



ELIXIR

by the student
for the student
to the student

SASSOON ROAD

道 宣 沙

UNIVERSITY OF HONG KONG

FACULTY OF MEDICINE

5 & 7 SASSOON ROAD

醫學院

沙宣道五至七號



EDITORIAL BOARD 1977

HONORARY ADVISER
EX-CHIEF EDITOR
EDITOR-IN-CHIEF
GENERAL MANAGER
FINANCIAL MANAGER
SECTION EDITORS

Prof A. C. L. Hsieh
Mr. Wong Man Tat, Daniel
Mr. Hsu Yun Chiang, Stephen
Miss Wu Ching Ying, Amy
Mr. Mok Ka Ming, Charles
Miss Chiu Lai Wah, Alvina
Mr. Li Chi Him

EDITORS:

Mr. Chan Hung Chiu
Mr. Ha Shau Yin
Mr. Hung Chi Tim
Mr. Kong Chi Kwan
Mr. Law Moon Yung
Mr. Li Shan Ho
Mr. Yung Cho Yiu

Looking Forward To A Brighter Tomorrow.....

As Lon Watters has said - A school is a building that has 4 walls, with tomorrow inside.

Yes, we are fortunate enough to enjoy the harvest of medical knowledge and experience which the pioneers of all fields have brought us. However, we are also on the brink of change. A change that entails a doctor, apart from his expertise in the medical field, to be a multi-faceted and socially conscious person. Indeed, an ideal doctor of this era will have to shoulder the role of a practitioner, an adviser and last but not least, a friend to all patients.

A medically-sound mind and a benevolent heart should enjoy parity of esteem. We are required to be equipped with both when we graduate. Our intuition tells us that the art of loving is not taught but trained. Therefore, we should grasp any means during our course of training to achieve this end.

On our journey for doctors-of-tomorrow, let us keep a simple truth in mind-that it is in giving that we receive.

The Elixir Editorial Board

MANDATUM

MESSAGIO

COMUNICACION

DIE BOTSCHAFT

MANDATUM

MESSAGE

MESSAGIO

COMUNICACION

DIE BOTSCHAFT

MANDATUM

MESSAGE

MESSAGIO

COMUNICACION

DIE BOTSCHAFT

MANDATUM

MESSAGE

MESSAGIO

COMUNICACION

DIE BOTSCHAFT

MANDATUM

MESSAGE

MESSAGIO

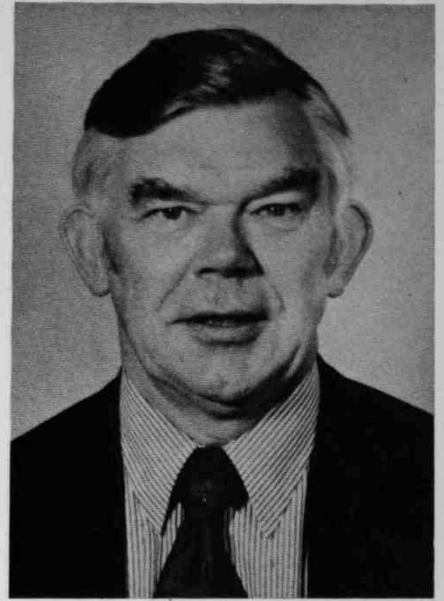
COMUNICACION

DIE BOTSCHAFT

MANDATUM

MESSAGE

from the dean



Another year is upon us bringing with it another edition of Elixir to record our doings and reflect our current interests; perhaps even to suggest where we may be going in the future.

The new curriculum has started on its life. It is still an infant but it looks healthy. It is expected to pass the milestones of development successfully and to reach maturity in time, with a more balanced and a more generally agreeable personality than its elder brother.

This year also the Faculty has made a start on a new kind of training programme — the Certificate in Medical Sciences. It is a one-year course and it leads, after a second year, to a Master's degree. The programme is designed to give science graduates a broad base on which to build a career in preclinical sciences in particular, and it is being introduced at a time when teaching in these subjects is likely to be expanded in several institutions in Hong Kong.

One of these institutions is our own Dental School which will begin its career within the Medical Faculty. It is planned that dental students will be enrolled in 1980. They will work during their first year — their preclinical year — in Sassoon Road alongside preclinical medical students — though probably to only a small extent, if at all, in the same classes. Most of the teaching of dentistry will be at a new dental hospital and school to be built in Sai Ying Pun close to the Tsan Yuk Hospital. Plans for this building are well started and it is hoped that it will be finished in 1980, which is not far ahead.

The dental school project took a big step forward with the appointment in September of Professor Geoffrey Howe as Dean of Dental Studies. Professor Howe qualified in medicine as well as in dentistry and is at present Dean of the School of Dental Surgery of London University at the Royal Dental Hospital of London; he is a leading figure in the British dental profession. He will start working full-time with us in the coming summer, before then he will be making one or two visits to Hong Kong.

Space, vacated in the Patrick Manson Building by the moving of lockers to the Li Shu Fan basement, has been modified for temporary offices for Professor Howe and for other dental school staff to be appointed ahead of the entry of students. When the time comes for them to move down to Sai Ying Pun, this space will be used again for general facilities, probably for an extension of the library.

More elaborate improvements to our facilities are planned for the north side of Sassoon Road opposite the Patrick Manson building, to help to accommodate the extra 80 or so preclinical students who will comprise the first intake into dentistry. The ground on that site is very steep, but it is possible to rehouse the animal house there and to build storage space and an audio-visual unit and also to relocate the canteen and improve associated facilities.

As we move with the times, broaden our interests and improve our facilities and with them, I hope, our capabilities, we mustn't lose sight of the fact that medicine is only partially an academic pursuit. Chiefly it is a practical service for people, and how to improve the quality of their lives according to their surroundings and special needs. The population of Hong Kong is unusual in certain respects and, at least at this moment in time, medical practice here is not quite the same thing as elsewhere. There is a high proportion of young persons in our population and this situation will evidently persist for quite a long time although not as predominantly as it does at present. Another population trend is creeping up on us. The expectation of life in Hong Kong is nowadays about as long as it is elsewhere; more and more people are surviving to old age. Both of these trends can be predicted statistically with reasonable accuracy, but they are gradual and they could escape our notice. We ought to keep them in mind, however, when we think about medical education because that is a lengthy affair with its stages of undergraduate and postgraduate training, to say nothing of continuing education later in professional life. Evidently in 20 or 30 years' time when today's medical students are reaching the peak of their professional performances, their practices will serve many more old people than today's include. The nature of medical work will be somewhat different. There will also be more work for doctors to do because old age is a period in which more medical care and more supportive care of all kinds are needed than at any other stage in life. It is not too soon to spare a thought on how Hong Kong medicine will measure up to this new challenge and how we shall meet it ourselves.

Medical progress is like climbing in the mountains. As soon as you scale the height which has challenged you, another and higher peak unfolds before you. The Walkathon is unprogrammed, the maps are not good and some of the paths are rough going, but the bright objectives and the good company on the way more than compensate for some aching muscles and sore feet, while now and again we are refreshed by a dose of our own special Elixir.

J.B. Gibson,
Dean, Faculty of Medicine.

December 1977.



from the president

22nd February, 1978

A year spent with the Hong Kong University Medical Society is a fruitful one. One comes into contact with a group of young men and women, who, apart from being committed to five years of medical education, are also interested in extra-curricular affairs, and especially in running some form of administration. I have been impressed by the way the executive council of the Society, together with its various committees, dealt with a wide variety of functions, ranging from social, to sports, to exhibitions which attempt to bridge the gap between the public and medicine in general.

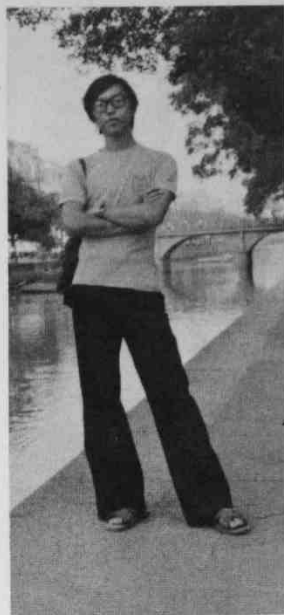
Like any good society, this Society has a voice of its own, and comes in the form of the "Elixir". Hong Kong is in the midst of expanding its facilities for medical education. The Chinese University will soon be opening its medical school and the Hong Kong University Medical Society will certainly be an example for the members of the new medical school to look to. The Elixir, with its opinions and views, will no doubt assume a greater importance in the years to come.

I congratulate the members of the Editorial Board for bringing out another splendid issue.

A handwritten signature in black ink, appearing to read "John C. Y. Leong". The signature is stylized and fluid.

John C. Y. Leong.

from the chairman



「團結同學，共同參與，認識將來的責任。」

這是一年前我們出來競選時的理想和抱負，在這行將卸任的日子裏，回顧起來，少不免會為我們因力有未逮而做得不足的地方感到汗顏，但當看到醫學會在大家的努力下一年比一年更形蓬勃，在多方面作出突破，開創新局面的時候，心裏又另有一番喜悅。

一年以來，在衆多的發展之中，似乎以對外的較為顯著，在「放眼世界，認識中國，關心社會」的大前提下，我們首次接待了巴布亞新畿內亞醫學院的訪華團；由八十位各級同學組成的中山醫學院專業訪問團更開了大專界的先河；通過過百同學的實際參與和籌備，中國周專題研究和其他認中活動都辦得有聲有色；外務委員會在非英聯邦醫生和實習醫生問題上的努力，帶動了同學的關心；「你的健康」展覽和其他配合活動，讓同學對服務加深了體驗……一個又一個的活動，掀起一個又一個的高潮，使同學的胸襟更廣，眼光更闊，對自己的責任認識更深。

在港大校內方面，同學再也不甘心只做一個「醫學生」——我們要做一個全面的「大學生」。在學生節，開放日，認中問題，迎新，浸會事件，大學加費，宿舍招生政策和統一膳堂政策等事件上醫學會都起了一個積極的作用，可以預見的是，醫學會將在校內扮演一個更重要的角色，不再只是「在那遙遠的地方」的一羣。

在對內方面，「團結同學，辦好福利，爭取權益」是我們無時或忘的首要任務，除了一些原有的福利外，千呼萬喚，期待多年的田徑裝終於面世，醫學會手冊的提早一學期出版，休息室的新設施，加訂的報紙，飯堂和小賣部的加強管理以至即將面世的來往港大校車，每一樣都是同學的實際要求，工作人員的辛勤成果。

醫學生貸款基金（ELIXIR LOAN FUND）的成就，更是同類基金的典範，這個由同學自己管理的基金，儘管放棄了以週年舞會作為籌款的主力，但憑著那鍥而不捨的精神，終於把積欠多年的過期貸款全部討回，達到百分之百的還款率，保證了這基金能自行循環不息，延續下去，幫助經濟情況較差的同學。

提到財政方面，上任時大家面對的是一個「一窮二白」的情況，擁有的是一年未償還給印刷公司的四千元欠款，一批「值」七千多元、有價無市的健康小冊子，萬多元的未收會費，和總支出超過十萬元的財政預算！幸而在師長同學的支持下，步行籌款，電影首映和其他籌款活動都達到了目標，穩定了局面。

文娛體育方面，雖然「醫學會之夜」在多年爭辯之後，終於給十月廿四日的全民投票廢除，但其他各項文娛活動和體育比賽都順利舉行，為大家帶來了輕鬆的氣氛。在三月的學生節裏，我們雖只能以一年級同學作主力參加，但卻取得了總亞軍，而合唱團更蟬聯了系際冠軍，說明了醫科同學在這方面的潛力。

自新學期開始，各院際球類比賽似乎多了不少捧場同學，水運會在「你也游，我也游」的精神下，又一次取得總冠軍，相信這一股熱心，終會令玫瑰盃重歸醫學院。

其實，說了一大堆「成就」，還未說出最重要的一點：這些成績不是由幾個幹事取得的，而是數以百計的同學的努力成果。今年醫學會房內衆多工作人員的熙來攘往，幹勁沖天就說明了這一點。

當然，我們還期待有這一天：醫學院內所有同學能「團結互助攜手齊邁進，萬衆一心并肩為人羣。」（錄自醫科捌零）。我們相信，只要大家願意，這一天總會來。

最後，爲了今屆ELIXIR編委有決心創新版面和提前出版，致以衷心的祝賀。

林光前
寫於七七·十一·一

Elixir Loan Fund, Medical Society

Balance Sheet

at November 30, 1977

Loan Fund balance b/f			
Loans outstanding at December 1, 1976	\$ 78,790.00		\$ 78,790.00
Cash	17,976.58	\$ 96,766.58	19,975.00
Surplus of income over expenditure		4,173.61	58,815.00
Loan Fund Balance c/f		\$ 100,940.19	15,200.00
			\$ 74,015.00

Loans Receivable

Loans outstanding at December 1, 1976
 Less: Loans repaid during year
 Add: 14 new loans granted in year
 Loans outstanding at November 30, 1977

Cash

Medical Society's Current Account
 University's Current Account
 Fixed Deposit with HSBC for a period of
 3 months due on December 28, 1977

	\$ 1,450.00		\$ 26,925.19
	22,448.89		
	3,026.30		\$ 100,940.19

Income and Expenditure Account for the year ended November 30, 1977

Payment for petty cash imprest to Financial Secretary for stationery and postage expenses	\$ 100.00	Petty cash b/f	\$ 90.00
Photocopies supplied to Auditors of ELF by Finance Office	\$ 4,173.61	Bank interest received	260.03
Surplus of income over expenditure	\$ 4,274.41	Subscription from Associate Members	760.00
		Transferred from Central Fund, Medical Society	3,064.38
			\$ 4,274.41

Prepared by:

Lam Kwong Chin, (Sd.)
 Chairman, Administrative Board,
 Elixir Loan Fund, Medical Society,
 Session 1976-1977.

Date: December 15, 1977.

THE MEDICAL SOCIETY 76-77





Society Photograph

**OFFICE BEARERS OF
THE HONG KONG UNIVERSITY MEDICAL SOCIETY
HKUSU 1976-1977**

President

Dr. J.C.Y. Leong

Vice-President

Dr. J.C.C. Hwang

Hon. Treasurer

Dr. E.C. Chew

Council Chairman

Mr. Chan Chau Sing

Ex-Chairman

Miss Lilian Pusavat

Chairman

Mr. Lam Kwong Chin

Vice-Chairman

Mr. Ho Leung Sing

General Secretary

Mr. Ng Yu Kin

Financial Secretary

Mr. Chu Wai Man

External Affairs Secretary

Mr. Li Fuk Him

Internal Affairs Secretary

Mr. Chan Yiu Kay

Sports Secretary

Mr. Tse Chor Fat

Social Secretary

Mr. Chiu Shui Wah

Class Representatives

Final Year

Mr. Wong Chung Kwong
Miss Lok Suk Fong, Anna

Fourth Year

Mr. Li Chung Ki, Patrick
Miss Tam Wai Ling

Third Year

Mr. Lee Wai Keung
Miss Chan Fung Yee

Second Year

Mr. Cheung Ming Kuen
Miss Chu So Shan, Susan

First Year

Mr. Ha Shau Yin
Miss Leung Yuet Foon

Caduceus, Editor-in-Chief

Mr. Ng Chi Sing

Health Officer

Mr. Fung Hau Tak

Fraternity Committee, Chairman

Mr. Ng Hang Kin

Elixir, Editor-in-Chief

Mr. Hsu Yun Chiang, Stephen

Student Senator

Mr. Fok Kai Hung

Student Representatives in the

Medical Faculty Library Committee

Miss Huen Kwai Fun
Mr. Wai Heung On
Mr. Man Chi Wai

Medical Faculty Board

Mr. Hui Pak Kwan
Mr. Hong Kwai Wah
Mr. Yung Wai Hung

Medical Faculty Review Board

Miss Lilian Pusavat
Miss Anna Lok

Selection Committee of Various Loan Funds

Mr. Li Chung Ki



THE COUNCILLORS

MEMORIALS OF
UNIVERSITY MEDICAL SOCIETY
1976-1977

OUR CHRONOGRAPHY

JAN FEB MAR APR MAY JUNE JULY AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUNE

DECEMBER 76

- 1st Executive Committee (76-77) comes into office. Degree examinations begin: MB., B.S. Second (Part II) and Final Examinations.
- 10th First Extraordinary General Meeting with the agenda 'to discuss the causes and consequences of the troubles arising from Medic Nite, 1976'.
- 11th First term ends.
- 20th Council Meeting – First session.
- 23rd Christmas Carolling and visits to Marycove.
- 27th Society picnic to Bride's Pool.
- 30th New Year Party at Loke Yew Hall.

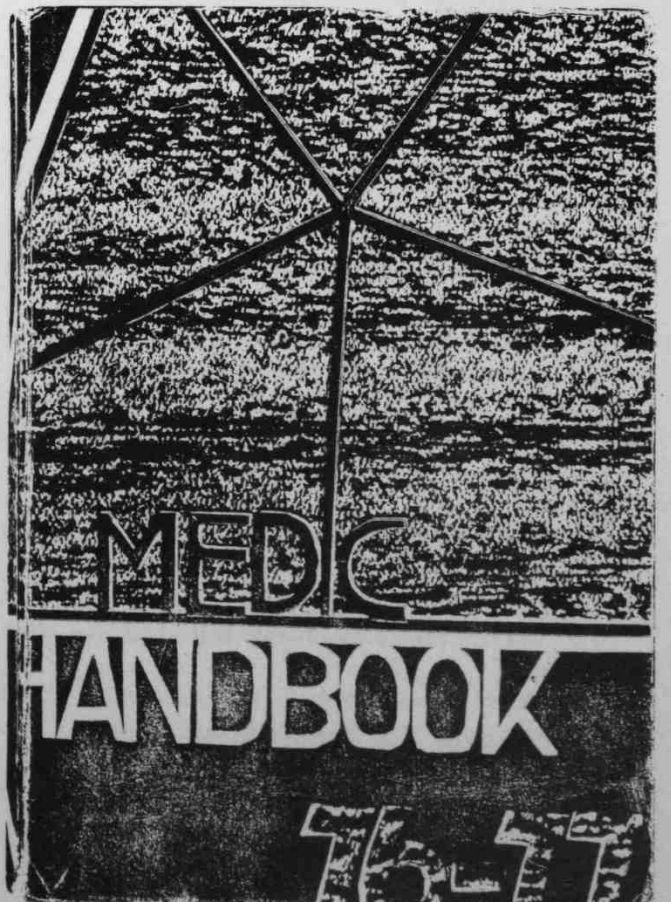
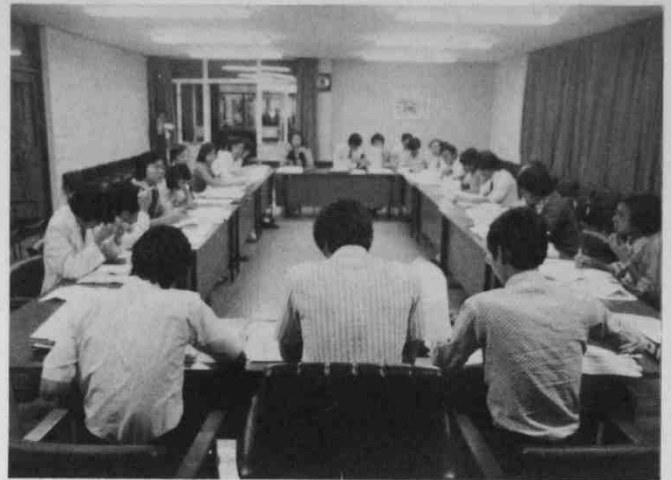
JANUARY 77

- 1st Health Committee, Caduceus and Elixir Editorial Boards ('77) come into office.
- 3rd Second term begins.
- 17th Degree examination begins: M.B., B.S. Final Examination.
- 20th Talk and demonstration on 'Hypnosis' by Mr. Ng Kwok Ping.
- 21st Council Meeting – Second session. Talk on 'Surgery and Surgeons' by Professor G. B. Ong.
- 31st Elixir Loan Fund Awarding Committee meets. Others: Project and Seminar of Revised Curriculum. Survey on Service of Medic Canteen. Distribution of January issue of Caduceus.

