeding, bodies stinking
In their midst you'll so the shinking

Forsenic medicine, what a topic !
So outsider, let us drop it.

Dear outsider you do realize
The ratio between brain and book size

Overburdening of a little mind,
Means outlets for fun it has to find.

Dear Outsider you must not think
That due to studies we have no link

Dear Outsider, we are not such snobs
As to forget sport in being the nobs.

So dear Outsider, I say "Hurray !"
For our doctors of today

So what if his knowledge is a null
At least he's gay and not a dull

IMRANA AFRIDI
4th Year

The other day I was going through the Cricket digest, when I suddenly remembered . . . . .

THE MATCHLESS MATCH

KHALID ISMAIL
IVth Year

It was one of those beautiful mornings when one wishes to do something that the girls of DMC decided to do something and a cricket match was arranged with the Home Economics Girls College.

Every minute a new coach was born and during those eventful days of rehersals those blabbering stooges would stage a lot of action and with wrinkles of idiocy on their foreheads you could find them ever fighting amongst themselves and rolicking the mini-stadium with their worthless convictions :

'Not like this' and 'Not like that'
And 'But like this' and 'Yes like that'.

Eventually under the vigilant coaching of uncoached coaches, an uncomposed sort of team was composed. The pending issue of the unsettling date was finally settled and the girls set out one fine morning, with high hopes to make history at the Home Economics ground.

The players were, as I presume, greeted with screams and shrieks and all sorts of such noises, which can very easily be produced, provided you are estrogenic in nature and endowed with supersonic resonators instead of vocal cords. After the preliminaries, the coin was tossed high up in the air and as it touched the ground, the fate had been decided. The home team was to bat.

The batswomen came amidst a thunder of clappings, bountiful shrieks and squeaks, hilarious slogans and sincere advices. Zohra stood at one end, examining the seam and perhaps planning the strategy of her attack. In she came running, the ball left her hand and zoomed past the batswoman who flashed out her bat but missed. It was a humid morning and much to the batters discomfort, the ball moved considerably and in the first over they could hardly score a couple. There was too much of noise. The crowd in high spirits was appreciating every move of the bat, whether it touched the ball or not, when all of a sudden, the lively crowd was lulled, as if fifteen hundred tongues had been cut clear and square. The fielders roared the triumphant cry of the victors. The new manoeuvre had routed the first wicket. Zohra was in a destructive mood, her attacks were agile spontaneous and devastating with a few misgivings and she credited six wickets.

Yet the score was at a tremendous acceleration. A few other bowlers were tried and were successful to some extent. But the powerful batting side rapidly put an end to any lingering DMC hopes and our limited bowling attack was completely invalidated. Nazish, who bowled the Wellesly-Hall style, perhaps had forgotten the purpose of her bowling and every limpy ball she bowled was escorted towards the VIP corner. The vice captain thought to intervene. Nazish infuriated now bowled with the inertia built up by twenty-two steps run and in the following few seconds everyone was patting her 'Well done!' In her long spell of ten overs, she credited four wickets for sixty-two runs.

Finally the home team quit with a grand total of 106 in 25 overs.

It was a weary afternoon and the girls were very tired, but with half a dozen male supporters predicting an unseen victory, the girls were filled with determination to score at least five-score-and-ten in the field. "She alone will be enough", said Romana, daring a pat on the powerful arms of Durray-Samine, who nodded stretching her countenance to a smile — the smile of a century-maker. "Nazish is there", someone said. "And don't

forget Yasmeen", added another. "I will make fifty", declared Nargis and Rohilla was confident to support till the end. Farzana, quite unaware of her smiling stars, awefully tired, drank gallons of water like a camel who stores enough water on any hot day before a long journey.

With the fielders inside the field, the DMC openers entered the ground followed by a lot of cat-callings and other fanciful noises and for a moment it seemed as if we were in some zoological garden with a lot of illogical animals, illogically trying to impress their absurd logic on logical visitors.

The DMC openers began solidly, driving with tremendous power and played many crashing drives, cover strokes and sneaky cuts, but the fielding was very tight and it was indeed very difficult to drive the ball through the gaps. Yet it was a fine start for DMC and in a couple of overs the score stood at 9 for no loss, when all of a sudden the morale of the team was shaken; fate had taken its toll; the first wicket had been lost.

After this break the home team gained a firm grip on the match. Yasmin was dismissed, brilliantly caught by the keeper after having added a couple to the total. Perveen was unfortunate. She started off fairly well but lost her confidence after she had been hit and in the last ball of the same shaky over, while attempting a straight drive, she was comfortably caught and bowled. Then Nazish came in to bat. She did play a few good strokes on both sides of the pitch but she could not battle the clouding fielders and a rare "three-tipper" sent her back to the pavilion. Rohilla, though less spectacular, kept her word and played her part bravely till the end, despite the intriguing pace onslaught.

The wickets were falling like autumn leaves. The umpire was busy raising his index finger at every HOW'S THAT! and thus heralding the approaching defeat. At such an hour came Farzana. The score card showed meagre score at the expense of a large number of wickets. Suddenly, after a profound, lingering silence, a cracking sound arose; the ball had been hit for four. The Umpire perplexed for a moment was about to raise his index finger but then realizing the situation, waved his hand parallel to the ground with a broad smile — the smile one smiles after multiple humiliations. Slow early in her innings, Farzana increased her scoring rate as the limited overs came to an end and when her total was 23, she hooked a rare bouncer and was effortlessly caught at the long leg.

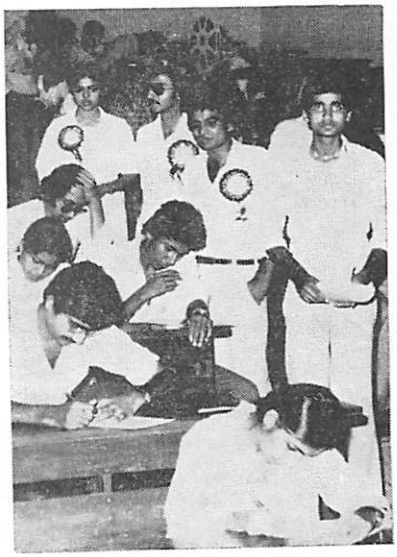
With Farzana gone, the chances of success dwindled again. Now time had taken a turn. One by one the girls tried to ease off the tension and steady the rate of score, but the irritating bowlers and the brisk fielders had full control on the game. Every knight who dared was shot or speared. Though Nargis and Yasmeen Jamshed played surprisingly well and stayed in for a pretty good time but the score remained where it was and the much desired recovery did not come.

When Durray entered the ground to bat, smiles alightened the "off" faces of DMC supporters. She started aggressively and for a moment it seemed as if the faltering run rate would march majestically towards success. The few dazzling strokes she played in the first over were well fielded and consequently the score remained the same. Unfortunately, her aggression did not last long. While aiming a full blooded drive, she was caught in the covers and thus the predicted heroine of the match left the pitch sooner than expected of her, bearing the countenance of a defeated generaless. Neelofer, who had done well during the practice sessions, lasted only a short while, before she was caught off bat and pad for one. And thus ended the legacy of a formidable side which was completely routed in a matter of 18 overs for just 48 runs in reply to a grand Home Economics total of 106 for 8 in 25 overs.

Cheer up girls, I don't blame you. Forty-eight isn't a bad score when you look at it from another angle. After all everything has to start from the scrap. So I say :

Let bygones be bygones, I say,
Heed to such defeats you should not pay,
Have your time and play it out,
In spirited mood, in sportsmens' way.

AVP ANATOMY QUIZ



CAN YOU GET YOUR TONGUE ROUND THESE?

People are often caught out by not knowing the meanings of words, but what about *saying* words? Can you manage these tongue-twisters? Repeat each one three times rapidly. You can make up your own method of scoring for this page.

The seething sea ceaseth and thus sufficeth us.

Preshrunk shirts.
Fanny Finch fried five floundering fish for Francis's father.

Six slim slick slender saplings.

A bloke's back brake block broke.

The sixth sheikh's sixth sheep's sick.

Are you copperbottoming 'em, my man?
No'm, I'm aluminiuming 'em, mum.

Amidst the mists and coldest frosts,
With barest wrists and stoutest boasts,
He thrusts his firsts the posts
And still insists he sees the ghosts.

The twine to three tree twigs.

Double bubble gum bubbles double.

Truly rural.

Strange strategic statistics.

Lemon liniment.

She stood at the door of Burgess's
fish-sauce shop welcoming him in.

BRAIN TWISTERS

1. Rearrange these letters—OOUSWTDNERJ—to spell just one word. Not a proper name, nor anything foreign or nuusual.

2. The six letters in the word 'chesty' can be arranged into onJy one other word in the English language. Can you find the word?

3. Are you observant enough to detect the common characteristics of these six words : deft, sighing, calmness, canopy, first and stun?

4. From these letters a single English word can be made. What is it? PNLLEEEESSSSS.

HOUGH NOUGH;

The spelling of English is a pitfall for most of us at some time or another. Here are some oddities for your amusement.

SOB STORY

Today, away from me you fly,
Though, yesterday, to me you flew,
So now I am disposed to cry.
Though heretofore I never crew.

NOT HARD TO SWALLOW

I wonder what would help my cough;
A cup of coughey should.
At least it wouldn't bump me ough.
And it *might* do me gould.

COMPANION PEACE

A jug of wine beneath the bough
And milk from you contented cough
And you beside me makes me glow
Deliciously, from head to tow.

THE POINT IS MOOT

If you say, 'Boot,'
Then why not foot?
And on your feet,
You should wear beet.

The wind was rough
And cold and blough;
She kept her hands inside her mough.

It chilled her trough,
Her nose turned blough.
And still the squall the faster flough.

And yet although,
There was no snough,
The weather was a cruel fough.

It made her cough,
(Please do not scough);
She coughed until her last blew ough.

HOW GOOD A DETECTIVE WOULD YOU BE ? ANSWERS

1. *No.* Fingerprints of identical twins may be more dissimilar than those of total strangers.
2. *No.* Laboratories can find no sex differences, *per se*, in blood.
3. *Yes.* Arsenic is readily recovered years after death.
4. *Yes.* Grooves on a bullet fired by a Smith and Wesson twist to the right; by a Colt, to the left.
5. *No.* The would-be suicide's stranglehold would relax when he became unconscious.
6. *No.* Death by drowning is caused by asphyxia when the windpipe is clogged with water and mucus, rather than by water in the lungs.
7. *Yes.* Footprints in fresh snow can be cast in plaster after preliminary dusting with talc and spraying with shellac.
8. *No.* Although hair may be important corroborative evidence, it alone is insufficient proof.
9. *Yes.* The serial number is punched so deeply into the molecular structure of the steel that an application of metallurgical etching fluid will make it reappear.

THE NATURE OF THE BEAST

1. Why do animals' eyes shine in the dark ?
2. Are bats 'as blind as bats' ?
3. Why are bulls particularly excited by the colour red ?
4. Are baby hedgehogs born head first so that the mother isn't injured by the quills ?
5. Can mice sing ?
6. Is it true that an elephant never forgets ?
7. Can a toad give you warts ?
8. Why do we so rarely find dead animals ?
9. Why don't sleeping birds fall off their perches ?
10. Are snakes slimy ?
11. How can fish jump up big waterfalls ?
12. Do fish sleep ?
13. Do crocodiles weep crocodile tears ?
14. Why don't spiders get snared in their own webs ?
15. Can horses sleep standing up ?

Answers on page

NATURE—FACT OR NATURE—FICTION ?

If you can answer correctly seven questions in the following quiz, your ability to distinguish nature facts from superstitious beliefs is better than that of most people; if 10 or more, your nature lore is exceptional.

1. A wild animal is more likely to attack you if you are afraid of it. *True or False ?*
2. Only the female mosquito ever bites you. *True or False ?*
3. Moss grows thickest on the north side of trees. *True or False ?*
4. A chameleon takes on the colour of the object on which it rests. *True or False ?*
5. A person who cannot hear at all is as deaf as an adder. *True or False ?*
6. Summer is warmer than winter because the earth is then nearer the sun. *True or False ?*
7. Beavers use their tails as trowels when building their dams. *True or False ?*
8. Venomous snakes are immune to their own poison. *True or False ?*
9. Horned toads squirt blood out of their eyes. *True or False ?*
10. If you cut an earthworm in two, each half will become a new worm. *True or False ?*
11. A shark must turn belly-up in order to bite. *True or False ?*
12. Elephants live to be several hundred years old. *True or False ?*
13. Squirrels have an accurate memory for the places where they have buried nuts. *True or False ?*

Answers on pega

TEASERS

1. If on February 28th you go to sleep at seven o'clock at night and you have set your alarm clock to awaken you at eight the next morning, assuming that you sleep soundly all the time, how many hours sleep will you get ?

2. Here is the beginning and ending of an everyday word. Can you fill in the middle five letters :

   Und . . . . . und ?

3. How many times can you subtract the numeral One from the numeral Twenty-five ?

4. What is the closest relation that your mother's brother's brother-in-law could be to you ?

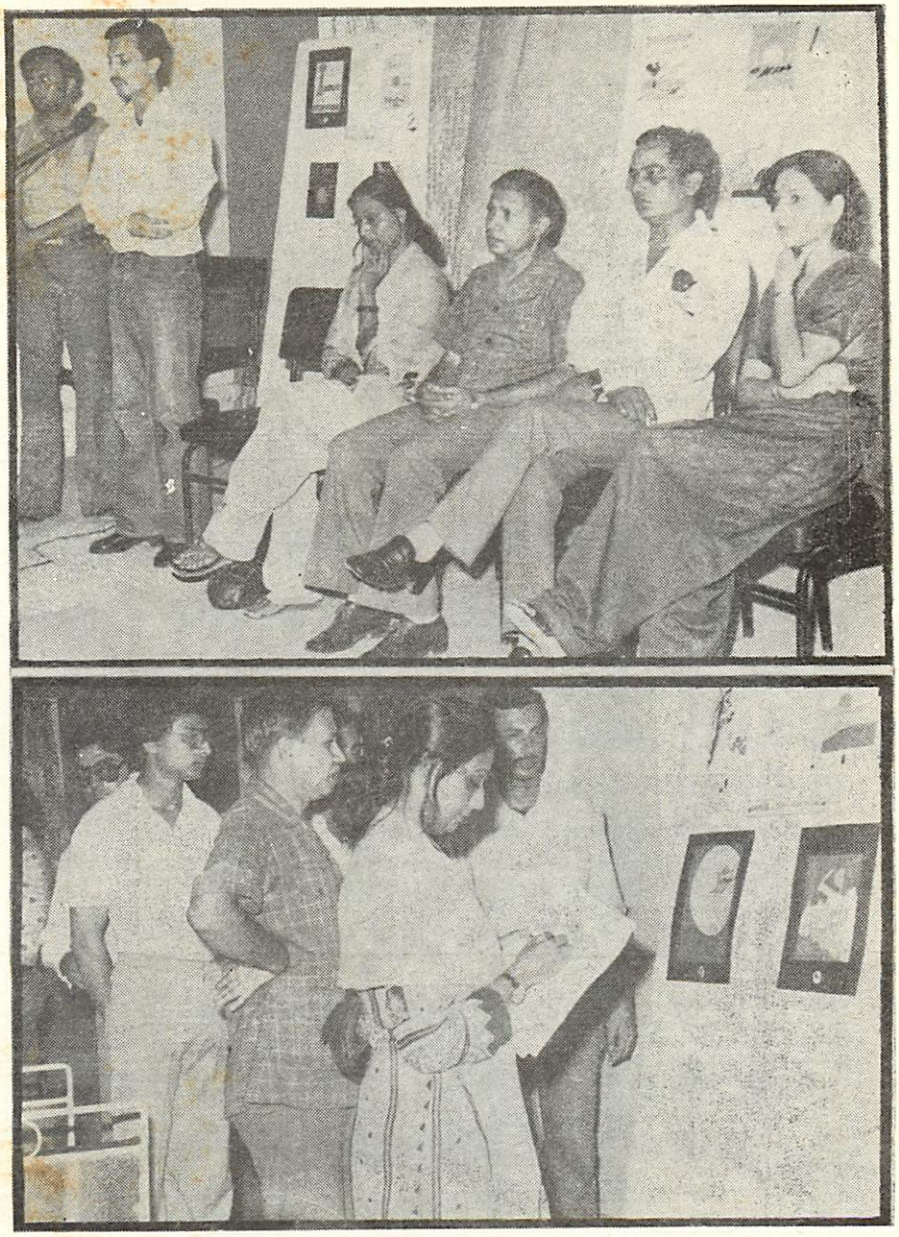
5. How is it possible for Jim to stand behind George and George to stand behind Jim—at the same time ?

6. If you went into your kitchen and found that you had left the water running in the sink and it was rapidly covering the floor, and a mop, a bucket, a dustpan and a covered floor drain were all convenient for you to reach—what would you do *first* to prevent as much further damage as possible ?

Answers on page

TITLE COVER COMPETITION

(MAGAZINE SECTION)



CONTRADICTORY PROVERBS

Great minds run in the same channel.
Fools think alike.

One man's meat is another man's poison.
Sauce for the goose is sauce for the gander.

A rolling stone gathers no moss.
A setting hen never lays.

With age comes wisdom.
Out of the mouth of babes and sucklings come all wise sayings.

Too many cooks spoil the broth.
Many hands make light work.

God helps him who helps himself.
Thou shalt not steal.

Bear ye one another's burdens.
For every man shall bear his own burden.

Seek, and ye shall find.
Curiosity killed a cat.

Nothing venture, nothing gain.
Fools rush in where angels fear to tread.

Save for a rainy day.
Tomorrow will take care of itself.

Life is what we make it.
What is to be will be.

TEASERS (ANSWERS)

1. One hour. The alarm would have gone of at eight that night.
2. *Underground.*
3. Only once. After the first time, you're subtracting from twenty-four, then twenty-three, etc.
4. Father.
5. Stand back to back.
6. Turn off the water.

THE WIDE RANGE OF HUMAN STATISTICS

MEASUREMENT	NORMAL	MAXIMUM	MIINMUM
Height	Men: 4'3"-6'7" Women: 3'11"-6'1 "	The tallest man on record was Robert Wadlow of Illinois, who stood 8'-11". He was a victim of pituitary gigantism.	The shortest person on record was a 16-inch, dwarf reported by George Buffon, a French naturalist, in the late 18th century.
Weight	Men: 8-14 stone Women: 6 -12 stone	Robert Hughes of Illinois weighed 76 stone shortly before his death in 1958.	Hopkin Hopkins, a Welsh boy who died at the age of 17, never weighed more than 17 lb.
Number of Hairs on Head	120,000 (average)	Natural blondes can have as many as 140,000.	The minimum (excluding baldness) usually occurs among natural redheads, who can have as few as 90,000.
Body Temperature	36-70°C. (97-99°F.)	At 43°C. (110°F.), fatal haemorrhages occur, and cells degenerate and die. Recovery from temperatures higher than 43°C. is extremely rare.	At 26.4°C. (79.5° F.), the heart fails. One rare exception was a girl who recovered from 16°C. (60.8°F.).
Heart beats per minute	70	In young people, during strenuous exercise, the heart may beat asoften as 270 times a minute.	55 - 60 (during sleep).
Blood Pressure	120/80 mm (at age 20)	A person with severe hypertension may develop pressure as high as 300/150—*i.e.*, 300 mm of pressure when the heart is contracted, 150 when relaxed.	Just after birth, pressure may be as low as 74/38.
Sleep Needed per day	7-9 hr (adults)	New-born babies require 18 to 20 hr. a day.	Older people may get along on as little as 5 hr. a day

Size of Babies at birth	7.3 lb (median)	The largest baby on record was a 23 -lb son born to a 7 -foot. Nova Scotian giantess, Mrs. Anna Bates, in 1879. Mr. Bates was 7'8" tall, weighed 33 stone.	The smallest baby known to have survived was a 12-oz girl born in the U.S. in 1936.
Births per Mother		A Russian peasant woman gave birth to 69 children—16 sets of twins, 7 sets of triplets and 4 sets of quadruplets. Few survived infancy.	
Child-Bearing Age	25.4 (median, 1961)	In 1863 a child was born to a 69-year-old Cincinnati woman.	In 1939 a child was born to a 5-year-old Peruvian Indian girl.

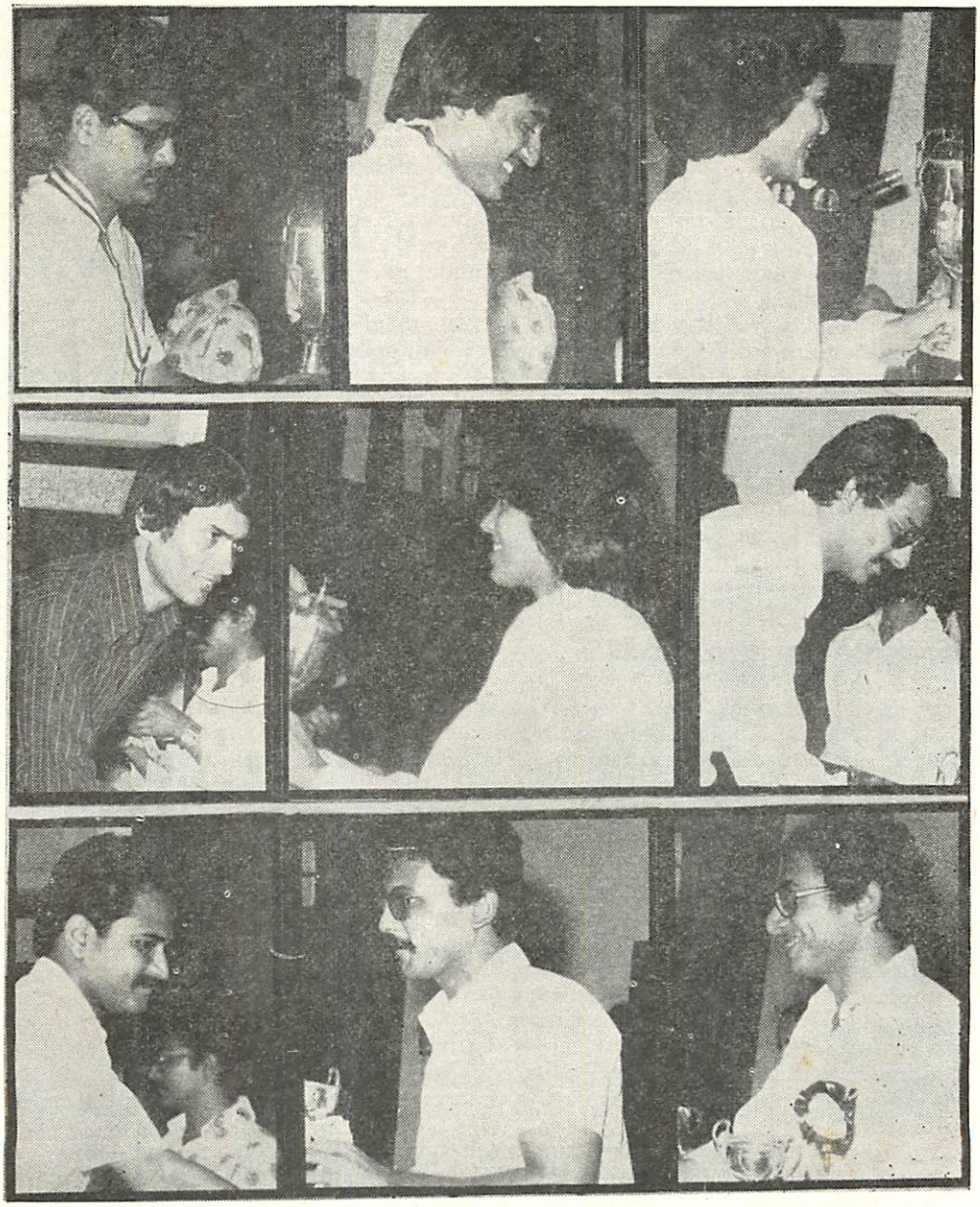
THE ENERGY SPENT BY WOMEN AND MEN (PER MINUTE)

WOMEN	CALORIES	MEN	CALORIES
Lying at Rest	.98	Lying at Rest	1.19
Standing	1.11	Standing	1.25
Office Work	1.31-1.72	Office Work	1.6
Peeling Potatoes	1.29	Peeling Potatoes	2.7
Washing Dishes	1.53	Washing Dishes	3.3
Washing and Dressing	3.3	Washing and Dressing	3.56
Walking	2.9	Walking	5.1
Making Beds	5.4	Making Beds	7

NAHEED QAZI MEMORIAL ARTS AND CRAFTS EXHIBITION

(MAGAZINE SECTION)

ANNUAL PRIZE DISTRIBUTION CEREMONY



AKBAR FAISAL
QAZI ISRAR
NAVEED BIN KAKAL

KHALIL-UR-REHMAN
DURE SAMINE
WAHAB SHEIKH

Miss NATALWALA
MASOOD JILANI
SHAHABULLAH

NATURE-FACT OR NATURE-FICTION ? *(Answers)*

1. *True.* Most savage animals are peculiarly infuriated by human terror — possibly, as some naturalists believe, because a frightened person gives off a 'scent' of fear.
2. *True.* Only the female mosquito sucks blood ; the male is content with nectar and other plant juices.
3. *False.* Moss growth depends chiefly on the exposure of the land and the direction of the prevailing winds.
4. *False.* The chameleon's colour-changes depend on temperature, emotion, health, and other factors unrelated to the chameleon's background.
5. *True.* An adder, like all other snakes, is deaf.
6. *False.* We're nearest the sun on 2nd January. We fail to get full benefit of its heat, however, because winter days are shorter, and the sun's rays are slanting.
7. *False.* The beaver employs its tail as a rudder in swimming or as a prop when standing on its hind feet.
8. *True.* Snakes are also immune to the venom of other snakes of their own species. The venom of a different species, however, can poison them.
9. *True.* The horned toad's ejection of blood, which is intended to terrify enemies, is accompanied by a popping or clicking noise.
10. *False.* The earthworm's 'head' end will grow a new tail and survive, but the 'tail' end will perish.
11. *False.* Sharks often turn over in order to attack or grip their prey more advantageously in their undershot jaws, but can bite effectively while in normal position.
12. *False.* An elephant usually shows signs of senility at 50, and a centenarian is rare.
13. *False.* Squirrels frequently forget where they hide part of their trove ; their poor memory is an important factor in the propagation of forests.

THE NATURE OF THE BEAST *(Answers)*

1. Animals' eyes don't shine ; that is, they don't give off light ont heir own. Nocturnal animals' eyes shine for the same reason as roadside reflectors. Behind their retinas is what amounts to a cluster of mirrors. The faint moonlight or starlight in which they have to do their seeing is reflected by these mirrors and thereby multiplied.
2. By no means. Bats have complex eyes, and fly with no indication of being dazzled even in the brightest sunshine.
3. They aren't. Bulls are colour-blind.
4. All placental mammals are covered at birth by membrane ; the slippery membrane round little hedgehogs makes them non-scratchy.
5. Yes. The mouse's song is a high, wiry, warbling little trill, something like a canary's. Why don't we hear it more often ? Probably, though not certainly, because mouse music is mostly of too high frequency for us to hear it. Only occasionally does part of the song fall within our auditory range.
6. Not really, of course. What *is* true is that elephants have longer memories than most animals, and retain the recollection of injuries. If an elephant has been done harm to by a man, and then sees him again years later, the beast may blaze up in renewal of hatred.
7. Toads give off a slightly irritating exudation wh ch discourages predatory animals from eat ng them, but the substance cannot cause a wart.
8. Most killed animals are eaten at once by others. Animals that die of disease or accident may be taken, depending on the part of the world, by vultures, jackals and so on. But an important part of the answer lies in the activities of sexton beetles, which can bury the body of a dead rabbit in a night, so that no trace remains.
9. A bird does not have to make a conscious effort to keep its toes curled firmly round a twig. The tendons that cause toe-curling pass round the back of a bird's ankle joint.

As soon as the weight of a bird's body bends this joint, as the bird takes its perching position, the tendons pull the toes into a tight curve, clamping the perch firmly.

10. *No.* Snakes are among the most fastidiously clean of all animals, and are as dry and inoffensive to the touch as a smooth-gark tree.

11. The biggest vertical leap any fish can make is not much more than six feet. The 'waterfalls' that fish ascend are mostly gradually slanted cascades and rapids, with more plenty of whirlpools and back eddies. Salmon, reputed to jump up vertical waterfalls 20 feet high, really indulge in a vigorous jumping take-off followed by swimming.

12. Having no eyelids, fishes' eyes are perpetually open. But you and I, even with our eyes open, can turn off our consciousness of the seen, choosing to be blind. A tired fish similarly relaxes into unconsciousness. The lidless eyes are still open, but the fish is asleep.

13. In fact, yes. In spirit, no. A crocodile hasn't mind enough to enable it to indulge in hypocrisy. It sheds tears whenever it opens its mouth to engulf a big victim and its jaws are forced far apart, just as our own eyes water when we yawn.

14. A spider's web is spun of a dry and not-very-elastic sort of thread. As its final touch, the spider goes over it again, spinning a new kind of thread, gummy and sticky. It breaks its original spirals and replaces them with this. This is the spider's web that catches prey, the viscid web-stuff that the spider carefully avoids after spinning. And the spider always leaves a 'free zone' in the gummy network—a safe area, where it can go scuttling with no danger of being entangled.

15. Yes, and so can many other big beasts, including elephants. When a horse stands stock-still and relaxes, its leg joints automatically lock to support it. A recumbent horse sleeps only lightly and fitfully, and rarely stays lying down long. Its heavy weight, pressed against the ground, makes the horse sore and cramped, and makes its breathing laborious.