FEBRUARY 77

- 3rd Folk Dance interest group.
- 8th Talk on 'Medical and Health Planning in Hong Kong' by Dr. Patrick Wong, Senior Director of MHD.

Visit to Duchess of Kent Children's Orthopaedic Hospital arranged for 1st yr. students.
- 28th Degree examination begins: M.B., B.S. First Examination.
- Others: MedSo participating in Union Festival. Distribution of Medic Handbook (76-77). Distribution of February issue of Caduceus.



MARCH 77

- 1st Degree examination begins: M.B.,B.S. Second (Part II) Examination.
- 19th General polling for the re-election of student representatives to the Faculty Board.
- 21st Paraclinical Orientation for second year students.

APRIL 77

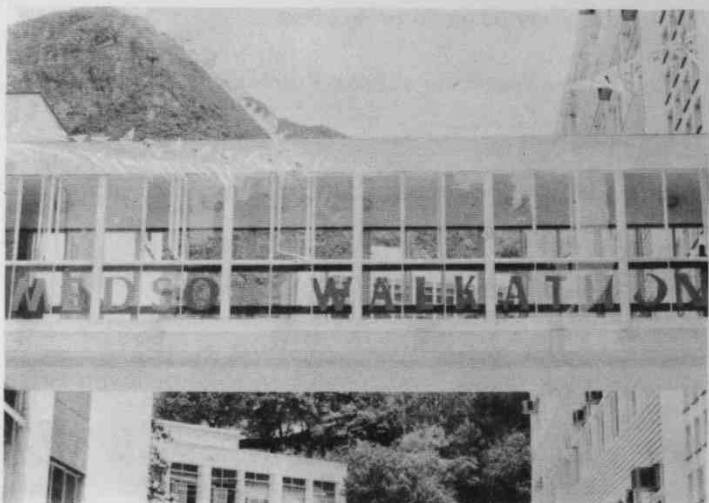
- 1st Degree examination begins: M.B.,B.S. Second (Part I) Examination.
- 5,6th Participation in 'Cancer Awareness 77' exhibition
- 7th General polling for the re-election of student representatives to the Faculty Board.
- 18th Blood donation
2nd Council Meeting
- 20th second-hand paraclinical book sale.
- 25th Interyear sports competition starts, lasting until May.
- 26th Mandarin class starts, lasting until 19th May.

Others: Project on unregistrable doctors including several visits and discussions.
Distribution of combined March and April issue of Caduces.

MAY 77

- 1st Walkathon.
 - 2nd Degree examination begins: M.B., B.S. Final Examination.

First Committee meeting of 'Live in Health' Exhibition Organizing Committee.
 - 7th Visit to Social Hygiene Clinic in Tang Siu Kin Hospital organized by Health Committee.
 - 12th Film show: 'The Magnificent Men in Their Flying Machines'.
 - 14th Interyear Chinese Billiard Competition.
 - 24th Third Council Meeting.
Tetanus toxoid vaccination and polio immunisation.
 - 26th Film show: 'The French Connection.'
- Others: Project on Internship.
Distribution of Elixir (session 76)
Distribution of May issue of Caduceus.





JUNE 77

- 8th Reception of friends from Medical School of Papua New Guinea.
- 10th Panel discussion on revised curriculum held by Fraternity Committee.
- 11th Visit to Decompression Chamber of MTR organized by Live in Health Exhibition Organising Committee.
- 16th Forum on 'Know China Activities'.
- 24th Talk on 'Internship year' by some housemen.
- 25th Medic Ball.

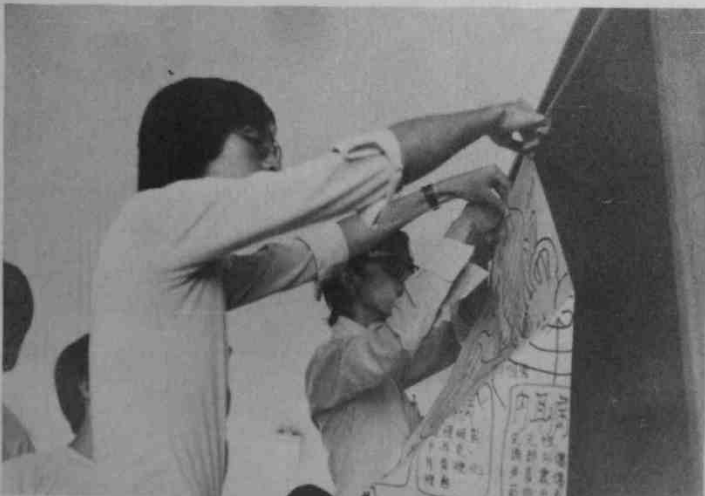
Others: Distribution of June issue of Caduceus.

JULY 77

- 1st Fraternity Committee (77-78) comes into office.
- 2nd Third term ends.
- 9th Matriculants Gathering Day.
- 13th Gala Premiere 'Sweet Hostage' at Lee Theatre.
- 16, 17, 21st Academic Orientation.
- 31st Participation in the 'Health and You' programme organized by the Caritas Centre in Tin Wan.

AUGUST 77

- 1-10th General Assembly of IFMSA held in Denmark.
 - 7, 12th Visits to Workers' Clinic at Jordan Road and some factories.
 - 13, 14th MedSo review camp at Adam Schuall Hall, C.U.
 - 17th Talk on 'Acupuncture in the Treatment of Drug Addicts' by Dr. C. N. Wan.
 - 20th Rehearsal Exhibition of 'Live in Health' Exhibition.
 - 22nd Student tutors meeting of the Fraternity Committee.
 - 26th Freshman Welcome Day.
 - 30th Demonstrators' Training Course for the 'Live in Health' Exhibition.
- Others: Distribution of combined July and August issue of Caduceus.



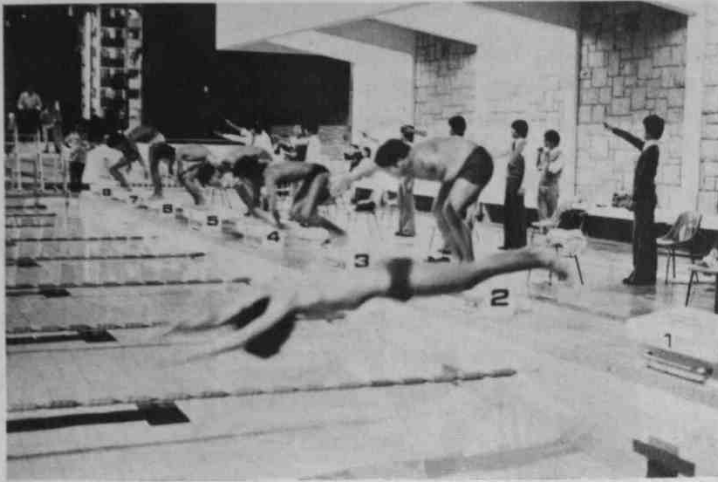
SEPTEMBER 77

- 1st Academic Year 1977-78 begins.
Degree examinations begin: M.B.,B.S. First and Second (Part I) Examinations.
- 1st-3rd Fraternity Camp at Cheung Chau.
Union Orientation.
- 6th Second-hand book sale for first year students.
- 7th Opening Ceremony of 'Live in Health' Exhibition.
- 8-12th 'Live in Health' Exhibition at City Hall.
- 13th China Week Project.
Interflow.
- 15-16th Library Tour for Freshmen.
Visit to several medical institutions arranged for Freshmen.
- 16-20th Tour to Chung Shan Medical College, Canton.
- 30th Second-hand book sale for second year students.
- Others: Distribution of Joint issue of Caduceus, Rotar and Voice on Occupational Diseases and Accidents.

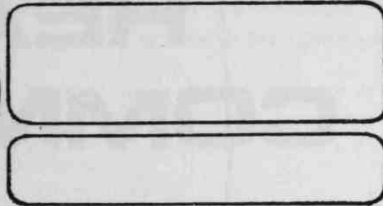
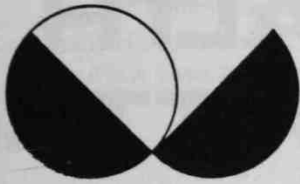
OCTOBER 77

- 3rd Fifth Council Meeting.
- 5th Interyear aquatic meet.
- 9th Rehearsal Exhibition of China Week Projects.
- 11th Report on Tour to Chung Shan Medical School.
- 11-14th Film shows on China.
- 13th Second Extraordinary General Meeting with the Agendum 'To discuss the proposed Constitution Revision.'
- 15-20th Inter-faculty Aquatic Meet.
- 15th 'Live in Health' Exhibition reunion.
- 16th China Week Walkathon.
- 17th First Emergency Council Meeting.
- 17-24th China Week Book sale.





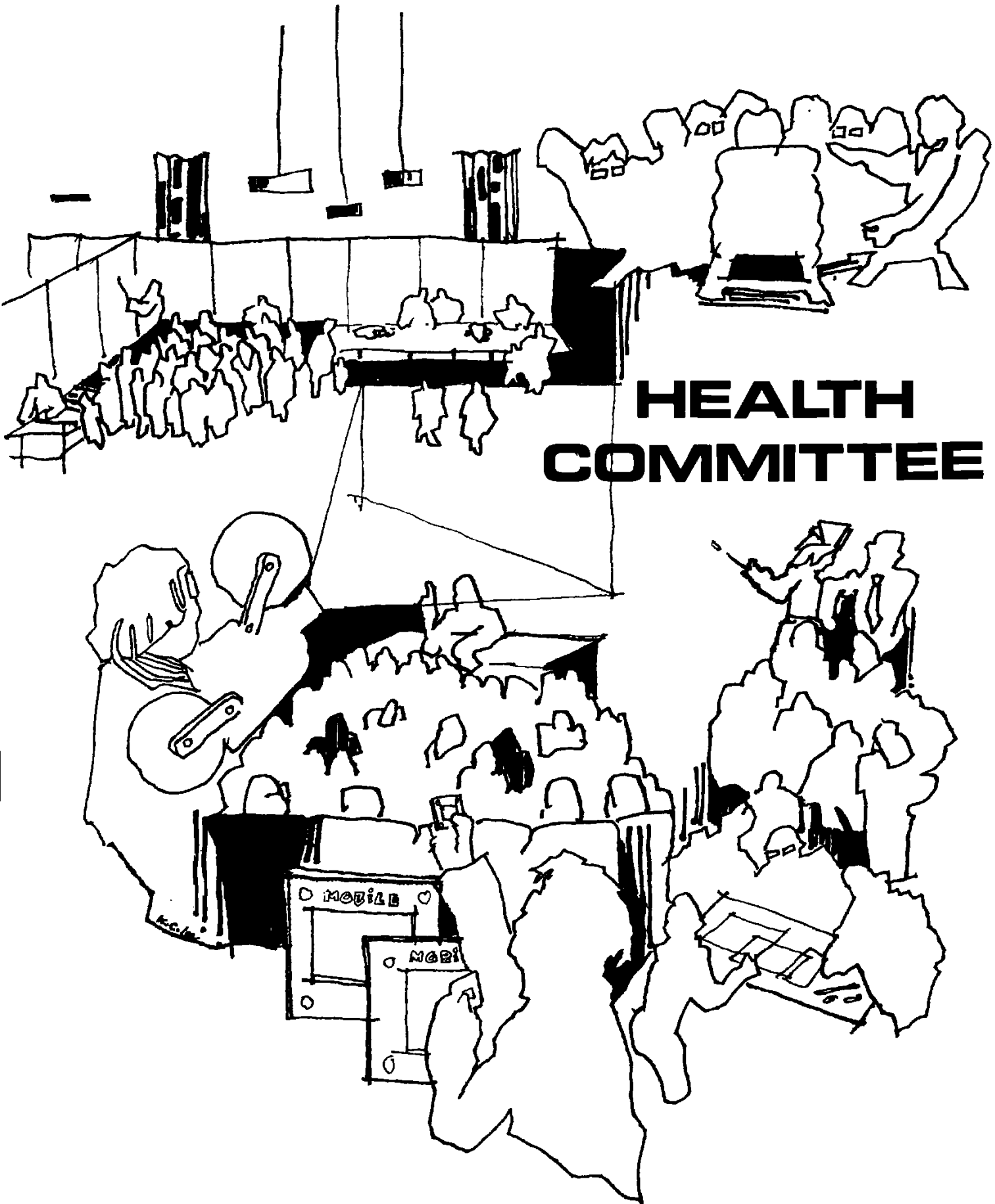
HKU Open Day '77



- 18th Fraternity Nite at Loke Yew Hall.
- 19th Talk on 'Health Care in China' by Professor Lisowski.
- 20th Forum on Medic Nite.
Interyear aquatic meet finals.
- 12-26th Exhibition of China Week Projects in Hong Kong Polytechnic.
- 24th General polling — Motion: 'The Medical Society will hold Medic Nite in the session 76-77.'
- 29th Visit to Social Hygiene Clinic at Tang Siu Kin Hospital.
- 31st Blood Donation.

NOVEMBER 77

- 3rd Tea Party held by the Health Committee.
Film show: 'Tibet'.
- 5-6th University Open Day.
- 8th Sixth Council Meeting — 1st session.
- 10th Joint forum with Nurses; 'The Viewpoint of Nurses on the Medical and Health Problems in Hong Kong'.
- 11th Sixth Council Meeting: — 2nd session.
- 12,19th, Interfaculty athletic meet.
- 14th Forum on, 'Two Year Internship'.
- 17th 31st Annual General Meeting.
- 18th General polling for the Ex-co session 77-78.
- 22-26th Dental Health Week.
- 28th Presidential Address: 'The Crooked Child' delivered by Dr. J. C. Y. Leong.
- Others: Project on '2 Year Internship' including the setting up of an Ad-hoc Committee.
Distribution of combined October and November issue of Caduceus.



HEALTH COMMITTEE

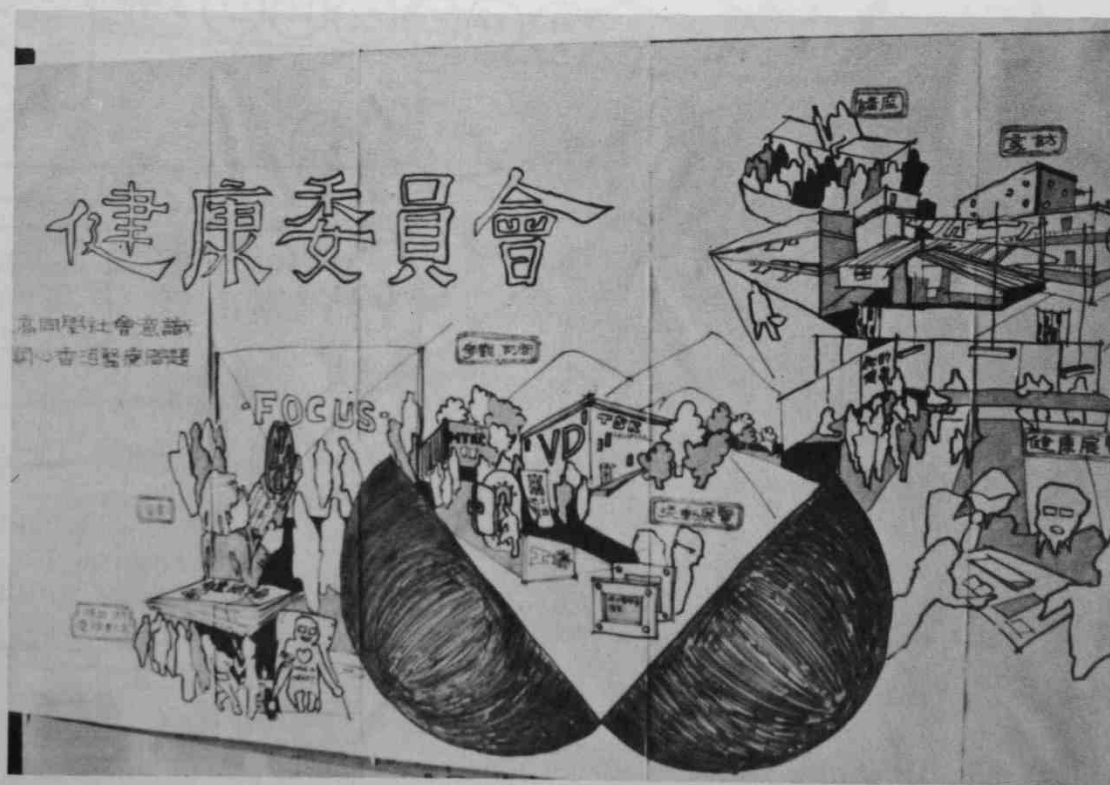
The Standing Committee on Health progressed into the session 77-78 with two major new practice. During the session, the committee has its first advisor — Professor M.J. Colbourne of the Department of Community Medicine. It also set up its first main theme for the working year — the Medical and Health Problem in Hong Kong. The advice from Professor Colbourne proved to be valuable to the committee. Our activities this year continued to concentrate on two very important aspects, namely, 'to serve' and 'to learn'.

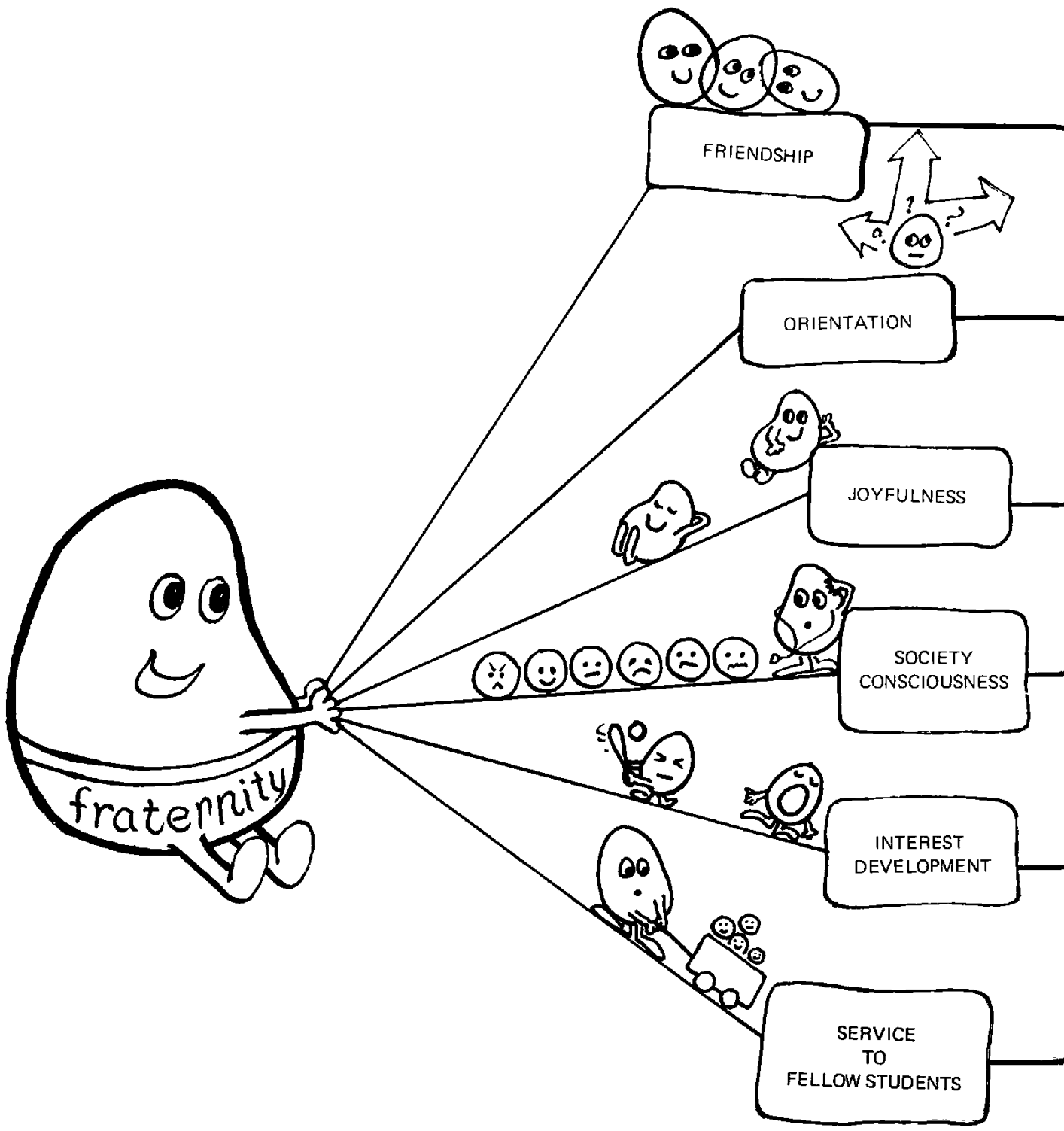
For the past year, the committee organised various activities such as talks, visits, mobile exhibition, health club project, blood donation campaign and involvement in various health projects and exhibitions organised by external organisations. The "Live in Health" exhibition held at the City Hall in September proved to be especially successful in achieving both our aims to serve the community and, through the preparatory work, to learn more about the health and medical care in Hong Kong.

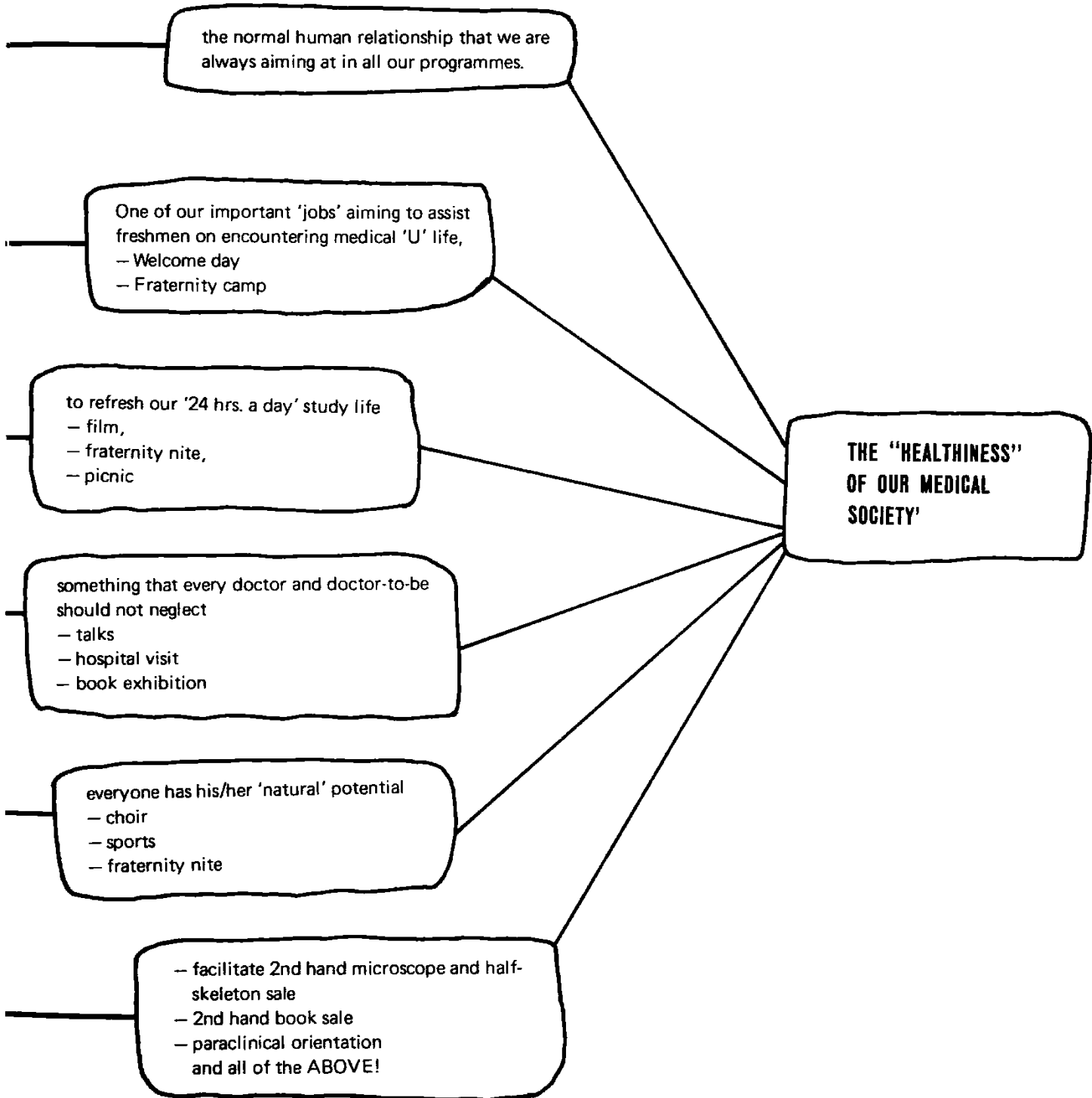
The committee also concerns the health of fellow students. It organised vaccination, distributed instructions on eye exercise and participated in the Hong Kong University Dental Health Week organised by the University Clinic this November.

The committee hopes that through the various activities it has organised, our fellow students will become more conscious about our future role as a doctor in the community, and more concern towards the public that we are going to serve a few years later.

Health Committee







I think this is the first time among the recent issues of Elixir that standing committees are invited to write to Elixir introducing their year of work. I suppose there can be no better introduction of the work of Caduceus than for the readers to pile up their collected issues of Caduceus and read them from Number one again. However, I do think that it may be a good idea at this time of the year to remind our readers once again of our Board policy and may I hope that the spirit of the policy can be kept up in the coming volumes.

The policy of the Editorial Board, as discussed thoroughly by its then 30 board members (now, approximating 40 board members) at the beginning of the year is:

1) Being the monthly publication of medical students, Caduceus aims at reflecting the activities, interests and life of medical students and at reflecting matters related to the medical field. It provides a means for all fellow students to voice their opinions and express their feelings.

2) Being one of the monthly publications of post-secondary students in Hong Kong, Caduceus aims at encouraging more discussion about the direction and participation of medical students in the Students' Movements in Hong Kong, the present slogan of which is "widen your horizon in the world, know your motherland – China, be concerned with society and fight for the rights and benefits of your fellow students."

In order to fulfill our board policy, the Editorial Board emphasized that all editors must have personal participation in the activities of the Medical Society, the Hong Kong University Student Union and the Hong Kong Federation of Students in order to obtain the views and opinions of fellow students. The Editorial Board had also stressed a spirit of unity among standing committees and the executive committee of the Medical Society to better the activities of the Medical Society. Throughout the past year, talks, visits, interviews and seminars in relation to special features and important events had been organized and welcomed by a significant number of students.

I hope that the spirit of unity in the Medical Society can be maintained in the coming years and let us welcome this issue of Elixir with happy anticipation.

Ng Chi Sing
Editor-in-chief

Caduceus



啟思



ELIXIR

by the student
for the student
to the student



FROM THE CLASSES

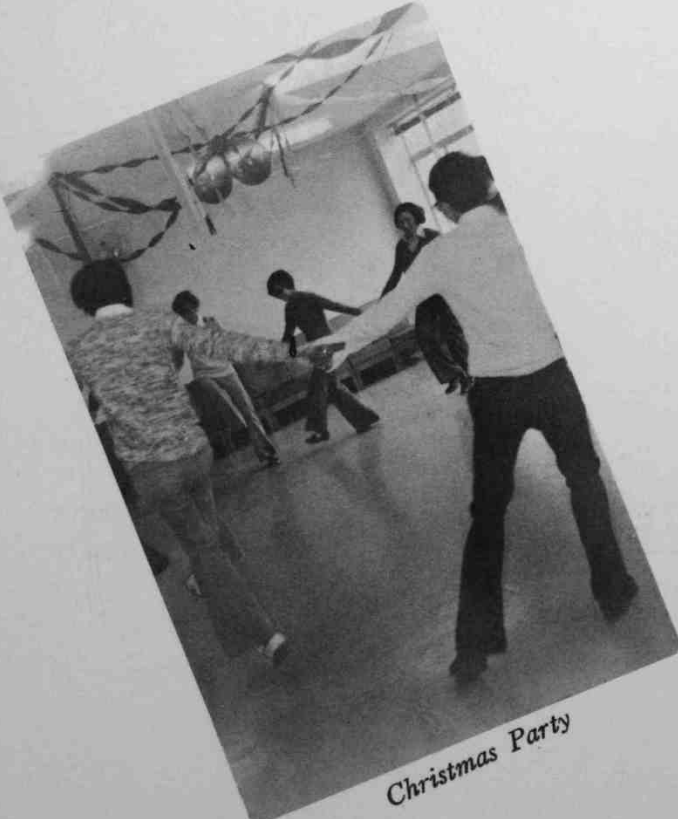


What's so interesting?



Class Dinner

Medic 78



Christmas Party



Our Sportsmen

This year had been a busy year for us. Nevertheless, there were many cherishable moments punctuating the monotony of the Part II of 2nd M.B.B.S. examination and the tense rapid pace of the circle game of rotating specialty clerkships.

The Medic Nite was an exciting and enjoyable time for all of us. Then there were the Christmas tea party and social gathering, as well as social gatherings in between clerkships.

The highlight of the year's function was the Class Dinner held in March when we had games and fun with Professor Colboune, Dr. C.P. Yip and Dr. F.K. Li.

This year, our class got the Champion of the Interyear sports 1977 and 1st runner-up in the Interyear Aquatic Meet, 1976. Mr. Alan Wong Hin Yeuk was the Sportman and Miss Hextan Ngan Yuen Sheung was the sportswoman of the year 1976.

With the start of Specialty Clerkship, it was difficult to organise activities in large scale. Activities were therefore limited to intra-group functions. Now the strain of the approaching final M.B.B.S. examination was increasing. Let's wish all Medic 78s every success in the coming examination.



MEDIC 79



1976 – 77 has been an exciting year for our class. As 3rd yer medical students, we had our first taste of clinical experience. The academic work, though heavy, was punctuated with various social, cultural and sports activities. All these are past, but they are not dead. They still live in our memories. Better still, we have captured some of these moments in photos.

- launch to Lamma Island
- outing to East Ping Chau
- Annual Dinner

Other equally memorable moments which have missed the camera are:

-canoeing at Tai Tam Bay
- social gathering
- tea party with 1st year
- Christmas camp at Wu Kai Sha
- outing to Po Toi Island
- Ocean Park Tour
- Beach Party at South Bay. So, it has been an eventful year.

We have to prepare ourselves well in both our academic work and our concern for patients in order to be good future doctors.

Keep up classmates! Hope each of us will be prepared by 1979.







Canoeing

Medic 80



at the Banquet

1977 was a year spotted with joy and fun. After the 1st M.B. Exam. an academic orientation was jointly organised with the Fraternity Committee.

A tour to the Ocean Park was organised and we obtained a 20% discount for the admission fee.

The annual dinner at the Sheraton Hotel surely gave us a chance to express our thanks to our preclinical teachers.

On the 16th of May, half of our class grouped together at the Repulse Bay after school in a Beach Barbecue. That night would surely be remembered by many of us after our graduation because it had been so happy for everyone.

Then came a swing-all-nite social gathering and girls were invited from St. Paul's Secondary School and Hong Kong Sanatorium Student Nurses. From the way the people danced that night, it would be a disaster to diagnose anyone of them as having myasthenia gravis.

At the end of May, many of us went canoeing at Tai Tam Wan and this was really a great training for our upper limbs and back muscles.

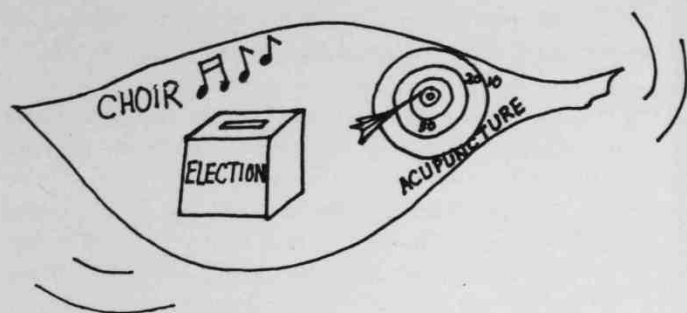
In spite of the pressure from term tests, we were still able to put up film shows in June; supporters were many.

Then our last summer vacation came and we immediately grasped the opportunity to arrange a launch picnic for the class. 55 of us joined the occasion; some swam in the sea but some swam in another way — playing mah-jong.

Before we finished our holidays, a canoe camp was held at Sai Kung from 12th to 14th September and again our muscles had their chance to exercise.

With the beginning of the 3th year and the introduction of the clinical subjects, it seemed that we were one more step nearer to our goal as doctors.

MEDIC 81



貝多芬第十一交響樂
(FRATERNITY NITE)

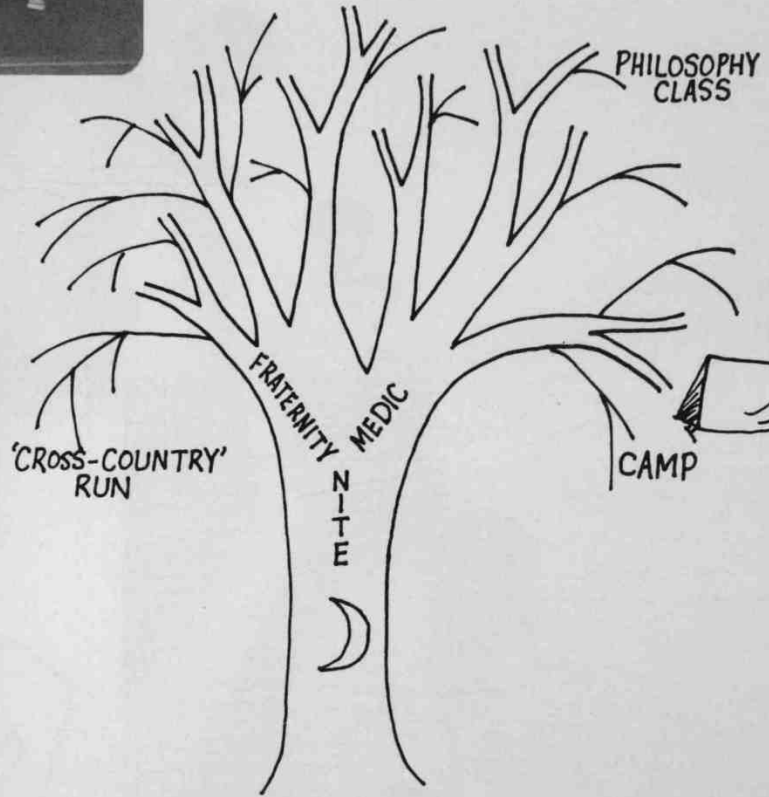


嘩，咁多人！
(步行籌款)

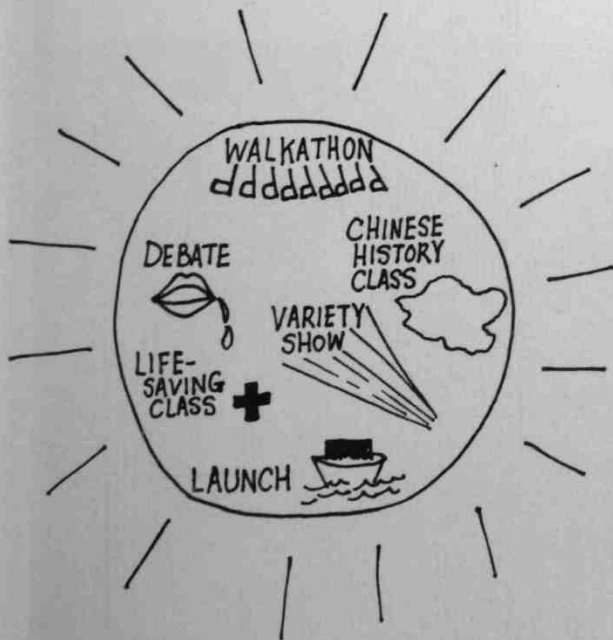




點解手索手？（班際籃球賽）



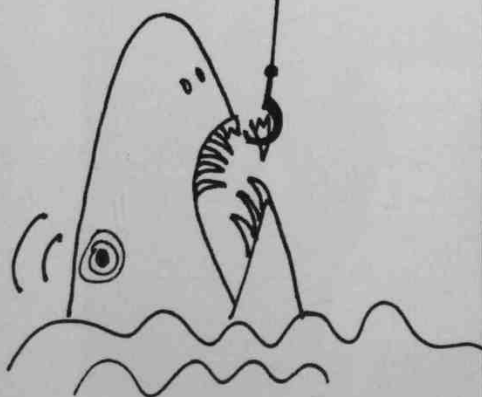
漫天烽火待黎明！
（露營）



新王老虎搶親
（VARIETY SHOW）



Med: 82



**EXTRACT
FROM THE GAZETTE**

personalia

Dr. K. M. B. Chan, Lecturer in Anatomy, attended the Twenty-seventh Annual Meeting of the Tissue Culture Association held in Philadelphia, Pennsylvania, from June 7 to 10, 1976.

Dr. T. K. Chan, Senior Lecturer in Medicine, attended the Sixteenth International Congress of Haematology held in Kyoto, Japan, from September 5 to 11, 1976, and presented a joint paper (with Dr. W. C. Chan) entitled 'Erythrocyte Hemighost: a hallmark of severe oxidative injury in vivo'.

Dr. Vivian N. Y. Chan, Lecturer in Medicine, attended the Fifty-eighth Annual Meeting of the American Endocrine Society held in San Francisco from June 23 to 25, 1976, and presented a paper entitled 'Effects of heroin addiction on thyrotrophin, thyroid hormones and prolactin secretion'. She also attended the First Asia and Oceania Congress of Nuclear Medicine held in Sydney from September 6 to 14, 1976, and presented a paper entitled 'Pituitary-thyroid response to surgical stress'.

(Miss) Y. M. Cheung, Lecturer in Physiology, attended the Physiological Society Meeting held in Dublin, Ireland, from September 10 to 11, 1976, and presented a paper (with Dr. J. C. C. Hwang and Dr. P. Y. D. Wong) entitled 'Epithelial membrane potentials of the epididymis in rats'.

Dr. J. C. C. Hwang, Reader in Physiology, attended an intercountry workshop on Generating Educational Changes in Medical Faculties organized by the World Health Organization and the University of New South Wales and held in Sydney, Australia, from May 16 to 28, 1976.

Dr. S. K. Lam, Lecturer in Medicine, attended the Basel Liver Week 1976 (Fourth International Congress of Liver Diseases and Fourth International Bile Acid Meeting) held in Basel, Switzerland, from October 4 to 14, 1976.

Dr. T. T. Loh, Lecturer in Physiology, attended the Sixteenth International Congress of Haematology held in Kyoto, Japan, from September 5 to 11, 1976, and presented a paper

entitled 'Kinetics of transferrin during the iron uptake by reticulocytes'.

Dr. L. W. Mak, Lecturer in Medicine, attended the International Union of Immunological Societies' Symposium on 'Cell interactions in the initiation and regulation of the immune response' held in Kyoto, Japan, from August 31 to September 4, 1976, and presented a paper entitled 'Sheep cell rosettes in glomerulonephritis'.

Dr. C. W. Ogle, Reader in Pharmacology, has been appointed an External Examiner for a Doctor of Philosophy thesis in pharmacology by Jadavpur University in Calcutta, India.