A DREAM

Forget me,
I was a dream

I saw you,
I liked you,
and then soon realised,
it will be
a short story,
bound to end,
any sad tomorrow

Nobody saw,
the tears in my eyes,
my heavy heart,
my sleepless nights

Your ring on my finger,
shall remind me of you forever,

But, forget me,
I was a dream.

QAISER JAMIL
Year 4th

COMPETITION

If you really have competitive spirit, it is not the men and women with who you work that you compete with. Your real competitor is you. Instead of wasting energy wondering what he or she will do or what someone else's reactions will be, you continually try to do yourself one better. You look for challenges that give you more than financial reward. You try to do things that are socially worthwhile and make life better for someone else. And, if your chief competitor is yourself, you get along a lot better with everyone else.

I & THE OTHER FELLOW

Isn't funny, when the other fellow takes a long time to do something, he's slow.
When I take a long time to do something, I'm thorough.
When the other fellow doesn't do it, he's lazy.
When I don't do it, I'm busy.
When the other fellow does it without being told, he's overstepping his bounds.
When I go ahead and do it without being told, that's initiative.
When the other fellow states his opinion strongly he's bullheaded.
When I state my opinion strongly, I'm firm.
When the other fellow overlooks a few rules of etiquette, he's rude.
When I skip a few rules of etiquette, I'm doing my own thing.

HOW GOOD A DETECTIVE WOULD YOU BE ?

Here is a chance to test your ability as a detective with problems taken from the files of actual homicide cases.

1. Would you expect to find that the fingerprints of identical twins match ? *Yes or No ?*
2. The slayer, slightly wounded, left his or her blood spattered at the scene of the crime. Can science ascertain the slayer's sex from the blood spots ? *Yes or No ?*
3. The widow is suspected of having poisoned her husband, who died three years ago, with arsenic. Can this be determined if the body is exhumed ? *Yes or No ?*
4. The bullet is removed from the victim's body, but the revolver cannot be found. Is it possible to tell from the bullet alone whether the weapon was a Colt or Smith and Wesson revolver ? *Yes or No ?*
5. From all indications, the circus strong man committed suicide by choking himself to death. Is this possible ? *Yes or No ?*
6. When the body was brought to the lake surface, there was virtually no water in the lungs. Does this prove that death took place before the body was flung into the water ? *Yes or No ?*
7. You have just come across suspicious footprints in fresh snow, but they will soon melt. Can plaster casts be made of them ? *Yes or No ?*
8. In the victim's clenched fist is a srand of hair from the killer's head. Can the killer be positively identified from that alone ? *Yes or No ?*
9. The manufacturer's serial number had been filed completely off the pistol found at the scene of the murder. Can this identification be restored ? *Yes or No ?*

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THE MYSTERIOUS PLACEBO

HOW THE MIND HELPS MEDICINE WORK

NORMAN COUSINS

Over long centuries, doctors have been educated by their patients to observe the prescription ritual. Most people seem to feel their complaints are not taken seriously unless they are in possession of a little slip of paper. To the patient, a prescription is a certificate of assured recovery. It is the doctor's IOU that promises good health. It is the psychological umbilical cord that provides a nourishing and continuing connection between physician and patient.

The doctor knows that it is the prescription slip itself, even more than what is written on it, that is often the vital ingredient for enabling a patient to get rid of whatever is ailing him. Drugs are not always necessary. Belief in recovery always is. And so the doctor may prescribe a placebo in cases where reassurance for the patient is far more useful than a famous-name pill three times a day.

This strange-sounding word *placebo* is pointing medical science straight in the direction of something akin to a revolution in the theory and practice of medicine. The study of the placebo is opening up vast areas of knowledge about the way the human body heals itself and about the mysterious ability of the brain to order biochemical changes that are essential for combating disease.

The word *placebo* comes from the Latin verb meaning "to please." A placebo in the classical sense, then, is an imitation medicine — generally an innocuous milk-sugar tablet dressed up like an authentic pill — given more for the purpose of placating a patient than for meeting a clearly diagnosed organic need. The placebo's most frequent use in recent years, however, has been in the testing of new drugs. Effects achieved by the preparation being tested are measured against those that follow the administration of a "dummy drug" or placebo.

For a long time, placebos were in general disrepute with a large part of the medical profession. The term, for many doctors, had connotations of quack remedies. There was also a feeling that placebos were largely a shortcut for some practitioners who were unable to take the time and trouble to get at the real source of a patient's malaise.

Today, however, the once lowly placebo is receiving serious attention from medical scholars. Medical investigators have found substantial evidence showing that the placebo not only can be made to look like a powerful medication but can actually act like a medication. They regard it not just as a physician's psychological prop in the treatment of certain patients but as an authentic therapeutic agent for altering body chemistry and for helping to mobilize the body's defenses in combating disorder or disease.

While the way the placebo works inside the body is still not completely understood, some placebo researchers theorize that it activates the cerebral cortex, which in turn switches on the endocrine system in general and the adrenal glands in particular. Whatever the precise pathways through the mind and body, enough evidence already exists to indicate that placebos can be as potent as — and sometimes more potent than — the active drugs they replace.

It is obviously absurd to say that doctors should never prescribe pharmacologically active drugs. There are times when medication is absolutely essential. But the good doctor is

always mindful of its power. No greater popular fallacy exists about medicine than that a drug is like an arrow that can be shot at a particularized target. Its actual effect is more like a shower of porcupine quills. Any drug — or food, for that matter — goes through a process in which the human system breaks it down for use by the whole.

There is almost no drug, therefore, that does not have some side effects. And the more vaunted the prescription — antibiotics, cortisone, tranquilizers, antihypertensive compounds, anti-inflammatory agents, muscle relaxers — the greater the problem of adverse side effects. Drugs can alter or rearrange the balances in the bloodstream. They can cause the blood to clot faster or slower. They can reduce the level of oxygen in the blood. They can prod the endocrine system, increase the flow of hydrochloric acid to the stomach, slow down or speed up the passage of blood through the heart, impair the bloodmaking function of the body by depressing the bone marrow, reduce or increase blood pressure, or affect the sodium-potassium exchange, which has a vital part in the body's chemical balance.

The problem posed by many drugs is that they do these things apart from the purpose intended by the physician. There is always the need, therefore, for the doctor to balance off the particularized therapy against the generalized dangers. The more powerful the drug, the more precarious his balancing act.

Complicating the doctor's dilemma about drugs is the fact that many people tend to regard drugs as though they were automobiles. Each year has to have its new models, and the more powerful the better. Too many patients feel the doctor is lacking unless a prescription calls for a new antibiotic or other miracle drug that the patient has heard about from a friend or read about in the press.

Because of the very real dangers associated with powerful new drugs, the prudent modern physician takes full advantage of his freedom of choice, specifying potent drugs when he feels they are absolutely necessary, but disregarding them, prescribing placebos or nothing at all, when they are not.

A hypothetical illustration of how a placebo works is the case of a young businessman who complains of severe headaches and abdominal pains. After listening carefully to the patient describe not only his pains but his problems, the physician decides that the businessman is suffering from a common disease of the 20th century: stress. The fact that stress doesn't come from germs or viruses doesn't make its effects any the less serious. Apart from severe illness, it can lead to alcoholism, drug addiction, suicide, family breakdown, joblessness. In extreme form, stress can cause symptoms of "conversion hysteria" — a malaise described by Jean Charcot, Freud's teacher. The patient's worry and fears are converted into genuine physical symptoms that can be terribly painful or even crippling.

In sympathetic questioning, the doctor learns that the businessman is worried about the ill health of his pregnant wife and about newly hired young people in his office who seem to him to be angling for his job. The doctor recognizes that his first need is to reassure the patient that nothing is fundamentally wrong with his health. But he is careful not to suggest in any way that the man's pains are unreal or not to be taken seriously. Patients tend to think they have been accused of having imagined their symptoms, of malingering, if their complaint is diagnosed as being psychogenic in origin.

The doctor knows that his patient would probably be uncomfortable without a prescription. But the doctor also knows the limitations of medication. He is reluctant to prescribe tranquilizers because of what he believes would be adverse effects in this particular case. He knows that aspirin would relieve the headaches but would also complicate the gastro-intestinal problem, since even a single aspirin tablet can cause internal bleeding.

He rules out digestive aids because he knows that the stomach pains are induced by emotional problems. So the doctor writes a prescription that, first of all, cannot possibly harm the patient and, secondly, might clear up his symptoms. The doctor tells the businessman that the particular prescription will do a great deal of good and that he will recover completely. Then he takes time to discuss with his patient possible ways of meeting the problems at home and at the office.

A week later the businessman telephones the doctor to report that the prescription has worked wonders. The headaches have disappeared and the abdominal pains have lessened. He is less apprehensive about his wife's condition following her visit to the obstetrician, and he seems to be getting along better at the office. How much longer should he take the medicine?

The doctor says that the prescription will probably not have to be refilled but to be sure to telephone if the symptoms recur.

The "wonder" pills, of course, were nothing more than placebos. They had no pharmacological properties. But they worked as well as they did for the businessman because they triggered his body's own ability to right itself, given reasonable conditions of freedom from stress and his complete confidence that the doctor knew what he was doing.

Studies show that up to 90 percent of patients who reach out for medical help are suffering from self-limiting disorders well within the range of the body's own healing powers. The most valuable physician — to a patient and to society — knows how to distinguish effectively between the large number of patients who can get well without heroic intervention and the much smaller number who can't. Such a physician loses no time in mobilizing all the scientific resources and facilities available when they are necessary, but he is careful not to slow up the natural recovery process of those who need his expert reassurance even more than they need his drugs. He may, for such people, prescribe a placebo — both because the patient feels more comfortable with a prescription in his hand and because the doctor knows that the placebo can actually serve a therapeutic purpose.

The placebo, then, is not so much a pill as a process. The process begins with the patient's confidence in the doctor and extends through to the full functioning of his own immunological and healing system. The process works not because of any magic in the tablet but because the human body is its own best apothecary and because the most successful prescriptions are those filled by the body itself.

Berton Roueche, a medical reporter, wrote an article in 1960 in which he said that the placebo derives its power from the "infinite capacity of the human mind for self-deception." This interpretation is not held by placebo scholars. They believe that the placebo is powerful not because it "fools" the body but because it translates the will to live into a physical reality. And they have been able to document the fact that the placebo triggers specific biochemical changes in the body. The fact that a placebo will have no physiological effect if the patient knows it is a placebo only confirms something about the capacity of the human body to transform hope into tangible and essential biochemical change.

The placebo is proof that there is no real separation between mind and body. Illness can begin in the mind and affect the body, or it can begin in the body and affect the mind, both of which are served by the same blood-stream. Attempts to treat most mental diseases as though they were completely free of physical causes and attempts to treat most bodily diseases as though the mind were in no way involved must be considered archaic in the light of new evidence about the way the human body functions.

Placebos will not work under all circumstances. The chances of successful use are believed to be directly proportionate to the quality of a patient's relationship with a doctor. The doctor's attitude toward the patient; his ability to convince the patient that he is not being taken lightly; his success in gaining the full confidence of the patient — all these are vital factors not just in maximizing the usefulness of a placebo but in the treatment of illness in general. In the absence of a strong relationship between doctor and patient, the use of placebos may have little point or prospect. In this sense, the doctor himself is the most powerful placebo of all.

A striking example of the doctor's role in making a placebo work can be seen in an experiment in which patients with bleeding ulcers were divided into two groups. Members of the first group were informed by the doctor that a new drug had just been developed that would undoubtedly produce relief. The second group was told by nurses that a new experimental drug would be administered, but that very little was known about its effects. Seventy percent of the people in the first group received significant relief from their ulcers. Only 25 percent of the patients in the second group experienced similar benefit. Both groups had been given the identical "drug" — a placebo.

How much scientific data has been accumulated on placebo efficacy? The medical literature in the past quarter century contains an impressive number of cases :

* The late Dr. Henry K. Beecher, noted anaesthesiologist at Harvard University, considered the results of 15 studies involving 1,082 patients. He discovered that across the broad spectrum of these tests, 35 percent of the patients consistently experienced "satisfactory relief" when placebos were used instead of regular medication for a wide range of medical problems, including severe postoperative wound pain, seasickness, headaches, coughs and anxiety.

* Dr. Stewart Wolf wrote that placebo effects are "neither imaginary nor necessarily suggestive in the usual sense of the word." His comments were connected to the results of a test in which a placebo induced eosinophilia — a blood condition in which specialized blood cells called eosinophils accumulate beyond their normal numbers and circulate throughout the system. Wolf also reported a test by a colleague in which a placebo reduced the amount of fat and protein in the blood.

* When a patient suffering from Parkinson's disease was given a placebo but was told he was receiving a drug, his tremors decreased markedly. After the effects of the placebo wore off, the same substance was put into his milk without his knowledge. The tremors reappeared.

* During a large study of mild mental depression, patients who had been treated with sophisticated stimulants were taken off the drugs and put on placebos. The patients showed exactly the same improvement as they had gained from the drugs.

* When a group of patients were given a placebo in place of an antihistamine, 77.4 percent reported drowsiness, which is characteristic of antihistamine drugs.

* In a study of postoperative wound pain by Beecher and Dr. Louis Lasagna, a group of patients who had just undergone surgery were alternately given morphine and placebos. Those who took morphine immediately after surgery registered a 52 percent relief factor; those who took the placebo first, 40 percent. The placebo was 77 percent as effective as morphine.

* Eighty-eight arthritic patients were given placebos instead of aspirin or cortisone. The number of patients who benefited from the placebos was approximately the same as the number benefiting from the conventional arthritic drugs.

* A group of medical students were invited to participate in an experiment they were told was for the purpose of testing the efficacy of a depressant and a stimulant. They were informed in detail of the effects, beneficial and adverse, that could be expected from these drugs. They were not told that both "stimulants" and "depressants" were actually placebos. More than half the students exhibited specific physiological reactions to the placebos. The pulse rate fell in 66 percent of the subjects. A decrease in arterial pressure was observed in 71 percent of the students. Adverse side effects included dizziness, abdominal distress and watery eyes.

If the placebo can do a great deal of good, it can also do a great deal of harm. The cerebral cortex stimulates negative biochemical changes just as it does positive changes. Beecher stressed as long ago as 1955 in the *Journal of the American Medical Association* that placebos can have serious toxic effects and produce physiological damage. A case in point is a study of the drug mephenesin's effect on anxiety. In some patients, it produces such adverse reactions as nausea, dizziness and palpitation. When a placebo was substituted for mephenesin, it produced identical reactions in an identical percentage of doses. One of the patients, after taking the placebo, developed a skin rash that disappeared immediately after placebo administration was stopped. Another collapsed in allergic shock when she took the drug. A third experienced abdominal pain and a build-up of fluid in her lips within 10 minutes after taking the placebo — before she had even taken the drug.

Some people are more susceptible to placebo therapy than others. Why? It used to be assumed that there was some correlation between high suggestibility and low intelligence, and that people with low IQs were therefore apt to be better placebo subjects. This theory was exploded by Dr. H. Gold at the Cornell Conference on Therapy in 1946. The higher the intelligence, said Dr. Gold on the basis of his extended studies, the greater the potential benefit from the use of placebos.

Inevitably, the use of the placebo involves contradictions. A good patient-doctor relationship is essential to the process, but what happens to that relationship when one of the partners conceals important information from the other? If the doctor tells the truth, he destroys the base on which the placebo rests. If he doesn't tell the truth, he jeopardizes a relationship built on trust.

This dilemma poses a question involving medical ethics: When is a physician justified in not being completely candid with the patient? In terminal cases, the doctor may think it unwise and even irresponsible to add desolation to pain; and so he skirts around the truth. What about drug addiction? Placebos are now being used by some doctors as a substitute for hard drugs in a systematic attempt to wean their patients away from addiction. In these cases, the patient exhibits the same response to an innocent injection of saline solution as he does to heroin or cocaine. The body's raging desire for the drug is appeased — but it doesn't pay the physiological price of the addictive poisons. Should doctors withhold such treatment because they feel it is a breach of medical ethics not to inform the patient about the true nature of the treatment?

In an even more fundamental sense, it may be asked whether it is ethical — or, what is more important, wise — for the doctor to nourish the patient's mystical belief in medication. An increasing number of doctors believe they should not encourage their patients to expect prescriptions, for they know how easy it is to deepen the patient's psychological and physiological dependence on drugs — or even on placebos, for that matter. Such an approach

carries with it the risk that the patient will go across the street to another doctor; but enough doctors break with ritual in this respect, there is hope that the patient himself will regard the prescription slip in a new light. Dr. Richard C. Cabot once wrote that ',the patient has learned to expect a medicine for every symptom. He was not born with that expectation....It is we physicians who are responsible for perpetuating false ideas about disease and its cure."

Another problem arises because many doctors believe not enough is known about the effects of the placebo on the structure and functions of the body's nervous system. Should the benefits of the placebo be deferred until such time as more answers are obtained?

Certainly the medical profession is not without precedent on the use of modalities or drugs about which full knowledge is still absent. Electric shock is being used in the treatment of mental disease even though doctors don't know exactly what happens inside the brain when it is jolted by high voltage. The most widely used drug in the world is aspirin, yet how it reduces inflammation is a mystery.

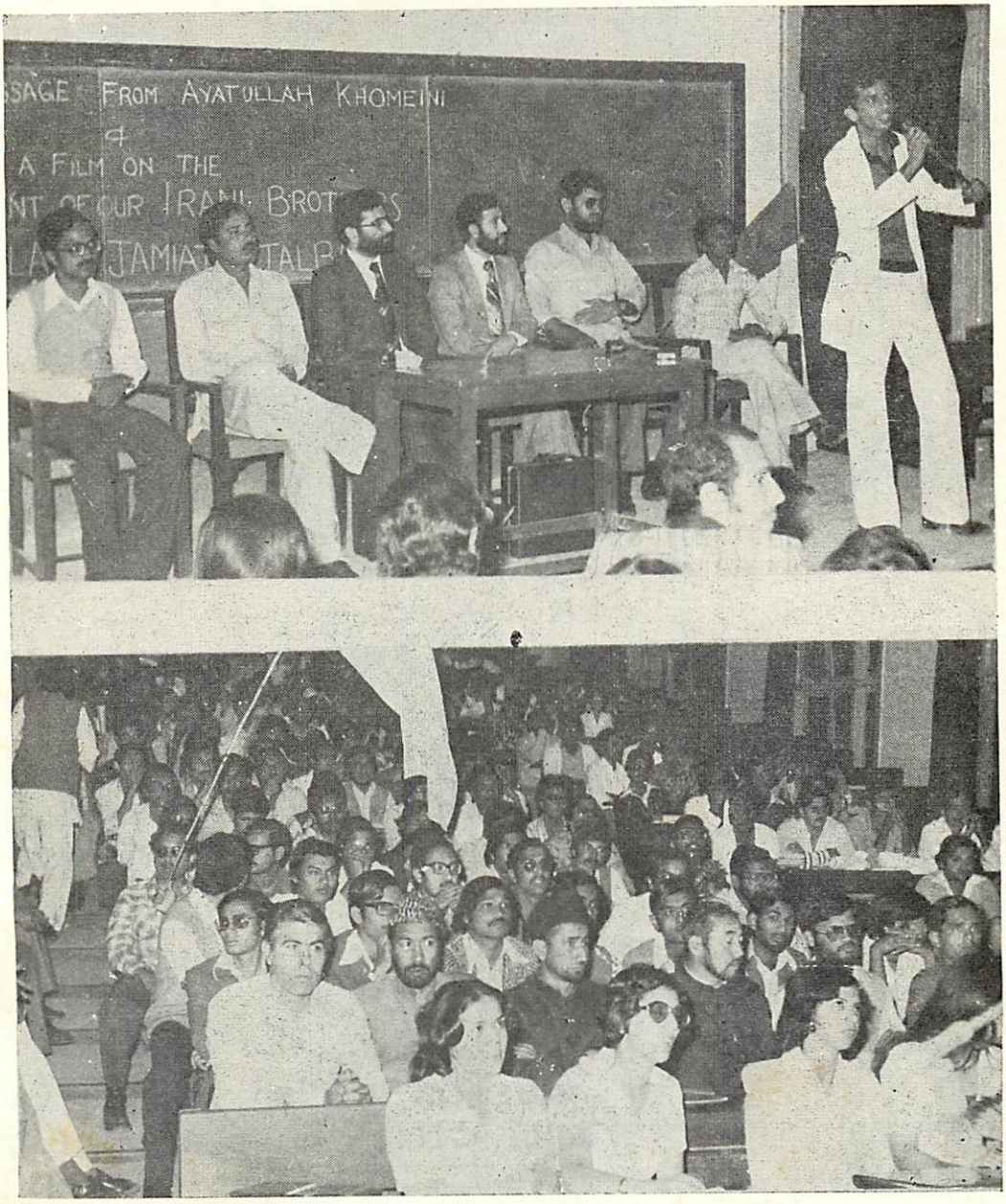
True, not everything is known about the placebo. But enough is known to put its continued study high on the medical and human agenda. Knowing more about the gift of life is not merely a way of satisfying random curiosity. In the end, it is what education is all about.

It is doubtful whether the placebo — or any drug for that matter — would get very far without a patient's robust will to live. For the will to live is a window on the future. It opens the individual to such help as the outside world has to offer, and it connects that help to the body's own capability for fighting disease. It enables the human body to make the most of itself. The placebo has a role to play in transforming the will to live from a poetical conception to a physical reality and a governing force.

In the end, the greatest value of the placebo is what it can tell us about life. Like a celestial chaperon, the placebo leads us through the uncharted passageways of mind and gives us a greater sense of infinity than if we were to spend all our days with our eyes hypnotically glued to the giant telescope at Mount Palomar. What we see ultimately is that the placebo isn't really necessary and that the mind can carry out its difficult and wondrous missions unprompted by little pills. The placebo is only a tangible object made essential in an age that feels uncomfortable with intangibles, an age that prefers to think that every inner effect must have an outer cause. Since it has size and shape and can be handheld, the placebo satisfies the contemporary craving for visible mechanisms and visible answers. But the placebo dissolves on scrutiny, telling us that it cannot relieve us of the need to think deeply about ourselves.

The placebo, then, is an emissary between the will to live and the body. But the emissary is expendable. If we can liberate ourselves from tangibles, we can connect hope and the will to live directly to the ability of the body to meet great threats and challenges. The mind can carry out its functions and powers over the body without the illusion of material intervention. "The mind," said John Milton, "in its own place, and in itself can make a heaven of hell, and a hell of heaven."

Fahimul Hasan, on behalf of the Union Welcoming Envoys of Ayat-ullah Khomini



INFERTILITY

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Definition. Failure to conceive after two years of regular married life.

Incidence. 7-12% of all marriages.

Cause in Female	50%
Cause in Male	25%
Cause in Both	25%

Failure to conceive during two years of adequate opportunity is justified for full investigation. If the man is over 40 years or woman over 30 years, then the investigation should be done after one year as on an average normal couple practising coitus regularly take an average of 6-7 months to achieve pregnancy. If a woman is suffering from a disability such as heart disease, hypertension, nephritis or from a communicable disease which may contra-indicate pregnancy then the woman should not be encouraged for having conception, till such diseases are under control.

CAUSES. The causes may be : (a) Physiological (b) General (Psychological) (c) Pathological

Physiological Causes :

In males the infertility (physiological) period is during childhood before puberty and in old age.

In females it is before puberty, soon after puberty, during pregnancy, during lactation and after menopause.

General Causes :

General causes are mainly coital errors. Ovulation time is far from being predictable and conception is more likely if female genital tract is regularly replenished with an ample supply of active sperms. Therefore sometimes ignorance of coital approach leads to infertility.

Other psychological causes are: (a) Apareunia; (b) Dyspareunia; (c) Patient's attitude towards sex (d) Something unpleasant or unhealthy in past; and (e) Anxiety and apprehension.

Pathological Causes :

Male : The causes may be due to: (1) Production failure of sperm; (2) Sperm supply line failure. (3) Failure to deposit sperms in the posterior fornix. (4) Secretions inhibiting sperms.

1. PRODUCTION FAILURE. Failure to produce spermatozoa in sufficient number and with the capacity to fertilize. Reasons can be :

(i) Incomplete development of testes.
(ii) Late descent or non-descent of testes.
(iii) Orchitis due to mumps.
(iv) Damage to testes from operation or accident.
(v) Exposure of testes to heat reduces spermatogenesis.
(vi) Varicoele, as it raises scrotal temperature.
(vii) Diseases of testes *e.g.*, tumours, syphilis, T.B.

2. Supply Line Obstruction. Obstruction may be due to :

(a) Accidents or operation *e.g.*, herniorhaphy.
(b) Infections *e.g.*, gonorrhea (epididymitis).
(c) Congenital absence of vas.

3. Failure to Deposit Spermatozoa. This failure may be due to

(a) Impotence.
(b) Premature ejaculation.
(c) Abnormalities of penis *e.g.*, hypospadias.
(d) Retrograde ejaculation into the bladder, it is usually after prostatectomy.

4. Secretion, Inimical to Sperm : following Prostatitis or Seminal vesiculitis.

INVESTIGATIONS FOR MALE

History. Very carefully history should be taken, following questions should particularly be asked :

Age, occupation, previous marriages; duration of marriage and use of contraceptives. If partners remained separated for significant time, previous illness; any operative procedure near genital tract, orchitis, gonorrhoea in the past; responsible for pregnancy in another woman, about coitus, frequency, whether normal and painless; onset of puberty; growth of hair and frequency of shaving.

Examination. (a) General (b) Local

Particularly look for : (i) abnormalities of penis; (ii) size and consistency of penis; (iii) presence of the vas; (iv) varicocele, hydrocele, hernia (v) any prostatic abnormality and (vi) scar of previous operations.

Special Investigations :

Semen Analysis. The specimen is collected in dry glass container usually by masturbation and is looked for : (a) volume of fluid (b) number of spermatozoa (c) motility of spermatozoa and (d) morphology of spermatozoa.

Chemical Analysis. If chemical analysis of seminal fluid reveals absence of fructose, it indicates that block is at or below the level of ejaculatory duct. If retrograde ejaculation is suspected then urine is collected immediately after orgasm and examined for spermatozoa.

Testicular biopsy. This is particularly useful when it is not clear whether azospermia is the result of failure of spermatogenesis or of an obstruction between testes and penis.

Treatment

Treatment is of the cause. *Impotence and premature ejaculation may be treated by Psychotherapy *If faulty spermatogenesis, then correction of general health, obesity etc. *warm underclothes to be avoided while cold baths are encouraged. *While surgically treating varicocele care should be taken not to injure arterial supply to testes. *Administration of Vit. E, Vit. B12, small doses of thyroid and folic acid may improve spermatogenesis. *Administration of FSH for inactive seminiferous tubules. *Obstruction of epididymis or vas causing azospermia is treated surgically by short circuit operation. *Artificial insemination is strongly recommended if all other methods fail to treat infertility of male.

Pathological Causes. FEMALE. There are four main causes:

1. *NO OVULATION.* This may be due to :

(a) Ovarian atrophy or hypoplasia (b) metropathia hemorrhagica (c) congenital absence of oophrons (d) Turner's syndrome (aplasia); (e) Hormone deficiency (f) radiations (g) surgical removals (h) inflammatory damages and (i) Stein Leventhal syndrome.

2. *PASSAGE CAUSES.* They may be : (a) Congenital (b) Acquired.

Congenital..... (i) stenosed cervix; (ii) abnormality of uterus; (iii) hypoplastic tubes.
Acquired..... (i) blockage of fallopian tube; (ii) tuberculous salpingitis; (iii) spasm at utero-tubal junctions.

3. *SECRETIONS INHIBITORY TO SPERMS.* *chronic cervictis *vaginitis *cervical mucus hostility.

4. *ENDOMETRIUM NOT RECEPTIVE TO FERTILIZED OVUM.*

(i) Tuberculous endometritis; (ii) Fibroids (iii) Asharman's syndrome (I/U adhesions).

INVESTIGATIONS

History : History should be taken very carefully with particular reference to : age, puberty onset age; frequency of coitus; menstrual history; general diseases which are chronic in origin *e.g.*, tuberculosis, diabetes; any operative procedure on pelvis or lower abdomen; family history.

Examination This is : (a) General (b) Local

General examination : One must look for general appearance, look, height and build. Secondary sex characters which include distribution of pubic and axillary hair and development of breasts.

Local examination : Examination of external genitalia *i.e.* vulva and vagina; examination of neck glands.

Special Investigations. 1. For Ovulation

(i) Regular menstrual period. If regular menses then 99% chances are that patient is ovulating; (ii) painful menses (dysmenorrhea) more chances of ovulatory periods (iii) ovula-

tory pain which patient feels on the sides of abdomen at the time of ovulation; (iv) vaginal discharge, during 14th, 15th and 16th day of menstrual cycle is due to ovulatory discharge (v) Mastalgia : Breast pain associated with vascular congestion confirms ovulation (vi) Test for cervical mucus : (a) Ferning's test. It is done every 3rd day after menses and it is negative during secretory phase.

(b) Spin Berkit test : Positive during estrogenic phase—negative during secretory phase.

(vii) Basal Body Temperature. This should be measured for at least three cycles at optimum rest early in the morning under identical conditions.

(viii) Vaginal cytology. Vaginal cells are flat during estrogenic phase while in progesteronic phase margins of the cells are turned up like envelops.

(ix) Endometrial biopsy. This can be performed in outdoor with the help of Sherman's biopsy curette.

(x) Hormone assay. *Urine *Blood

Daily estimation of estrogen, progesteron is done. Estrogen rises at peak with ovulation. Pregnandiol rate is increased in second half of cycle.

(xi) Laparoscopy. Direct examination of oophoron for corpus luteum.