Dr. K. F. Shortridge, Reader in Microbiology, was a guest at the Working Conference of the Japan-United States Medical Science Program held at Sendai, Japan, from August 25 to 27, 1976, and presented a paper for discussion by the Panel on Viral Diseases entitled 'Studies in Hong Kong on the natural history of Japanese encephalitis virus'. During his stay in Japan, he visited the National Institute of Health, the Kitasato Institute, Central Virus Diagnostic Laboratory and the Department of Virology and Rickettsiology where he gave a lecture entitled 'Lipoproteins as nuisance factors in diagnostic virus serology'. Dr. Shortridge also carried out studies in human/animal influenza virus epidemiology at the World Health Organization Centre for the Ecology of Influenza Viruses in Animals, St. Jude Children's Research Hospital, Memphis, and at the Plum Island Animal Disease Centre, U.S. Department of Agriculture, Long Island, and visited laboratories at the W.H.O. Centre for Influenza, Centre for Disease Control at Atlanta, Yale University School of Medicine, and University College Hospital Medical School in London.

Professor K. Singer has been elected an Honorary Member of the World Psychiatric Association.

Dr. Sung May Lun, Lecturer in Obstetrics and Gynaecology, has been admitted as a Member

of the Royal College of Obstetricians and Gynaecologists.

Dr. C. S. Teng, Lecturer in Medicine, attended the Fifth International Congress of Endocrinology held in Hamburg, Germany, from July 17 to 24, 1976, and presented a paper entitled 'Antibodies to the thyrotrophin receptor in Ophthalmic Graves' disease'.

Professor P. H. Teng, Emeritus Professor, has been made in Honorary Fellow of the Royal College of Surgeons of Edinburgh.

Professor D. Todd and Dr. S. C. Tso, Reader in Medicine, presented papers on the use of doxorubicin in lymphoma and leukaemia at a seminar on Adriamycin held in Hong Kong on September 27, 1976, and sponsored by the Hong Kong Society of Radiation Therapy and Cancer and Carlo Erba Farmitalia (H.K.) Ltd.

Dr. T. F. Tse, Lecturer in Medicine, attended the Second Southeast Asian Conference on Rheumatic Fever and Rheumatic Heart Disease held in Manila, the Philippines, from September 27 to 30, 1976, and presented a paper on 'Active rheumatic carditis and bacterial endocarditis — clinical features'. He also participated in the panel discussion in the Scientific Session on the Symptomatology and Diagnosis of Rheumatic Fever and Rheumatic Heart Disease in Southeast Asia and chaired the meeting on the Treatment of Rheumatic Fever and Rheumatic Heart Disease in Southeast Asia (medical aspects). Dr. Tse also attended the Sixth Asian-Pacific Congress of Cardiology held in Honolulu, Hawaii, from October 3 to 8, 1976, and presented a paper entitled 'Treatment of hypertension with acebutalol'.

Dr. S. C. Tso, Reader in Medicine, attended the Sixteenth International Congress of Haematology held in Kyoto, Japan, from September 5 to 11, 1976, and presented a joint paper (with Professor D. Todd and Dr. T. K. Chan) entitled 'Prognosis and conventional therapy in aplastic anaemia'.

Dr. Christina C. L. Wang, Lecturer in Medicine, attended the First International Congress of Andrology held in Barcelona, Spain, and presented a paper entitled 'Testicular function in heroin addicts', and also the Fifth International Congress of Endocrinology held in Hamburg,

Germany, and presented a paper entitled 'Disso- ciated testosterone luteinizing hormone and follicle stimulating hormone secretions during surgical stress' from July 10 to 28, 1976.

Dr. P. Y. D. Wong, Lecturer in Physiology, attended the 1976 Annual Conference of the Society for the Study of Fertility held in Sheffield, England, from July 5 to 9, 1976, and presented a joint paper (with Miss C. H. Yeung) entitled 'In vitro measurement of fluid reabsorption in isolated cauda epididymidis of rats'. He also attended the One hundred and Forty-Seventh Meeting of the Society for Endocrinology held in Bristol, England, from September 11 to 14, 1976, and presented a joint paper (with Miss C. H. Yeung) entitled 'Hormonal dependence of fluid reabsorption in isolated rat cauda epididymidis *in vitro*'.

Dr. C. M. Yim, Lecturer in Obstetrics and Gynaecology, has been admitted as a Member of the Royal College of Obstetricians and Gynaecologists.

Dr. D. Y. C. Yu, Senior Lecturer in Medicine, attended the Sixth Asian-Pacific Congress of Cardiology held in Honolulu, Hawaii, from October 3 to 8, 1976, and presented a paper entitled 'Haemodynamic effects of intravenous terbutaline in left ventricular dysfunction'.

Dr. L. C. S. Hsu, Lecturer in Orthopaedic Surgery, has been elected a Fellow of the British Orthopaedic Association.

Dr. P. H. M. Lam, Lecturer in Surgery, has been admitted as a Fellow of the Royal College of Surgeons of Edinburgh.

Dr. T. K. W. Ng, Senior Lecturer in Community Medicine, has been elected a Member of the Faculty of Community Medicine of the Royal College of Physicians, U.K.

Dr. Y. C. Wong, Lecturer in Anatomy, attended the First International Congress on Cell Biology held in Boston from September 5 to 10, 1976, and presented a paper entitled 'The ultra- structure of the prostate gland of the guinea pig'.

Dr. T. K. Chan, Senior Lecturer in Medicine, has been elected a Fellow of the Royal College of Physicians of London.

Dr. P. Y. Chau, Lecturer in Microbiology, attended the Second International Symposium on Rapid Methods and Automation in Microbiology held in Cambridge from September 19 to 25, 1976. He has also been elected a Member of the Royal College of Pathologists, U.K.

Dr. K. C. Lam, Senior Lecturer in Medicine, has been elected a member of the International Association for Study of the Liver.

Dr. J. C. Y. Leong, Senior Lecturer in Orthopaedic Surgery, has been elected a Fellow of the British Orthopaedic Association.

Professor F. P. Lisowski visited Seoul and Manila from November 28 to December 11, 1976, in his capacity as a World Health Organization Consultant for the child growth survey in the Republic of Korea. He has also been appointed to the Board of Examiners of the Royal College of Surgeons for the F.R.C.S. (Part I) Edinburgh Examination in anatomy.

Dr. W. D. Low, Senior Lecturer in Anatomy, attended the Fourth Indonesian National Congress of Anatomy held in Jakarta from December 27 to 29, 1976, and presented a paper entitled 'Physical growth and development of Chinese children in Hong Kong'.

Professor H. K. Ma attended the World Congress in Obstetrics and Gynaecology held in Mexico City from October 17 to 23, 1976, and presented a paper entitled 'Obstetrics and gynaecology postgraduate training in Southeast Asia and China'. She also attended, as Chairman of the Medical Committee of the Southeast Asia and Oceania Region, the meeting of the Central Medical Committee of the International Planned Parenthood Federation held in London from March 21 to 23, 1977, and chaired a meeting of its Committee of Research and Evaluation on March 24, 1977.

Dr. M. H. Ng, Senior Lecturer in Microbiology, attended an International Symposium of Etiology and Control of Nasopharyngeal Carcinoma held in Kyoto from April 3 to 6, 1977, and presented four papers entitled 'In vitro cellular immunity of NPC and other cancer patients to PPD and extracts of NPC biopsies and raji cells'; 'In vivo CMI studies in nasopharyngeal carcinoma to EBV-related antigens' (with J. H. C. Ho, J. C. W. Chau, and P. H. Levine); 'Possible

transformation of normal nasopharyngeal mucosa by EBV derived from B₉₅-8 cells' (with D. P. Huang and H. C. Ho); and 'Solubilization of antigenic activities from the raji cell surface' (with H. C. Ho and W. S. Ng).

Professor G. B. Ong has been elected Honorary Fellow of the American Surgical Association.

Dr. K. F. Shortridge, Reader in Microbiology, attended, as a consultant to the World Health Organization's Committee on Ecology of Influenza Viruses, a consultative meeting held at the Geneva Headquarters on January 17 and 18, 1977. He also visited a number of laboratories in the United Kingdom in connection with influenza research. Dr. Shortridge has been awarded a contract to conduct influenza virus isolation studies in animals by the National Institute of Health of the United States, through the World Health Organization Centre for the Ecology of Influenza Viruses in Animals, St. Jude Children's Research Hospital, Memphis.

Dr. C. S. Teng, Lecturer in Medicine, attended a Symposium on Thyroid Disorders sponsored by ICI (China) Limited and held in Taipei on October 17, 1976, and presented a paper entitled 'Treatment of Graves' ophthalmopathy with orbital irradiation'.

Professor D. Todd has been appointed by the President of the Sydney Hospital Board, Australia, to be Norman Paul Visiting Professor for 1978. He has also been re-elected Director of the Hong Kong Anti-Tuberculosis and Thoracic Diseases Association.

Professor A. C. M. C. Yau participated in outpatient clinics and carried out demonstration spinal operations at the Prince Alfred, Mater Misericordia and Auburn Hospitals in Sydney from July 24 to August 8, 1976. During his stay in Manila from September 22 to 26, 1976, he delivered lectures entitled 'Central cervical cord lesions' to the Philippine Association of Military Surgeons, '150 consecutive cases of Halo-pelvic traction, to the Philippine Association of Spinal Surgeons, and 'Poliomyelitis surgery in Hong Kong' at the third postgraduate course organized by the Philippine Board of Orthopaedics. He was also elected an Honorary Fellow at the 27th Annual Convention of the Philippine Orthopaedic Association. From September 27 to October 2, 1976, he attended the Fifth Congress of the

WPOA held in Seoul, chaired a symposium on 'Tuberculosis of the spine – current trends of treatment', and also delivered a lecture entitled 'The Medical Research Council trial on the surgical treatment of T.B. spine in Hong Kong'. While in Seoul, he also visited Yonsei University Medical College and operated on a case of T.B. spine. Professor Yau attended the Post Congress Meeting of the WPOA held in Sapporo from October 4 to 8, 1976 and talked on the 'Multidisciplinary approach to the management of severe scoliosis', and visited the Children's Orthopaedic Hospital run by the Sapporo Medical College. From October 8 to 11, 1976, he visited the University of Tokyo, conducted one morning's postgraduate teaching, and delivered a lecture on 'The surgical approaches to the spinal column'. Professor Yau also lectured and operated on spinal problems in Kobe University School of Medicine and in Hyogo College of Medicine in Osaka from October 11 to 17, 1976. During his visit in Taiwan from October 17 to 24, 1976, he lectured on post-polio deformities of the spine, and on 'Correction of T.B. Kyphosis' at the Cheng Hsin Rehabilitation Centre and the National Taiwan University respectively. He also delivered an undergraduate lecture on T.B. spine at the Kaohsiung Medical College.

Professor Rosie T. T. Young attended the annual meeting of the Australian Diabetes Society held in Melbourne on November 12 and 13, 1976. She presented two papers and participated in a Seminar on the Epidemiology of Diabetes Mellitus and its Vascular Consequences. She also visited and gave lectures at various hospitals and medical research institutes in Melbourne and Sydney on endocrine and metabolic subjects. She participated in a postgraduate course on diabetes organized by the Christchurch Hospitals Postgraduate Society and the University of Auckland from November 17 to 20, 1976. As the 1976 Visiting Fellow for the Chapter of Physicians of the Singapore Academy of Medicine, Professor Young, gave a series of public lectures and teaching clinics to undergraduates and postgraduates in Singapore from November 27 to December 4, 1976. She has also been elected a member of the Association of Physicians of Great Britain and Ireland.

Dr. A. Koo, Lecturer in Physiology, was appointed Visiting Assistant Research Bioengineer in the Department of Applied Mechanics and Engineering Sciences, University of California,

from July 1976 to April 1977. He also gave a research seminar on blood flow in hepatic sinusoids in experimental haemorrhagic shock held at the School of Medicine of the University of California in November 1976.

Dr. N. W. Lee, Lecturer in Surgery, has been elected a Fellow of the Royal College of Surgeons of Edinburgh.

Professor H. K. Ma was appointed Examiner of the Part II Membership Examination of the Royal College of Obstetricians and Gynaecologists in April 1977. She also delivered a paper entitled 'Carcinoma of cervix' during the Lance Townsend's Valedictory Scientific Meeting held in Melbourne from June 20 to 24, 1977.

Professor G. B. Ong was awarded the Honorary Fellowship of the Royal College of Physicians and Surgeons of Glasgow at the Ceremony of Admission held in the College on May 2, 1977.

Dr. T. F. Tse, Lecturer in Medicine, delivered a lecture entitled 'Treatment of cardiogenic shock with Terbutaline' at the University of Goteborg, Sweden, on June 6, 1977.

Professor D. Todd has been appointed by His Excellency the Governor as a member of the Medical Development Advisory Committee of the Government Secretariat for the period ending June 30, 1978.

Professor Rosie T. T. Young attended the Fifty-ninth Annual Meeting of the American Endocrine Society held in Chicago from June 8 to 10, 1977, and presented a paper entitled 'Erythrocyte abnormalities in thyrotoxic periodic paralysis'. She also attended the Thirty-seventh Annual Meeting of the American Diabetes Association held in St. Louis from June 5 to 7, 1977. During her visits to the Diabetes Division of the National Institute of Health, Bethesda, and the Department of Medicine of the University of Chicago in May and June 1977, Professor Young gave seminars on Hypoglycaemia in primary hepatoma. She has also been elected a member of the American Endocrine Society.

COUNCIL

Anonymous: HK\$2,000 to the Department of Paediatrics, and HK\$24,000 to establish a scheme of travel grants in memory of the late Professor P. M. Yap.

Miss W. Cheung: HK\$5,000 to the Department of Obstetrics and Gynaecology.

China Medical Board of New York Incorporated: US\$250,000 to the Faculty of Medicine to support a regional fellowship programme for postgraduate training in medicine and allied science; and US\$250,000 to enable teachers in the Faculty of Medicine to obtain further training abroad.

The family of Mrs. K. C. Fok: HK\$3,000 for research work in the Department of Medicine.

Mrs. W. C. C. Fong: HK\$7,240, being contributions from a number of donors in memory of her late husband, for research in Cardiology in the Department of Medicine.

Li Shu Fan Medical Foundation: a Model E-10 Treadmill, costing \$137,130, to the Lewis Laboratory in the Department of Medicine.

May and Baker Limited: HK\$4,200 to enable Dr. Y. C. Yu, Senior Lecturer in Medicine, to attend the Sixth Asian-Pacific Congress of Cardiology held in Honolulu from October 3 to 8, 1976.

G. D. Searle International Company: HK\$12,916 in support of Professor Boyde's research in differential assay of isoenzymes in blood, and its clinical applications.

Emeritus Professor

The title of Emeritus Professor has been conferred upon Professor K. K. Cheng, Professor of Physiology from 1960 to 1976 on his retirement in June 1976.

Donations, grants and gifts

An anonymous donor: HK\$3,500 for re-

search work in the Department of Medicine.

Mrs. Leung Chan Shin Ha: HK\$3,000 to the Medical Library.

Mr. Luk Kwai Ming: HK\$1,000 to the Medical Library for the purchase of books on arts and culture.

Roche Far East Research Foundation: HK\$2,315 to the Department of Medicine for research on drug-induced haemolytic anaemia.

Dr. K. F. Leung: HK\$518 to the Medical Faculty Research Fund.

South China Medical Supplies Company, Limited, a Topcon Retinal camera to the University for use in the Department of Medicine in research on the vascular changes in Chinese who have diabetes mellitus

The World Health Organization: US\$1,500 for the transfer of existing data on to new record forms for the male contraceptive trial programme.

Staff members of Cable and Wireless Limited: HK\$1,500 to the Medical Faculty Research Fund.

A.S. Watson and Company: HK\$5,000 to the Medical Faculty Research Fund.

World Health Foundation (H.K.): HK\$38,400 to the Department of Microbiology for the continuation of research on Viral Oncogenesis of Nasopharyngeal Carcinoma for the year 1977-78.

World Health Organization, I.A.R.C.: HK\$83,705.25 to the Department of Microbiology for research in respect of the isolation and purification of EBV specified antigens.

The estate of the late Madam Wong Ching Yee: donations totalling approximately HK\$36,000 for the establishment of the Wong Ching Yee Medical Scholarship.

SENATE

External Examiner

Professor J. H. Hutchison, in paediatrics for the Final M.B.,B.S. Examination to be held in February 1977.

Professor A. C. Kennedy, Muirhead Department of Medicine at the University of Glasgow, in medicine for the Final M.B.,B.S. Examination to be held in May 1977.

Mr. H. B. Torrance, Department of Surgery at the University of Manchester, in surgery for the Final M.B.,B.S. Examination in December 1977.

Membership

Dr. S. C. Tso, Reader in Medicine, has been elected by the non-professorial members of the Board of the Faculty of Medicine to be a member of the Senate for three years from April 1, 1977.

FACULTY OF MEDICINE

Appointment of Sub-Dean

Consequent upon amendments to Statute IX to include provision for the appointment of one Sub-Dean in each Faculty, Professor David Todd has been appointed Sub-Dean of the Faculty of Medicine for the period ending April 23, 1978.

Appointments

David Fang, M.B.,B.S. (Hong Kong), appointed Lecturer in Orthopaedic Surgery from October 1, 1976.

Lam Tai Hing, M.B.,B.S. (Hong Kong), appointed Lecturer in Community Medicine from August 14, 1976.

Dinshaw Rustam Master, M.B.,B.S. (London), M.R.C.P. (United Kingdom), appointed Temporary Lecturer in Psychiatry for six months from October 21, 1976.

Tang Fai, M.Sc. (Hong Kong), Ph.D. (Hull), appointed Assistant Lecturer in Physiology from January 1, 1977.

John Wong, B.Sc. (Med.), M.B.,B.S., Ph.D. (Sydney), F.R.A.C.S., Lecturer, appointed Senior Lecturer in Surgery from December 1, 1976.

Patricia Mary Bannatyne, M.B.,B.S. (Sydney), F.R.C.Path. (Australia), appointed Lecturer in Pathology from November 22, 1976.

Mok Che Keung M.B.,B.S. (Hong Kong) F.R.C.S. (Edinburgh), F.A.C.S., appointed Lecturer in Surgery from January 1, 1977.

Yeung Ho Yin, M.B.,B.S. (Hong Kong), appointed Lecturer in Pathology for a fixed period of 27 months from April 1, 1977 to June 30, 1979.

Olivia Chow Kit Wun, M.B.,B.S. (Hong Kong), appointed Lecturer in Paediatrics from July 1, 1977.

Ho Ho Cheong, M.B.,B.S. (Hong Kong), Clinical Pathologist, appointed Lecturer in Pathology from July 1, 1977.

Andrew Hua Su Ping, M.B.,B.S. (Hong Kong), F.R.A.C.P., appointed Lecturer in Medicine from August 1, 1977.

Lee Kee Shing, M.B.,B.S. (Hong Kong), F.R.C.S. (Edinburgh), appointed Lecturer in Orthopaedic Surgery from August 1, 1977.

Zoltan Lett, M.D. (Czechoslovakia), F.F.A.R.C.S. (England and Ireland), F.F.A.R.A.C.S. (Australia), D.A. (England), R.C.P.S. (Ireland), Honorary Clinical Lecturer, appointed Lecturer in Surgery from December 1, 1977.

Siu King Fun, appointed Lecturer in Surgery from July 1, 1977.

(Mrs.) Chan So Luk Kan, M.B.,B.S. (Hong Kong), Lecturer in Microbiology, appointed Lecturer in Obstetrics and Gynaecology from April 1, 1977.

Patrick Yuen Man Pan, M.D. (Saskatchewan), F.R.C.P. (Canada), Dip.Am.Board, Honorary Clinical Lecturer, appointed Lecturer in Paediatrics from December 1, 1977.

Frank Cheng Chi Yan, M.B.,B.S. (Hong Kong), F.R.C.S. (England and Edinburgh), F.A.C.S., Senior Lecturer, appointed Reader in Surgery from June 1, 1977.

Donald Yu Yu-Chiu, M.B.,B.S. (Hong Kong), F.R.C.P. (Edinburgh), Senior Lecturer, appointed Reader in Medicine from June 1, 1977.

Louis Hsu Che Shek, M.B.,B.S. (Hong Kong), F.R.C.S. (Edinburgh), Lecturer, appointed Senior Lecturer in Orthopaedic Surgery from July 1, 1977.

Lam Shiu Kum, M.D. (Hong Kong), M.R.C.P. (United Kingdom), Lecturer, appointed Senior Lecturer in Medicine from July 1, 1977.

James Wang Chi Ching, M.Sc., Ph.D. (Hong Kong), Dip.Med. (Shanghai), Lecturer, appointed Senior Lecturer in Physiology from July 1, 1977.

Wong Yong Chuan, B.Sc. (Nanyang), M.Sc., Ph.D. (Western Ontario), Lecturer, appointed Senior Lecturer in Anatomy from July 1, 1977.

Alfred Au Man Cheuk, M.B. (National Taiwan), Lecturer in Surgery, appointed Clinical Pathologist in the Department of Pathology from July 4, 1977.

Ian Duncan Gardner, B.Sc. (Flinders), Ph.D. (Australian National University), appointed Lecturer in Pathology from September 1, 1977.

Romeo R. Du, M.D. (Santo Tomas), appointed Temporary Lecturer in Anatomy from July 1, 1977.

Ignatius Kung Tak Min, M.B.,B.S. (Hong Kong), appointed Clinical Pathologist in the Department of Pathology from July 1, 1977.

(Mrs.) Veronica Lam Min Sien, B.Sc., Ph.D.

(London), Assistant Lecturer, appointed Lecturer in Biochemistry from May 1, 1977.

Kevin Leung Ming Keung, M.B.,B.S. (Hong Kong), appointed Lecturer in Community Medicine from August 1, 1977.

Kalev Wilding, M.B.,B.S. (Sydney), F.R.C.S. (England), F.R.A.C.S., appointed Temporary Lecturer in Orthopaedic Surgery from July 1, 1977, to October 31, 1977.

Resignations

Dr. S. H. H. Chan, Lecturer in Physiology, from December 31, 1976.

Dr. M. K. G. Ma, Senior Lecturer in Surgery, from October 8, 1976.

Dr. V. W. T. Yan, Lecturer in Medicine, from September 30, 1976.

Dr. P. C. K. Yue, Reader in Surgery, from June 30, 1977.

Dr. A. J. C. Buchanan, Lecturer in Paediatrics, from May 10, 1977.

Dr. J. H. Elias-Jones, Temporary Lecturer in Obstetrics and Gynaecology, from March 3, 1977.

Dr. D. R. Master, Temporary Lecturer in Psychiatry, from March 8, 1977.

Dr. R. K. M. Poon, Lecturer in Orthopaedic Surgery, from June 8, 1977.

Dr. V. Raj, Clinical Pathologist in the Department of Pathology from August 5, 1977.

Dr. T. W. Wong, Lecturer in Pathology, from June 30, 1977.

Dr. K. P. Yau, Lecturer in Community Medicine, from July 31, 1977.

Dr. F. A. O'H. Ward, Senior Clinical Pathologist in the Department of Pathology, from October 21, 1977.

Dr. H. H. Y. Yu, Lecturer in Surgery, from September 5, 1977.

Bristol-Myers Exchange Registrar

Dr. James D. Best has been appointed as Bristol-Myers Exchange Registrar for 1977.

Department of Microbiology

The Department of Microbiology has been awarded a contract for the year 1977 by the National Cancer Institute Special Virus Cancer Programme for the study of Isolation and Purification of Epstein Barr Virus specified antigens.

The Department of Microbiology has been designated a W. H. O. Collaborating Laboratory for Animal Influenza Viruses.

Haematology Seminar

A Seminar on Haematology, jointly organized by the Department of Medicine and the Hong Kong Society of Haematology, was held in the Pathology Lecture Theatre, Queen Mary Hospital Compound, on September 1, 1976.

Prize

The Dr. P. M. Yap Memorial Prize has been awarded to Mr. Lau Pui Hing

The Belilios Medical Prize (1st year) has been awarded to Mr. Mak Kong Ling.

Prize

Anna Lok Suk Fong has been awarded the Hong Kong University Alumni prize.

EDWARD LEONG CHE HUNG

M.B.,B.S. (Hong Kong), F.R.C.S. (England and Edinburgh), F.A.C.S.

Dr. Edward C. H. Leong, Senior Lecturer in Surgery, has been appointed Reader from July 1, 1976.

After taking the degrees of M.B.,B.S. from the University of Hong Kong in 1962, Dr. Leong served an internship at the Queen Mary Hospital and later became Clinical Assistant at its University Surgical Unit, to which he returned in 1966 as Lecturer in Surgery after having spent a year in overseas training in London.

During 1971-72, Dr. Leong was awarded a China Medical Board Fellowship to serve as a Research Fellow at the University of California, Los Angeles, and in the latter year was promoted

Senior Lecturer in Surgery in this University. In 1973 he was appointed Visiting Professor in the Department of Urology/Surgery in the University of Missouri, Columbia. In 1975 he was named Hunterian Professor of the Royal College of Surgeons of England – the third Hong Kong recipient of this award, and the first local-born Chinese to be so honoured. Recently he was awarded the first Li Koon Chun Travelling Fellowship to tour major Australasian universities.

Dr. Leong has written extensively in medical journals, particularly on general and urological surgery. His main interest is in urinary diversion and bladder replacement.

TSO SHIU CHIU

M.B.,B.S. (Hong Kong), F.R.C.P. (Edinburgh)

Dr. S. C. Tso, Senior Lecturer in Medicine, has been appointed Reader from June 1, 1976.

Born in Hong Kong, Dr. Tso graduated from the University of Hong Kong in 1959 with the degrees of Bachelor of Medicine and Bachelor of Surgery. Upon graduation, he served as House Officer in the University Departments of Surgery and Medicine, Queen Mary Hospital, and the following year became Clinical Assistant in the Department of Medicine. He was promoted Assistant Lecturer in 1961, Lecturer in 1964, and Senior Lecturer in 1970.

In 1962 Dr. Tso was awarded a Sino-British Fellowship for postgraduate studies in the United Kingdom, where he undertook clinical work at the Royal Infirmary of Edinburgh and engaged in research in the Department of Therapeutics at the University of Edinburgh and in the Paterson

Laboratories, Christie Hospital and Holt Radium Institute, Manchester. In 1968, he was awarded a China Medical Board Fellowship for studies in the United States, where he gained further experience in stem-cell techniques and experimentation with the immunofluorescence technique as applied to erythropoietin at the University of California at Berkeley.

Dr. Tso specializes in haematology and has research interests in erythrocytosis and erythropoietin, folate metabolism in thalassaemia and the use of radioisotopes in haematological studies, and has published many papers on these subjects. He is a member of the Hong Kong Society of Haematology and the World Federation of Hemophilia, and a Fellow of the Asian-Pacific Division of the International Society of Haematology.

LIANG CHI CHIN

B.Sc. (Tsing-hua), Ph.D.(London)

Dr. Liang Chi Chin retired from the Department of Physiology on June 30, 1976, after forty years as a teacher, the last twenty-eight years of which were in the service of the University.

Dr. Liang received a Bachelor of Science degree with first class honours from National Tsing-hua University, Peking, in 1936 and joined the staff of Tsing-hua as an assistant in plant and animal physiology. The outbreak of the Sino-Japanese 'Incident' and the vicissitudes of war led to a remarkable odyssey through China. During the period 1938 to 1948, Dr. Liang taught at universities in Peking, Kunming, Hong Kong, Kweilin, Chungking, Wukung and Lanchow. In tracing his early career as a teacher one is struck by his dedication to his profession and his singleness of mind in serving his country through the field of education.

In 1948, Dr. Liang joined the University of Hong Kong as a Demonstrator in Biology and a year later transferred to the Department of Physiology. In those early post-war years the Department of Physiology consisted of a professor, two lecturers and two demonstrators who were responsible for teaching biochemistry as well as physiology. Dr. Liang, with his versatility and broad interests, was called upon to teach in both fields. When, with the addition of one lecturer, the teaching responsibilities were divided, Dr. Liang was assigned to teach biochemistry. Later, when pharmacology became a departmental responsibility, again with the addition of one lecturer, Dr. Liang was assigned responsibilities in that area. In 1959, after spending two years at the University of London, where he received the

degree of Doctor of Philosophy, he was appointed Assistant Lecturer in Physiology and Pharmacology. In 1963 he was appointed Lecturer in Physiology. His many research papers in the *Biochemical Journal*, *Journal of Biochemical Pharmacology*, the *Journal of Physiology* (London) and *Journal of Nutritional Science and Vitaminology* reflect the breadth of his interests. They also give some insight into the nature of a man who has, in the true spirit of the scholar-scientist, pursued knowledge in many directions.

Dr. Liang is married to the former Miss Wong Kiu-sam, now retired after many years of service as a nurse at the Nethersole Hospital. Their four children are carrying on the family tradition of community service and teaching. The fact that they are all in different parts of the world is an indication that C.C.'s example of independence has been well followed. We are glad to report that their eldest daughter, Isabella, continues her studies for a doctorate in the department in which her father served for so long. When one includes the numerous former students who have no doubt gone to all parts of the world, one can indeed say of C.C. that he has

For a man with the vigour and natural inquisitiveness of Dr. Liang, retirement is but a milestone to be passed. He continues to be active in research and writing and the University is indeed fortunate that he has agreed to continue his association with the Department of Physiology as an Honorary Research Fellow. We look forward to many more years of his valuable advice and collaboration.

A.C.L.H.

JAMES HOLMES HUTCHISON

C.B.E., M.D. (Glasgow), F.R.C.P. (London, Glasgow and Edinburgh),
F.R.S.E., F.A.C.P. (Hon.)

Professor J. H. Hutchison has been appointed Professor of Paediatrics from September 1, 1977 to August 31, 1980.

After graduating with the degrees of M.B.,Ch.B. from the University of Glasgow in 1934, Professor Hutchison served in the following two years as House Officer and Registrar respectively, first at the Western Infirmary and Royal Hospital for Sick Children, Glasgow, and then at St. Luke's Hospital, Bradford. He obtained the McCunn Research Scholarship for 1936-38 and was awarded the Harry Stewart Hutchison Prize for research into disease in children in 1939. In the same year he received the degree of Doctor of Medicine with honours from the University of Glasgow and was awarded the Bellahouston Gold Medal.

Meanwhile, Professor Hutchison stayed in the Royal Hospital for Sick Children, Glasgow, first as Assistant Visiting Paediatrician from 1938 to 1947 and then as Consultant Paediatrician in charge of wards from 1947 to 1961. During the war years of 1939-45 he was with the Royal Army Medical Corps, and was awarded the O.B.E. (Military) in 1945. From 1947 to 1964, Professor Hutchison also acted as Consultant Paediatrician to the Royal Maternity Hospital.

From 1961 until his present appointment with the University, Professor Hutchison has been Samson Gemmell Professor of Child Health at the University of Glasgow and Consultant

Paediatrician at the Royal Hospital for Sick Children and Queen Mother's Hospital, Glasgow.

Because of his extensive teaching experience in the past forty years, Professor Hutchison has frequently been called upon to serve as examiner in the various M.R.C.P. examinations and as External Examiner of several universities, including the University of Hong Kong. His chief areas of interest and specialization are endocrinology and neonatology. He advocates a department which is community-oriented and feels that medical undergraduates should have greater exposure to the paediatrics of primary care (general practice) and to the effects of the child's environment on his health state.

Professor Hutchison has held important positions in various professional organizations, including the presidency of the Royal College of Physicians and Surgeons of Glasgow (1966-68), the British Paediatric Association (1969-70) and the Association of Physicians of Great Britain and Ireland (1973-74). He was chairman of several medical advisory committees and was the Dean of the Faculty of Medicine in the University of Glasgow from 1971 to 1974. In addition, he was a member of a number of medical research councils and government committees.

Professor Hutchison's outstanding publications include *Practical Paediatric Problems* (fourth edition), chapters in several textbooks, and many contributions to medical journals.

FRANK CHENG CHI YAN

M.B.,B.S. (Hong Kong), F.R.C.S. (England and Edinburgh), F.A.C.S.

Dr. F. C. Y. Cheng, Senior Lecturer in Surgery, has been appointed Reader from June 1, 1977.

Dr. Cheng has been a distinguished student from as early as his secondary school days. He received his M.B.,B.S. from the University in 1963, not only with distinctions in Anatomy, Biochemistry and Surgery, but also with such awards as the Ho Fook and Chan Kai Ming Prize and the Digby Memorial Gold Medal for his brilliant achievements. After serving as House Surgeon and House Physician at Queen Mary Hospital for one year, he returned to the University as Clinical Assistant in the Department of Surgery. Within two years he was promoted to Assistant Lecturer and subsequently Lecturer while receiving postgraduate surgical training in the Department. In 1966, he went to the U.K. on a Commonwealth Scholarship which enabled him to attend a Basic Medical Science Course at the Royal College of Surgeons of England. This was followed by a one-year appointment as Honorary Surgical Registrar at Hammersmith Hospital and the Royal Postgraduate Medical School, University of London, where he received post-

graduate surgical training concurrently. Upon his return to Hong Kong in 1967 he resumed his lectureship in Surgery at the University. In 1972, he took charge of the University Surgical Unit at Kwong Wah Hospital. In the same year, he was promoted to Senior Lecturer in Surgery.

Dr. Cheng is a Fellow of the Royal Colleges of Surgeons of England and of Edinburgh, Fellow of the American College of Surgeons, and an active member of international surgery societies including Council Member of the International Society of Endoscopy and Vice-President of the Association of Surgeons of Southeast Asia. At home, he is President of the Hong Kong Surgical Society and had been President of the Medical Society of the University. Dr. Cheng's Research interests are in gastroenterology and endoscopy. He was awarded the Li Po Kwai Prize in Surgery for his essay on 'Gastric acid secretions'. He has presented many papers in conferences and published various papers on topics in gastroenterology including gastric acid studies in duodenal ulcer, cirrhosis of liver, carcinoma of liver, recurrent pyogenic cholangitis and chemotherapy of gastrointestinal carcinoma.

BEATRICE HUANG-CHAN SHUK-TSZ

M.B. (National Chung Cheng), Ph.D. (Hong Kong)

The premature passing of Dr. Beatrice Huang-Chan Shuk-Tsz, Reader in Anatomy, on March 23, 1977, after a sudden and short illness, came as a profound shock to all who knew her. The Department has lost a valued colleague and warm friend who had been so much part of our activities and life. Dr. Huang-Chan had been dedicated to anatomy for over twenty-six years. She will be long remembered by many generations of Hong Kong medical graduates.

Dr. Huang-Chan was born in Canton in 1920 as the youngest daughter of a family of twelve children. It was a family with a strong sense of service. In her younger days she studied at the Wa Ying Girls' School from which she graduated with honours. She received her medical education at

Lingnan University Medical College, Canton, and the National Chung Cheng Medical College, Kiangsi, graduating in 1947. During her studies she was awarded a scholarship and several prizes. She gained her clinical experience from 1947 to 1949 first as an intern at the Hackett Medical Centre, Canton, and then as a resident and part-time instructor in obstetrics and gynaecology at Canton University Hospital. In 1951 she embarked on her anatomical career as a Demonstrator in the University of Hong Kong and subsequently became a Lecturer. In 1969 she was appointed a Senior Lecturer and was awarded the degree of Ph.D. in 1970 for her work on 'Linear Growth of Hong Kong Chinese Children'. In 1973 she was promoted to Reader.

She was a dedicated and popular teacher with rigid standards who demanded the best of herself, and who was constantly concerned about the progress of the students. Her help and advice was much sought after. The Hong Kong University Students' Union Medical Society made her a Vice-President from 1970/1971.

In her research she was industrious and made considerable contributions both in the studies of the growth and development of Hong Kong children and in her investigations of the quantitative and qualitative changes of bone-marrow cells, in particular the basophil cell, under the effect of foreign proteins. More recently she had been working on the effect of laser on bone-marrow cells. Her publications testify to her continued interest in the biometric and cytological fields.

She was awarded three fellowships during various periods of study-leave. In 1958-59 she received one from the China Medical Board of New York to work in the University of Bristol, U.K. In 1968-69 she worked as a Dr. Henry C. and Bertha H. Buswell Fellow and Visiting Assistant Professor of Anatomy at the State University of New York in Buffalo, U.S.A. And in 1973 she was a Wellcome Research Fellow in the University of Birmingham, U.K., Her work carried her to international anatomical and haematological conferences in London, Cardiff, Boston, Leningrad, New York, Manchester and Tokyo. She was also a member of several scientific societies.

Within the Department Dr. Huang-Chan looked after the topographical anatomy section and was also the Acting Head from time to time. She took an active part too in the affairs of the Faculty of Medicine and was on several of its sub-committees.

In her outside activities, she was on the Executive Committee of Wa Ying Middle School Alumni Association and helped in the establishment of Wa Ying College in Hong Kong; she also was a member of the Executive Committee of the Hong Kong Association of University Women.

Dr. Huang-Chan was the wife of Professor C. T. Huang and the mother of their four children. She led a rich and full life and was a busy and indefatigable worker, devoted to her family, a great support to her husband in all his offices and an academic in her own right. She was a warm person, with a sense of the dignity of all human beings, ready to enter into the concerns of any. She never showed any impatience and at all times was ready to shoulder responsibilities whatever the task. It was the ability to give herself in so many different ways that made her an integral part of us all. One of her great virtues was her sense of duty and devotion. Dr. Huang-Chan was, and remains, an example to us all and her spirit lives on among those of us who were privileged to work with her.

To her husband, Professor C. T. Huang, and family we extend our deepest sympathy.

F.P.L.