2. For Tubal Patency Test,. These tests are done 3-10 days after menstrual period so as to take no risk of disturbing fertilized ovum. These tests are :

(a) Insufflation of tubes with CO_2, Air. CO_2 or air is injected with cone shaped cannula through cervix and uterus to see that the gas passes to abdominal cavity and reading is noted by a needle on kymograph. To ensure that the gas has passed the tubes, following methods are adopted : (i) auscultation of the iliac fossa to hear the hissing sound of gas; (ii) patient feels pain when gas irritates diaphragm (shoulder pain); (iii) radiography helps to see gas beneath diaphragm.

DANGERS : (i) immediate pain with collapse and vomiting; (ii) embolism, therefore air is not used nowadays and only CO^2 is used which dissolves in blood and lessens danger of embolism; (iii) peritoneal reaction and infection; (iv) abortion; and (vi) generalized sensitivity reactions to chemicals.

Contraindications. *During menses *immediately before and after menses *after curettage *when tuberculosis of genital tract is suspected *during pregnancy *infection of lower genital tract.

(b) *Hysterosalpingography.* This method includes injecting of non-irritant radio opaque material usually iodine throuth cervix into uterus and tubes. Procedure is usually conducted on x-ray table in radiology department.

(c) *Visual Patency Test.* This test may be:

Direct — *e.g.* Laparotory. Indirect — *e.g.* according to route; peritoneoscopy, leproscopy, culdoscopy. There are certain other tests to be carried out if there seems no apparent abnormality with ovulation and tubes.

3. Sperm Invasion Test on Cervical Mucus. At ovulation time cervical mucus is taken from the patient on a glass slide alongside a specimen of semen to study its invasion by spermatozoa microscopically.

4. Post Coital Test. Microscopic examination of muscus removed from cervix 6-12 hours after coitus to see preserved number of spermatozoa and their motility and activity.

Treatment. Treatment is according to cause. However it may be classified as :

1. General. Reassurance *correction of coital difficulties *correction of general ill health.

2. Medical. (a) Hormone therapy. It is given when proved that there is no ovulation (b) antispasmodic for uterotubal spasm; and (c) treatment of vaginitis, cervicitis etc.

3. Surgical. Surgery should be performed on women less than 35 years.

(a) Dilatation of cervix, tubal insufflation and hysterosalpingography besides being diagnostic aids, are also of therapeutic value sometimes.
(b) Reconstruction operation of tubes. When blockage is caused by :

(i) Surgical injury; (ii) previous pelvic peritonitis (iii) peritubal adhesion; and (iv) mild gonococcal infection.

Tubal Plastic Operation

(a) Salpingolysis. Separation of peritubal and periovarian adhesion. Pregnancy rate after operation 30-40%.
(b) Reimplantation of tube. Excision of damaged isthmus with implantation of remaining healthy part, it is followed by pregnancy in 10-20% cases.
(c) Salpingostomy. Creation of new stoma in outer end of completely closed tube.
(d) Implantation of ovary into uterus. (Este's Operation). When it is impossible to restore tubal patency then ovary is stitched in uterine wall with its surface exposed to uterine cavity.
(e) Sometimes correction of uterine position is worthwhile for curing infertility in cases where no other abnormality is detected except retroverted uterus.

Remember this symbol-
the symbol that separates the
best from the rest-
This symbol stands for

Brooke Bond

Tea setters of the world

IAL-BB-2-76

IS MODERN MEDICINE DANGEROUS?

By LEWIS THOMAS

Attitudes toward the medical profession range from awed respect to deep suspicion. It was not surprising, therefore, that a recent book attacking contemporary medicine should have provoked a good deal of attention and controversy. Here a noted physician and medical researcher considers this latest critique and finds that its errors of judgment exceed its insights.

Formerly chairman of the department of pathology at Yale University, Dr. Thomas is now president of the Memorial Sloan-Kettering Institute for Cancer Research in New York City. He won the National Book Award in 1975 for his collection of essays, *The Lives of a Cell : Notes of a Biology Watcher.* **His article is reprinted from** *The New York Review of Books.*

As a physician, I've had a hard time with Ivan Illich's new book *Medical Nemesis : The Expropriation of Health* but not, as you might be thinking, because of wincing or hurt feelings at all the harsh things Ivan Illich wants to say about contemporary medicine. Indeed, most of his arguments, taken singly, are not all that bad, or all that wrong. It is possible to read the whole book through, nodding much of the time in general agreement with one point after another. The hard part comes when it is finished, thousand-odd footnotes and all, and you try to figure out what Illich wants to have done about it.

The footnotes are impressive at first sight, occupying in fine print at least a third of the book, and symbolizing scholarship, rigor, and a firm grasp of the subject. They give the reader rather more confidence than he may actually be earning from the book, and there is, regrettably, no footnote to the footnotes to suggest how extraordinarily selective they are.

If, for instance, you'd like to look further into the literature of medicine in order to find out what, if anything, medicine is really good at, you'll find no help in the fine print. You will find no reference to Alexander Fleming or Howard Florey or Selman Waksman — who were responsible for the early antibiotics — or George Minot and George Whipple, who devised the liver treatment for pernicious anemia, or John Enders, whose work helped produce both the polio vaccine and the measles vaccine, or even Jonas Salk or Albert Sabin, who perfected the polio vaccine. No Sir William Osler, the doctor's doctor. Walter Cannon is mentioned, in a footnote, not for his great work in physiology but only because of something he once wrote about voodoo death. Robert Koch and Rudolf Virchow are in footnotes, but not because of their scientific work, only because they helped to compound what Illich presumes to be a generally false epistemology of disease by launching, respectively, medical microbiology and pathology.

This could make for annoying reading, if you were misled at the outset, as you might well be, into expecting any sort of balanced appraisal of contemporary medicine. This is not Illich's intention, and once that is clear, the annoyance wears away.

The Perils of Medical Care

There's a lot to agree on, when Illich gets down to pounding out his arguments. Everyone knows that modern medicine can do harm when used unwisely and excessively. Iatrogenic illnesses—those caused by treatment itself—are a real problem. There is too much unnecessary surgery done, and (probably a more serious matter) too much unnecessary

medicine. It is the scale of the problem that is arguable, and Illich argues only the one extreme side : health care has been turned into a "sick-making enterprise" :

> *The pain, dysfunction, disability and anguish resulting from technical medical intervention now rival the morbidity due to traffic and industrial accidents and even war-related activities, and make the impact of medicine one of the most rapidly spreading epidemics of our time.*

There is some overkill here, or at least overmaim. Does Ivan Illich really mean that iatrogenic illnesses (caused by medical treatment) match in incidence and severity the deaths and permanent crippling injuries of all the country's auto accidents ? And industrial accidents ? *And* those of the Vietnam war ? Or is he using the term morbidity very carefully here, and simply calculating the total *number* of iatrogenic episodes (which could be a very large number if you include all the transient skin rashes and mild fevers due to allergic reaction, especially to antibiotics), and then matching this number against the total injuries (not deaths) caused by cars, industries, and the car ?

But this would be grossly unfair ; one cannot really compare a rash to paraplegia, nor can it be stated so flatly that iatrogenic disease is worse than war without offering some firm facts about comparative death rates. I've never been able to find reliable data anywhere on the incidence of iatrogenic death resulting from needless surgery or as a complication of drug therapy, and I expected to be helped in the search by the array of references in Illich's abundances to the technical literature turned out, on checking, to be descriptions of a much milder set of problems than the picture of human devastation called up by Illich's prose. (In a recent study from the University of Florida, it was found that only sixteen patients out of 7,423 died of drug-associated causes, and most of the sixteen were terminally ill beforehand, with fatal malignancies being treated at the last ditch with antineoplastic drugs). There are, in real life, a great many untoward reactions to drugs, and there are too many unnecessary operations ; it is a matter of genuine concern, no question about it. But it is not at all the threat to human survival that Illich makes it out to be.

A Loss of Dignity

The rest of Illich's case rests on his persuasiveness about these matters, all dealt with in the first thirty-six pages of the book. If you become convinced by this section that modern medicine has little or nothing of real value to offer, with that little overwhelmed by its destructive and lethal effects, then the following sections on "social" and "cultural" iatrogenesis must seem logical extensions of the same theme. Medicine is bad luck for societies because of the useless and harmful overmedicalization of almost everything, from ordinary unhappiness to ordinary dying. Cultural iatrogenesis is even worse, in Illich's view; it is the loss of nerve and the giving up of autonomy and dignity on a societal scale.

These are interesting and provocative ideas, whether or not you agree with the first thirty-six pages. We Americans *are* overmedicalized, tending to become a psychoneurotic people. Never before has there been so much public anxiety about health and its jeopardy, at the very time when we have achieved the healthiest society in history. We have a longer average life expectancy (seventy-two years) than ever before; our death rate is running at less than 1 percent per year, substantially below our birth rate. But we seem to be more worried than ever, about cyclamates and air pollution, food additives, sludge, sonic booms, *germs*, above all *germs*. The television commercials deal mostly with minor ailments, piles, headaches, stomach gas, bad breath, smelly feet and the like. But they are so skillfully staged as to make even dandruff seem a sort of threat to life. We are nervous about the fallibility of the human form, distrustful of the way we are made, and so we turn more than ever to the doctor or his surrogate, for checkups, for reassurance, for advice about how to live a life.

There is, in this failure of confidence in ourselves, a certain loss of autonomy, even dignity. Illich is right about this.

But the news is not as solidly bad as he asserts. He has left out some things. The thought ought to arise, but does not in this book, that things could be a great deal worse. Had it not been for the biomedical science which began in the late nineteenth century we might, for instance, still have at our disposal only the medical knowledge and technology of Montaigne's time, three centuries earlier, but with a system for delivering health care built on today's scale. Montaigne, who detested medicine and doctors with hotter eloquence than Illich does, would have been swept off his feet by such a system, overwhelmed, bled and purged to death, poisoned to death by heavy metals and noxious plant extracts, goaded to death by incantations and charms, leeched away.

Give up Medicine?

Illich seems to believe, with ardor and intensity, that medicine has become worse rather than better. To be sure, he concedes briefly and hastily, almost as though uncomfortable with the thought, that a few useful things may have happened, antibiotics and chemotherapy for infection for example, or immunization, or vitamin B-12 for pernicious anemia, may be insulin for an aspect of diabetics, a few other odds and ends; but he has a generally low regard for medical therapy and believes that on balance it does considerably more harm than good. And anyway, he seems to say, the few effective measures available to medicine in, say, dealing with infection, are far outbalanced by a long array of health disorders for which medicine has nothing to offer beyond dangerous meddling.

Give it up, says Ivan Illich. Root the doctors out, and all the rest of the bureaucracy along with them. Return to the people their responsibility for selfhealing. Demedicalize illness, disability, and dying. Above all, get rid of those hospitals. Go back, society, to nature. Learn to live with pain abide early death, naturally.

The real trouble with this book, in my view, is that Illich so overestimates the power of medicine and its science. He asserts that medicine has fully matured, run its full distance, and has failed. Everything we are likely to know we have already learned, and we are not helped by the information. Medicine has become a high technology and, like the other manifestations of industrial society, including compulsory fast transportation and mass education, it simply doesn't work. Therefore, give it up and rescue mankind.

What Illich doesn't know, or anyway doesn't reveal in this book, is that medicine has hardly begun as a science, is still at its earliest beginnings, just now about to emerge as a coherent scientific discipline. Compared with the rest of biology, or with the harder physical sciences, medicine is still largely a pre-Darwin, pre-Newton enterprise. We have *not* learned everything. There is nothing like a unifying theory we can work with. The early and astonishing insights into the phenomenon of infection cannot be extrapolated to other diseases about which we are still almost totally ignorant. We do not yet understand the underlying mechanisms of the major illnesses which plague humanity, and therefore much of what is done in the treatment of illness must still be empirical, trial-and-error therapy. We are compelled by our limitations to resort to shoring things up, applying halfway technology, trying to fix things after the fact. Most diseases, if the truth be told, cannot be prevented because we do not comprehend their mechanisms.

Soluble Puzzles

This is the truth. We are very good at some things in medicine, most spectacularly in the infectious diseases, but there are lots of other afflictions which we cannot influence

one way or the other. We can cure lobar pneumonia, a commonplace cause of death thirty-five years ago, outright; we can prevent and cure tuberculosis; tertiary syphilis is now almost a fossil disease; polio and smallpox have departed. But we cannot do more than palliate schizophrenia; we are defeated by more than half the varieties of cancer; we are bewildered by multiple sclerosis; chronic nephritis must lead to renal failure (with the artificial kidney or kidney transplantation as our only last resort); coronary thrombosis and stroke cannot yet be much affected by any technology, nor, for that matter, can they be prevented. We could prevent lung cancer if we only knew how to prevent smoking, but we don't. Senile dementia is still the ultimate and unavoidable humiliation for many of us. We do not yet comprehend the process of dying, and death is universally perceived as an outrage, a violation of nature. We have a long way to go, a lot to learn.

But the way is now open to science, and this is the great point, clean missed by Illich. Having proved, once and for all, that science *can* provide conclusive measures for disease control, we have begun to discern clues, feasible scientific approaches to each of the major diseases still at large. The biological evolution of the past quarter century—from the discovery of DNA to the analysis of the body's immunological system—has opened things up, and there are no longer any disease problems standing there as blank mysteries. They now have the look of soluble puzzles, even though we haven't solved them. A new way of thinking scientifically has been developing in medicine, and it is justified by this century's yield of new information, most of it the product of research in the last twenty-five years.

There is another point, taken from the history of medicine within our lifetime. Whenever we do achieve a genuine insight into a particular disease, deep enough so that we can figure out what to do precisely for prevention or cure, the measure turns out to be both simple and inexpensive. The cure of typhoid fever by antibiotics has changed a life-threatening disease lasting eight weeks or so, demanding the most costly kind of hospital care imaginable, into a trivial illness lasting less than a day and costing a couple of dollars. Meningitis, polio, sub-acute bacterial endocarditis, neurosyphilis, scarlet fever, and diphtheria in no sense present economic problems today.

Where we run into the insupportable costs and unbearable technologies described by Illich is in the care of those diseases by which we are still mystified. We would not be arguing confusedly about a nuclear-powered, four-pound artificial heart of plastic and metal, costing hundreds of millions to develop and entailing impossible ethical decisions once developed, if only we knew enough about the central factors involved in coronary occlusion to reverse the process or prevent it.

We Need More Science

What we need is more science, not less. We should not be talking about abandoning modern medicine; it is not yet really here. When we have it as a genuine science, truly perceptive and charged with insights, the technology of medicine will be easy to deliver, and will no longer cost the moon.

Perhaps there will always be, as Illich maintains, human problems that are not the business of medicine, in which we are likely to do more harm than good by meddling. Unhappiness, discontent, anomie, worry about meaning, ill will, grabbiness, and loss of nerve are huge problems for our society, but they are not medical problems. Medicine's professional task is the prevention and cure of illness, most of all the prevention of premature death. If it can stick to this line, taking advantage of all the biological science coming into view, learning more whenever the opportunity arises, admitting ignorance more candidly than is its old habit, medicine will earn its keep among useful human endeavours.

HYPOPADIAS: SURGICAL ROUTINE ON OUR SERVICE

at Dow Medical College

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Professor of Plastic Surgery

Hypospadias is essentially a ventral dystopia of the external urethral meatus, of ongenital origin.

I intend to take up only the surgical management of this condition and would like to concentrate on two major problems that must be set right when present.

1. The first is abnormal micturition. Everybody has the right to be able to urinate standing up, as Culp put it. With hypospadias, the stream is directed downward as in ladies. *(Fig. 1)*.

2. The second major problem is that of ventral curvature of the penis. This makes erection difficult and may even render coitus impossible. *(Fig. 2)*.

We have developed a routine over the years wherein we correct these two deformities in two stages. The individual procedures are by no means original with us but their combination into one general routine has given us encouragement to continue with their use.

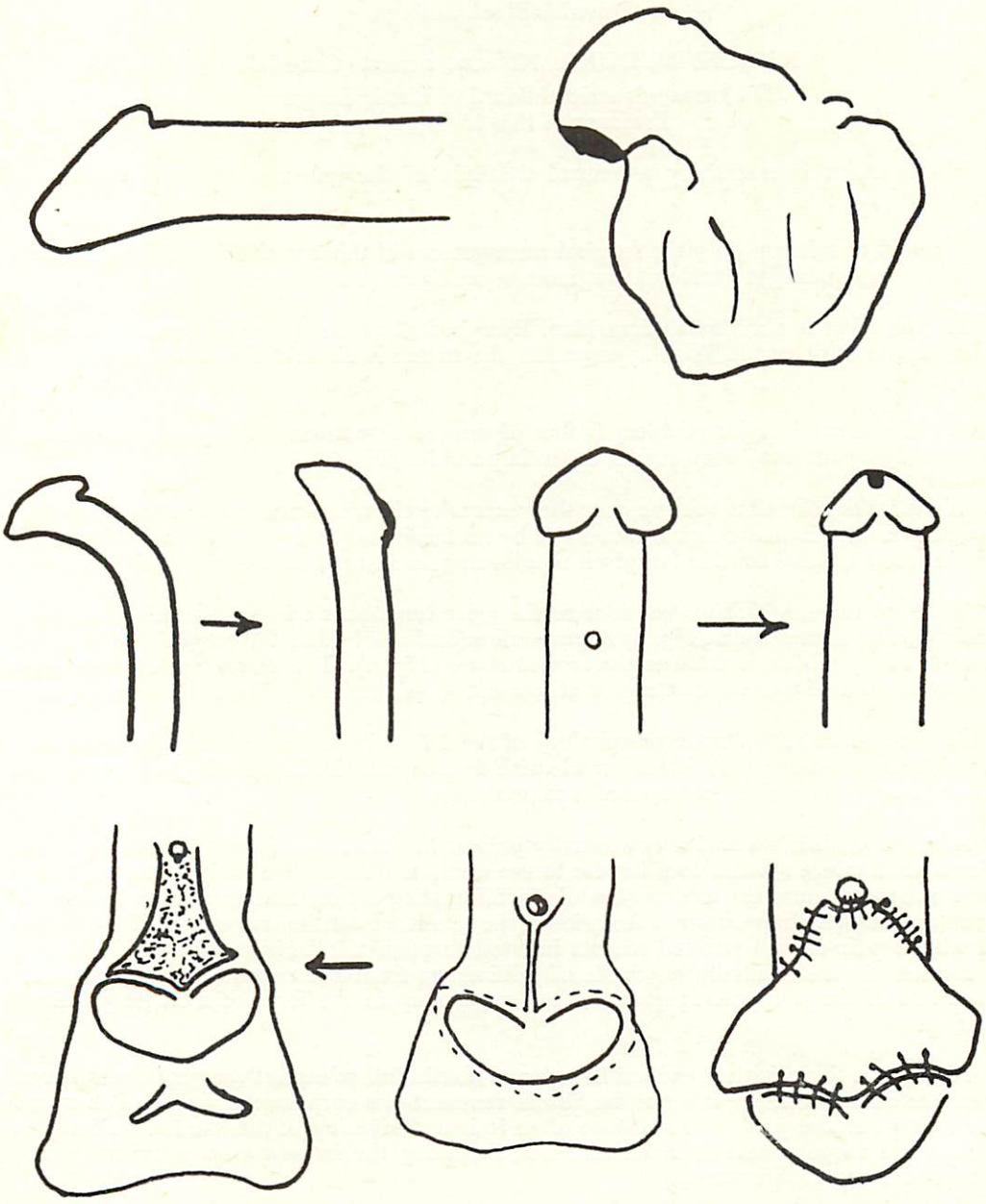
The first stage, which we consider as the more important one, consists of orthoplasty or straightening of the penis. *(Fig. 3)* A proper foundation is laid at this stage for subsequent neourethroplasty which constitutes the second stage *(Fig. 4)*. The first stage is undertaken anywhere between 6 months and a year of age and the second stage about six months later.

At the first stage the exact morphology of the deformity is determined and assessment of all available redundancy of tissues is made with the purpose of redistributing the integument over the organ during the two stages of reconstruction.

Minor tags, bridges and crypts usually present in the region distal to the meatus are eradicted to obtain a smooth roof for the future urethra. Skin is then incised longitudinally between the meatus and the corona glandularis, bifurcating the incision posteriorly to encircle the meatus about halfway around. Anteriorly, the two leaves of the prepuce are freely separated with a pair of dull pointed scissors inserted through this incision and the incision is then carried circumferentially a couple of millimeters from the corona, cutting only the internal leaf of the prepuce. Prepuce is then opened up in the form of a single proximal based flap.

All fibrous tissue is then excised in order to obtain full release of the penile curvature. Contrary to common belief, it is not the fibrous remnant of a corpus spongiosum or so called *chordee* that pulls the penis down. More often it is a thickening of the tunica albuginea encircling the corpora cavernosa on all sides, including the intercavernous region, which maintains this ventral curvature.

Enough should be excised to get full straightening of the penis and especial attention must be paid in the region around and dorsal to the external meatus. Distal 1/2 cm. or more of the urethra will often have to be mobilized in order to get at this tissue and allow the meatus to slide back into place and the glans to acquire a more normal posture (*Fig.* 5).



For legends please see page 64

After all hemostasis is secured, the skin deficiency created by this increase in the ventral surface area is fulfilled by bringing the prepuce down like a visor and suturing its free edges to the corresponding edges of the defect *(Fig.* 6).

A buttonhole for the glans is appropriately created in order to satisfy all raw edges and suture performed with any fine material. This of course is the Beck procedure, first described in 1917. It is also known as the Ombredanne technique.

With a scale, the distance is now measured between the proximal border of the external meatus and the tip of the glans and this same distance is transferred to the midline of the scrotum, starting at the penoscrotal junction and measured backwards. Two parallel lines, about the width of the penis apart, are drawn along this length and a flap of skin and subcutaneous tissues raised and intubated. Scrotal defect in turn is closed by wide undermining and approximation in two layers *(Fig.* 7).

This tube will be the covering for the new urethra to be fashioned at the next stage.

Enough time should elapse between the two stages to allow maturation of the tube and subsidence of inflammation. We allow a minimum of 6 weeks in adults. Children are sent away for 3-6 months before the next stage is undertaken.

At the second stage perineal urethrostomy is first performed and neourethroplasty is then started.

Parallel cuts are made on the ventral surface of the penis, far enough apart to be able to make an adequate urethral channel according to the age of the patient and the size of the penis.

Posteriorly, these incisions meet a little behind the external meatus and anteriorly they are staggered laterally in the coronal region to pick up some extra skin left here during transplantation of the prepuce. They end where the new meatus is intended to be and short cross cuts are made here to enable easy intubation of glandular skin which is rather inelastic *(Fig.* 8).

Over a proper sized catheter the urethral channel is closed, after necessary undermining, with a running suture through the dermis *(Fig.* 9).

Posterior end of the previously prepared scrotal tube is sectioned, split in the midline, continuing the incision in the midline of the penis into the raw area just created by construction of the urethral channel.

The tube tissue, now in the shape of an open flap is just laid over the raw area and sutured to its edges with fine material, keeping one or two drains in place *(Fig.* 10).

First dressing is changed after 2 days, when the drains are removed. Urethrostomy is removed in about 7-10 days and the sutures in about 14 days.

The main advantages of this technique are :

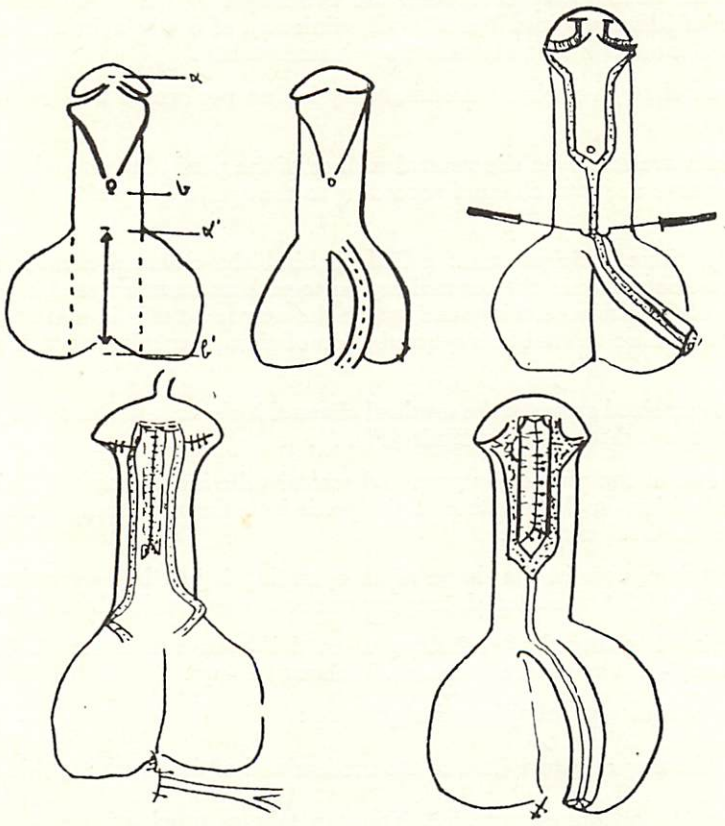
1. The offsetting of suture lines of the urethra and of the overlying skin cover.

2. No tension on any suture line. You can take as much of the ventral penile skin as you need for completing the urethral conduit, without worrying about closure of the residual defect.

3. The chief disadvantage is that the covering skin is hairbearing and looks odd. According to some of our married patients even this is an advantage in certain ways :

LEGENDS TO FIGURES

Figure 1. Abnormal micturition needs correction.
Figure 2. Ventral curvature requires release.
Figure 3. Stage I surgery : release of curvature — orthoplasty.
Figure 4. Stage II surgery : neourethroplasty.
Figure 5. Excision of fibrous tissue and straightening of penis; Opening up of preputial leaves and button-holing for glans.
Figure 6. Completion of Orthoplasty.
Figure 7. Designing of scrotal tube for use in Stage II.
Figure 8. Stage II : incisions for neourethroplasty and opening of scrotal tube preparatory to use as covering flap.
Figure 9. Urethra completed.
Figure 10. Scrotal tube laid over and surgery completed. Note perineal catheter for temporary urinary diversion.



GENE SPLICING: PROCEEDING WITH CAUTION

A new strain of wheat that could derive its own nitrogen fertilizer from the air — or a plant pathogen that might race through the world's croplands like some sort of infectious prairie fire?

A bacterial "factory" where insulin and perhaps other precious human hormones might be inexpensively mass-produced — or a maverick bacterial strain now able to make a deadly toxin for which neither humans nor animals have developed any protection?

A means of setting right certain heritable diseases, such as sickle cell anemia or Tay-Sachs — or a short-circuiting of separate evolutionary lines of development that have taken millions of years to proceed?

Polarized questions, reflecting polarized opinions. Such has been the brief and controversial history of a new biological technique properly known as "recombinant DNA" and more popularly referred to as "gene splicing," "gene grafting," "gene manipulation" or "mix-and-match genes."

DNA is the familiar acronym of deoxyribonucleic acid, th molecule of heredity. The constituent biochemical parts of this molecule are everywhere the same, whether found in the smallest virus or in the great blue whale. But it is the particular sequences into which these parts are organized, and the number of such organized sequences (or simply, "genes") that make the virus a virus, the whale a whale, and every other creature, ourselves included, in between.

Recombinant DNA, then is a meld of genes from two different species. Perhaps an easy way to visualize this is to imagine an organism's genom (its complement of genes) as being rather like a looseleaf binder, with each page therein representing one gene.

In recombinant experiments, scientists open the rings of two distinct organisms, say, yeast and bacteria, and remove one, two or several genes pages from the former. After inserting these into the bacterium's binder, they snap it shut and the microbe now has the proper instructions to make whatever protein or proteins are called for by those yeast genes.

The capability to take genetic mechanisms apart and reassemble them according to will can be traced back to the late 1960s and early 1970s when, as is often in the case of science, several researchers at different laboratories independently and more or less simultaneously made the same discoveries.

The discoveries dealt with substances called "ligases" and "nucleases." These compounds are enzymes, or biological catalysts, naturally produced by bacteria for their own defense; ligases enable bacteria to repair nicks in their DNA chains, and nucleases are used to chop off encroaching strands of foreign DNA.

Isolated from bacteria and produced in quantities, ligases and nucleases provided biological researchers with two essential tools for the making of genetic montages; a pastepot and scissors.

By themselves, however, the pastepot and scissors were not enough. Some means were needed of transferring a newly created montage to the interior of bacterial cells, where

large numbers of identical copies (biologists call them "clones") can be made in short order. That transfer agent was found in "plasmids."

Plasmids are small rings of extra DNA found in the cells of certain bacteria. Because these rings, usually containing just a few genes, are not part of the bacterium's single chromosome, they have been dubbed "genetic loose change." Whatever they are called, plasmids are biologically negotiable coin because they can introduce their genes into the host cell's chromosome or they can exchange themselves among other bacteria and there have their genes incorporated into those chromosome DNA chains.

With plasmids (easily separated from regular chromosomal material), biologists now had all they really needed for recombinant DNA experiments; pastepot, scissors and a delivery service to the factory. The "factory" is almost always a bacterium known as *Escherichia coli* because it doubles its population every 20 minutes and because scientists know so much about it.

E. coli is to a microbiologist what a white mouse or guinea pig is to a biologist. Its genetic properties are very familiar to scientists by now, even if much of the specific details of genes themselves have yet to be worked out. And so it is for this reason that *E. coli* is the preferred "lab animal": after a large quantity of plasmid DNA has been harvested from bacteria, it is possible for scientists to sort out the familiar from the unfamiliar DNA. Any strange DNA that shows up in analyses must come from genes other than those of *E. coli.*

That, in fact, was what Professor Paul Berg of Stanford University in northern California was planning to do back in 1971 — until he received a very urgent telephone call one day.

Like many other scientists in the United States and other nations around the world, Berg — a biochemist — was interested in cancer. In particular, he was interested in a class of substances called "animal cancer viruses" or "tumor viruses".

Certain viruses have long been known to cause tumors in a wide range of laboratory animals: mice, rats and chickens, for example. And while no virus has yet been definitely linked to any form of human cancer, the fact that some of these infectious agents induce tumors in lower mammals, as well as transforming (making cancer-like) cultures of human cells in test tubes, has placed them under grave suspicion.

Berg was on the verge of investigating one such tumor virus, known to biologists everywhere as "simian virus-40." So-called because it was first found in monkeys, SV-40 is a small and apparently simple virus of only three genes. It does not cause tumors in monkeys, but it does when injected into mice and other laboratory animals.

It was Berg's plan to stitch SV-40's three genes into a plasmid and then introduce the plasmid into *E. coli.* Within a short time span, Berg would have isolated the three genes, identified the one which triggered tumors and begun to learn why it did so. He did not carry out this plan.

And the reason he didn't was attributable to that telephone call. The caller was Robert Pollack of the Cold Spring Harbor Laboratory on Long Island, New York. Pollack had learned from one of Berg's Stanford colleagues about the proposed SV-40-in-*E. coli* experiment and it worried him.

Specifically, he was concerned that some of those altered bacteria might escape from Berg's laboratory and, with the tumor-causing gene now part of their genetic machinery,

somehow work their way into a human host. Since *E. coli* is a common occupant of the human gut, Pollack was alarmed by the possibility, no matter how remote, that the experiment might set in train an epidemic of human cancers. Couldn't the work be postponed, Pollack asked Berg, until its safety had been established?

Although Berg at the time felt that Pollack's fears were unfounded, the Stanford scientist — widely regarded by scientists everywhere for his professional and personal attributes — could not say with absolute certainty that indeed they were unfounded. And Berg admitted this, after he had discussed the SV-40 investigation with other scientists and discovered that such misgivings were not restricted to the Cold Spring Harbor Laboratory researcher.

The issue was raised later, in the summer of 1973, at a scientific conference in New Hampshire. Dr. Maxine Singer, a cancer researcher with the U.S. National Institute of Health and a cochairman of one particular session at the conference, noted the excitement that the then-recent discoveries had been generating throughout the biological co mmunity.

"Nevertheless, we are all aware that such experiments raise moral ethical issues because of the potential hazards such molecules may engender," she said to her colleagues. "Because we are doing these experiments, and because we recognize the potential difficulties, we have a responsibility to concern ourselves with the safety of our co-workers and laboratory personnel, as well as the safety of the public."

By the end of that morning, a letter had been drafted to the presidents of the U.S. National Academy of Sciences (NAS) and its Institute of Medicine. Signed by 11 scientists, including Singer and Berg, the letter asked those organizations to examine the many ramifications of this new and challenging avenue of scientific inquiry.

Moreover, so that they might share this concern with as many of their peers around the world as possible, the 11 scientists asked that the letter be published in two widely circulated and well-respected journals, the American *Science* and British *Nature*. And until such time as an international conference could be convened, and the nature and dimensions of the potential risks of this new technique assessed, the signatories to the letter asked their colleagues everywhere to defer two types of experiments and to do a third with utmost caution. Scientists were asked specifically not to improve the antibiotic resistance of bacteria, not to put any kind of animal virus into them and not to insert genes for known toxins, such as botulism, into organisms that do not normally carry them.

In more technical terms the deferred experiments were identified as those which would:

—confer resistance to an antibiotic drug, by means of recombinant methods, to bacterial strains presently vulnerable to such drugs. As a correlative, genes that code for a toxin were not to be transplanted to bacteria which do not possess them in nature;

—blend, in the test tube, animal tumor virus genes with bacteria which are capable of living in human beings.

The experiments to be done with great care involved plasmids and animal genes. Go ahead and do them, said the 11 scientists, but do them carefully.

In February 1975, nearly 150 scientists from the United States, Great Britain, France, Germany, Holland, Japan, the Soviet Union and Australia gathered at the Asilomar Conference Center on Californoa's Monterey Peninsula for the International Confegence on Recombinant DNA Molecules. There, for three and one-half days and long, long nights,

they talked. And argued. And debated. Sometimes heatedly, even angrily. And sometimes with wit and humor. Wouldn't it be wonderful, mused the puckish British biologist Sydney Brenner, if the genes of an orange could be combined with those of a duck; the jest brought on a great roar of laughter from the men and women in the audience.

In the end, the Asilomar conferees worked out a broad consensus on how, and under what conditions, recombinant DNA research should proceed. They set forth categories of risk for different types of experiments (low, moderate and high) and specified the sorts of physical and biological safety steps that should be taken for each risk class so as to obviate any possibility of a catastrophe occurring.

"If we can make these barriers so that each has, say, only one chance in a million or 10 million of happening," Brenner said, advancing a philosophy of risk-reduction that was eventually to infuse this research, "and you have five or six or 10 such barriers, the possibility of anything drastic happening becomes very, very remote."

The barriers envisioned by Brenner and the others attending the conference were to be of two types: (1) physical and (2) biological. Meant to be used in concert, the former was seen as a means of containing recombinant organisms within the laboratory and the latter as a means of impairing any "escapee" microorganism's ability to survive in the world outside the laboratory.

In the United States and in Great Britain, committees were appointed soon after Asilomar and charged with the responsibility for developing specific criteria which would implement the conference's consensus. The American criteria, which came to be known as the "NIH (National Institutes of Health) Guidelines," spelled out four different levels of physical containment, P1 through P4, and three of biological containment, EK1 through EK3, for the conduct of recombinant DNA experiments:

—A P1 facility, which might be likened to a minimum-security prison, was defined as one where such simple sterile techniques as handwashing and decontamination of work areas, coupled with a ban on smoking and the eating of food, would be sufficient to hold in check those recombinant DNA organisms judged to be harmless.

—A P2 laboratory was defined as basically similar to a P1 facility, but with more stringent procedures and access limited to authorized personnel only. Comparatively speaking, P2 is a local jail.

—Following the analogy of different prisons, a P3 laboratory would be on the order of a maximum-security facility. In addition to all of the procedures set forth for P1 and P2 facilities, a P3 laboratory would require recombinant experiments to be done in "biological safety boxes" (in effect, work tables with enclosed sides and ventilated hoods). Laboratory technicians would wear gloves. Moreover, the pressure inside the laboratory would be maintained at something less than that outside the laboratory — so that any leaks would be *into,* not *out of,* the structure.

—A P4 laboratory, the ultimate barrier against the most dangerous pathogens, would be the equivalent of a maximum-security prison situated on an island in the middle of an ocean. Elaborate in the extreme, it must possess monolithic walls, ceilings and floors to qualify for a P4 rating, along with air locks, mandatory showers and clothing changes for technicians, waste treatment systems for discarded liquids and exhausted air, and many other requirements.

Not willing to trust entirely in walls and doors, the NIH panel also recommended these levels of biological containment be developed:

—EK1, the "EK" standing for the "K-12" strain of the *E. coli* bacteria. Actually, when scientists talk about using *E. coli* in various biological experiments, they mean the K-12 strain—a strain that was isolated from the human bowel in the early 1920s and grown only in laboratories ever since. Although critics of the new genetic research often cite the presence of *E. coli* in the human gut as a reason why these bacteria should not be used in DNA experiments, they appear to be ignoring the sharp distinctions between the K-12 strain and the 50 or so other variants of *E. coli* that normally colonize human and animal bowels.

Although members of the same taxonomic family, these bacteria are similar to each other as members of the chicken genus can be said to be similar. But there are important differences, just as there are differences between the cage-reared, barely ambulatory, chicken bred for mass-marketing and wild gamecock. Decades of laboratory living have left the K-12 bacterium as poorly equipped to survive in the human gut today, where it would have to compete with more vigorous "wild" strains of *E. coli*, as that prospective fryer chicken would be matched against the gamecock.

Because of this, the NIH panel found that the K-12 bacterium, along with certain plasmids or bacteriophages (viruses that infect bacteria) acting as the transfer agents for the transplanted genes, would make a suitable host-vector system for low-risk experiments.

EK2. For experiments possibly involving a higher level of risk, the panel called for development of a still weaker host-vector system, one that could not survive in the outside world if, somehow, it should ever escape from a laboratory. Accordingly, Professor Roy Curtiss of the University of Alabama Medical Center took some K-12 bacteria and built in 15 different genetic mutations. The result was a new bacteria strain, named "chi-1776" in honor of America's Bicentennial celebration, so enfeebled and so dependent upon an artificial laboratory environment that it dies in the real world. Curtiss fed some 10 thousand million "1776s" to rats and not a single living bacterium could be found in the animals' droppings; the NIH guidelines for EK2 status require that no more than one bacterium out of 100 million survive a single passage through an intestinal tract.

—EK3. This si an EK2 host-vector system, verifiedby extensive testing.

The NIH panel published these guidelines in the summer of 1976 and made them binding upon all scientists working on federal grants. Many scientists active in the field of recombinant DNA regarded the guidelines as strict, stricter, in fact, than their own experience and professional judgment would call for, but they accepted them in the interests of public safety "Scientists today," said Maxine Singer, "recognize their responsibility to the botulism into organisms scientific work."

But far from being water thrown on the fires of controversy the NIH guidelines were as so much gasoline; the flames of dissent seemed only to crackle higher. The city council, for example, of Cambridge, Massachusetts, held public hearings on the subject when it became known that nearby Harvard University was planning to build a P3 laboratory for the conduct of recombinant DNA research.

The council asked the university and its neighbor, the Massachusetts Institute of Technology (MIT), to refrain from such experiments until such time as a citizen's review board could assess the adequacy of the NIH guidelines. It was an unprecedented action, but with exemplary diligence the review board—consisting of nine members ranging from a housewife and a factory worker to two physicians and a philosopher—made itself conversant with the new biology and showed, as it declared in its report, that "a predominantly lay citizen group can face a technical scientific matter

of general and deep public concern, educate itself appropriately to the task, and reach a fair decision."

The decision was to endorse the adequacy of the NIH guidelines, with some reservations, and to allow the research at Harvard and MIT to proceed.

Within the short span of a few months, however, other cities and states around the United States began holding their own inquiries into the subject: Ann Arbor, Michigan, where the debate was particularly acrimonious; Bloomington, Indiana; Madison, Wisconsin; San Diego and Stanford-Palo Alto, both in California; and New York State.

Central to these many hearings, forums and public debates have been concerns about the limited extent of the NIH guidelines (they do not apply to private industry or to research laboratories not receiving federal funds), the creation of "new forms of life" never before seen on earth (and, therefore, presumably posing a threat to the globe's animal and plant kingdoms), and the wisdom of using a bacterial host-vector system—*E. coli*, plus its plasmids or bacteriophages—in such experiments when it can also take up residency in humans.

Indeed, industry—and at least half-a-dozen of the major U.S. pharmaceutical houses—did its own cause little good when it insisted that its compliance with the NIH guidelines be placed on a "voluntary" basis, rather than a mandatory one, and that it be exempted from two particular requirements: (1) limitations on the volumes of recombinant DNA material that might be produced and (2) full disclosure of experimental processes. (Industry was worried about its proprietary rights.)

The upshot in the United States is that the Carter Administration recommended to the Congress that all such research be placed under federal controls, whether the experiments are done by universities under contract to the NIH or by private industry with its own funds.

"We are not saying that research be halted," said Joseph Califano Jr., Secretary of the U.S. Department of Health, Education and Welfare. "We are urging that it proceed under careful safeguards unless and until we have a better understanding of the risks and benefits posed by use of recombinant DNA techniques without government regulation."

As for claims that such work would yield new forms of life, Dr. Singer has branded them "misleading." A bacterium normally has thousands of genes, each of which contributes its specific product to the overall structure and functioning of the cell, she explained. "The introduction of one or a few foreign genes to this complex system may be able to alter certain properties of the cell," she told a National Academy of Sciences forum in March 1977 in Washington, D.C., "but the bacterium basically remains its same old self."

Should recombinant DNA research be done with some bacterial host other than *E. coli* K-12? Would there be less hazard posed to people by some other bacterial species? Such arguments, Sydney Brenner of Great Britain once remarked, are advanced as much out of ignorance of the ecology of other prospective bacterial hosts as they are out of knowledge of *E. coli's* characteristics. Moreover, an estimated three million or so recombinations have been made using *E. coli* hosts in the last few years, according to Singer, and "we still do not know that hazardous organisms can in fact be produced from recombinant DNA experiments."

Even if no hazardous by-products result from such experiments, some skeptics like Dr. Robert Sinsheimer of the California Institute of Technology (Caltech) have worried about the new technique's short-circuiting of eons of separate evolutionary patterns. Humanity

has been directly interfering with evolution for centuries, reply advocates like Professor Stanley N. Cohen of Stanford University, through the practice of animal husbandry and the cultivation and cross-breeding of various crops.

And, says Cohen, people should not be confused by talk of "evolutionary wisdom." It is, the Stanford physician-researcher has said, evolutionary wisdom that has afflicted man with genetic combinations for bubonic plague, smallpox, yellow fever, typhoid and cancer. Indeed, the history of all biological and medical science is one of a continuing struggle against such evolutionary wisdom.

In the end, this new technology may or may not help to develop new plants which would forestall the threat of worldwide starvation, and it may or may not cure certain diseases. The most important benefit to come out of this research, Stanford University's Berg has stated, "will be the knowledge acquired about mammalian and human genes and chromosomes. That knowledge will make the diagnosis, prevention and treatment of disease more rational and effective."

IN PRAISE OF PERITIONAL DIALYSIS

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The symptoms and biochemical abnormalities of uraemia may be relieved by dialysis with either an artificial kidney or by peritoneal dialysis (P.D.). Writing from a relatively affluent centre to one where artificial kidney treatment must be very difficult to obtain, I do not know to what extent P.D. is used. However, I suspect that in your country, away from the large cities, where there are few doctors and none with specialised nephrological experience, that P.D. is not used so much as it should be.

Admittedly, P.D. is expensive if the commercially available solutions are used but it does not require sophisticated apparatus and is within the technical competence of any doctor or nurse. If solutions can be manufactured or improvised locally, then the procedure should not be prohibitively expensive if reserved for use in suitable cases.

Principle

Peritoneal dialysis solution, which is a physiological saline solution containing calcium and magnesium but no potassium is introduced through a cannula into the peritoneum (Table 1). Equilibrium of concentration of all small diffusible molecules then occurs between blood in subperitoneal capillaries and the dialysis fluid. This means that urea and creatinine and most other uraemic toxins pass from blood to the P.D. fluid in which they were originally absent. When the fluid is subsequently removed from the peritoneaum, ureamic waste products are also removed from the body. If, in an adult, two litres of P.D. fluid are run in and out of the peritoneal cavity hourly for about 40 hours a very useful amount of urea is removed from the body and, if the rate of urea production is not too high, the blood urea concentration will be about halved. There will be no net loss of sodium, calcium or magnesium because the concentrations of these ions in the fluid and the blood are initially about equal. Potassium will be removed from the body and this is usually desirable in uraemia to prevent hyperkalaemia.

Uraemic patients tend to be over-loaded with fluid. Excess water is removed in P.D. by osmosis because the P.D. fluid is slightly hypertonic to plasma. This hypertonicity of the P.D. fluid is due to its high glucose concentration. Firms which produce peritoneal dialysis fluids usually produce fluids with 130 mmol/L or 140 mmol/L sodium and about 1.5 or 6.5% dextrose (Table 1).

1. *The Cannula* — The sterile disposable ones (McGraw 'Trocath', Glendale, California 11201) are the most convenient but any sterile narrow gauge plastic tube will do. It should be introduced in the mid line a few inches below the umbilicus using a sharp stillette inside the cannula. The patient is sedated and local anaesthetic put into the abdominal wall. A very *small* incision is made in the skin through which the stillette and cannula will pass. The skin should fit tightly round the cannula thus making a water tight junction preferably without the use of sutures. The cannula should be positioned so that its lower end is well down in the pelvis. It will not drain if it is just inside the abdominal wall. A sterile dressing is placed round the tube which is then securely taped in place.
2. Two litres of fluid are usually run into the adult abdomen at once (less for children). The bottles or bags of fluid are attached to a Y shaped giving set *before* the cannula is inserted so that fluid may be run into the abdomen immediately the cannula is in place. Blood in the cannula is thus washed out before it has chance to clot and blockage of the cannula is prevented.

The Cycle

The fluid should be run into the abdomen as quickly as it will go, allowed to 'dwell' there for about half an hour and then withdrawn from the abdomen by putting the original containers, still attached to the giving set on a tray on the floor. The fluid syphons back in about 10 minutes. The first few cycles should be run without a 'dwell' period to prevent blood coagulating in the tube. After this, each cycle of two litres should last in all about one hour. Strict asepsis is needed when bags are attached to the giving set.

Duration of Treatment

Most treatments should be restricted to about forty cycles in forty hours. The cannula should be removed then and inserted again in a few days time if the blood urea rises. Infection of the peritoneum is much more likely to occur if cannulae are left in for more than two days.

Record Keeping

The most serious difficulties with P.D. arise through inadequate records. The patient should be weighed at the beginning and end of each treatment. An estimate of the amount of fluid he needs to lose (if any) should be made and written down at the beginning of a treatment.

Patient's blood pressure must be measured at the beginning and periodically throughout the treatment.

A special fluid chart (fig. 1) should be kept for the dialysis. On it are recorded the time and volume of fluid run into the patient. The fluid drained out of the patient must be measured either in a measuring cylinder or by weighing the bags and recorded, and a running account kept of the patient's positive or negative fluid balance. The fluid containing 1.5% dextrose will cause most patients to lose about 2 litres in 40 cycles. If a patient needs to lose more fluid than this then *occasional* litres of 6.5% glucose solution should be used as well. *Never* use continuous 6.5% solution since this withdraws fluid very rapidly and can cause shock.

Complications

The possible complications of P.D. are listed in Table 2 along with their management.

What kind of patients should be treated by Peritoneal Dialysis?

In a country with very limited resources, P.D. should only be used for patients with renal failure which is potentially recoverable. These will usually be patients with acute tubular necrosis complicating shock and in particular acute renal failure following obstetrical catastrophies. Patients with gross sepsis and multiple injuries or extensive burns are too catabolic and produce urea too quickly to be successfully managed by P.D. Patients with chronic irrecoverable renal failure should not be managed with P.D. unless a renal transplant can be arranged quickly.

But the woman who has been shocked due to obstetrical haemorrhage and now has tubular necrosis should do very well with P.D. properly managed. Other aspects of her treatment must not be neglected. It is almost universally true that kidneys of this type of patient will recover if the rest of the patient recovers. However, diuresis will not occur for about two weeks. The patient's nutrition and hydration must be maintained during this period and adequate amounts of dietary protein given. P.D. is carried out as often as necessary, to keep the blood urea below about 300 mg% (50 mm/L) and to keep the serum potassium at safe levels. Sepsis is treated bearing in mind that the maintenance dose of many antibiotics needs to be reduced in renal failure. Diuretics are not of much use in the treatment of acute renal failure.

It is more difficult to do P.D. if the patient has had a recent laparotomy but one should not be unduly deterred by this if it will prevent him from dying of uraemia.

In this age I believe that all doctors should be able to carry out a P.D. but in your country its use should be restricted to patients who have a good chance of survival with recovery of their own kidneys.

TABLE 1

Peritoneal Dialysis Fluid Composition

Dextrose	1.5 Gm/100 ml or 6.5
Sodium	140 mmol/L or 130
Calcium	1.8 mmol/L
Magnesium	0.75 mmol/L
Chloride	90 mmol/L
Bicarbonate (as lactate)	45 mmol/L

THE ROYAL HOSPITAL PERITONEAL DIALYSIS SHEET

NAME..... DIALYSIS No. .....

DATE..... SHEET No. .....

PRE-DIALYSIS

Weight.....

Blood Pressure.....

CYCLE

No. of litres per cycle

In.....

Resting.....

Drain.....

POST-DIALYSIS

Weight.....

Blood Pressure.....

ADDITIVES per cycle

Heparin.....

Patossium.....

Antibiotics.....

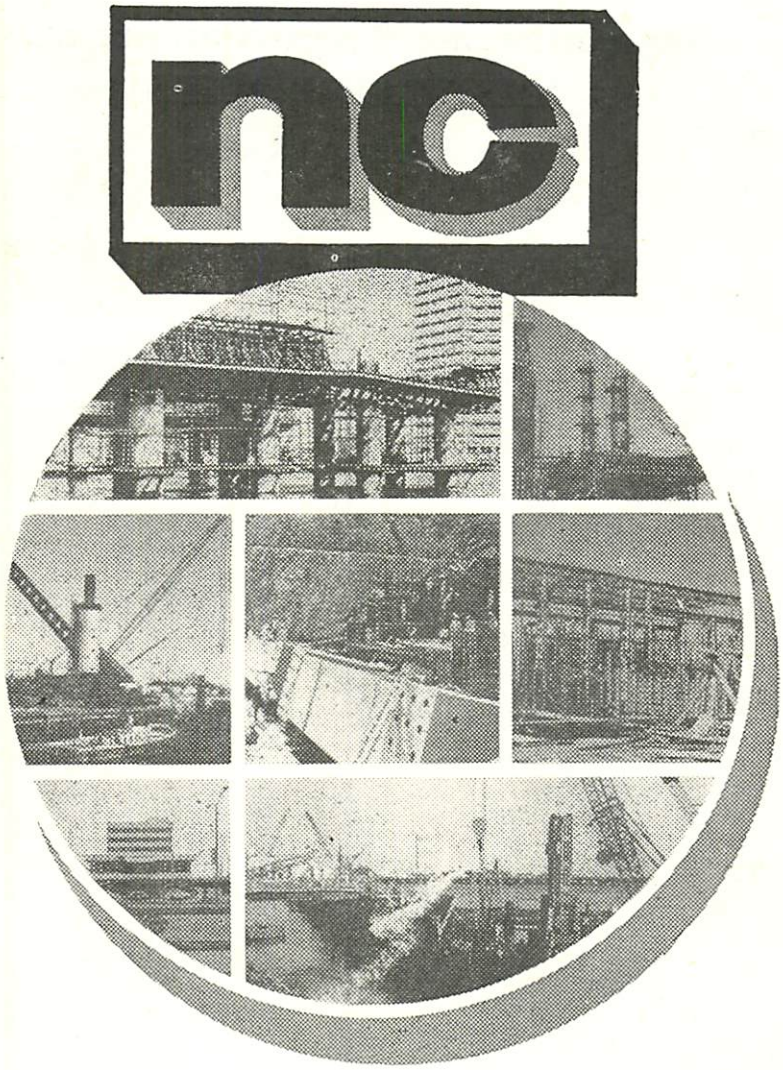
FIG 1

Time	No.	Type Solution	Additives		Volume In	Volume Out	Balance	Total Bal.	Pulse	B/P	Observations
			Heparine	Others							

TABLE 2

Complications of Peritoneal Dialysis

Problem	*Signs*	*Action*
Perforated bowel	Watery diarrhoea +dextrostix	Remove tube Antibiotic P. and B.P.
Perforated bladder	Large volume of colourless urine +dextrostix	Remove tube
Peritonitis	Pain Turbid fluid fever	Culture fluid Continue dialysis Systemic and peritoneal
Mild haemorrhage	Bloody fluid	Continue dialysis rapidly to prevent clotting
Dehydration	Excess fluid and weight loss Low B.P.	More fluid by mouth Do not use '62'
Pain	Rectal ..... Generalised	Pull tube out one inch ? peritonitis Lignocaine
Tube will not drain	Positive fluid balance Bags slow to fill	Alter patient position Squeeze bubble trap Do NOT syringe tube



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SHORT STATURE

Condensed By
DR. SUHAIL ROOMI

Short stature is defined as a body height below the mean height for age.

Stature is a direct result of growth of both the axial (spine) and appendicular (lower extremities) segment of the skeleton, while the growth in height of a typical child is clearly non-linear, it can be divided into *time segments* during which the increments are essentially linear.

Tanner and Associates have provided data on increments (gains per interval of time), in height which can be used to estimate whether a child's skeletal growth is normal.

It is possible that the stature may be short and the rate of gain to be well within normal limits. This is particularly likely in infants and young children with low birth weight.

A child whose stature is below 50% (Table) but whose rate of growth is well within the normal range, will, in time, catch up in terms of absolute stature, at least to the limits imposed by parent's stature.

Therefore, while measurements plotted on a standard growth chart indicate how close to normal a child's height is at a particular age, use of standards of incremental growth enables a physician to detect a slow rate of growth before short stature develops.

The length of time over which growth measurements are made is an important element in the evaluation of growth with respect to both absolute stature and rate of gain.

A minimum interval between measurements decision about rate of gain, should be 56 days for infants (less than 5 months of age) and at least 3 months for older children.

NUTRITIONAL CAUSES OF SHORT STATURE

When a depressed rate of growth has been confirmed or short stature has been verified what nutritional causes might be suspected in a child.

a) Calorie malnutrition.
b) Mineral deficiencies.
c) Vitamin deficiencies.

When the growth rate is marginal, subclinical nutritional deficiency should be considered. Evaluation of diet (both quantity and quality) should be considered. Whether the net energy intake is adequate to meet the infant or child's needs for maintenance of basal activity of growth.

Distribution of calories among carbohydrates, fat and protein must be appropriate for age.

Intake of protein may be adequate to meet minimal requirements but if net energy provided from fat and carbohydrate is border-line then dietary protein may be used as an energy source rather than a source of amino acids for growth of new tissue (short stature). An insufficient quantity of the component in the diet may cause this problem.

In an infant or a young child with recurrent gastro-enteritis or intractable diarrhoea severe deficiency intestinal lactose and relative intolerance to lactose may develop.

Lactose provides 40% to 45% of the calories in young infants diet.

PROTEIN NEEDS

If the net intake of fat and carbohydrate is adequate to meet energy needs for maintenance activity and growth, protein deficiency should be considered. Protein requirements are estimated to be about 1.5 gm per 100 calorie per day during the first year of life and about 1.2 gm/kg/per/day from age 1 year until the adolescent growth begins.

Protein is provided largely by milk during the first year, later on by a combination of milk with other animal products (meat, egg, vegetable).

MINERAL NEEDS

Iron, zinc and calcium have major effects on growth. Iron deficiency anaemia which directly effects growth by reducing appetite and food intake.

Daily intake of 7-8 mg. of iron should be implemented.

CALCIUM

Sufficient calcium is essential for normal skeletal development. Excessive intake of protein or fat causes calciqm to be excreted in abnormally large amounts and can lead to metabolic shortages which retards bone development.

PHOSPHORUS

Phosphorus is metabolised in a delicate balance with calcium metabolism. The ratio of tissue calcium in children is 0.5:1. An excessive intake of phosphorus can lead to calcium insufficiency even though the dietary intake of calcium appears adequate.

Binding of zinc, calcium, phosphorus and iron by phytates in cereals products has been shown to contribute to mineral deficiencies. Binding of necessary minerals by other dietary acids may be discovered.

VITAMIN 'D'

Recommended daily allowance of Vit 'D' is 400 I.U. Exposure of skin to sunlight allows synthesis of Vitamin 'D'.

RECUCED APPETITE

Reduced appetite also contributes to growth retardation.

Anaemia, marginal hormonal irregularities, chronic diseases, psycho-social factors can lead to growth retardation through reduction of food intake.

If growth, limited by parental stature or delay in onset of puberty can be ruled out, a nutritional evaluation may be fruitful.

DIET

— Amounts and types of food offered.
— Food likes and dislikes.
— Eating habits

may point to dietary insufficiency.

INVESTIGATIONS

— Serum levels of calcium, phosphorus, alkaline phosphatase.
— Radiographs of bones can provide evidence of sub-clinical rickets.
— Tests of urine concentration ability.
— Tolerance of lactose.
— Metabolic balance (calcium, phosphorus, nitrogen)

may evaluate the efficiency of digestion, absorption, use of energy and nutrient intake.

REFERENCES

— David S. Weaver.
— George Mowen.
— Postgraduate Medicine December, 1977

Chronic neurotic anxiety

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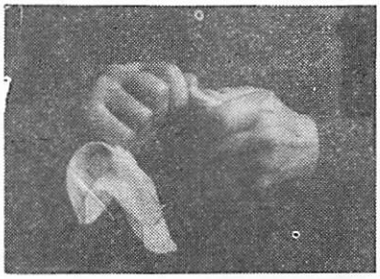

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ASIATIC

ROMANTIC FEVER

FARZANA IQBAL
IVth Year

Romantic fever is a non-inflammatory and non-suppurative disorder of the nervous tissue which follows opthalmococcal encounteritis. It chiefly affects the brain and the heart in order of severity and has a marked tendency to recur.

AGE INCIDENCE. In about 80% of cases, the first attack occurs during the second decade; of the remaining, one half occur earlier usually between the fifth and tenth year of life. The primary attack rarely occurs after the age of thirty years.

AETIOLOGY. Presumably the high incidence of romantic fever in co-eds and liberal societies is due to increased likelihood of opthalmococcal encounteritis. The immediate onset speaks in favour of a direct effect of emotionotoxin on the higher centers. There is a strong evidence that the disease has immunological basis. Compared with those who make an uncomplicated recovery from opthalmococcal sour experience, patients who develop romantic fever have an unusually low antibody levels against various opthalmococcal species. The serum of many patients contains inherent auto-bodies which at intervals release a laouvotoxin that directly affects the brain and cardiovascular system giving rise to a condition called PSEUDO-ROMANTICISM, in which the patient begins to feel the brunt of innumerable admiring eyes and is elated.