LIFE IN MEDIC (I)

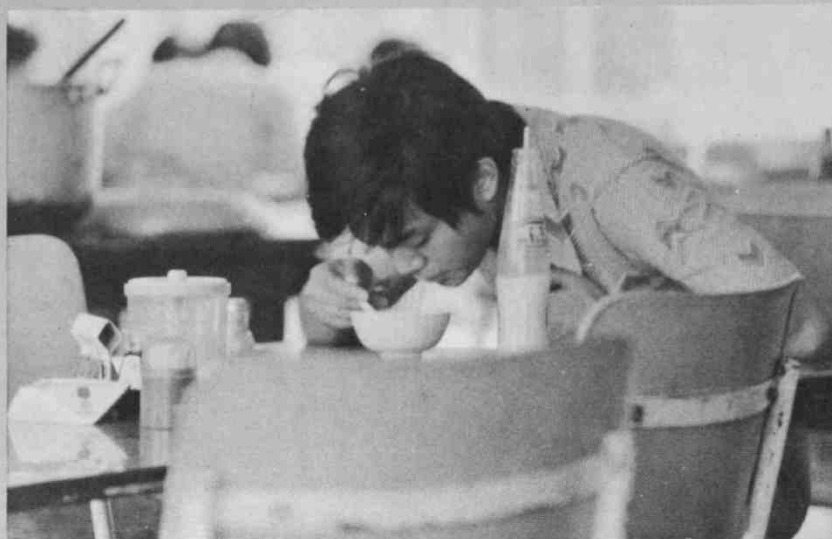


咦？有隻嘢嘅！

OUR

DAILY

MENU



鋤完又剛，剛完又鋤

**PINPOINT
PUPIL ?**



係咁先……

FAILURE OF RESUSCITATION



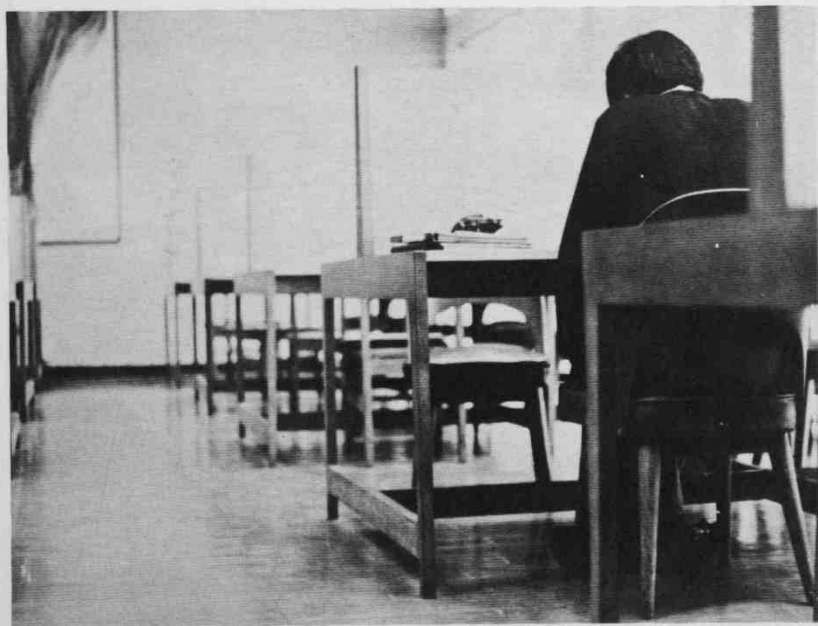
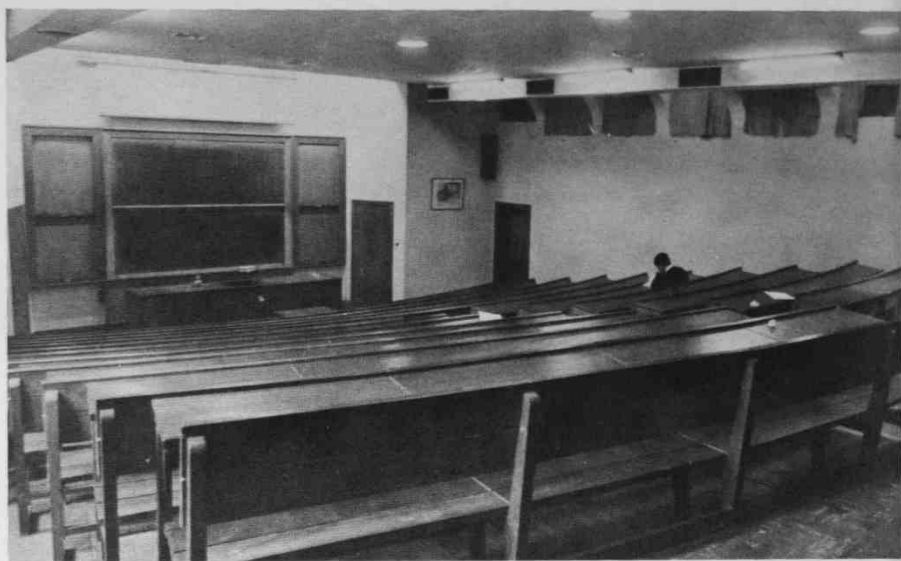
PING PONG POLITICS ?

GENIUS

AT

WORK

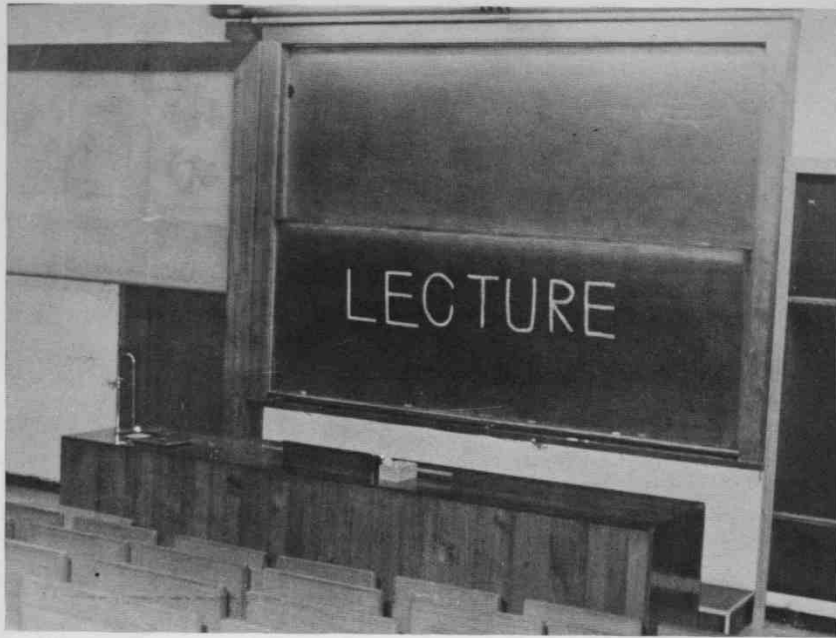
SHHHH.....



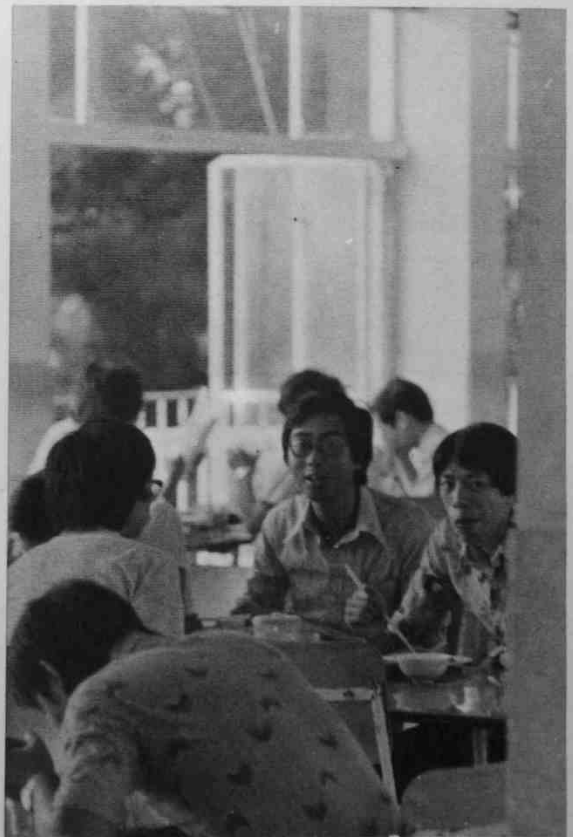
THE BLOOMING SEASON



It's a Kind of Hush



MONDAY MORNING 8:29 A.M.



M.S. IN FULL UNIFORM



HOME-HOME WARD BOUND



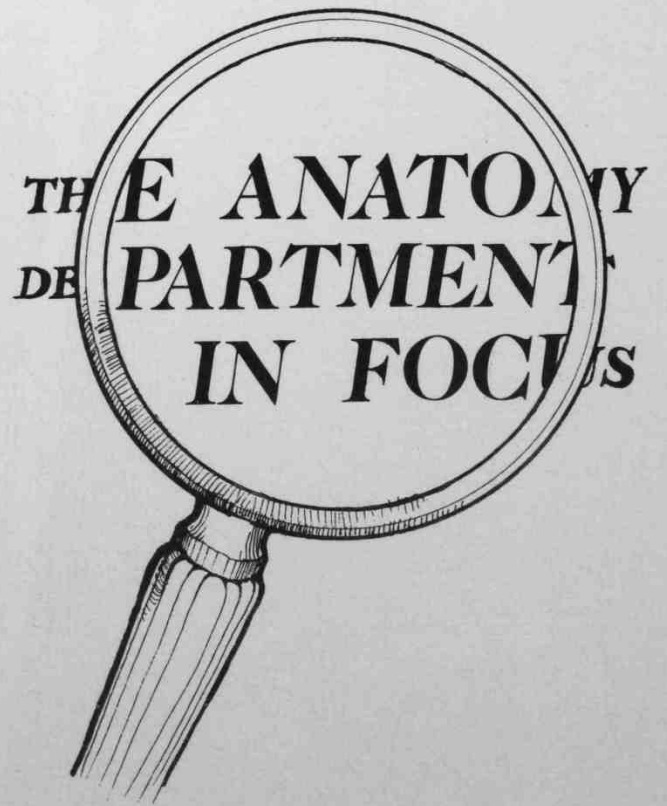
STYLISTIC.....

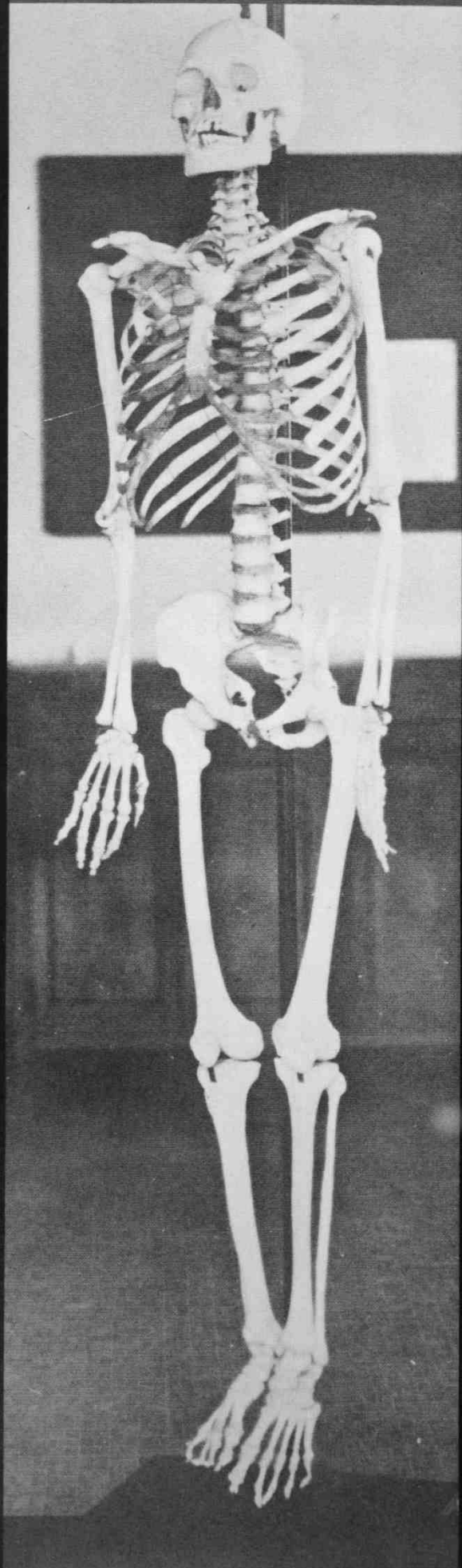
.....有型氏

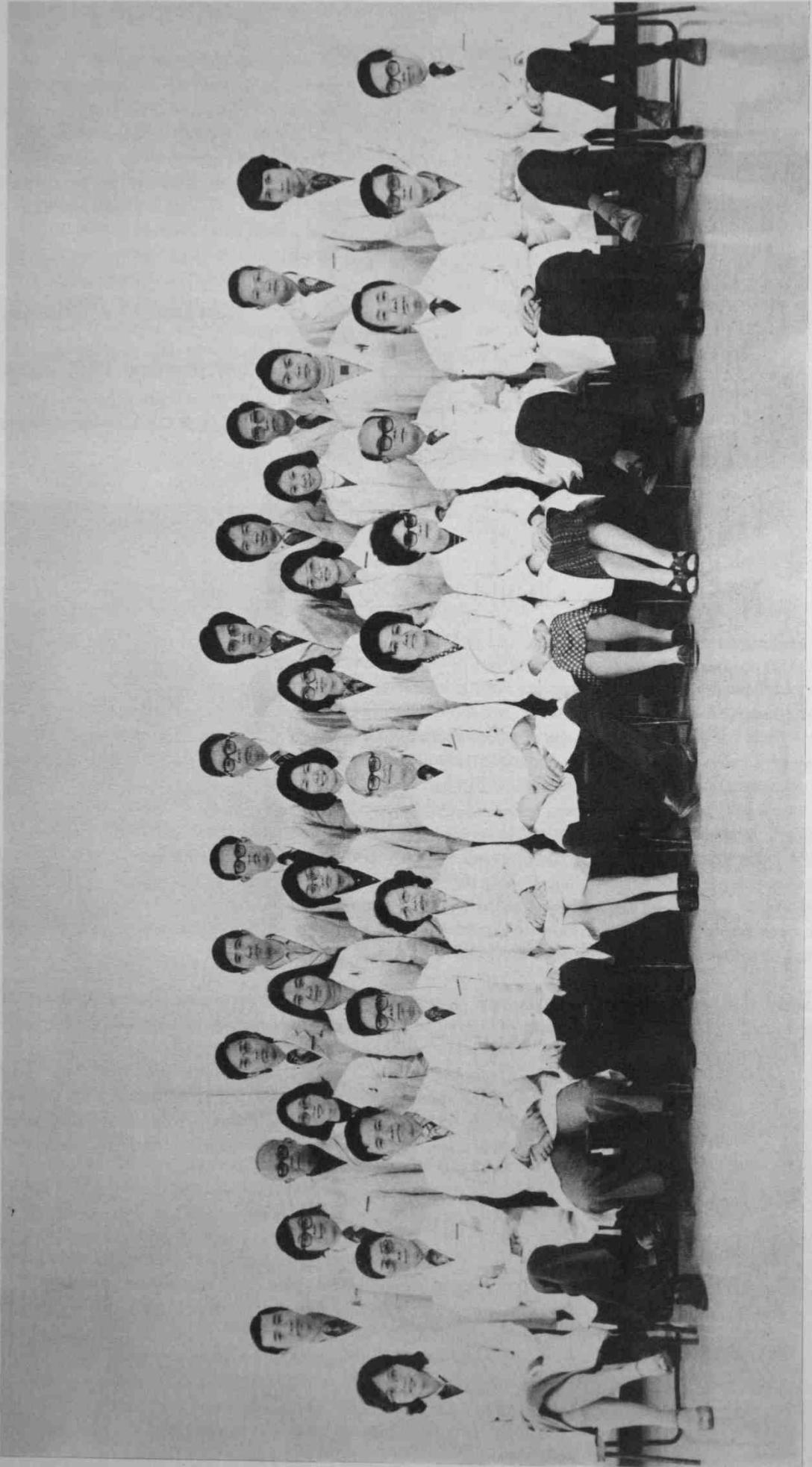
**MOK
KA MING
AND HIS
CABINET
NEED YOUR SUPPORT**



Walking into office







DEPARTMENT OF ANATOMY

1976-1977



PROFESSOR F.P. LISOWSKI

L.M. (Rotunda), Ph.D. (Birm.);

L.R.C.P.I., L.R.C.S.I. (Head of Department)

Professor Lisowski graduated in medicine in Dublin in 1947. He then completed a postgraduate course in obstetrics and gynaecology and subsequently went to Liverpool for his internship and to gain experience in general practice. He started his anatomical career in Trinity College Dublin and the University of Liverpool, first as demonstrator and then as assistant lecturer. He then joined one of the world's largest anatomy departments in Birmingham where he enjoyed the dynamic atmosphere of a heavily involved research centre. Later Professor went to Ethiopia on secondment to help in starting a new medical school and a department of anatomy in particular.

In 1969 he became Professor of Anatomy in our University. For the past 8 years he witnessed considerable changes and expansion of the Department. He hopes to obtain more equipment for the microanatomy section and more staff in order to ease the heavy teaching load of the Department. He has been in China several times, visiting research centres in Peking, Shanghai, Sian and Canton, as well as giving a few lectures. Professor is aware of the progress in his subject in other departments overseas, and during his tours to other countries he has been observing their developments and research. During most of these trips his wife has been accompanying him.

Professor's present work is in the field of primatology, especially locomotion, postural adaptation and the evolution of primates including man. In his spare time he takes an interest in the pre-and early history of East Asia. He also enjoys Western classical and Chinese music.

In his opinion there exists a communication barrier between students and staff. The students are often too shy to participate in active discussion. Moreover he feels that they should think more and attempt to understand their work rather than concentrate on memorisation. To him the new curriculum is a welcome change, and although not a radical one, he feels it is an important step forward.

Dr. M.C. IP M.Sc.(H.K.); Ph.D.(Durh)

Dr. Ip had his secondary schooling at La Salle College and read his MSc. (Biology) in University of Hong Kong. Later he went to England (University of Durham) to take his Ph.D. on neurology.

Dr. Ip returned to Hong Kong in 1966 and took up a post offered by the Professor of Anatomy Department. He has then been teaching neuroanatomy in University of Hong Kong; and during his leave he has once taught in England also.

Dr. Ip thinks that students here a bit shy and do not often raise questions (this may be due to the high student-staff ratio here).

To some students, a sudden exposure to new terms and facts in Anatomy makes them feel that this is a difficult and dull subject. However, Dr. Ip thinks think that even the so-called duller things can have interesting and rewarding bearings which can only be explored with good efforts.

In this spare time, Dr. Ip likes going to a swim or shopping with his family.



Dr. LIU Hin-ching B.Sc., Ph.D.

Dr. Liu graduated at Sun Yat-sen University. Before joining the Dept. of Anatomy in H.K.U. In 1956, Dr. Liu taught Histology and Embryology in Lingnan University.

Dr. Liu obtained her Ph.D. in 1968. In 1968-1969 she worked with Prof. A.G. Everson Pearse in the Dept. of Histochemistry Royal Post-graduate Medical School in London. She has wide experience of research work especially in the comparative study on ureter, nervous endings and regeneration of tissues. Her most recent research work is on histochemical studies on experimental brain concussion.

Music and sports are her favorite.

Dr. Liu always says that the students are her sons and daughters and she enjoys this intimate relationship with them.

Dr. W.D. LOW M.Sc. Ph.D. (H.K.)

"I really enjoy teaching."

After obtaining his B.Sc., Dr. Low joined the department as demonstrator in 1960. Through many years of devoted work he got his Ph.D. in 1969 and became Senior Lecturer by 1975.

Growth of Chinese children has been the subject matter of Dr. Low's research for some time, and his efforts proved to be of great use in the paediatric units in Hong Kong as well as in Singapore. At present Dr. Low is also working with the Orthopaedic Department to investigate the growth of Chinese Children with genetic scoliosis.

Throughout these years, Dr. Low has witnessed the maturing of the department and he admitted that the students today are more active.

Dr. Low loves golf-playing and occasionally he also plays badminton — indeed, he was the University Team Captain during his college life. Dr. Low does some reading in his leisure time but rarely visits the cinema; in fact, he has not been to the movies for twelve years!



DR. Y.C. WONG B.Sc. (Nanyang); M.Sc., Ph.D. (W. Ont.)

Dr. Wong spent his secondary school days in Kuala Lumpa. He obtained his B.Sc. in Nanyang University, and subsequently his Master and Ph.D. degrees in University of Western Ontario.

He joined the Department of Anatomy in 1971 as Lecturer and became Senior Lecturer in 1977.

Dr. Wong concentrates on tissue culture and EM studies of prostate glands. He has also made some studies on changes of muscles associated with scoliosis.

'I like spending time with the students, especially when they start coming before examinations. Furthermore, I enjoy good companionship with all the staff-members of this Department'.

Dr. Wong is happily married with 2 sons.



Dr. K.M.B. CHAN B.Sc., Ph.D. (H.K.)

Dr. Chan completed his matriculation course in 1963 in Wah Yan College, Kowloon. Having taken his B.Sc. degree at H.K.U., he further obtained his Ph.D. in the Department of Zoology. He joined the Department of Anatomy in 1970.

Similar to Dr. Chow, Dr. Chan conducts research concentrating on the structure and function of male accessory reproductive organs, and in particular, steroid metabolism and the mechanism of action of androgens.

In his opinion, sufficient feed-back from the students is essential for successful teaching and the recently proposed fixed-tutor system may well foster better student-staff understanding.