CLASSIFICATION. Two forms are known :

(i) Acute romanticism
(ii) Chronic romanticism.

CLINICAL FEATURES. In acute romanticism, the attack develops immediately following encounteritis. Initially there is stimulation. The entire outlook of the patient is suddenly changed, dressing becomes a regular feature with frequent bouts of combing and tishen. This is known as 'active phase'. Tachycardia, breathlessness and romantic blush are the characteristic features. Extravagance becomes a common affair and the patients, specially the females develop a syndrome—Lingua twista americana. Other late manifestations are insomnia, chorea, nocturnal poeteria and bathrooma singalise.

The patient is least interested in studies, bunks classes regularly and flunks examinations off and on. The usual rendezvous is the college steps, parks, theatres, cafeteria but the patient may also be seen at the snack corner or on the car bonnets, visually or verbally involved.

If all goes well, the condition slowly reverts to normal, behaviour and studies gradually improve and with the consent of the parents a metallic ring is applied on the third finger of the left hand as a life-long prophylaxis against other species of opthalmococci.

Depressive form of romanticism is seen when the titre does not rise above 50%. Redemption is possible provided the brain involvement is not extensive. However, shallow breathing burning sighs, romantic pallor, grim countenence with that typical 12 o'clock look, anorexia and insomnia are the characteristic features. Late manifestations are delusions, hallucinations, psychoses, neuroses and extensive smoking plus jeanism with clotha dirteria.

Rebound depression is seen when frequent attempts fail to excite an opposite response and the patient becomes psychotic. In this case opthalmococci become indifferent. The situation is very critical and further aggravation due to the release of takin-toxin can push the patient into romantic shock.

In chronic romanticism the brain undergoes liquifactio abstractia and the cardio-vascular system specially the myocardium becomes sensitive to opthalmococci. A small colony can excite a response causing profound hypertension. Such episodes gradually become so common that over a span of time the acute stage passes insidiously into chronic form. It is a combination of a depressive romanticism and rebound depression with frequent attacks of acute on chronic romanticism. In such patients, marked personality changes occur pseudo-romanticism is a common feature. Immunity is zero and recurrence becomes common. Poeteria thefta is frequent with prominent dewanism.

PATHOLOGY. Strangely enough no vissible lesions have so far been detected. According to one theory the symptoms occur due to a deficiency of acklay-saleem in the cerebral cortex because of the tenfold increase in the amount of released emotionotoxin Derangement of mental faculties is worsened due to the subsequent release of takin-toxin. Hypertention, chorea, gulping, tremors, blushing, extensive urge to talk in the initial and rebound depressive states, may perhaps be thus explained.

TREATMENT. The treatment largely depends upon the nature of the case. Some species, due to their typical anatomical features can cause extreme personality changes and for a time redemption may seem impossible but since the effect is short-lived the symptoms may subside in 7-21 days.

In milder forms no specific treatment is indicated. However, if the symptoms continue for over 21 days, a mild dose of DANT orally is sufficient. For stubborn cases, a heavy dosage is necessary. Relatively it has minor or no side-effects. Occasionally sensitivity is seen, in which case, the patient may develop lacrimation, grimace due to haphazard contractions of the facial muscles, respiratory rate increases. strange sounds begin emanating from the throat and finally, breathing becomes strenuous and some patients even collapse. Profound personality changes may occur; somnolence, indifference to the near ones and solitude are commonly seen.

Some patients may become aggressive, abusive and insolent. A few cases of suicide due to rebound depression have also been reported.

The other most widely used drug is MAR for topical application only. It can be applied with hands or spatulla. While applying, it should be noted that this drug should not be applied extensively to sensitive areas. It is relatively a toxic drug and over-dosage can cause skin lesions, fractures and internal haemorrhages.

SIDE EFFECTS. Contusions, lacerations, black eye, fractures, haemorrhages (internal and external) depending upon the dose applied and marked personality changes occur with psychoses, neurosis, hallucinations, delusions and the patients may commit suicide. Since MAR is an unofficial and illegal preparation, unwise and loathesome use can invite medico- legal intervention. In case of the death of the patient, life imprisonment, gallows or electric chair are inevitable. Therefore liberal use is to be discouraged.

It is always wise to begin the treatment with a mild dose of DANT, increasing gradually till a successful response is seen· In most stubborn cases a double regimin consisting of adequate doses of DANT and MAR may be instituted till a favourable response is seen. If the maximum dose therapy fails, never go for L.D. 50.

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YOU NEVER CAN TELL

When Dr. Marlin was a young medical student, he had pretty strong convictions on the stupidity of cluttering up and the world with people who are hopelessly ill and handicapped. He was a strong advocate of euthanasia. He used to argue about it with the other students in his class.

"But that's what we're here for," they protested, "—to take care of the lame, the halt and the blind."

"Doctors are here to make sick people well," Marlin always countered, "and if nothing can make them well, they're better off dead."

On his hospital duty, one night in Marlin's senior year, he delivered a baby to a German immigrant (to U.S.A.) woman in the slum section of the town. It was her tenth child, and it was born with one leg a good deal shorter than the other. Force of habit made Doc blow into the baby's mouth to get him to breathe, but after a moment he thought, "What the hell! All his life he'll have to go round with that awful game leg. The other kids will call him 'Limpy.' Why coax him to live? The world will never miss him."

But the doctor in him was strong, and somehow he couldn't stop trying to make that small pair of lungs begin working, so he started again. Finally there was the gasp he'd been waiting for, the rush of red to the baby's face, and then a feebly protesting wail.

Doc picked up his bag and left, kicking himself all the way across town. "I don't know why I did it," he grumbled. "Too many children already in that poverty-stricken home! Why did I save this defective one? The world would be better off without such cripples."

The years went by. Doc moved to a small manufacturing city and built up a large practice there. His youthful radicalism was now gone and Doc was just another plodding, always-tired physician, working like a dog to keep people alive no matter how much better off they'd be dead. Old Hippocrates had won.

Doc had his share of trouble. His only son and his son's wife were killed in a car accident, and Doc took their baby girl to look after. Doc adored her. The summer she was ten, Barbara woke one morning complaining of a stiff neck and funny pains in her arms and legs.

At first it was thought to be polio, but it turned out to be a rare virus infection that occurs so seldom it rates only a brief reference in medical text-books. In all his long practice Dr. Marlin himself had never run across a single case of it. He called in neurologists, who shook their heads. They said there was no known cure for the disease, which always progressed slowly to a greater or lesser degree of paralysis.

There's a young doctor, however, who wrote an article recently about his success in handling some of these cases," one of the specialists told Doc. "The name is Miller. I'd get in touch with him if I were you."

Doc took Barbara to the small private hospital where Dr. Miller had instituted his his new and revolutionary physical therapy techniques for victims of the various crippling diseases. Doc noticed that he walked with a decided limp.

"This game leg makes me one of them," Dr. Miller said, as he noticed Doc's glance. "I let the children call me Limpy and they love it. In fact, I like that better than my real

name—Thaddeus—which always seemed to me rather stuffy. You see, like a lot of kids, I was called after a young medical student who brought me into the world."

Dr. Thaddeus Marlin swallowed hard. He remembered how, when he was a young medical student, he had said to himself, "The world will never miss him." How blind he had been in those days!

He held out his hand to the doctor who was going to make Barbara walk again.

It's better to be crippled than blind," he said.

HELPLESS LITTLE THING ?

Why is it that everyone refers to a baby as a helpless little thing ? Give a baby a home of his own, and he is the least helpless object in it. All he needs to do to have his every want filled is to let out one small peep. If help does not come at once, he need only extend this peep into a wail. And by forcing a bellow, he can throw the entire household into a tailspin from which it may not emerge for days.

He can't walk, he can't talk, he can't feed or bathe himself, and in that he has an unmixed blessing. Unable to walk, he can lie in bed all day and kick his legs — the envy of every adult who sees him. Unable to talk, he need never answer unnecessary questions, become involved in a political argument or politely tolerate a bore. When oppressed by the last, he can turn his head the other way, go to sleep, and have his actions approved by polite society.

He need never worry over what he is going to wear today or what he will eat for lunch. If he doesn't wear a stitch, he is perfectly content, and no one will raise an eyebrow. If he doesn't like his food, he can spit, blow or bubble it out, no matter who is watching, or he can disdain to eat at all. He can emit, at the end of a meal, a resounding belch, and be applauded for what two years later will be considered most unseemly.

Soon the world at large will criticize the way his hair grows, although now his admirers are enchanted because it grows at all. It will criticize the way he eats, although now all are ecstatic if he gets it down any way. If he turns out to be beautiful, good, rich, or successful, part of the world will envy him; and if he turns out to be ugly, mean, poor or a failure, the other part of the world will berate him. But now, probably for the last time in his life, he is eulogized by poets, patted under the chin by old ladies, cooed at by Scrooges, and adored by all.

Far from being helpless, he is the only human being who can take advantage of it. It wasn't idle conversation that prompted a pediatrician to muse, "In the next life I'm going to be a perpetual baby."

DO YOU ACT---OR REACT?

I walked with my friend to the newsstand the other night, and he bought a paper, thanking the newspaper seller politely. The vendor didn't even acknowledge it.

"A sullen fellow, isn't he?" I commented.

"Oh, he's that way every night," shrugged my friend.

"Then why do you continue to be so polite to him?" I asked.

"Why not?" inquired my friend. "Why should I let *him* decide how I'm going to act?"

As I thought about this incident later, it occurred to me that the important word was "act". My friend *acts* toward people; most of us *react* toward them.

He has a sense of inner balance which is lacking in most of us; he knows who he is, what he stands for, how he should behave. He refuses to return incivility from incivility, because then he would no longer be in command of his own conduct.

When we are enjoined to return good for evil, we look upon this as a moral injunction — which it is. But it is also a psychological prescription for our emotional health.

Nobody is unhappier than the perpetual *reactor*. His center of emotional gravity is not rooted within himself, where it belongs, but in the world outside him. His spiritual temperature is always being raised or lowered by the social climate around him, and he is a mere creature at the mercy of these elements.

Praise gives him a feeling of euphoria, which is false, because it does not last and it does not come from self-approval. Criticism depresses him more than it should, because it confirms his own secretly shaky opinion of himself. Snubs hurt him, and the merest suspicion of unpopularity in any quarter rouses him to bitterness.

A serenity of spirit cannot be achieved until we become the masters of our own actions and attitudes. To let another determine whether we shall be rude or gracious, elated or depressed, is to relinquish control over our own personalities, which is ultimately all we possess, the only true possession is self-possession.

PICTURE Vs. WORDS

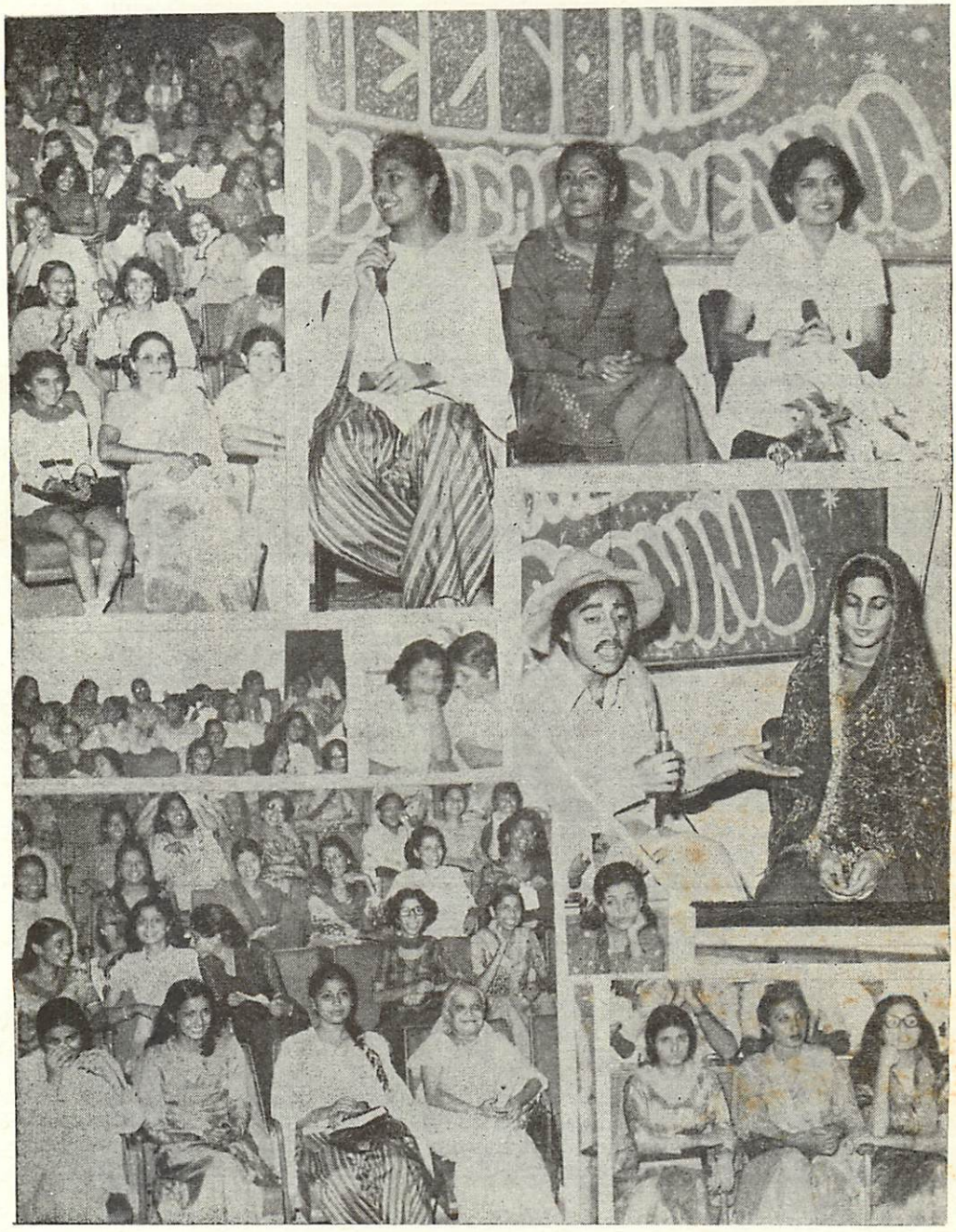
"One picture is worth a thousand words" ?

The fact is that one picture is rarely, if ever, worth a thousand words. Some are worth only one : Phooey.

Far from being worth more than words, pictures can be downright frustrating. If you buy a new electric typewriter, what do you prefer: a glossy, glamorous picture of the machine? Or a 1000 word booklet telling you what to do with it? Pictures have their value, of course. But if they're a thousand times more versatile than words, let's see a picture of TRUTH.

And if you're still not convinced, fall in a lake and start gulping water — and then, instead of screaming the word HELP, hold up a picture of yourself drowning. If someone pulls you out, I lose my argument.

GIRLS PRE-CLINICAL EVENING



JULES VERNE'S TRIP TO THE MOON

By
NADEEM AHMAD NASIR
1st Year

The blast-off from Florida was almost flawless, and the spacecraft was hurtling toward its rendezvous with the moon. Inside, the intrepid 'aeronauts' arose from their 'couches' and decided that now was the time for a bit of celebration. One of them produced a bottle and they all toasted happily the "union of the earth and her satellite".

This distinctly non-NASA-like incident occurred not during the July 1969 flight of Apollo 11—but 114 years ago—in the fertile imagination of a French author named Jules Verne (1828-1905). Verne believed that man would one day reach the moon, and that the first man to do so would be an American—a tribute to what he called "the audacious go-aheadiveness of the Yankee."

Writing in 1865, Verne described a trip (From the Earth to the Moon and Around the Moon) which bears remarkable similarity to the real exploit of 1969.

Verne's space capsule contained three men—two Americans and a Frenchman. The dimensions of Verne's capsule and the actual NASA one were startingly, close. Verne's cylindero-conical aluminium shell was 15 feet high and 9 feet in diameter; the Apollo command module-10 feet, 7 inches high and 12 feet 10 inches in diameter.

The launch sites were almost identical : Verne chose a location near the 27 degree latitude in Florida—only about 140 miles West of Cape Kennedy—the actual launching site for Apollo 11. In the Verne narrative—Texas fought to the last moment for the honour of becoming the launching site; in actuality, Texas was the site of Mission Control (situated at Houston).

Initial velocity for the Verne Craft was estimated at 36,000 feet per second; after the firing of Apollo 11's third stage engine, velocity was 35,533 feet per second. Verne gave his capsule 97 hours, 13 minutes, 20 seconds to reach the moon. Apollo's time was 103 hours, 30 minutes. Verne's capsule orbited the moon several times, often at the exact height flown by the Apollo Command Module.

Spacemen in both capsules experienced weightlessness. Both took numerous photograph and made observatiens of the lunar surface, and the Verne men even charted the Sea of Tranquility—where Neil Armstrong and Edwin Aldrin were to take their fabulous stroll. Even the conclusions of trip were unbelievably similar. In both cases, the capsules splashed down in the Pacific, the spacemen were picked up by an American warship and returned to the mainland where they received coast to coast acclaim.

Verne was not a clairvoyant or mystic. He was a remarkable master of Science Fiction, writing in a climate that challenged scientific imagination. In the mid-nineteenth century, the steam engine and other products of science were making perceptive people realize that the world was undergoing a profound change. Verne was one of them, and he translated his ideas of the future into adventure stories. He wrote "Twenty Thousand Leagues under the Sea", before the submarine was invented; he masterminded the fastest circumnavigation of the globe—"Around the World in 80 Days", before the airplane.

In his moon epic, Verne's calculation proved to be accurate because he based them on the laws of physics and immutable solidities of astronomy—the most ancient of sciences. Modern technology provided Apollo 11 with the power to escape earth's gravity; Verne endowed his capsule with the power of his precisely informed imagination.

He aimed his vessel just as NASA aimed Apollo 11—toward the position where the moon would be at the time of arrival. But Verne's propulsion power came from a 900 feet cannon containing 400,000 pounds of guncotton. It was however, named the "Columbiad" Apollo 11's command ship was the "Columbia". And not one who watched the Apollo blast-off could quibble with Verne's 1865 description :

"An appalling, unearthly report followed instantly, such as can be compared to nothing whatever known, not even to the roar of thunder, or the blast of volcanic explosions. An immense spout of fire; the earth heaved up, and with great difficulty some few spectators observed a momentary glimpse of the projectile victoriously cleaving the air in midst of the fiery vapours."

Inside Verne's spacecraft, the astronauts relaxed on sturdy couches and cooked meals with gas. They had as passengers two pet dogs, plus six chickens. They also brought along cuttings from Medoc vineyards to plant on the moon, so as to eventually be able to wash down their chicken dinners more palatably.

Verne's spacemen did not land on the moon, because they made a slight trajection error. (This was fortunate because the author had failed to provide them with space suits). But Verne had provided his heroes with a set of Firecrackers-dynamite-type rockets which the ingenious astronauts used to conquer moon's gravity and start the journey back to the Pacific.

Fantasy, fiction and fact were finally fused one autumn day in 1969—in the French town of Amiens where Verne who had dreamed the impossible dream of a trip to the moon, spent his last years. Amiens made astronauts Neil Armstrong, Edwin Aldrin and Michael Collins—it's honorary citizens.

The postscript of this article is aptly provided by Leonardo da Vinci—(1452-1519)—famous Italian Universal Genius. His predictions about flight and his "mechanical bird" strangely foreshadow across four and a half centuries what man and Apollo 11 have finally accomplished. "The great bird", he wrote, will fill "the whole world with amazement," and will fill "all records with its fame and will bring eternal glory to the nest where it was born."

Today—though a whole decade has elapsed since that historic day of July 21st 1969—when man conquered the moon—yet the memory of the three brave men who accomplished the "impossible" as well as that of the imaginative Frenchmen who 104 years earlier had predicted it with uncanny accuracy still remains fresh in our minds—and will remain thus till man's adventurous spirit is extinguished.

"TO ERR IS HUMAN"—

"It is one thing to show a man that he is in error, and another to put him in possession of the truth."—John Locke.

Or as Josh Billings said :

"The trouble with most folks isn't so much their ignorance, as knowin' so many things that ain't so."

THE IRISH POTATO IS NOT A POTATO, AND IT DID NOT COME FROM IRELAND.
(It is a tuber plant and came from Peru.)

MUSTARD GAS IS NOT GAS—NOR IS IT MUSTARD.
(It is a volatile liquid.)

PEANUTS ARE NOT NUTS.
(They are beans.)

A JUNE BUG IS NOT A BUG.
(It is a May beetle.)

TME EGYPTIAN SPHINX IS NOT A SPHINX.
(It is the statue of the God Harmachis.)

SEALING WAX CONTAINS NO WAX.
(It is made of shellac, Venice turpentine and cinnabar.)

TURKISH BATHS ARE NOT TURKISH—NOR ARE THEY BATHS.
(They are hot-air rooms of Roman origin.)

THE ENGLISH HORN IS NOT ENGLISH—NOR IS IT A HORN.
(It is French and a wood-wind.)

THE BELGIAN HARE IS NOT A HARE.
(It is a rabbit.)

AN AMERICAN RABBIT IS NOT A RABBIT.
(It is a hare.)

A PINEAPPLE IS NOT AN APPLE—NOR IS IT PINE.
(It is a berry.)

THE WHITE ANT IS NOT AN ANT—NOR IS IT WHITE.
(It belongs to the order of orthoptera, and is brown in color.)

RICE PAPER IS NOT MADE FROM RICE.
(It is made from a pithy plant called "tung-tsau.")

MOVING PICTURES DO NOT MOVE.
(They are a series of still pictures.)

CATGUT DOES NOT COME FROM A CAT.
(It is obtained from sheep.)

THE SILVER FISH IS NOT A FISH.
(It is an insect.)

BANANA OIL IS NOT MADE FROM BANANA,.
(It is a by-product of petroleum.)

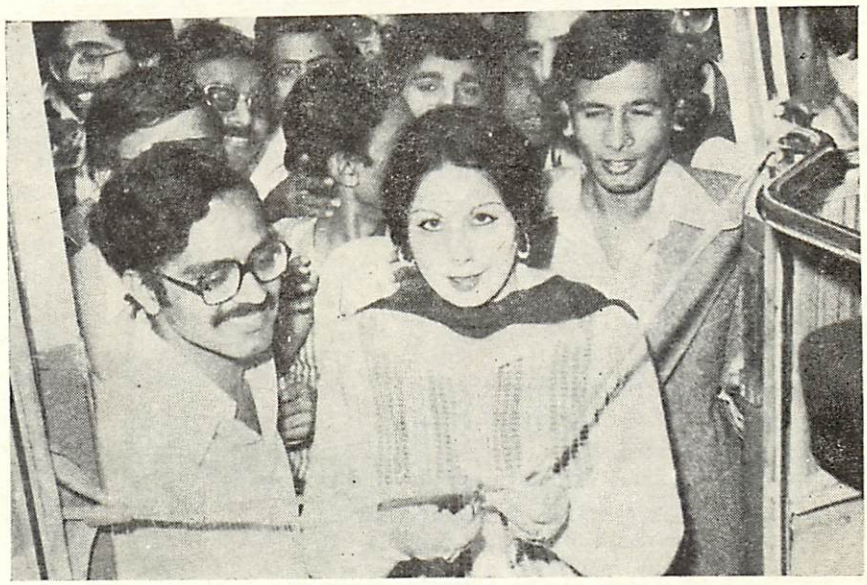
THE MULBERRY IS NOT A BERRY.
(It is a multiple-stone fruit.)

TIN CANS ARE NOT MADE OF TIN.
(They are rolled iron, thinly coated with tin.)

THE STEEL GUITAR IS NOT MADE OF STEEL.
(It is made of wood and played with a steel bar.)

THE HORNED TOAD IS NOT A TOAD.
(It is a lizard.)

NEW ADDITION TO DMC BUS FLEET



(1) *Madam Kishwar Nazli declaring the buses opening for service* (2) *"Good manouverability" Murmers Madam Kishwar* (3) *A general view of the buses.*

THE DARE-DEVIL

This jesting, fencing dare-devil was the greatest goldsmith the world has known It is from him that all daredevil heroes of modern fiction derive.

Benvenuto Cellini was the quickest-tempered swordsman in all sixteenth-century Italy, and he made his enemies pay with their lives. Battle brought laughter to his lips, and the deepest dungeon could not hold him.

Above all, this swaggering rascal was the greatest goldsmith in the world. Some of the treasures he made can still be seen in London, Florence, Paris and Vienna.

Cellini was born in Florence in 1500. From his father, who was a maker of musical instruments, he inherited the skill of his hands. As a child he would stand in front of the gold-workers' shops, lured by the rat-tat-tat of the little hammers, the snuffling of the bellows, the glow of the coals. He would edge his way inside the shops, to see the gem-cutters at work on beautiful jewels, and to watch the gold being moulded and beaten into shape.

Soon he got himself apprenticed in one of the shops. This raised a storm at home, for Papa Cellini had set his heart on making a musician of him. Benvenuto's nimble fingers on the flute could draw tears of joy from his father's eyes, but he was not the lad to practise scales all day. He would run away for months at a time to escape the hated notes, supporting himself in neighbouring towns as a goldsmith's apprentice. When he was nineteen, in a temper with his father, he set out on foot for Rome, where the Pope was said to pour out money to artists as the city's fountains poured water.

His first job in Rome was to ornament a silver box for a Cardinal. This he decorated with interlacing leaves, fruit, children and grinning masks. The shop master was so proud of the box that he showed it all over the city. Benvenuto was even prouder to be able to send part of the fee to his father, whom he continued to support handsomely as long as the old man lived. For Cellini was as quick with a gift as with a blow. During his hardworking life he supported not only a widowed sister with six children, but also another poor family and many a young art student and model.

In Rome he made plenty of money, and soon had a shop of his own. Out of it came beautiful rings and brooches, inlaid knives and daggers, silver belts for brides, a silver pitcher for a bishop. Cellini made guns too, some of which he used for shooting wild duck in the marshes around Rome.

CRACK SHOT

It was a crack shot that started off Cellini's greatest adventures. In 1527 Rome was besieged by the forces of the Emperor Charles V of Austria, under the command of the Constable of France. Cellini, a volunteer guard upon the walls, peered through the fog and chanced to see the enemy plant a ladder against the walls. Raising his gun, he brought down the group's leader with one shot. Later Cellini wrote the story of his life, and in it he says that the man he shot was the Constable of France himself. Was Cellini merely boasting? History records that on that very day the Constable was killed by an unnamed sentry.

Cellini was now given command of the swivel gun on top of the mighty Castel Sant' Angelo, a famous Roman fortress. The Pope himself, Clement VII, came out to watch Cellini's marksmanship as he pounded the enemy's trenches.

When the war was over, the Pope made Cellini coiner of the Vatican mint. Cellini also created many gorgeous ornaments for important members of the Church. A button for a robe for the Pope required years of work before it was finished. Large as a butter dish, it showed God the Father surrounded by fifteen golden angels, all set with emeralds, sapphires, rubies, and a magnificent diamond.

Cellini fell in love many times, and he could hate as strongly as he loved. When his brother was killed in a street fight, he did not even consider calling in the law. What was the use, since the murderer was a corporal of the city guard? At last, in a dark alley, Benvenuto drew his dagger and killed the man himself.

IN AND OUT OF PRISON

When the old Pope died, and before a new one had been elected, Rome had no proper ruler. A rival Vatican goldsmith, named Pompeo, started out with ten swordsmen to find Cellini, Benvenuto happened to meet them in the streets, and in the scrimmage he stabbed Pompeo dead. Pompeo had important friends, and after this Cellini was constantly being attacked. He was waylaid by a Corsican assasin, and pursued to Venice by cut-throats. He always got the best of his enemies. But in 1537 the new Pope had him arrested and sent to prison.

He was sentenced to death, but craftily he prepared to escape. First he stole pincers from a prison workman. When fresh bed linen was brought to him by his apprentices, he stuffed pieces of his soiled sheets in his mattress. With the pincers he extracted most of the nails from the iron hinges on the door, leaving just enough to hold it in place. So that the guards wouldn't notice anything, he replaced the nails with imitation nail-heads made of rust and candle wax. When all was ready, he knelt for a long time in prayer.

Just two hours of darkness remained when he pulled out the last nails from the hinges, and slipped silently out of the cell. With the knotted strips of sheet in coils on his back, he got on to the parapet, then let himself down into the court.

Night still lingered as he watched the sentries, timing his dash for the outer wall. Swarming up it with the aid of a pole he had luckily found, he fastened the remaining strips of sheet to a stone on top of the wall, and started down to freedom. But either the linen or his exhausted arms gave way, for he fell, breaking his leg.

He bound up his leg and crawled to the city gate. It was locked, but he somehow pulled out a great stone from under the doors and slithered under in agony. Beyond the gate mastiffs set on him. But a servant of the Cardinal of Venice recognized him, and took him to his master's palace.

As bad luck would have it, this Cardinal wanted a favour from the Pope. Now a bargain was struck and, in return for granting the favour, the Pope got Cellini back. He was thrown into a dungeon, deep at the bottom of Castel Sant' Angelo—a black pit where he lay delirious for days.

Away in France, King Francis I had expressed the wish to have this Benvenuto Cellini as his court goldsmith. So another Cardinal went to see the Pope, and Cellini was taken from his dungeon and sent to the most brilliant court in Europe. He was given splendid rooms to live in and plenty of assistants. He received many orders for works in gold, silver and bronze, including a huge golden salt-cellar, which today is the pride of a museum in Vienna.

PERSEUS

The king and queen, the Cardinal and nobles, often came to visit Cellini's shop. All seemed well. But Cellini had reckoned without a certain powerful lady at the king's court, and he neglected to ask her opinions on his work. Thanks to her scheming, little that Cellini planned for Francis I was ever completed. So in 1545 he returned to Florence, where he worked for Duke Cosimo de'Medici.

Cosimo suggested that Benvenuto make a statue of Perseus, the legendary Greek hero who slew Medusa—that evil creature with the body of a beautiful maiden but with hissing serpents instead of hair, and a face that turned men to stone.

Cellini made model after model in wax and plaster. At last, after nine years' work, he produced a figure, larger than life, that satisfied him. Now to cast it in bronze! This was one of the hardest tasks in sculpture ever attempted. Cellini had to devise his own furnace, moulds and metal alloys.

Here is the way Cellini himself described his task : "At last I called out to set the furnace going. Pine logs were heaped in, and my furnace worked so well that I had to rush side to side to keep it going. After striving for several hours, I had to fling myself on my bed as a sudden fever attacked me. When, two hours later, I strode into the workshop, I found the metal all curdled and the roof of the workshop on fire. I sent men on to the roof to stop the fire, and told two of my assistants to fetch a load of oakwood. When this caught fire, oh! how the metal began to stir in that awful heat, to glow and sparkle in a blaze.

"All of a sudden there was an explosion, with a tremendous flash of flame. I discovered the cap of the furnace had blown up, and the bronze was bubbling over. I opened the mould immediately, but the metal did not flow as rapidly as usual, because the base metal in the alloy had been consumed by the great heat. Accordingly I sent for all my pewter plates and dishes, to the number of about 200 pieces, and cast them in one by one. Now my bronze was in a perfect state for filling the mould. Seeing my work finished, I fell on my knees and with all my heart gave thanks to God."

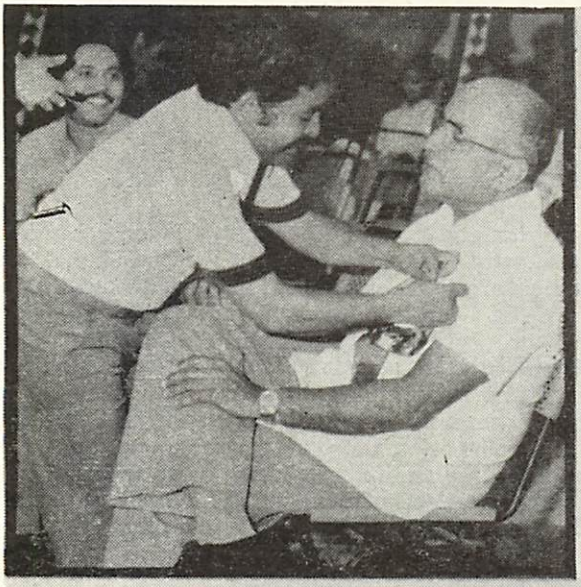
The statue of Perseus was placed in a gallery opening on a square in the heart of Florence. There today, in immortal bronze, stands the hero holding up Medusa's head. For this work of art alone, Cellini ranks amongst the greatest sculptors.

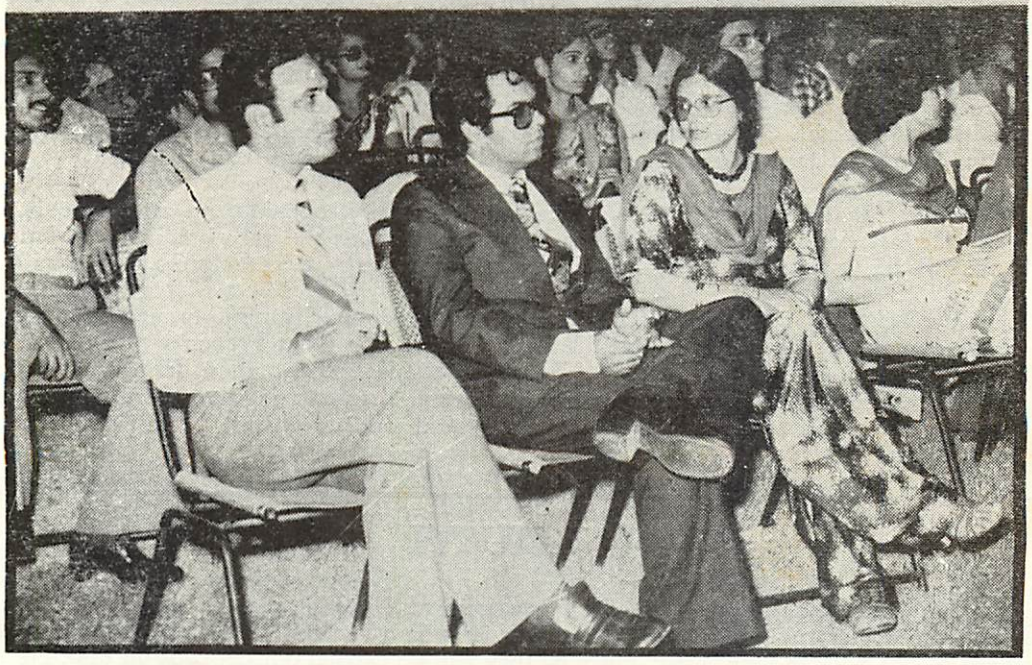
On February 13th 1571, he died, and so his adventures came to an end. Yet they go on for ever, while people still read his *Autobiography*. The great French writer, Alexandre Dumas, read it—and then invented his laughing cavalier, D'Artagnan, friend of the three musketeers. Since then the figure of a jesting, fencing, kiss-snatching dare-devil has fluttered from a hundred books and flashed from a thousand cinema screens. The first of them all was Benvenuto Cellini.

YOUTH

A youth is a person who is going to carry on what you have started. He is going to sit where you are sitting and attend to those things which you think are important. You may adopt all the policies you please, but how they will be carried out depends on him. He will assume control of your duties, states and nation. He is going to move in and take over your places of worship, schools, universities and corporations. All your books are going to be judged, praised or condemned by him. The fate of humanity is in his hands. So it might be well to pay him some attention.

GLIMPSES OF SPRING FESTIVAL, FINAL YEAR





GOOD OLD DAYS

"Oh, for the good old says!" How often have we heard those words! How often have we been told of those good old days and of how happy they were. In those days the weather during all the months of the summer was perfect; in the winter it was just what winter weather should be. Life was more peaceful; events did not follow one another quite so quickly; friends were more true and more understanding. There was more respect for family life, men were happy in their work, and life was a very good thing. Those past days, we are told, were very different from the present days of restlessness and doubt, of the wrong weather in both summer and winter. Perhaps we ask: "When were those happy times, when all men were brothers, and life was so easy and free?" Some will answer that they were the years before Partition. Others will place them round about 1900, while others will place them in the "90's."

In our reading also we come upon stories of the golden days of the past, but we find here that at all times during the past two thousand years men have been pointing back to the happy days of old, attempting to paint for us a picture of those happy days, and to show us how much better those days were than the times in which they were then living.

What is the reason for this looking back into the past to find happiness? Perhaps it is that at almost any time there are many people who are leading happy lives but who do not talk or write about it; but there are also many others who were happy in their young days but who have not changed with the ever-changing conditions of the life going on about them. For these people the world used to be a better place than it is at present. There are few of us who cannot look into the past and find happy days. As children, we have little or no control over the details of our lives, but we are generally happy because we are able more easily not to regard these details if they do not please us. We can cut ourselves off from the outside world and build up a happy world of our own.

It might be easy for us to believe these people who find good only in the conditions of the past were it not for the fact that these same people will, at other times, tell us how different things were when they were young, how hard they were forced to work, for what long hours they were kept at their work, how few pleasures they had, and so on. And for every book which we read telling us of the good old days there will be another telling us of the bad old days, of the hard lives of the masses of the people. Most of us would not be willing to return to the conditions of life as it was lived 30, 40 or 50 years ago. We believe that it is better to be living in the present, with all the troubles of the present day. We know that we have no right to expect to be happy all the time, and we know also that by keeping in touch with the life and the thought and the interests of our own times, we can help to make the present days happy ones, both for ourselves and for others.

We can be certain, too, that at some time in the future old people will look back to these present days and will speak of them as the "good old days."

It is very often the people who talk most about the "good old days" who at other times tell us about the very hard times they had in their own early days. In these easy-going days, they say, young people do not know what it is to work really hard, and, they continue, it is as a direct result of their own hard work that they are today the men they are. And we, of course, are left in no doubt whatever that we of the present day can never hope to be as good men and women as our fathers and mothers.

If this is the case, the country today is in a very bad way. But is it the case? If the young people of today are of poorer quality than their fathers and mothers, we may ask whether the old people of today are in their turn of poorer quality than *their* fathers and

mothers, who no doubt had to face even less easy conditions. Clearly, this cannot be the case, for if we are today any better than the people of a thousand or two thousand years ago, it is because on the whole the young people at any given time have been as good as the old people, and even a little better. The material conditions of life for the masses of the people of this country are better today than they have ever been. People generally have better food, better houses and better schools. More care is taken to see that young people, as far as possible, take up work of a kind which will interest them. And almost all large business houses now provide playing fields for their workers.

Not only are these better conditions offered to the people—it is of equal importance to note that the people are making full use of the better conditions. Authorities all over the country have provided schools where those who are at work during the day may increase their knowledge in their free time, either without charge or at a very low cost; and the attendances at such schools are growing yearly. Women all over the country and in every station of life are learning the food values of different kinds of food, and people generally are moving into the better kind of houses as soon as it is possible for them to do so. More people own their own houses today than at any time in our history.

It is quite true that to learn to face up to troubles and a hard life is a valuable part of our training; but even though the material conditions of our lives are better, we still have enough troubles to face and to overcome in our own times without wishing to turn our steps back into the past in order to find still more.

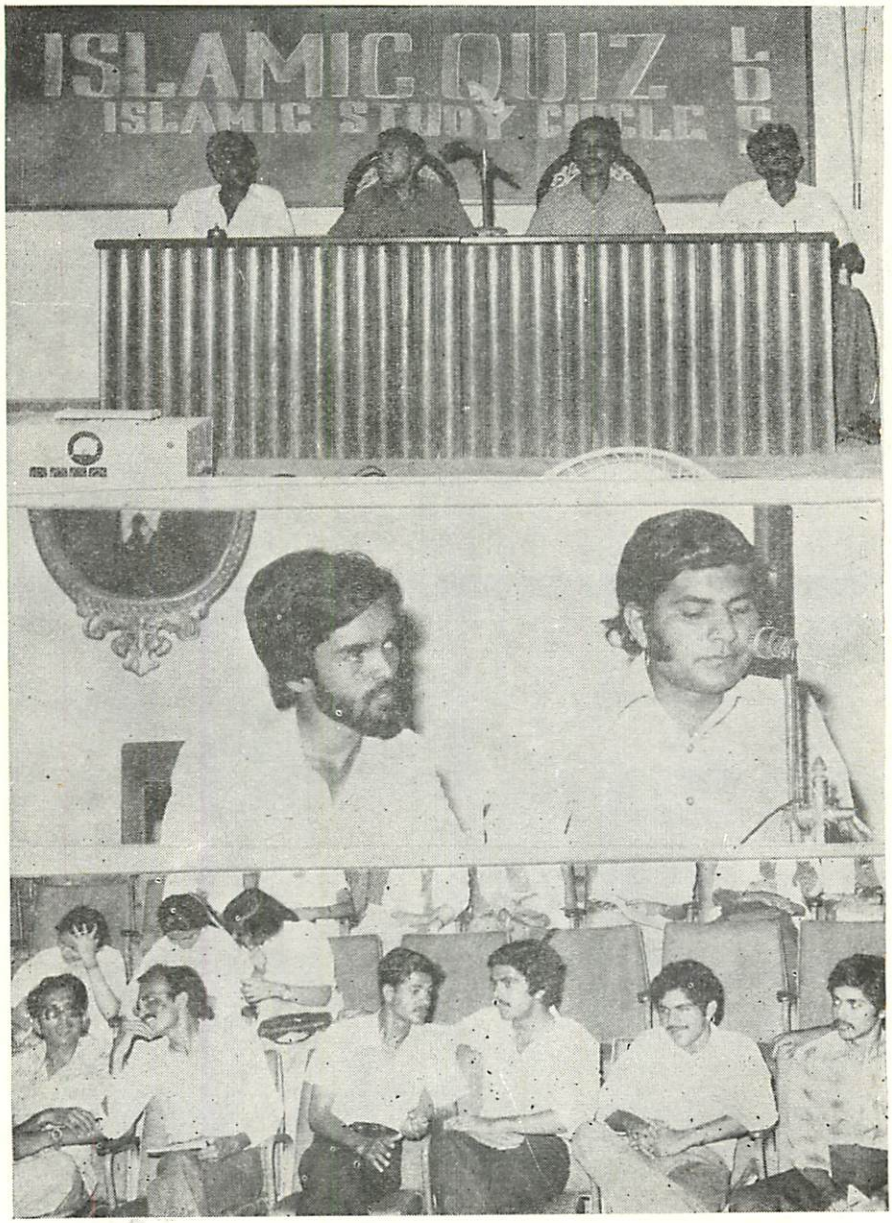
That girls and young women are today in a better position than their mothers were would not be questioned by many. They can lead very much wider and happier lives, and it is certainly not the women who talk with love about the good old days. But men have been doing it throughout the years. Here is one example. An old man writes :

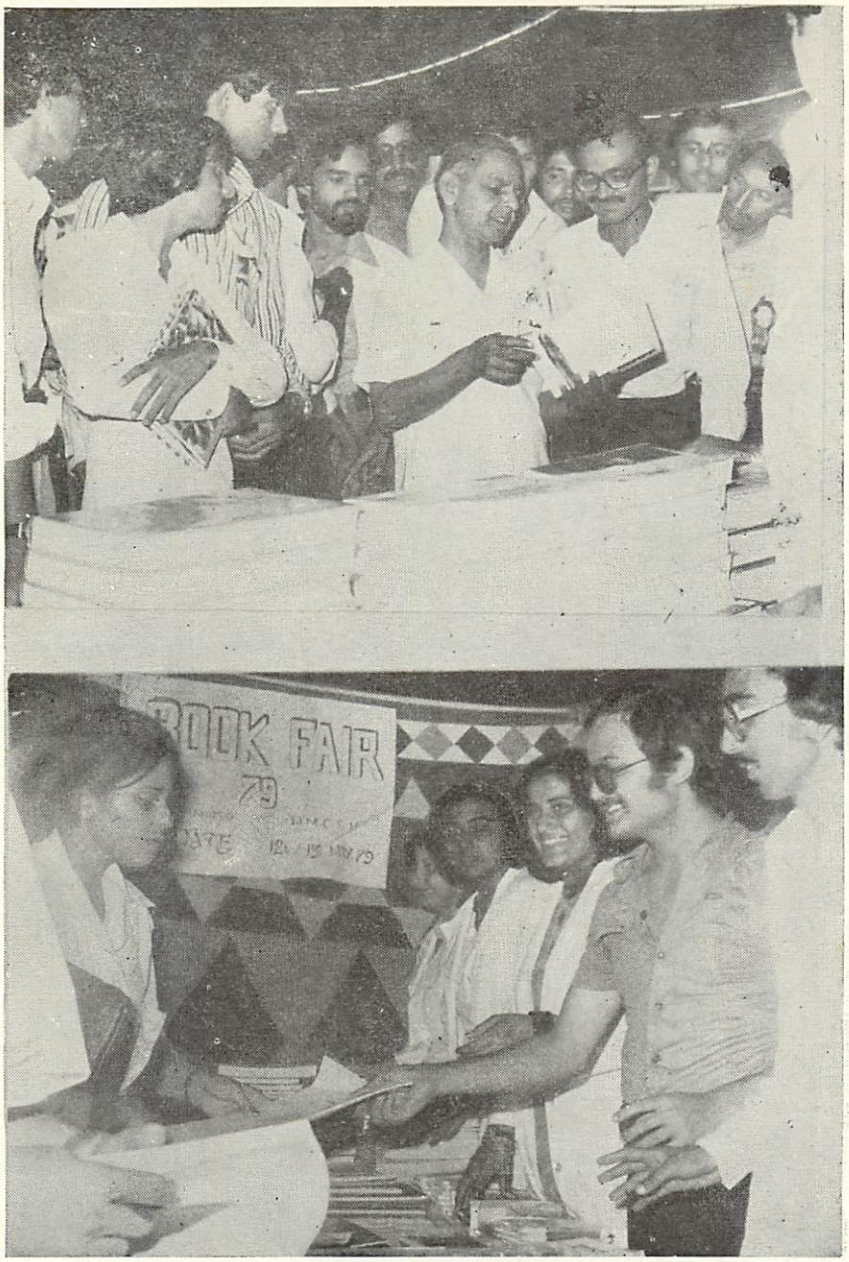
> "The minds of the young people are full of plays and shows; and if they are so interested in these things, what room is left over in their minds for learning? And," he adds, "the teachers are just as bad. With them, too, such subjects supply the material for talk more often than any others."

We feel that we have heard these words before. But when were they written? Nearly two thousand years ago ! Have we, after all, changed so very much?

SOHAIL BASHIR CHOUDHRY
IV Year M.B.B.S.

ISLAMIC QUIZ
(ISLAMIC STUDY CIRCLE)

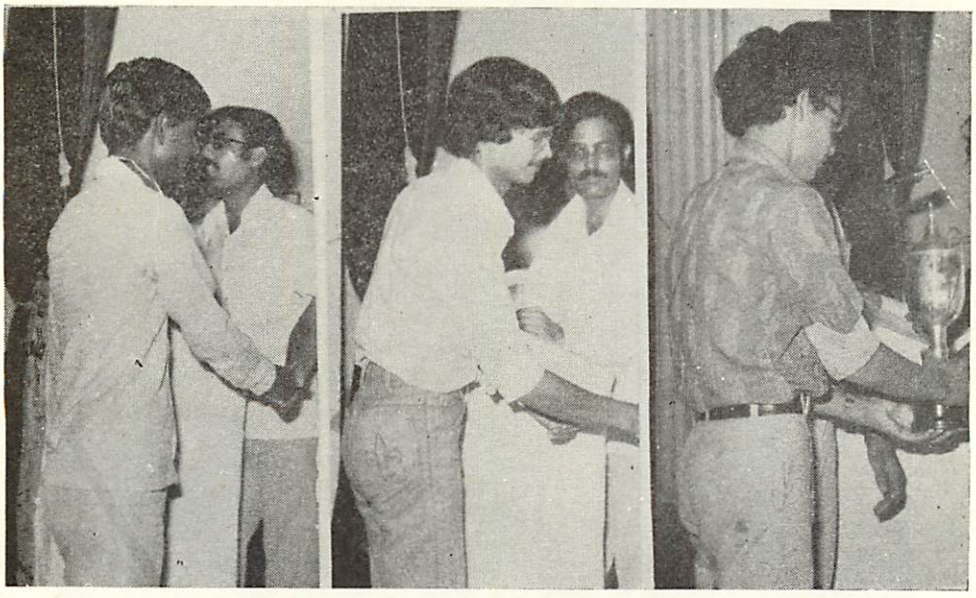




(1) *Prof. Fazl-e-illahi explains the importance of books to Rana and others around.*
(2) *"It's good and quite helpful too", Says Rauf "please buy it."*

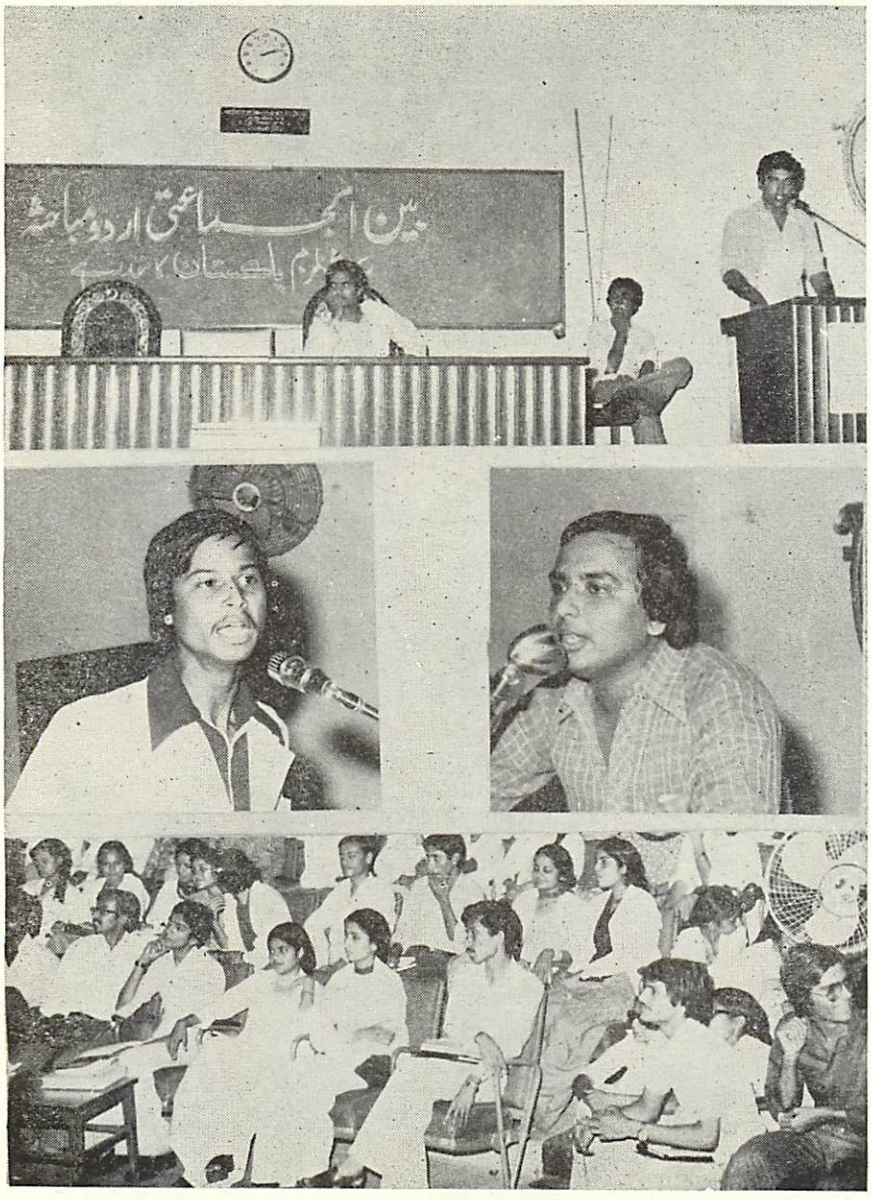
STUDENTS WEEK
PRIZE DISTRIBUTION CEREMONY