Dr. Chan favours football, table-tennis and badminton among other sports. In his leisure hours, he likes to read books on western paintings. Dr. Chan is now a father of two daughters.

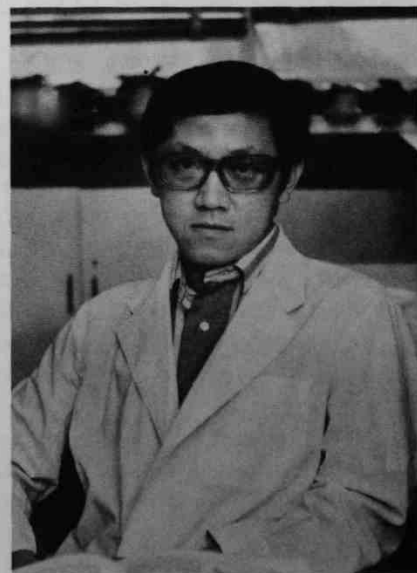


Dr. E.C. CHEW B.Sc.(Nanyang) M.Sc., Ph.D. (W. Ont)

Dr. Chew, whose native country is Malaysia, joined the department in 1972. His recent interest is in cancer research.

In his opinion, students in Hong Kong are very hard working but many lack initiative. He advised that students should not confine their knowledge to textbooks, and he remarked that he was happy to see more students becoming involved in various social activities. Finally, Dr. Chew expressed his hope of increasing the number of teaching staffs in this department in the future.

Dr. Chew has a happy family with a young daughter and he enjoys family picnics.





Dr. PATRICIA P.H. CHOW B.Sc., Ph.D. (H.K.)

Dr. Chow obtained her Ph.D. in this University and joined the Department of Anatomy in 1974. Her field of study is "Comparative Endocrinology and Physiology". At present she is concentrating on the functional aspects of male accessory sex structures in mammals.

Dr. Chow thinks that the medical students today are quite active and social conscious, which is appropriate to the nature of their future profession, viz., to serve the society. They are hardworking and industrious in their academic studies too.

Regarding anatomy, Dr. Chow thinks that the best way to study is to correlate structure and function. In this respect, practicals and teaching films are essential. These films help to project a vivid image onto the human brain and hence the information can be constantly recalled. Furthermore, learning is a mutual process-mutual interactions between staff and students is required for better results. Thus, the failures in the anatomy examination not only signifies that the students have failed, but also the staff.

Dr. C.K. Ng M.Sc. (H.K.); Dip. Med. (Lingnan)

Dr. Ng graduated in the Medical School of Nannan University in 1955. He taught Surgery, Obstetrics and Gynaecology in the Teaching Hospital for two years.

Dr. Ng joined H.K.U. in 1960 as a demonstrator and later was promoted to lecturer. He is now conducting a survey on Southern Chinese Children concerning growth and development with Dr. Low. At present Dr. Ng has quite a heavy teaching load encompassing gross anatomy, neuroanatomy as well as radiology.

Dr. Ng enjoys swimming and western classic music.

Dr. Ng thinks that competition among students today is becoming too keen and their extracurricular activities are not adequate.



Dr. YEW D.T.W. B.S.c. C.U.H.K.; Ph.D. (Wayne State).

Dr. Yew spent his secondary school years in St. Mark's and his university life in Wayne State University School of Medicine from which he emerged with a Ph. D. in Anatomy. His field of specialty was in the eye. He worked as a contract research associate at the National Institutes of Health (U.S.A.) before coming to H.K.U.

Dr. Yew believes that Hong Kong students are academically very good. However, he shares the opinion of some professors in U.S.A. teaching hospitals that no one hand students here have profound knowledge, on the other hand, their comprehensive power and thought process in general are less efficient than their U.S. counterparts. He thinks that University students should take the initiative to learn and try to extrapolate from the essential points that a lecturer can manage to present in a one hour lecture. The course in medicine here compared to that in the States, he remarked, is essentially similar. Neurology, however, is taught in the first year in U.S.A.

Being a father of a daughter and a son, Dr. Yew likes to spend his leisure hours picnicking.

THE ACADEMIC SIDE

Some thoughts on medical Education in Hong Kong

Professor Arnold C.L. Hsieh

(Based on an Inaugural Lecture delivered on November 7, 1977)

1. NEED FOR EXPERIMENTATION IN MEDICAL EDUCATION

The need for experimentation in medical education at the University of Hong Kong is by no means apparent. After all, we have been doing a fairly good job. The school has been in existence since 1887 and we have maintained accreditation with the General Medical Council since 1911. Our students have done well in postgraduate studies abroad and many of our teaching departments have gained high international reputations. Surely, we have every right to believe that we have served our community well. But have we?

With the institution of medical studies at The Chinese University, the pressure for us to increase our output of doctors will be reduced, at least for the next ten years. There will be time for us to think and to reassess our objectives. To me, our aim should be not merely to produce competent doctors but compassionate, competent doctors. Doctors who are attuned to the socio-economic environment of their patients. Doctors who are trained to regard free service to the community as a duty rather than a philanthropy. This aspect of medical education is, in my view, most important and yet most difficult for us to handle. The simplest, and obvious, solution is to add to the curriculum such courses as behavioural sciences, sociology, social work, ethics etc. However, in treating these subjects as disciplines we tend to make them less personal. My own feeling is that the major burden should be on the teachers who, in subtle ways, are constantly influencing the behavioural patterns of their students. This is what I had in mind when I considered the need for experimentation in medical education by the Department of Physiology.

2. NEED TO ESTABLISH EDUCATIONAL POLICY

Before proceeding with an experiment of this nature, one needs to know if its objectives are in the line with established policy. The Second Fulton Report (1) states that the two main functions of a university are scholarly research and teaching. This statement of overall policy is too broad to serve as a guideline for the educational policies of individual faculties. The educational policies of faculties of medicine are usually a series of ambiguous platitudes that can be given almost unlimited interpretations. More often than not there is no policy other than the unwritten and self-evident one of producing doctors to cure the sick.

The need for a more detailed statement of faculty policy is a real one. Without such a statement, the overall policy will be determined by the sum of the policies of the individual teaching departments acting autonomously. While this may be very satisfying to the departments concerned, it is doubtful that the product of such an educational system will meet the needs and receive the approbation of the community that supports it. The educational policy of a faculty should be determined by the faculty as a whole, not by the teaching units.

There is a need for an educational policy committee to determine the objectives of the Faculty. Once the objectives have been established, there should be some means of ensuring that the policy is implemented. To use a rather crude, but perhaps not inappropriate analogy: The objective in a dragon-boat race is to get from point A to point B in the shortest possible time. Having agreed on this objective, the participants place themselves in the hands of a man at the tiller and are required to pull in unison to the beating of a drum.

In anticipation of the cries for 'academic freedom', I hasten to elaborate. Under our present system it is possible, and I do not raise an hypothetical possibility, for individual departments to make decisions that may be detrimental to the main objective of the faculty. Thus, the Department of Physiology might well decide that the only way to teach physiology to medical students is to treat them as students studying for a degree in physiology. Other preclinical departments will take appropriate action to protect their share of the students' time and attention. Without any negative feedback from students, who are not supposed to know anything about academic matters, the demand for student contact time will escalate. Increasing amounts of information, in increasing detail, will pour forth on the students.

Innundated by the resulting flood, the students will either sink or resort to rote memorization to stay afloat – without really understanding the implications of the information in terms of their future practice of medicine.

A recent Report to the Vice-Chancellor by Drs. Whitby and Holt (2) gave the authors' understanding of the prime functions of a medical school as:

1. To educate and train the doctors of the future;
2. To set, by example, high standards in the care of patients;
3. To be active in research.

In the absence of any statements to the contrary, and for want of alternatives, I shall take these as the established policy of the Faculty of Medicine. What follows is an attempt to express the functions of the Department in terms of the prime functions of a medical school as enunciated in the Whitby-Holt Report and my own bias in favour of a more humane produce. In other words, we have been asking ourselves: "How should we gear our teaching and research activities so that we can make a positive contribution to the overall effort of the Faculty?"

3. TEACHING

a. Educating and training doctors of the future.

The function of educating and training doctors of the future is most effectively handled by the classical approach to medical education. The case for retention of the classical approach has been strongly put by Philip Bard who wrote in 1973:

"Many schools have reduced the presentation of the basic medical sciences either to a minimum which may suffice for the routine practice of medicine or to a hodgepodge of correlations. This not only deprives the students of a chance to learn many important things, but keeps from them the philosophic background of scientific medicine. And there is evidence that this situation is demoralizing many teachers of physiology and of the other medical sciences. Further, some new schools seem content to make the clinical departments responsible for the teaching of the basic sciences, thus abrogating their responsibility for training those who will make the basic discoveries of the future. These developments appear to be leading to the creation of a group of trade schools; if they continue we shall soon need another Flexner report." (3)

The Faculty of Medicine at the University of Hong Kong has been slow to jump on the 'core-curriculum' bandwagon. Our curriculum has been regarded as old fashioned. But we are beginning to meet those who have made the trip and are on their way back. I predict that in the not too distant future, by virtue of having stood still, we shall find ourselves in front.

The headlong advances in medical knowledge that have taken place, and are continuing to take place, can be traced directly to the development of the mechanistic view of biologic phenomena and the use of the scientific method in the investigation of these phenomena. The mechanistic concept of biology is based on the belief that functions of the body are most readily explained in terms of engineering and automation within the framework of a machine. Over the years these views have been systematized in the form of certain 'rules of the game' which together define the scientific method. Today, the mechanistic theory is the only solid underpinning we have on which to build our hypotheses. To be intellectually satisfying any interpretation of biologic phenomena must conform to this concept. It is true that there exist certain phenomena of a psychological or sociological nature that do not fit the mechanistic interpretation. But physiologists leave these to other disciplines in which another attitude towards life appears to have been adopted.

And so we train doctors of the future by demanding rigorous scientific explanations for biologic phenomena and teaching our students how to apply basic scientific knowledge to the solution of clinical problems. By showing enthusiasm for our subject, we hope to stimulate the development in them of curiosity and initiative which will make for them life-long habits of learning.

It is often said that teachers, like heroes, are born not made. This is very depressing to most of us who are not born with the art of teaching. I prefer to think that we can, by conscious effort and determination, train ourselves to be at least passably good at our job.

The literature on medical education abounds with proposals on how to select medical students, what to teach them

and how to teach them. But there is a remarkable dearth of information on even the desirable attributes of a teacher, much less on how to select one. It would seem that a physiology teacher, like any other science teacher, should be a sound scientist with a dedication for his subject and an ability to present his views and transmit his knowledge eloquently and concisely. Many universities invite prospective faculty members to give a scientific seminar before deciding on making an appointment. There has also been a suggestion that the recruit be required to give a lecture to students on a topic in an area in which he will be teaching. This latter idea has not met with acceptance — perhaps because it would be extending too far the concept of consumer participation in decision making processes. In my view, the traditional selection and promotion procedures for preclinical teachers need to be revamped. Selection boards are usually more impressed by quantity than by quality of publications and this has led to a plethora of published trivia. At present, the best advice I can give to junior members of the teaching staff is to forget about community and University activities, do just enough teaching to get by, and concentrate on publishing as many papers as possible. I should like to see the present balance, heavily weighted as it is towards publications, tipped slightly in favour of excellence in teaching. Thus, the duties of a member of the staff would be “teaching with research” rather than “research and teaching”. This slight change in emphasis should be sufficient to bring the functions of the Department into line with the functions of the Faculty.

B. Setting, by example, high standards in the care of patients.

It would appear that the second function of a medical school — that of setting high standards in the care of patients — is a function of the clinical departments. However, it is not enough for us to be simply good scientists — leaving the clinical departments to teach the students how to behave towards patients. There is a widely held view that the emphasis on science has led to the production of doctors who consider patients as merely ‘cases’ with certain mechanical or functional defects to be corrected for an appropriate fee. To say that this may be an universal phenomenon is to beg the question. It may well be that the fault lies with the community from which we derive our students and to which they ultimately return. But let us leave cynicism to another place and another time — this evening we are entitled to our idealism. The fact is, we take in young men and women at an impressionable age and have five to six years of close contact with them. Much of what they learn is not from books and lectures, but from emulation of our deeds and actions. Surely, we must share at least part of the blame if our graduates do not live up to the high ideals expected of them in the Hippocratic Oath.

Without guidance from published work on the desirable attributes of a good preclinical teacher, I have come up with my own list. These are: 1) Humour; 2) Compassion; and 3) Dedication. By carefully nurturing these qualities and constantly presenting them to our students, there is a good chance that a little will rub off on to them — to the advantage of their future patients.

Humour. By humour I do not mean a propensity for ‘sick’ jokes. By a sense of humour I mean an ability to see the lighter side of a situation and an ability not to take one’s self too seriously; both of which are so important in our daily transactions with others. To use the vernacular of the 1970’s, a sense of humour enables one to keep one’s cool.

Physiologists, for reasons best known to ourselves, are particularly blessed with this type of humour. One would have thought that there cannot be any humour in editing the *Journal of Physiology* for such an august body as the Physiological Society which celebrated its centenary in 1976. Yet we find in the 1938 Annual Report of the Editorial Board the following on the subject of delays in publication of papers:

“... during the first 3 months of 1937, the interval ... was 130 days, while the corresponding figure for December, January and February is 80 days. The Board views this decline with a certain uneasiness since extrapolation suggests that in March 1939 papers will be published 7 days before the receipt of the manuscripts by the central office.” (4)

I might say, in passing, that the Editorial Board’s concern failed to materialize. In fact, in 1977 the ‘time to publication’ is more than 300 days. And many of us are beginning to worry that we may not live long enough to see our accepted papers in print.

Another example of Editorial humour can be found in their Report in 1940 in which they wrote of their dealings with the War-time Board of Censors:

“... the Editors regard the acceptance (by H.M. Board of Censors) of their guarantee that a paper entitled ‘The electric organ of the torpedo’ contained no matter which might be used by the enemy towards a more effective prosecution of its naval warfare, as a telling symbol of mutual confidence and understanding.” (4)

Compassion. The Shorter Oxford English Dictionary defines compassion thus: "Suffering together with another; fellow feeling, sympathy." Louisa May Alcott described it more eloquently.

To smooth the rough and thorny way
Where other feet begin to tread;
To feed some hungry soul each day
With sympathy's sustaining bread.

Mathew Arnold was perhaps complaining of the lack of it when he wrote:

Nor bring to watch me cease to live
Some doctor, full of phrase and fame;
To shake his sapient head, and give
The ill he cannot cure — a name.

In clinical practice, compassion can be expressed in terms of time and attention to patients. We in the preclinical disciplines can demonstrate this by the giving of our time and attention to our students. Listening to them, trying to understand their problems. Helping to smooth the rough and thorny way they find themselves on leaving secondary school.

Dedication. Above all, dedication. Students are very perceptive. They are quick to spot the teacher who is merely doing his job and the teacher who is enjoying his work.

Lest anyone should think that my emphasis on undergraduate teaching and contact with students has been only recently acquired, I quote from an article I wrote for *Elixir* during the Christmas vacation of 1967:

"Over the years I have heard, with increasing frequency, the phrase 'medical students are not what they used to be'. Meaning, of course, that they are getting worse. ... To say that present-day medical students do not show sufficient interest in extracurricula activities is to speak from inexperience. Publication of *Elixir* and the raising of funds for the *Elixir* Loan Fund are entirely in the hands of members of the Medical Society and these functions have been carried out most successfully, with a minimum of fuss. The presidency of the University Students' Union appears to have become the prerogative of medical students. The turnout at sport and social events have always been good. ... Further evidence, though perhaps less honourable, that the medical student does not confine himself to books can be found in his amazing ability to perform with grace the intricate gyrations that have made the modern dance a spectator sport for his elders. ...

"What, then, is lacking in our present day students that has given rise to this feeling that they are in some mysterious way less suited than their predecessors for the most honourable of professions? Could it be that they lack the vague and undefineable quality one usually associates with the art of healing? If this is so then the fault lies not with the students but with the faculty."

The preclinical years used to be regarded as hurdles to be overcome in order to reach the clinical years. I fear that many students still have that feeling. But we are attempting to show, by introduction of appropriate examples, the extreme importance of an understanding of normal function in the solution of clinical problems. I still remember leaving my course in physiology many years ago with the vague idea that physiology had something to do with frogs. What we are trying to do now is to get the students to leave our course with the firm idea that physiology deals with the functions of the human body. In addition, we hope to impress upon our students the fact that that body also has a soul.

4. RESEARCH

The third function of a medical school is to be active in research. The attitude of physiologists towards research was epitomized by Starling who referred to it as "the greatest game of all" (5). Unfortunately, those halcyon days, when support for research was unquestioned as providing a source of betterment and progress, are over. The pursuit of knowledge for its own sake is no longer fashionable. Today, justification for research is increasingly based on some favourable benefit-to-cost ratio. Research is so expensive that the guardians of the public purse are demanding 'relevant research' — often euphemistically called 'program oriented research'. Thus, medical schools are expected to conduct research in areas that have relevance to the treatment of patients. Those of us who wish to do basic research on fundamental problems which are not necessarily of immediate practical concern are finding it more and more difficult to attract the attention of those who control research funds. More and more often we find ourselves left out in the cold.

Many have responded to this situation by seeking the warmth of a marriage of convenience with clinical colleagues. The difficulty with such marriages is that problems that arise in medical practice are "not infrequently passed to the physiologist like so much washing, with the expectation that they would be returned cleaned up, and neatly folded and ironed" (8). Others have sought the partial comfort of working under the umbrella of some clinical research program where they perform their "illicit" basic experiments with funds obtained by surreption.

At the University of Hong Kong we have not found it necessary to resort to such nefarious action. The Research Grants Committee dispenses what little money it has in an admirably fair manner. But the existence of earmarked funds for clinically oriented research does offer some temptation and the problem here is to persuade the public of the importance of financial support for the research activities of non-clinical departments.

I have referred to the high cost of research, but I wonder how many of us in Hong Kong realize how expensive it can be and how cheaply it is being done in Hong Kong. A recent analysis found a remarkable linearity between the U.S. National Institutes of Health funding and the number of biomedical publications from 133 universities (6). The equation was:

$$Y = 15.75 + 45.7 X \quad (r = 0.95)$$

where Y = publication output in number of papers,

X = millions of dollars (calculated in terms of 1967 U.S.\$)

Thus, each publication cost the NIH about U.S.\$22,000. Assuming that the NIH contribution was 70% of the actual cost, the true cost per publication comes to about U.S.\$31,000. These are 1967 dollars, a conservative estimate in terms of 1977 Hong Kong dollars would be about \$232,000 per publication! Compared to this figure, the forty publications from the Department of Physiology last year at a cost of less than H.K.\$5,000 each must appear cheap indeed. I mention this in the hope of catching the attention of the 'cost-effectiveness' boys. In terms of value for money spent, the Department has much to offer.

Current research in the Department includes acupuncture analgesia in rabbits, hypotensive effects of certain Chinese herbs, bronchial and pulmonary circulation, microvascular circulation, thiamine deficiency, iron metabolism, as well as several projects in endocrinology, reproductive physiology and neurophysiology. It may appear that we have spread ourselves too thin and that a concentration of effort would be more productive in terms of utilization of the very limited funds available. However, I am in full agreement with the present tradition of independent research by individuals of the Department — a tradition that goes back to the days of the late Sir Lindsay Ride's leadership. The Department has to cover the whole field of human physiology in its teaching and the various areas can only be taught in depth by those who have particular interests in those areas.

My own research interest is the response of the albino rat to a cold environment. A less relevant research project for a medical school in Hong Kong would be hard to find. But, when considered in the context of the normal functioning of the human body and its response to environmental stress, the study of a rat sitting in a room maintained at 5°C can be very relevant indeed.