STUDENTS WEEK
PRIZE DISTRIBUTION CEREMONY



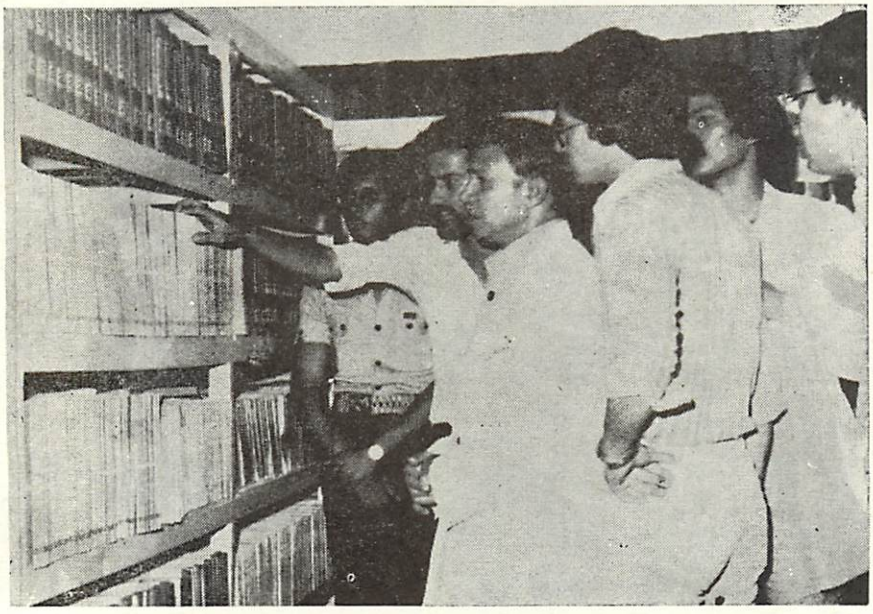
STUDENT'S WEEK

STUDENTS' WEEK
PROCEEDINGS OF URDU DEBATE



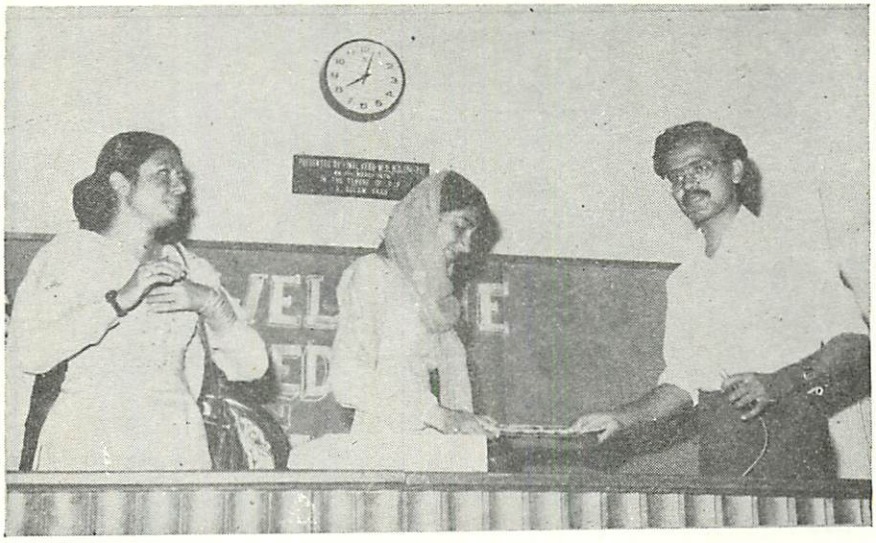
INAUGURATION OF NEW LIBRARY BLOCK

LENDING LIBRARY

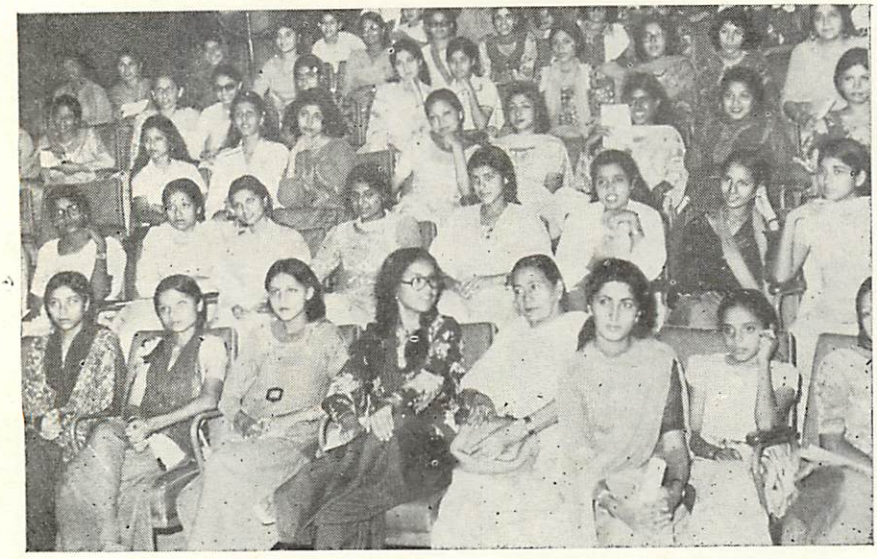


1. Rana and workers with Prof. Shareef
2. Prof Shareef inspecting the Books

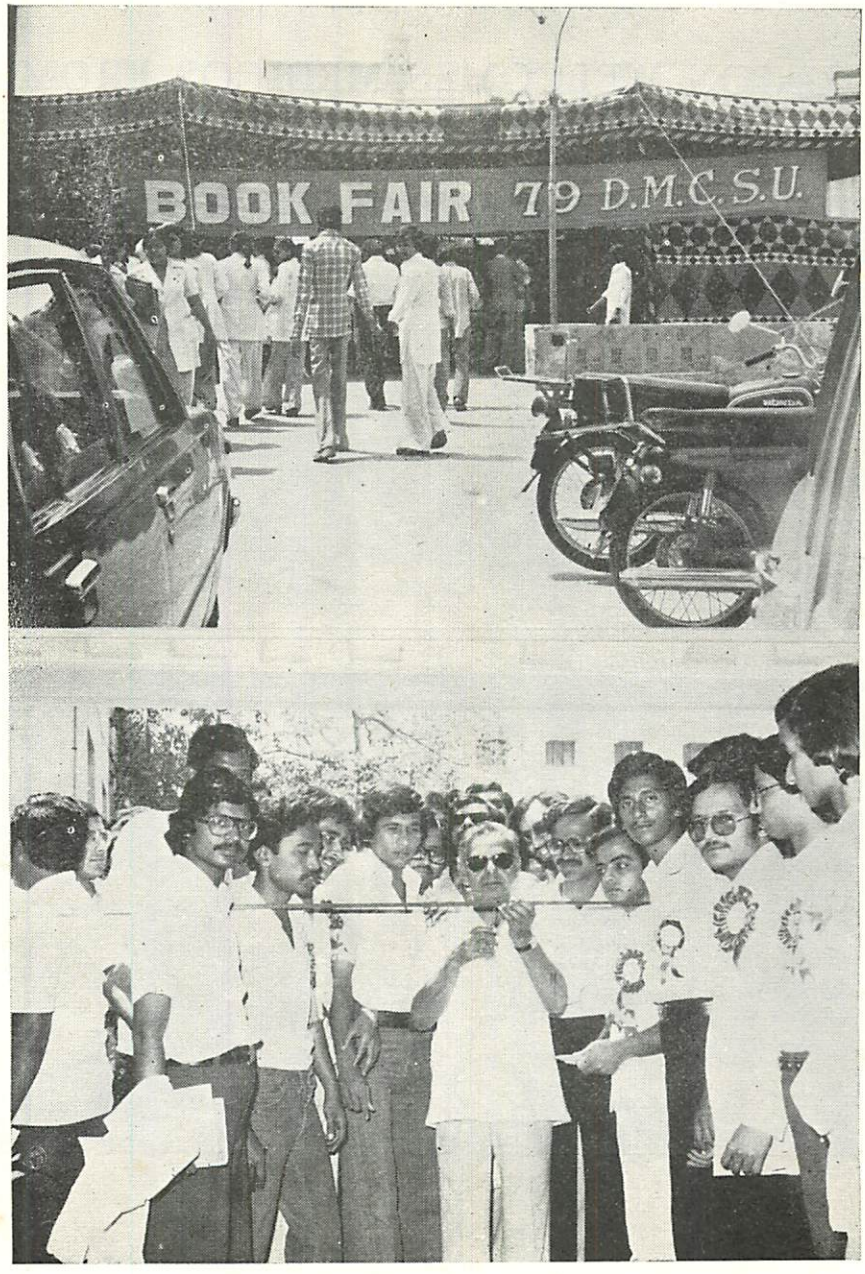
UNION WELCOMES MEDICOS FROM FJMC



YET ANOTHER GIRLS PRE-CLINICAL EVENING

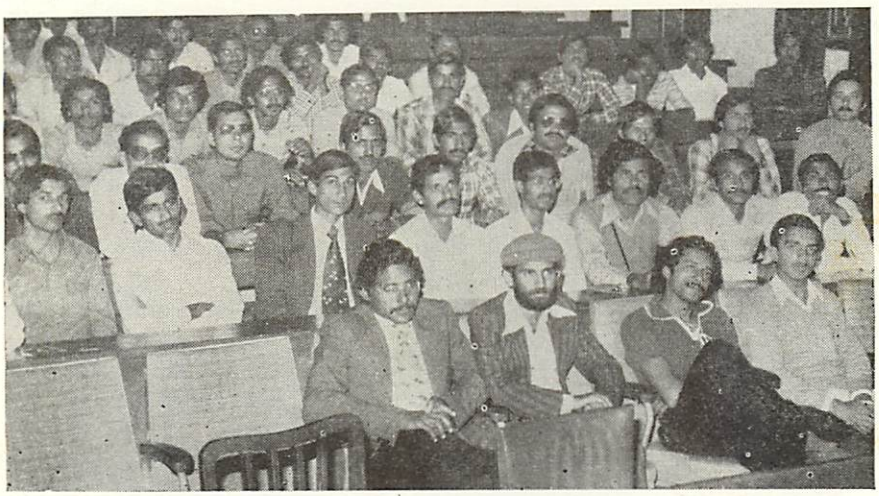


BOOK FAIR 1979

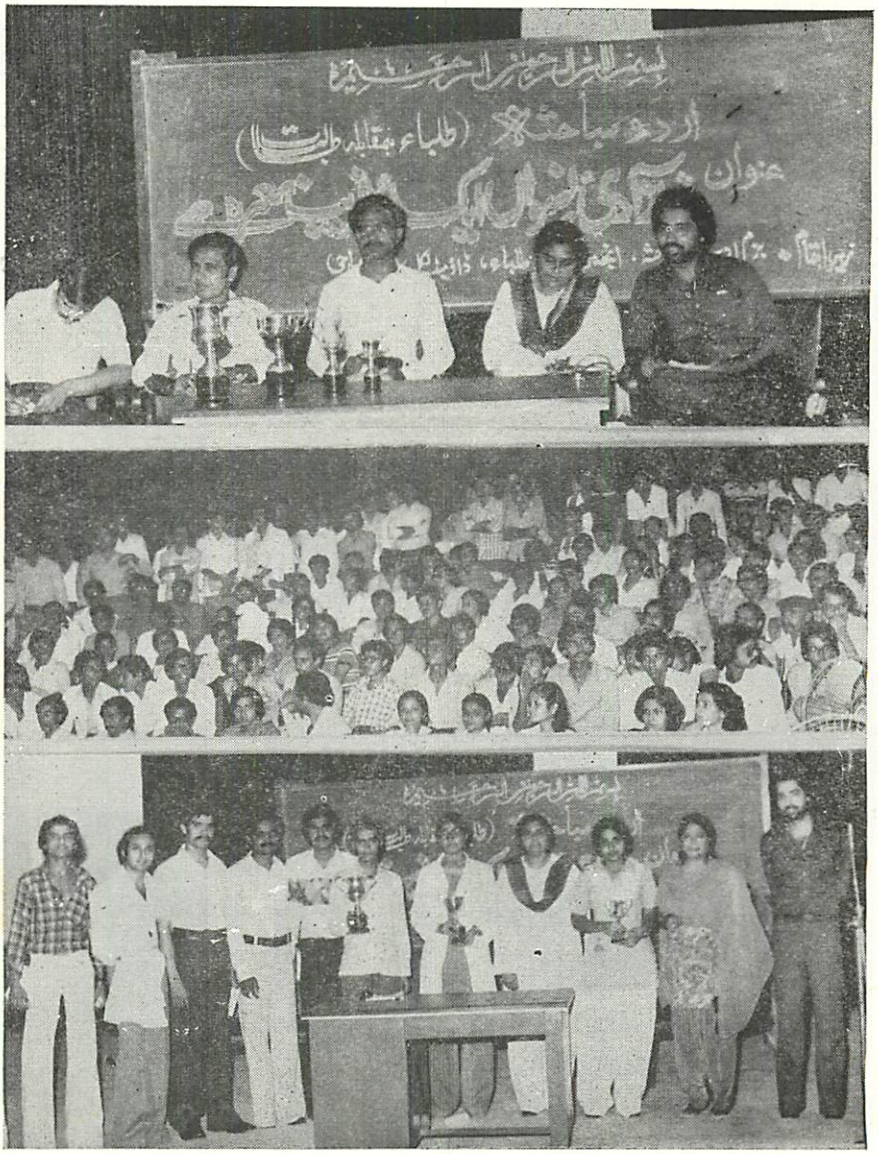


(1) *A general view of Fair.* (2) *Prof. Fazl-e-illahi inaguarating the Fair*

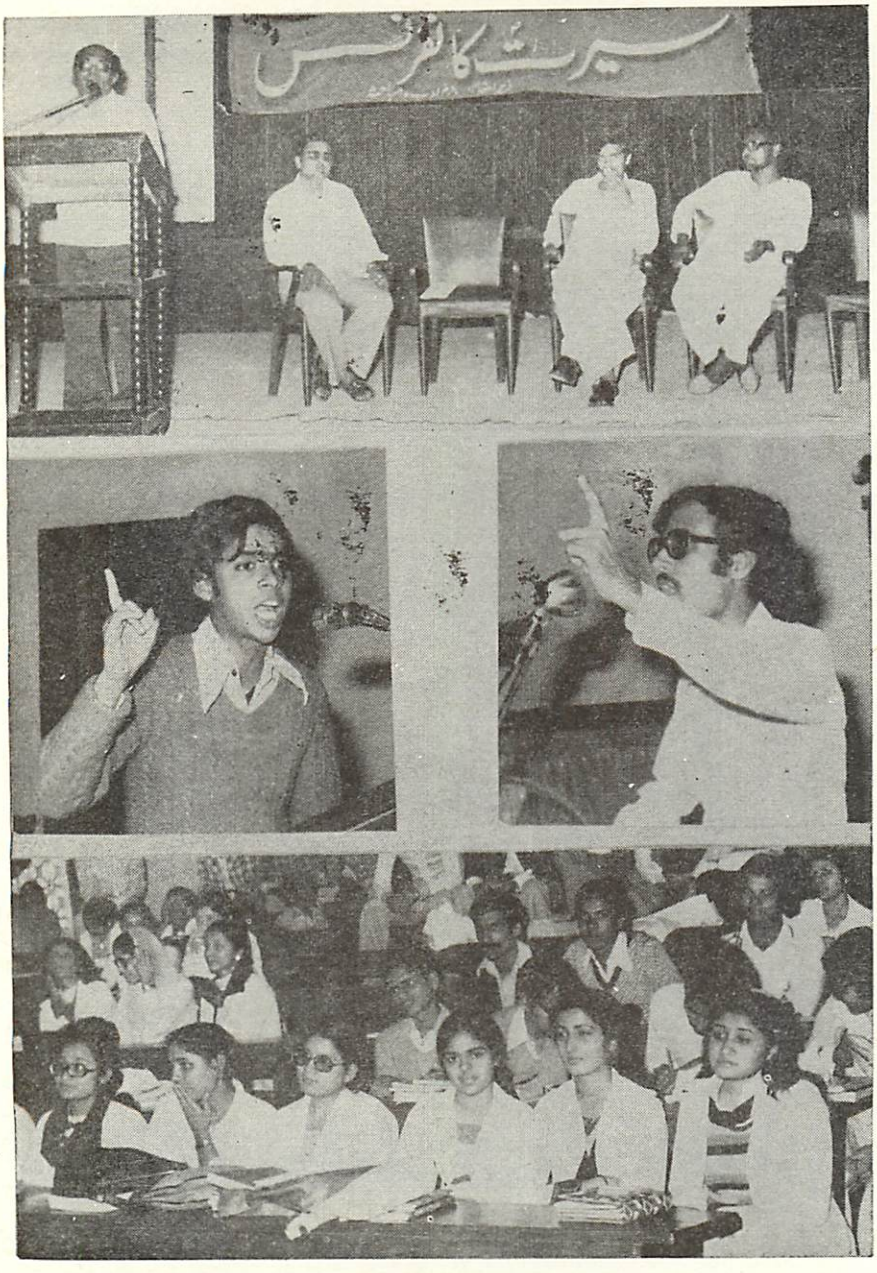
UNION WELCOMES MEDICOS FROM BOLAN MEDICAL COLLEGE



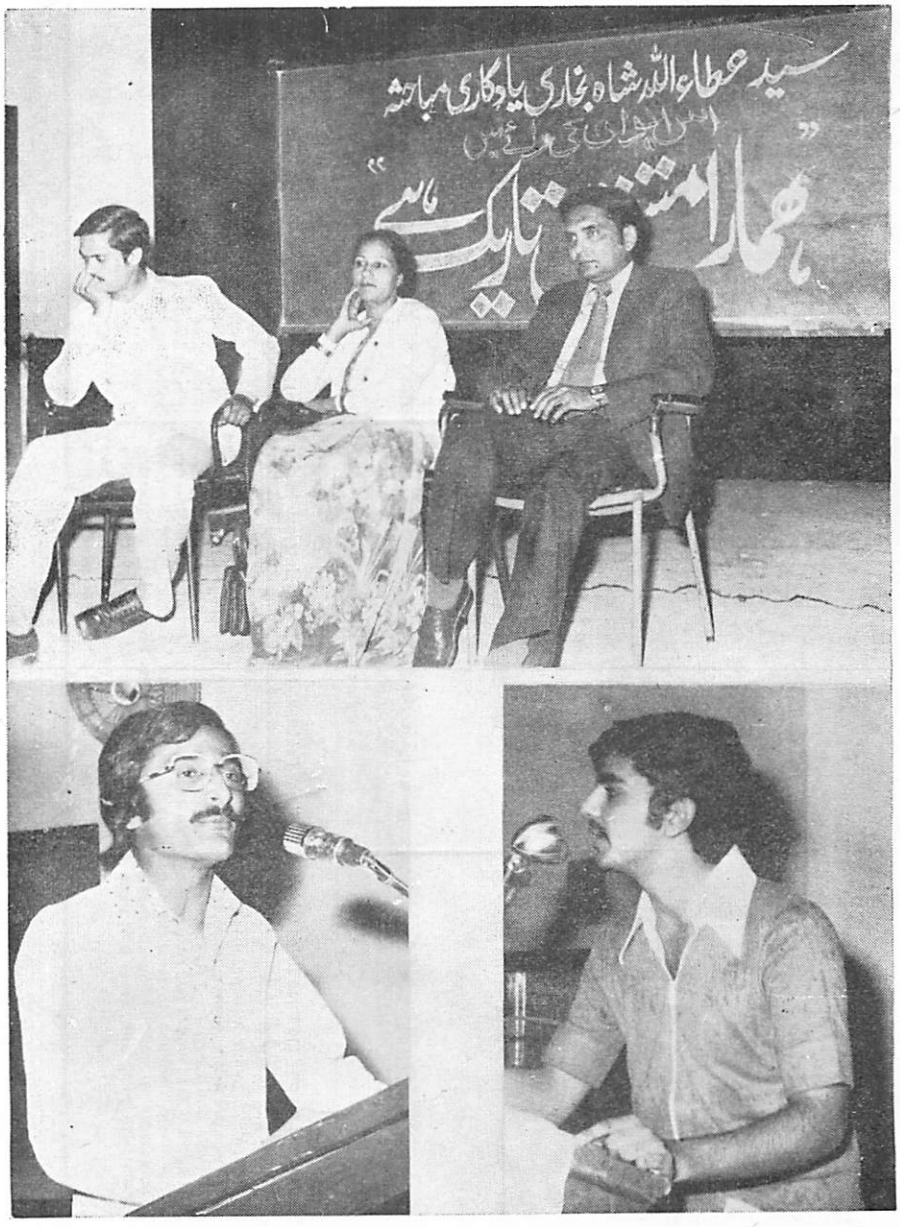
STUDENT'S WEEK URDU DEBATE
GIRLS Vs BOYS

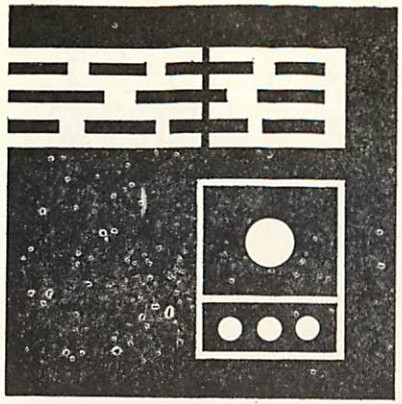


SEERAT CONFERENCE IN PROGRESS

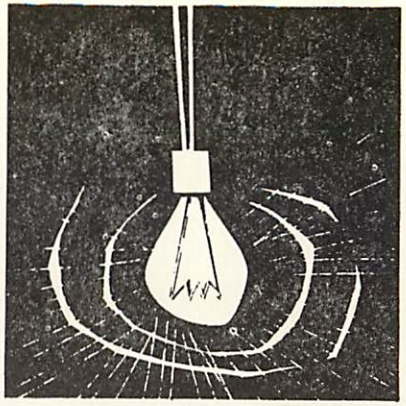


STUDENTS' WEEK URDU DEBATE

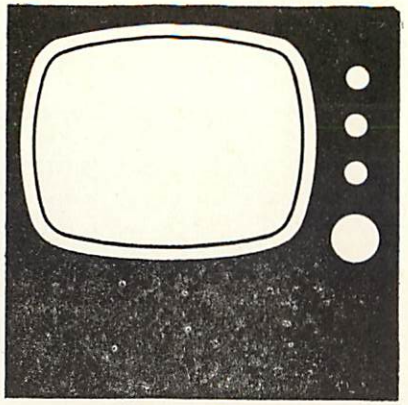




sound



Light



vision

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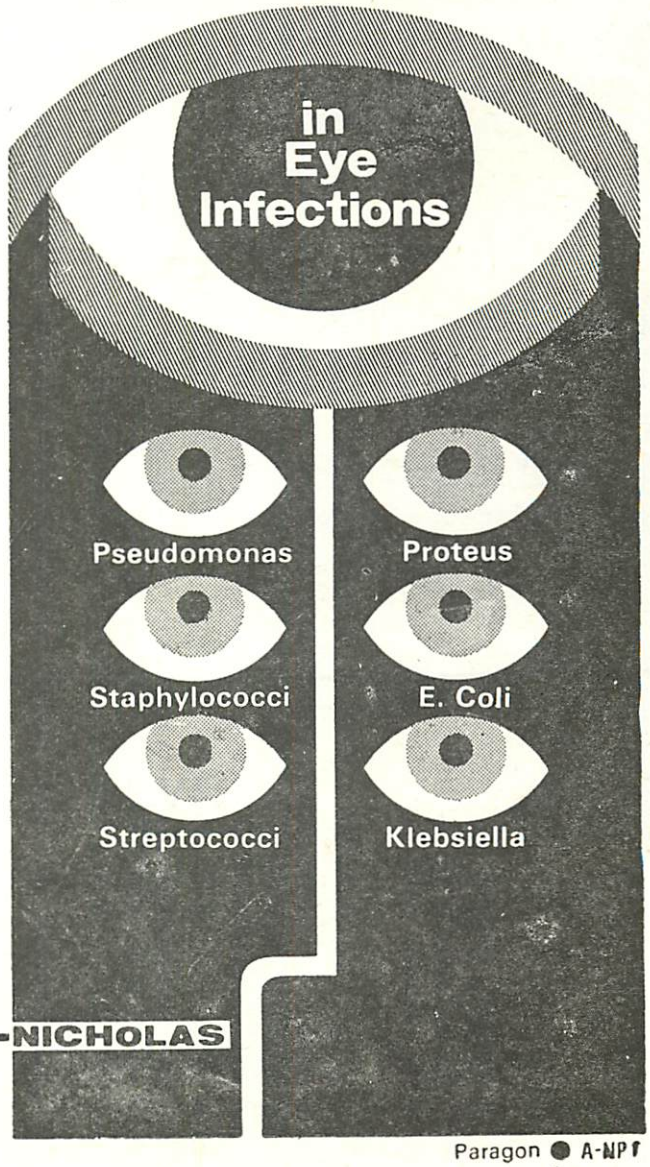

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In his hand he grasps a stone
Which he'll hurl with all his might
To vanquish every batsman in sight.

His is a genre of Supermen,
Pocketting wickets no less than ten;
A "demon bowler" is his name
And breaking bones is his game.

Chain him, harness him if you could,
Fine him, no-ball him — its no good;
A killer instinct is in his blood
And takes the shape of bumpers in flood.

If the ball strikes the pad he'll spin around
With a roar that's sure to shake the ground
And heavenward leap in every likelihood,
If the appeals accepted — let alone understood.

O woe is the batsman taking stand
Against him fresh, new ball in hand,
For then its certain he'll not see
The ball that fell him like a tree.

When this bowler is in full cry
Its likely you'll see many teeth fly;
Then its the stumps he'll eagerly pound —
Those in their mouths not those in the ground.

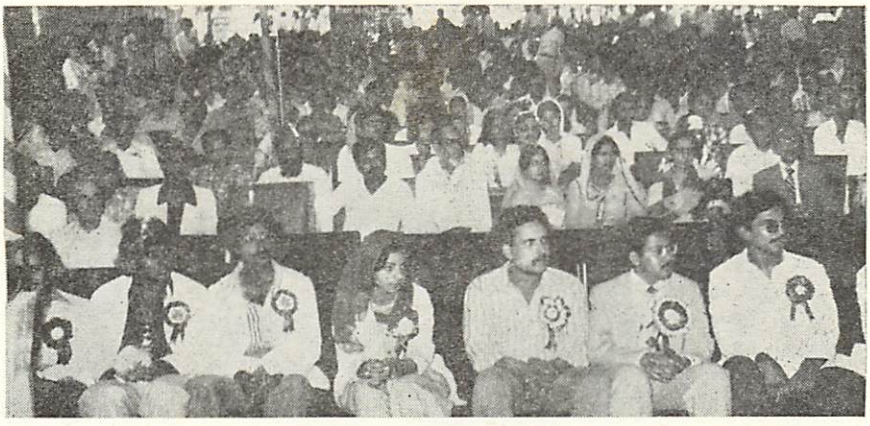
MIRZA SHAHZAD HASAN
1st Year

WHY?

The more you study
The more you know
The more you know
The more you can forget
The more you can forget
The more you do forget
The more you forget
The less you know
So why study?

GLIMPSES OF 4th ANNUAL CONVOCATION

GLIMPSES OF 4th ANNUAL CONVOCATION



GLIMPSES OF 4th ANNUAL CONVOCATION

The graduaters lined up, ready to march in

SIR ALEXANDER FLEMING

SYED ASIF HAMID ALI
Ist Year

The world of science has many a great men to be proud of. But one man has a unique place in this galaxy. Sir Alexander Fleming — the man who discovered penicillin — has the very great distinction of being a scientist whose work was such an immediate and direct benefit to mankind that it is very difficult to find a comparable example in history.

It is said that all the world knows the manner in which penicillin was discovered. Still, writers continue to embroider the truth to this day. As late as 1955 a story claimed that it was the tears of a pretty but lachrymose nurse which put researchers on the road to this discovery. Fact is different.

From the very beginning he was a curious little fellow. Every spare moment of his boyhood was spent roaming the remote upland surroundings of his country home. The habits of birds and animals enthralled him and he enjoyed the freedom of a world of his own. By the time he was 18 he had become an excellent swimmer, a crack shot and a noted polo player.

After his eighteenth birthday he received a small legacy. This made him think about improving his circumstances. Yet it was his family that took the final decision. He writes, "My brother pushed me into medicine."

His career in medicine began by winning the Senior Entrance Examination in Natural Science. In medical school he decided to become a surgeon and in 1909 was made a fellow of the Royal College of Surgeons of England. But he did not practise surgery. He was offered a very handsome post in Sir Almroth Wright's laboratory. From that day he fell under the influence of Wright and was still there till the day of his death in 1955.

It was an era of Vaccine therapy. Immunology was just beginning. By April 1909 Fleming had produced two fruitful pieces of research. First he suggested how *Acne vulgaris* could be treated by vaccine. Secondly he devised a simple method of "Serum diagnosis in Syphillis".

Fleming was 41 when he discovered lysozyme, an essential prelude to penicillin. He wrote a paper on his discovery.

In 1937 H.W. Florey and E.F. Chain at Oxford were completing their research on lysozyme, the substance Fleming had discovered. Then occurred an event that was to give the world its first antibiotic. It so happened that Chain, while searching for agents with powers similar to those of lysozyme came across a number of papers dealing with microbes able to produce substances capable of producing substances that limited growth of other bacteria. By the sheerest of chances he also read Fleming's paper on penicillin which had appeared in the *British Journal of Experimental Pathology*. He and Florey intrigued by it decided to take up research in this field. Finally they were successful in preparing penicillin.

What must be clear is that neither Florey nor Chain had anything in mind other than a piece of academic research. They had no idea that the consumation of Fleming's work would lead to so great an alleviation of human suffering.

Fleming, Florey and Chain were awarded the Nobel Prize for medicine jointly. Each had made a vital contribution to this remedy.

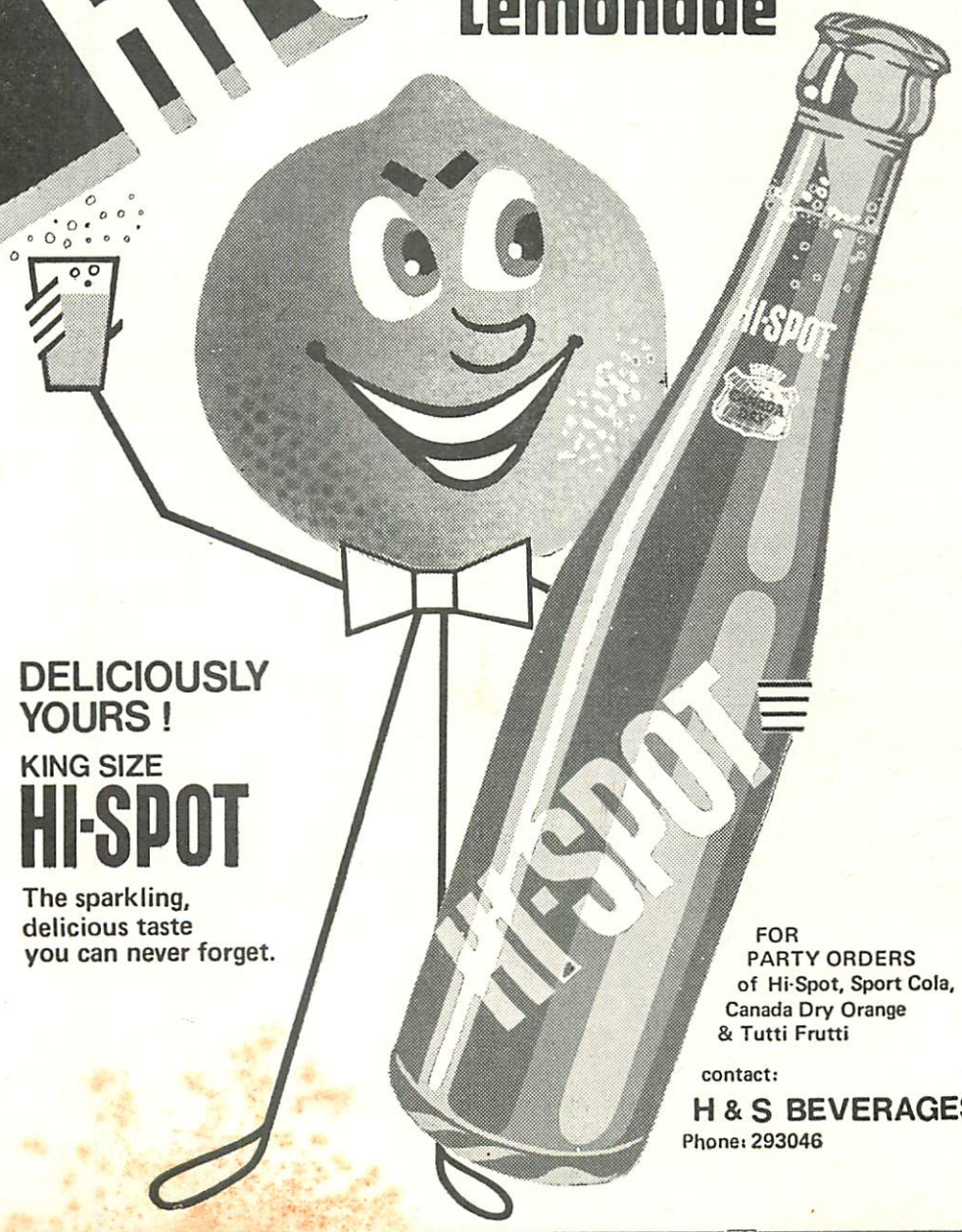
Fleming once wrote "The story of penicillin has a certain romance in it and helps to illustrate the amount of chance, fortune or destiny or call it what you will, in anybody's career."

He died suddenly in March 1955 and was buried in St. Paul's Cathedral in a very moving funeral. The eulogy was read by his old friend C.A. Panett. "....By his works he relieved more suffering than any other living man, perhaps more than any man who has ever lived."

CANADA DRY

HI-SPOT

Lemonade



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At first the astronomer's reply seemed almost a rebuff. Then, pondering it, Kaoru seized eagerly on its meaning. "To observe the skies solely to seek a new comet is a hopeless task which demands a great deal of time and hard labor," Minoru Honda wrote. "But to observe the brilliant heavens for their own sake without thought of discovery may bring you good luck in your comet-seeking."

Kaoru returned to his sky watches. Instead of searching for a comet, however, he concentrated on the whole sky, trying to become as familiar with its plan as he was with the streets and byways of Bentenjima.

On December 31, 1962, Mrs. Ikeya counted a total of 16 months since Kaoru had begun his vigils with his new telescope. "Surely, Kaoru," she pleaded, "this night you will take your full rest. It is *Omisoka,* the Grand Last Day of the year! Both of us have worked hard. We have honorably settled all our debts and can start the new year with a clean record. Let us stay up until midnight, listening to the temple bells, and then sleep late in the morning."

To please her, Kaoru did not climb to the roof that night. He remained with the family all though New Year's Day and accompanied his mother to a nearby shrine to pray for good luck in 1963.

Then, on the following night, January 2, 1963, Kaoru discovered his comet.

At the Harvard Observatory, the Western Hemisphere's clearing-house for astronomic information, all the data on Comet Ikeya 1963a were placed on announcement cards and sent to observatories and journals of astronomy around the world. A few weeks after Kaoru sighted it, there were confirming reports from the Yerkes Observatory in Wisconsin and the U.S. Naval Observatory's station at Flagstaff, Arizona. Thus Kaoru kept in touch with his comet through a widening circle of fellow observers.

All this while, Kaoru quietly reported for hib job at the piano factory. Only when the press requested interviews with him did the company first learn of his achievement. The company's response was to start a collection among the workers to help Ikeya continue his sky watching. A certificate lauding his off-the-job zeal, together with a check for $150—a lordly sum in Japan at that time—was presented to him in a ceremony at the plant.

Since then, Kaoru has made yet other discoveries. In July 1964, working with a new, improved telescope—which he made at a cost of about $14—he spotted a second comet. Comet 1964f. And in September 1966—along with another Japanese amateur astronomer, Tsutomu Seki, who watches the skies from the city of Kochi, 240 miles away—he co-spotted his third, the now-famous Ikeya-Seki.

Kaoru Ikeya has neither sought nor been offered advancement. For him, the richest reward has been this: he has now made partial payment on his *ko* by taking a dishonored name and writing it across the skies.

to be shown to school-children. Kaoru found this fiction especially distasteful. He commented wryly: "Why isn't the truth good enough?"

The true story began when Kaoru's father moved his family from the large industrial city of Nagoya to the town of Bentenjima, when Kaoru was six. Their new house overlooking Lake Hamana had a flat roof, and Kaoru clumbed up there to escape the noisy clamor of three younger brothegs and a sister. Soon he eas mounting to the rooftop at night to look at the stars.

By the time he was 12, Kaoru was so enthralled with the heavens that he was reading books about the stars and tracing maps and diagrams of the skies in his notebook. At 13 he determined to build his own telescope. Although his father's fish store was prospering, Kaoru was reluctant to ask him to buy one. Already there was tension between them; the father complained that the boy was not applying himself to learning the family's business. "Sound sense should show you, my son," he insisted, "that astronomy does not belong to our station in life."

Still, Kaoru continued to haunt the school library, reading texts on astronomy and studying the principles of optics, physics and chemistry that are involved in telescope-making.

But misfortune was lurking for the Ikeya family. Mr. Ikeya's business began failing. Discouraged and embittered, he took to lounging about the pubs, drinking, increasingly reluctant to face his wife and five young children.

Perhaps nowhere else in the world does a father's neglect so cruelly punish his family as in Japan, with its heritage of *on*. *On* refers to the obligation each person incurs by the mere fact of his existence. A basic part of *on* is *ko*—the obligation to one's parents and to one's descendants. Mr. Ikeya had failed in his duty as a parent, had placed an oppressive burden of shame on the family name, perhaps for generations. "We could think of nothing else, my mother and I," Kaoru says, "but that our family was disgraced."

Sadly Kaoru watched his mother go to work at the hotel near the Bentenjima railroad station, cooking and cleaning for strangers. He himself took a part-time job, rising at 5 a.m. to deliver morning newspapers, returning after school to deliver the evening edition. He felt increasingly the responsibility of removing from the family name the stigma his father had attached to it. And by this time he was thinking about discovering a comet—*his* comet. What if one day he could attach the dishonored name to the tail of a new comet and write that name across the sky? "Comet Ikeya!" The name had a fine, proud ring.

In June 1959, when he graduated from middle school, Kaoru went to work at the piano factory. Since earning power is directly related to education in Japan, he was classified as an unskilled worker at base pay. Kaoru wasn't disturbed. Polishing celluloid was mechanical*c* he could think of other things while he was working.

In his spare time, Kaoru set himself to grinding the high-precision surface for the main mirror that would go into the telescope he decided to build. Shopping around in second-hand stores, he obtained the other materials he needed. In August 1961, after two years of off-work hours of labor, he was ready to begin once more to search the skies.

In Japan, the best hours for viewing are from 3 to 5 a.m., but not every sky is fit for observation. On cloudy mornings Kaoru caught up on the sleep he lost on clear days. After many months without success, he felt deeply discouraged. The search for a new comet seemed futile. He wrote to astronomer Minoru Honda, discoverer of nine comets, pleading between the lines for a word of encouragement.

THE BOY WHO REDEEMED HIS FATHER'S NAME

"Lacks ambition and initiative," his personnel card read at the piano company where he worked for $35 a month. But Kaoru Ikeya had a burning ambition that filled his off-work hours with labor. How well he succeeded in achieving his goal of removing dishonor from the family name makes an inspiring story. Include Kaoru in your list of successful persons who deserve to be remembered for their perseverance against discouraging odds.

As she had done many times, Mrs. Shoichi Ikeya woke when her son Kaoru did and, unnoticed by him, saw him preparing to watch the sky. She saw him draw on his leather wind-breaker, heavy work pants, wool scarf and gloves (winter nights are cold in Japan), then carry a blanket with him as he left the house to climb a ladder to the rooftop perch beside his telescope. He was her eldest son, the mainstay of her home, and he looked so thin and haggard from lack of sleep that she had to struggle to stifle her protest against his going.

By this night of January 2, 1963, 19-year-old Kaoru Ikeya had been observing the sky for a long time. Whenever he peered through the telescope that he had made with his own hands, his pulse quickened in expectation. Kaoru had set himself a goal more than anything else, he wanted to be the discoverer of a new comet—and this was the 109th night of his longed search.

Now, after studying the eastern sky for an hour, he shifted his telescope toward the southeast. There he sighted a misty object he had never noticed before. He consulted his sky maps. They showed nothing in that location. He rechecked the position carefully, then remained glued to his telescope, half-convinced that what he was seeing must be an illusion. But the small, diffuse glow remained in the sky, and, as he observed its gradual movement among the stars, Kaoru positively identified it not as a faint star cluster but as the head of a comet.

But was it *his* comet? Or was he witnessing the return of a comet already recorded?

As soon as the telegraph office opened that morning, Kaoru dispatched a wire to the Tokyo Astronomical Observatory reporting the comet's position, its tenth-magnitude brightness and the direction of its movement. Then mounting his bicycle, he pedaled off to the huge Kawai Gakki Piano Co., where for $35 a month he polished the white celluloid sheaths for piano keyboards. "A steady fellow," his personnel card read. "Reliable. Quiet. Middle-school education only. Nonparticipant in company sports or hobby clubs. Lacks ambition and initiative."

A few days later, the international news services were flashing quite another profile: "Self-taught 19-year-old amateur astronomer Kaoru Ikeya, using a reflector telescope constructed by himself at a cost of $22.32, has discovered the new year's first comet, officially designated Comet Ikeya 1963a and now the subject of observation and tracking by astronomers in both hemispheres."

A great deal of publicity greeted Kaoru's discovery. His home was invaded by news photographers; he was led before TV cameras and radio hookups; he received more than 700 letters from amateur astronomers seeking advice; he was awarded a gold medal by the Tokyo Observatory; and he watched in polite silence a professional actor portray him in a melodramatic version of his life story, a 40-minute movie short called *Watching the Stars,*

After an hour of straining effort, the reconstruction was complete. The patient's respirations seemed to grow stronger. Then, as I hardly dared hope, Rob stirred slightly upon the table and feebly moved his lower limbs. Faint and exhausted, I could have cried out at this evidence that the paralysis had gone. In twenty minutes he was encased in a plaster cast and back in bed. Then, dizzly, but with a great warmth in my heart, I went towards the little group that waited in the hall. How wonderful to say, "I hope he'll do." And so it was. Three months later Robin Blair walked out of that village hospital, somewhat shakily perhaps, but completely cured.

Many joys and satisfactions came to me in after years. But, looking backward, that appalling moment when I stood terror-stricken beside the wrecked body of a man I felt I could not heal seems the most rewarding experience in my life. It taught me to throw off fear, to overcome discouragement and the dread of failure. Never again did I say, "I can't do it," but only, "I will do my best." I had learned the all-important lesson that if we keep trying, even when all appears lost, victory may be wrested from defeat.

In those early days I had not yet learned to assume a mask of professional reserve, and as I rose, full of pity and distress, my expression must have conveyed to the others the gravity of Rob's condition. But before they could press me for an opinion I hurried them to action. Wrapped in blankets, the inert young man was transferred to an improvised sled and carefully conveyed to the cottage hospital in the village. This done, I rushed to the hospital telephone. Here was a case demanding the utmost in surgical skill and experience; I had decided to summon a specialist from the Victoria Hospital in Glasgow.

Then the blow fell: the operator at the village exchange told me that all telephone lines to points south had been brought down by the storm. Desperately I explained the circumstances.

There was a chance, the operator said, that she might reach the rail junction at Stinchar, twelve miles across the moors, where perhaps the station-master could transmit a message on the railway telegraph. After a delay that seemed interminable I got through to the junction. From the station-master I learned that not only had the telegraph ceased to function but the railway line was completely blocked by drifts. We were cut off from the outside world.

Stunned by the thought, I made my way back to the little family group and haltingly explained the situation.

There was a silence. Then Rob's father said quietly, in a voice which held no hint of hesitation: "You must do what has to be done yourself, Doctor."

I was aghast. Did he realize what an impossibility he was demanding? To expect from me so delicate an operation as a thoracic laminectomy fell little short of lunacy.

Dumbly, I gazed at the old farmer, at Rob's mother, and his grief-stricken young wife. I was the only doctor available. How could I deny these simple people what they considered to be their loved one's only chance of recovery? I turned my head so that they might not discern the anguish in my eyes, and went into the operating-room.

This was no more than the annexe of the single small ward, spotlessly clean, but without proper lighting, its other fittings barely adequate. The patient, scarcely breathing, lay face downward upon a white-sheeted wooden table. The hospital sister, a little, elderly Highland woman, was dropping ether upon the gauze-covered mask. And somehow, as in a strange illusion, I began swabbing iodine upon the affected area, reached uncertainly for a scalpel. But even as I nerved myself to make that first tremulous incision I heard the cold, contemptuous voice of my old chief: "You will never be a surgeon."

And then a strange thing happened—how, or why, I know not. Perhaps a solitary spark, not yet extinguished, flared suddenly within me. For I was conscious of an inner flame of anger—anger against myself and my tame submission to defeat. The tormenting vision of my former teacher disappeared and instead there rose before me the faces of those simple country people, placing their trust in me.

A surge of resolution replaced my numbing indecision; perhaps it was the courage of despair. I took a long breath and went forward, resecting the damaged muscles, cleaning out the extravasated blood, ligaturing the torn arteries. If I flinched when the full extent of the injury became apparent—compound fracture of four thoracic vertebrae, the bony fragments impacted upon the spinal cord—I did not falter. Aware that a single false stroke of the saw might bring a fatal result, I nevertheless set out to remove this deadly pressure by cutting through the vertebral arches. Then, working by the sense of touch, I began to piece together the freed fragments of bone, as one might try to reassemble a jigsaw puzzle in the dark.

WHEN YOU DREAD FAILURE

A.J. CRONIN

When I was a medical student in Scotland I served as hospital assistant to a famous surgeon. He was an elderly man, tall, spare and severe, with a caustic temper; his own perfection gave him a grim contempt for the shortcomings of others. I was young, poor, desperately eager to succeed, and in my anxiety to please I occasionally made mistakes which drew from the great man a sharp reproof. Under this treatment I became increasingly nervous, especially when assisting him in the operating-theatre. Whenever I failed by a split second to hand him the correct instrument, to adjust the retractor to his liking, in short to anticipate his slightest wish, he would rap out the cutting phrase: "You will never be a surgeon."

Those words haunted me so that when I graduated as a doctor of medicine and took up the work of a general practitioner I was possessed by a fatal conviction which lay upon me like a curse: I might get along as a mediocre physician, make the daily hum-drum, round, perhaps use the lancet upon some superficial condition, but never be fit to undertake those major operations which were the crown and summit of my profession.

The practice to which I had been called lay in the Western Highlands, a remote country district wherein I was the only doctor. The people where a sturdy stock, silent and self-contained. Yet when I had shown I was active and willing, and had successfully treated a troublesome outbreak of diphtheria amongst the school children, I began to feel that I was winning their confidence. Nevertheless, on those few occasions when a surgical emergency presented itself, I felt forced to call in a colleague from Perth, which was two hours away by road and rail.

Late one December afternoon, when the rugged upland winter was at its height, I received a call to an outlying steading, three miles from the village. A young man, Robin Blair, had been hurt while cutting timber. The messenger, a farm lad who had run all the way, could give no particulars, but feared that the injuries were serious.

I knew young Blair well—only three months before, I had attended his wedding to the daughter of the local minister. Rob was a popular figure, a fine athlete who excelled at the sport known as tossing the caber, and had won several prizes at the Perth Highland Games.

I set out on foot—for any wheeled vehicle was an impossibiity on those snowbound roads. All the previous night a blizzard had raged, and now a bitter cold had set in. After battling with the icy wind for more than an hour, the messenger and I came to the Blairs' farm-house.

In the stone-flagged, raftered kitchen the patient lay upon a mattress before the fire. A single glance at that senseless form told me that he was a desperate case. His distracted young wife, weeping beside him, was beyond speech, but from his father I gathered the essential facts.

Rob and his father had gone out to fell a fifty-foot fir for a new sheep-fold. The strokes of the axe rang out clear. Then the great tree, toppled backward by an unexpected gust, had crashed upon Rob. Only the depth of the snow had saved him from instant death.

The lad was deeply unconscious and breathing irregularly. All his lower reflexes were gone, indicating total paralysis of the legs. And under the great puffy swelling on his spine I made out distinct crepitation—three, possibly four, of the thoracic vertebrae were shattered.

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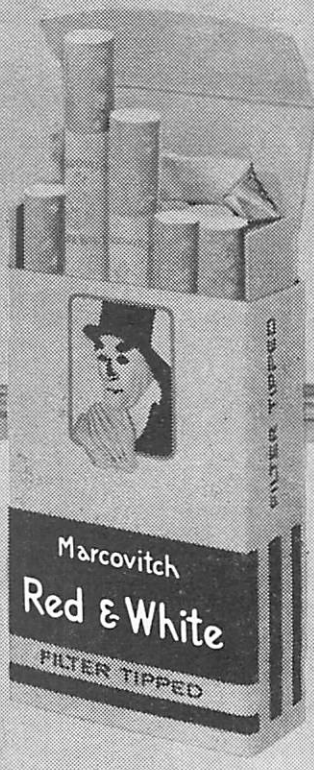

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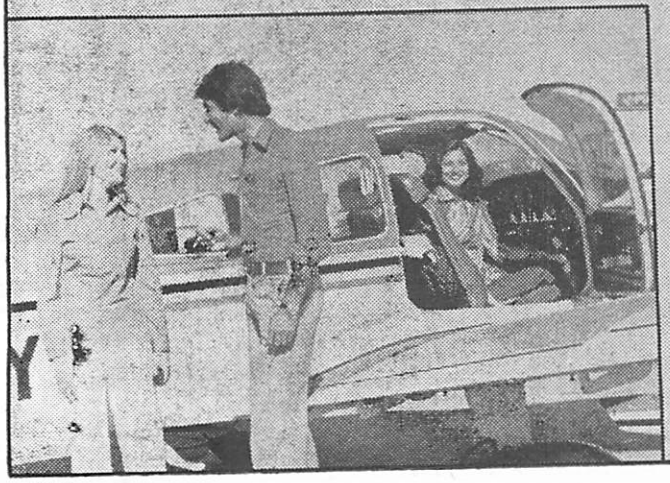

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PENSIVE MOOD

I stare out in the darkness,
Of this motionless, lonely night.
I listen to the quietness,
Of this hushed silence —
I smell the freshness
Of this accuted breeze.
It awakens within me —
A spark — Electrifying
My heart smouldors up
Rousing some dead memories.
Same scenes appearing,
In my inward eye —
Same voices echoing ...
..... in my ears.
Same fragerance lingering, of
Flowers — which are dead new.
Your image keeps flashing
In front of my eyes.
Your voice keep floating
Against the drums of my ears.
Your words keep repeating.
..... in my mind .....
Each one striking —
My heart like pears.
Old memories floating
My mind — my soul,
My eyes weeping .....
Washing out each stain.
My tears, draining
Each restless phase of past.
Today, I am forgetting — ,
All about you — what I have lost.
Today, I am leaving .....
Turning away from you.
Today, I am scatching ..... ,
All your memories, treasures away.
From today, I am beginning —
A new life of my own —
Where, I can enjoy the feeling
..... of being all alone.
For, I hate — caring.
For anyone, from nowon.
Now, I am sharing,
My life with .....
..... darkness,
..... Silence .....
And scented breeze.

By : FAUZJA KAUSAR
1st Year

"PIGEON"

"I LOVE THE PIGEON. IT IS A WONDERFULLY SWEET AND SACRED BIRD. SO ABSORBED IN ITSELF, AND ALWAYS MINDING ITS OWN BUSINESS."

Why do I feel detached
from the rest of the race ?
Why my different pace ?
why do tears shine,
In these eyes of mine,
when all else is laughter.
"Your philosophy," they say,
is above us all.
Don't fly too high
Or you shall fall.
I wonder .....
Is my core the same
As that of the sages before me
Or am I insane, as we say.

I enjoy the serenity,
And seclusion of my own world.
I create my own happiness.
I cannot sit and make small talk
on clothes and jewels.
Nor can I sympathize,
O'er snoring husbands.
God I just can't.

The Ballooned tummies,
Greed rolling down,
The corner of their mouths
In form of salivary drops
Dirty tricks and a rat race.
A monetory and a Matrimonial Rush.
I despire them all.

FOR I PREFER THE PIGEON TO THE HAWKS.

Also I cannot stand.
Self-induced weaknesses.
Insular and petty minds.
I want liberation,
OF THOUGHT, OF SPEECH OF ACTION.
Yet I don't hunt for the pinnacle
Or wait to run wild.
I STRIVE " FOR THE GREATNESS OF SOUL
FOR THE STRENGTH OF FAITH
FOR A DEVOTION TO CAUSE.
FOR THE INTELLECT OF MIND.

But ..... I remain
misunderstood and detached.
Detached from the rest of the race.
Walking at a different pace.

By: SOFIA USMAN ROKERYA
IInd Year

BITTER HARVEST

S. AKHTER

And now you stand before me, begging asking nay pleading
For a tender smile of understanding, a show of loving care

Recall, a time when I walked to you
With a tear brimmed eye a heavy heart,
Trembling lips awaiting, that you would ask
The cause of my sorrow, the tale of my woe
And you, cool calm collected as ever
Pretended nor to see, pretended not to note
The pallor of my face, the weariness of my soul.
And still I stood, waiting hoping .... yes believing.

But you could not bear the clinging fingers of love
And would not step down from your exalted pedestal.
So, as if to get over an unpleasant, uncomfortable job
Forced by the entreaty in my ege, the plea on my lips
You cruelly coldly, so roughly said you knew and understood
How could you know ? How could you understand,
That a gentle word from you, a loving look
Would cause a thousand stars of joy to shine.
A smile, a laugh, a word of precious sympathy
Would cause my spirit to dance in gleeful joy

Ah, leave me this one conviction dear friend
That at least you did not know how much you meant.
For the knowledge that you knew and remained silent
Would rob me of my very last dream.
So I walked away, uncalled, unwanted, unloved.
A lifeless being dragging a tortured soul in despair.
Now, let me tell you, cruelly, coldly, mercilessly
(All arts I learnt from you, you see)
The Abject figure of pity that you and now are
Will not soften the hardness of my eye
Your tears of bitter anguish are so entirely useless
They do but nourish the grass upon my grave

ODE AT A PAKISTANI WAR CEMETRY IN EAST PAKISTAN

NADIM AHMED NASIR
Ist Year

Sleep sweetly in your humble graves,
Sleep martyrs of a fallen cause
Though yet no marble column craves
The pilgrim, here to pause.

In seeds of laurel in the earth
The blossom of your fame is blown,
And somewhere, waiting for It's birth,
The shaft is in the stone.

MIRROR IMAGES

LOVE

Love — love is a bundle of joy
Love — is a bundle of tears
Love is a bundle of smiles and laughter
Love is a bundle of fears
Love is never being lonely
Love is always being gay
Love is being terribly alone because someone isn't there
Love is learning to pray
Love is being confident
Love is being insecure because your happiness lies in another's hands
Love is just you, your love, a place a moment
Yet love is all time and everywhere
Love — love is a miracle

The miracle of learning to care.
Love — love is a cardiotropic virus, destroying the very place where it does grow
Love is being humiliated in a way thats rarely seen.
Love is someone who loves you, then sends you to the guillotine.
Love is the trampling of self-respect, the shattering of ego
Love is wondering why someone said they loved you, why pretend they ever did.
Love is of imagination, flattery and self-hypnosis a child
Love is merely loneliness, a craving for companionship growing wild.
Love is strong, so strong with all the strength of a silken thread.
Love is praying — praying soon to be dead.

SAHBA QADEER

AN ODE TO THE INDISPENSABLE MAN

Sometime, when you are feeling important,
Sometime when your ego's in bloom,
Sometime when you take it for granted
You're the best qualified in the room;
Sometime when you feel that your going
Would leave an unfillable hole,
Just follow this simple instruction
And see how it humbles your soul.
Take a bucket and fill it with water,
Put your hand in it, up to the wrist.
Pull it out, and the hole that's remaining
Is the measure of how you'll be missed.
You may splash all you please when you enter,
You can stir up the water galore,
But stop, and you'll find in a minute
That it looks quite the same as before.
The moral in this quaint example
Is to do the best that you can.
Be proud of yourself, but remember —
There is no indispensable man.

LEEPA BATTLE-CRY

Bring out the pipes and drums, my lads,
A battle song we will play;
Of the glory we won in 'seventy two'
In Leepa on the fifth of May.
Never did our steps falter once,
Nor did we fall back in stride
Proudly did we march into battle,
For we were Pakistan's Pride.
O, for the pride that welled in our hearts,
When we first faced the shot and shell;
O, for the warriors' cry "Allah-o-Akbar"
When Kiyani the tiger fell.
O, for the red of the warriors' blood
That stain'd the field that day,
Gallant dauntless, they fought and fell
For the swords of Allah were they.
O, the pride that filled our hearts
For His warriors were we;
O, our charge with the bayonet,
When we thundered "Ya Ali".
O, the pride that filled our hearts
Over Leepa flew our brave flag high ;
And "9 AK Battalion" was written
In blood across the sky.
Never will Leepa Valley fall,
While the 9 AK boys are there;
We will fight them, and win glory
For Pakistan, everywhere.
For it's for our brave green flag,
That we live, fight, or die;
All that we were, all that we are
Is to hold up our flag in the sky.

UNDERSTAND ME ?

She says she understands me, I think she speaks a lie
For how can she ? For she is she, whilst I —— I am I.
How can she read my mind, she cannot read my heart ;
She does not know what forces act on me
What makes me stop, what makes me start.
She does not know the thoughts that haunt me as I lie all night awake,
What sorrows make me cry, what makes my heart bend or break.
How can she know the fears and hopes that surround me all the day
How can she know what touches me or causes my lips to pray.
She does not know my loves or hates, the secret smiles or tears I cry,
For how can she, when she is she whilst I —— I am I.

SAHBA QADEER
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blossomed with jeans, not only for blue-collar workers and rebellious youth but for family members of all ages and all income levels. No longer were there just standard jeans—tight around the hips, with multiple pockets and double-stitched seams—but all manner of variations: flared legs, bell bottoms, cuffs, wide belt loops, tricky pockets, fancy stitching, lighter-weight fabrics, rainbow colors.

Young hotheads wore their jeans more ferociously than ever. Holes? Patch or embroider them. Rips? Sew piece of braid on top. Seat gone? Salvage the part from another worn pair. Legs torn? Amputate them and flaunt the frayed edges. Faded? Groovy. The tattered look of raveled, beat-up jeans became another way of nose-thumbing at the world of materialism and status.

But, once again, fashion co-opted its opposition. Machine-embroidered patches were manufactured to be sewn over nonexistent holes. To fade their new jeans, youngsters bleached them; if the bleach ate a hole in the fabric, so much the better. Rag peddlers sold anything made of denim at a premium to boutiques and department stores, where secondhand jeans outsold new ones, and at higher prices.

The denim phenomenon quickly leaped the oceans to change the world's way of dress.

Will jeans manufacturers wake up one morning to find jeans obsolete? Although jeans makers and sellers know that fashion is fickle, they have unlimited faith in the staying power of those tough pants that Levi invented. A Yale law professor has said, jeans "express freedom and wholeness of self," and isn't that what everyone craves these days?

Old or new, glorified or plain, jeans are likely to be around for a long time to come. Already they have succeeded where statesmanship has failed: although still unable to speak the same language, the inhabitants of this embattled planet have at least agreed to wear the same pants.

THE PANTS WORN ROUND THE WORLD

Condensen by
JAVED AKHTAR
Ist Year

The world is in the grip of a blue-jeans frenzy. Once the no-nonsense work pants of farmers, lumberjacks and miners—and few others—jeans now strut, stride, stroll and slouch everywhere, on the job and off. They are at home in palaces (Princess Anne of England wore them when she had her hair done on her wedding day) and at parties (author Norman Mailer and actor Marlon Brando have appeared in them at black-tie affairs). They are smuggled into Pakistan. School campuses from Karachi to Peshawar are so awash in a sea of unisex jeans that one might suspect they are compulsory wear.

The globe's most popular pants are today manufactured on every continent except Antarctica, and worldwide production is fast heading toward the billion-pair-a-year mark.

Why the "jeaning" of the world? "A fashion is easier to follow if it is both chic and cheap," explains one manufacturer. And jeans are undeniably fashionable and affordable, as well as sturdy and comfortable. You can dress down in recycled jeans—or dress up in a sky-blue jean suit.

Perhaps more important, jeans are an idea, a concept, a sit-on-the-floor attitude. "Jeans represent a casual life-style that is being adopted by a growing part of the world," says Walter A. Haas, Jr., chairman of Levi Strauss & Co., the world's largest manufacturer of jeans. And it's no coincidence that both the lifestyle and the garment itself sprang out of the free-swinging, colorful days of California's Gold Rush.

In 1850, Levi Strauss, a 20-year-old Bavarian immigrant, arrived by sailing ship in San Francisco to seek his fortune in the gold fields. He brought with him a stock of dry goods, including some heavy brown canvas he planned to sell to miners for tents and wagon covers. Tents, he soon found, were not in demand, but few prospectors had work clothes sturdy enough to stand up to the rough life of the diggings. The enterprising young man had a tailor make pants out of his rugged canvas. Word spread that "those pants of Levi's" (hence Levi's) were the strongest around, and they sold quickly.

Convinced that he had found a good thing, Levi opened a work-clothes shop in San Francisco (not far from the company's current headquarters in the 29-story Levi Strauss Building). When canvas ran out, he switched to a tough cotton fabric originally loomed in Nimes, France, called *serge de Nimes,* or simply denim. (Genoese sailors had long worn pants of similar fabric, known as *genes,* and later jeans.) Tall tales of denim's indestructibility proliferated. In one story, when the coupling between two railroad cars broke, a trainman hitched them together with a pair of Levi's and made it ten miles to the next station.

The truth was perhaps less dramatic, but the robust work clothes made by Levi Strauss, his relatives and competitors did in fact uniform the men who laid the railroad tracks, rounded up the cattle, cut the forests, farmed the plains and built the cities.

By the 1950s, jeans had become the staple play-garb of children, and teen-agers began to wear jeans to classes. Jeans themselves became a symbol of defiance against authority or oppression, whether parental or political, real or imagined. Their secret message identified youthful wearers one to another: "I am one of you—against the others." But a funny thing happened on the way to the barricades. Fashion discovered blue jeans. Suddenly, stores

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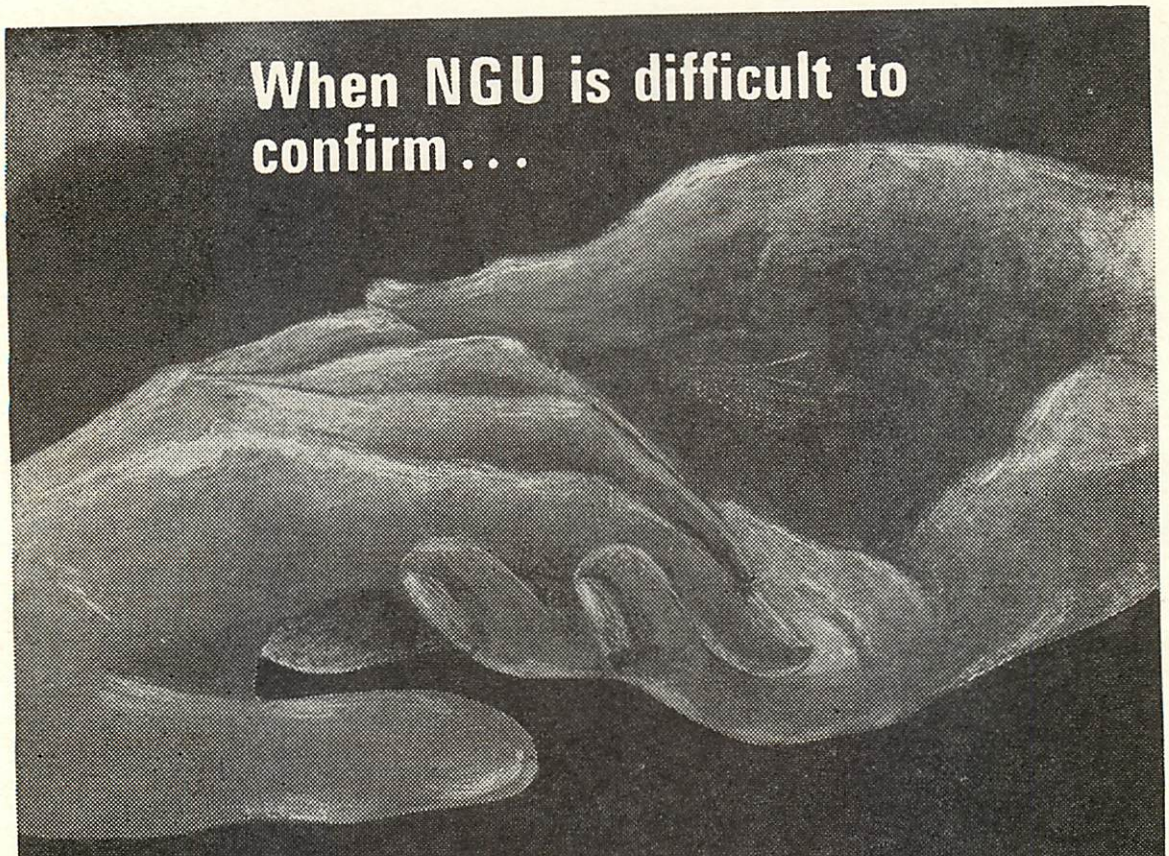

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