The study of the acclimation process has led me to explore problems in growth, digestion, metabolism, temperature regulation, haematology, endocrinology, and cardiovascular regulation. I have also made some rather tenuous and timid excursions into biochemistry. While I have become somewhat of a Jack of All Trades, the knowledge acquired has served to broaden my understanding of the functioning of the body as a whole and inevitably improved me as a teacher.

CONCLUSION

The need to strike a balance between undergraduate teaching (with its emphasis on transfer of established knowledge) and postgraduate teaching (with its emphasis on creation of new knowledge through research) is a problem that has yet to be solved by most universities. It is often thought that if one takes care of the latter, the former will take care of itself. But this is not necessarily so. The emphasis on postgraduate teaching and the subsequent neglect of the undergraduates was the main cause of student unrest on many campuses in the 1960's. This led, in the early 1970's, to the inclusion of students on university boards and committees and the move away from an aristocratic system of governance towards a more democratic one.

Those of us who thought that these changes would be sufficient, and that henceforth we would be left to do what we thought university teachers are supposed to do, were mistaken. Concern for social and environmental issues have

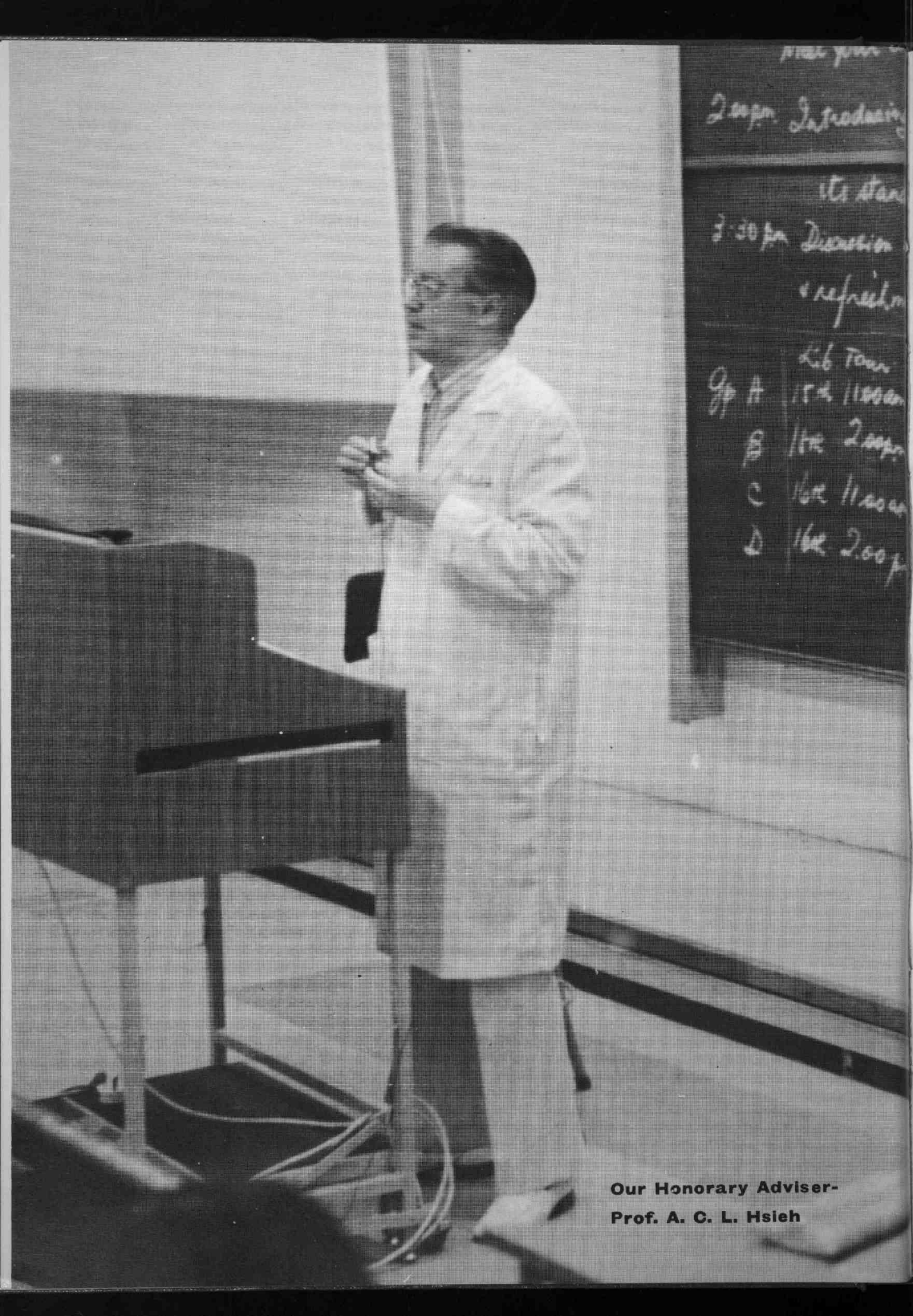
attracted the attention of the public. Powerful voices from scientific as well as non-scientific quarters are saying that the scientist should be more socially responsible, that science should be tolerated and supported only as long as its results are socially relevant (7).

We are becoming increasingly aware that we can no longer live in an ivory tower and insulate ourselves from political, economic and social pressures (8). Those who respond to these pressures by simply stating that a university serves its community best by functioning as a university will find themselves fighting a lonely losing rear-guard action. University teachers need to take an active role in bridging the gap between Town and Gown. Somehow, we must find means of contributing to the community's social and professional needs, so that the public and the government recognize the University as an integral part of the community. "Somehow, we must change the connotation of the conjunction between teaching and research to teaching with research so that the public and the government recognize their inseparable nature in the University" (8).

REFERENCES

1. Lord Fulton, Chairman. "Report of the Commission on The Chinese University of Hong Kong" Supplement of the University Bulletin, The Chinese University of Hong Kong. March 1976.
2. L.G. Whitby and J.M. Holt. "The Curriculum for the Degrees of M.B.,B.S. in the University of Hong Kong" Report to the Vice-Chancellor. January, 1976.
3. P. Bard. "The ontogenesis of one physiologist." Annual Review of Physiology, Vol. 35, 1-16; 1973.
4. W.B. Bynum, "A short history of the Physiological Society – 1926-1976" Journal of Physiology, 263: 23-72; 1976.
5. Charles Lovatt Evans. "First Bayliss-Starling memorial lecture. Reminiscences of Bayliss and Starling." Cambridge University Press, 1964.
6. J. Davidson Frame and F. Narin. "NIH funding and biomedical publication output" Federation Proceedings, Vol. 35, 2529-2532; 1976.
7. Hubert Bloch. Introduction to "The Ciba Foundation Symposium on Civilization and Science – In Conflict or Collaboration", 1972.
8. Loren D. Carlson. American Physiological Society Past-President's Address, 1970.





next year
2:30 pm. Introducing

its stand
3:30 pm Discussion
& refreshment

	Lib Town
Op A	15% 11:00 am
B	1hr 2:00 pm
C	1hr 11:00 am
D	1hr 2:00 pm

**Our Honorary Adviser-
Prof. A. C. L. Hsieh**

Testicular function: a comparative view-point¹

B. Lofts²

Reproductive function relies, of course, upon mature spermatozoa being elaborated within paired testes, structurally and functionally organized into exocrine and endocrine components. The exocrine component, the seminiferous tubules, are lined by a highly specialized stratified epithelium containing Sertoli cells and various layers of germinal cells closely arranged in specific associations around each Sertoli cell. The endocrine component consists of steroidogenic tissue, the interstitial Leydig cells, which is interspersed between the tubules and elaborates androgenic steroids, the main one being testosterone. These interstitial hormones are responsible for the development and maintenance of the secondary sex characteristics and accessory sexual ducts. The generally held concept of human testicular function and its control, is that both these components are dependent on the secretion of two gonadotropic hormones from the anterior pituitary gland, namely FSH (follicle stimulating hormone) which regulates spermatogenetic activity in the tubules, and LH (luteinizing hormone) which stimulates the secretory activity of the interstitial cells. The release of these two peptide hormones is, in turn, regulated by a hypothalamic releasing factor circulating to the anterior pituitary via the hypophysial portal system. This basic concept of the hypothalamo-pituitary-gonad axis, together with our knowledge of the negative feedback effects of circulating testosterone on both the pituitary and hypothalamus, forms the foundation of most contemporary thought about testicular function on which much of our medical treatment for testicular dysfunction syndromes, and male contraceptive controls, are based. It is becoming increasingly evident, however, that our understanding of these mechanisms is still not completely resolved, and the nature of the hormonal control of mammalian spermatogenesis is, to a certain extent, still a contentious issue.

Seasonal cycles in lower vertebrates

The human reproductive system is the culmination of many millions of years of organic evolution. There is, however, a considerable degree of uniformity in testicular structure throughout the vertebrate series, and it is only in the accessory duct system that significant modifications have taken place. Man, of course, is a continuous breeder, showing an uninterrupted production of spermatozoa throughout the year. In this human testicular function differs from that of most nonmammalian vertebrates and wild mammals whose gonads regress seasonally, and become sexually quiescent for several months each year. In birds, for example, at the end of the breeding season the testes rapidly regress and tubules contain only Sertoli cells and a few inactive spermatogonia (Fig. 1a, b). They remain in this condition throughout the winter, then, in the following spring, a recrudescence of spermatogenetic activity begins and the testes rapidly increase three to four hundred fold in size in a matter of a few weeks (Fig. 1c, d). Some twenty odd years ago Marshall and myself (Marshall, 1951, 1955; Lofts and Marshall, 1956, 1957a, 1958) discovered that, in addition to this seasonal pattern in spermatogenetic activity, an equally well defined pattern of histochemical events, involving both the interstitial cells and the Sertoli cells, also took place in these animals. In both tissues this consisted of a seasonal appearance and disappearance of cholesterol-rich lipids. These substances, although easily seen in testicular tissue embedded in gelatine and frozen sectioned, cannot be observed by routine histological techniques and, consequently, have often escaped detection.

The histochemical changes in the interstitial cells, closely follow the annual pattern of testosterone secretion. Thus, in the spring, as androgen titres begin to rise from the winter basal level, small cholesterol-rich lipid droplets appear in the Leydig cells, and subsequently become depleted as plasma testosterone reaches its seasonal peak. After breeding, testosterone levels rapidly decline, and concomitantly, the interstitial cells become rapidly filled with a dense, amorphous mass of cholesterol-rich lipid (see reviews by Lofts, 1968; Lofts and Bern, 1972; Lofts and Murton, 1973).

In the biosynthesis of testosterone (Fig. 2), the basic mammalian mechanism is believed to involve a " Δ^5 -pathway" where cholesterol is first converted to pregnenolone, then in subsequent stages to 17α -hydroxypregnenolone, dehydroepiandrosterone, 5-androstene- 3β , 17β -diol, to testosterone, or via a second route incorporating a " Δ^4 -pathway" which again transforms cholesterol to pregnenolone, then to progesterone, 17β -hydroxyprogesterone, androstenedione, and eventually, testosterone (Eik-Nes, 1979; Hall, 1970; Kahnt *et al.*, 1961; Moyle *et al.*, 1973; Yanaihara and Troen, 1972). In either route cholesterol is a basic precursor and is thought to be the probable source of all mammalian testicular hormones (Eik-Nes and Hall, 1965).

The close correlation shown in our early investigations, between the histochemical cycle in the interstitial cells and the seasonal pattern of androgen secretion, led us to conclude, therefore, that the build-up and subsequent depletion of cholesterol-rich lipids at times when accessory sexual structures indicated a high androgen output, was more likely due to its rapid utilization in steroid hormone synthesis, and, conversely, the rapid accumulation at the end of the breeding season was due to a decline in this activity with a consequent

¹ The Eighth Digby Memorial Lecture, delivered at the Department of Surgery, Queen Mary Hospital, University of Hong Kong, 12th November 1976.

² Professor of Zoology, Head of the Department of Zoology, University of Hong Kong.

backlogging of precursor within the cell. Subsequent investigations using techniques showing $\Delta^5 3\beta$ - and 17β -hydroxysteroid dehydrogenase (3β -HSD, 17β -HSD) activity have supported these earlier interpretations (Lofts, 1973; Lofts & Murton, 1973). These enzymes are essential for testosterone synthesis and catalyse some of the stages in the biosynthetic pathway leading to the production of this hormone. Strongly positive reactions for 3β -HSD are given by the interstitial cells during their lipid-depleting stage, but these become negative when the cells regress into their heavily lipoidal post-nuptial phase.

Interestingly, the Sertoli cells show a similar phenomenon, but in this tissue the annual lipid cycle seems to be closely associated with the seasonal spermatogenic activity. The correlation is an inverse one, so that at the height of the breeding season the tubules are virtually lipid-free (Fig. 3a), but when spermatogenesis ceases in the post-nuptial phase, dense masses of cholesterol-rich lipids accumulate in the Sertoli cells of the regressed tubules (Fig. 3b, c). They remain in this condition until the resumption of spermatogenic activity in the following spring, then lipids and cholesterol rapidly disappear as the next generation of spermatozoa become propagated.

This cyclic lipid pattern in Sertoli cells is not unique to the avian testis, but also occurs as an integral part of the testicular cycle in reptiles (Lofts and Boswell, 1961; Lofts *et al.*, 1966; Lofts, 1968, 1969), amphibians (Lofts and Boswell, 1960; Lofts, 1961, 1964), and even some fishes (Lofts and Marshall, 1957b). In all cases the inverse relationship with the spermatogenic cycle is found. It would appear then, that this phenomenon is part of a fundamental process common throughout much of the vertebrate series (see reviews by Lofts, 1968; Lofts and Bern, 1972), and, in view of the close similarity to the events in the interstitial tissue, its discovery poses two fundamental questions. These are: (1) does the histochemical cycle in the Sertoli cell indicate, as is apparently the case in the interstitial cells, a basic endocrine role in these cells?, and (2), if this is the case, does a hormonal secretion from the Sertoli cell regulate the spermatogenic activity of the adjacent germinal epithelium?

The seminiferous tubules and steroid synthesis

Whether the interstitial Leydig cells are the only source of testicular hormones has been debated for over fifty years. The early observation by Mottram and Cramer (1923) that the degeneration of the germinal epithelium in irradiated rat testes was followed by the appearance of castration cells in the adenohypophysis although the Leydig cells appeared functionally normal, led to the suggestion that the tubules may have been a source of some hormonal secretion with a direct effect on the anterior pituitary. Later McCullagh and coworkers (McCullagh, 1932; McCullagh and Walsh, 1935; McCullagh and Schneider, 1940) expanded on this earlier work, giving the name 'inhibin' to this tubule compound. Mottram and Cramer had suggested that the germinal epithelium might have been the locus for the production of this second testicular hormone, but later workers, particularly those in the clinical field, implicated the Sertoli cells as a possible endocrine source. Thus Zuckerman and McKeown (1938), drawing attention to the feminising effects of adenocarcinomas in male dogs, concluded that "the oestrogen potency of these adenocarcinomas is related to the fact that Sertoli cells take part in their formation". This hypothesis gained support from the investigations of Huggins and Moulder (1945), who extracted the lipid from the testes of two dogs with Sertoli cell tumours and found a high oestrogen content. A number of clinical investigations also endorsed this view (De Castillo *et al.*, 1947; Howard *et al.*, 1950; Berthrong *et al.*, 1949; Teilum, 1949). Later clinical studies by Heller *et al.* (1952), however, tended to discount a tubule endocrine contribution, and this view was also supported by Maddock *et al.* (1952) who came to the conclusion that the interstitial Leydig cells were the source of testicular oestrogens as well as androgens, and indeed were the only source of testicular hormones, a view which has generally remained dominant right up to the present day. It is worth noting that most of this early speculation was based almost exclusively on observations of pathological conditions in laboratory animals and clinical patients.

In an attempt to determine whether the naturally occurring phenomena observed in the seminiferous tubules of wild birds had any endocrinological basis, Lofts and Marshall (1959) extracted the lipids from testes during the postnuptial phase of Sertoli cell lipid deposition. Chromatographic analysis of the extracts revealed the presence of progesterone, a steroid which is produced at an early stage in the " Δ^4 -pathway", and whose presence in the tubule lipids, supported the hypothesis of the Sertoli cells being an endocrine tissue.

In laboratory mammals like the rat, guinea pig, dog etc., and also in the human testis, under normal conditions only very small quantities of lipids are located in the tubules which, usually react negatively to tests for cholesterol, and the large masses noted in the post-nuptial testes of seasonal vertebrates, are never found. If, however, rats are hypophysectomized, or have their FSH output blocked by administering exogenous synthetic oestrogens (Lacy and Lofts, 1965), dense accumulations of cholesterol-rich lipids appear in the Sertoli cells and resemble the naturally occurring phenomenon in lower vertebrates (Fig. 4a, b). The same condition can also be artificially produced by irradiation (Lacy and Rotblat, 1960; Lacy and Lofts, 1961), artificial cryptorchidism (Perlman, 1950), or by heat treatment (Collins and Lacy, 1967). It is possible to separate out these lipid masses by ultracentrifugation, and chemical analysis has confirmed the presence of cholesterol in this material (Kinson *et al.*, 1964). Furthermore, bioassay has also shown the presence of substances with progestogenic activity in the Sertoli lipids extracted from the testes of oestrogen-treated or irradiated rats (Lacy and Lofts, 1961), thus adding support to the earlier evidence obtained from the lipid extractions of wild birds (Lofts and Marshall, 1959). Stilboestrol implants lead to FSH suppression and tubule lipid accumulation within 3 to 4 weeks in rat seminiferous tubules and spermatogenesis is held-up at the late pachytene stage of primary spermatocyte development. All later stages of spermatogenesis eventually degenerate and become phagocytosed by the Sertoli cells (Lacy and Lofts, 1965). Lacy and Lofts found that injections of LH into such animals although stimulating the interstitial tissue, failed to have any effect on the seminiferous tubules, whereas PSH first caused a histochemical change in the tubule lipids, changing them from a cholesterol-positive to a cholesterol negative condition, then as the cholesterol content diminished, spermatogenesis became restored. FSH might therefore be involved with chemical changes in the Sertoli cells.

In 1965 an important step forward was made by Christensen and Mason who demonstrated that in fresh material the seminiferous tubules and interstitial tissue of rat testes could be separated by microdissection techniques. Using this method they incubated the two isolated testicular components with radioactively labelled progesterone (progesterone-4- 14 C) and found that both the interstitial tissue and the seminiferous tubules had the capability to bioconvert this substrate to 17β -hydroxy-progesterone, Δ^4 -androstene-3-17-dione and testosterone. In subsequent investigations Lacy and coworkers (Lacy *et al.*, 1969; Bell *et al.*, 1971), using similar techniques, have reconfirmed this ability in both normal, and heat treated rat testes (Collins and Lacy, 1967; Collins *et al.*, 1968).

In Hong Kong we have been investigating the endocrinology of testicular function in some of the local reptilian species. This group of vertebrates is of considerable phylogenetic importance. Reptiles are the most primitive amniotes, and represent the group from which the mammals evolved. Their study thus provides us with valuable clues about basic mechanisms governing testicular function from which the human pattern has evolved. We are fortunate in Hong Kong in having a plentiful supply, and much of our investigations have been done on the cobra, *Naja naja*, which is easily available from the local snake shops due to its popularity as a winter food and its curative

properties in Chinese medicine.

The cobra testicular cycle is very similar to the avian pattern, and at the end of the breeding period in April, the regressed seminiferous tubules become densely lipoidal and rich in cholesterol. Our ultrastructural investigations have confirmed that this lipid accumulation occurs within the Sertoli cell cytoplasm, and is not simply just a discharge in the lumen of the tubule. The tubules remain in this state for some three months, then lipid clearance begins as spermatogenesis resumes in September. (Lofts *et al.*, 1966) Histochemical tests have confirmed the presence of cholesterol in these lipid masses and strong reactions to 3β -HSD have been obtained from the tubules of this, and other reptilian species (e.g. *Trionyx sinensis*), during the period of lipid depletion and spermatogenetic recrudescence (Lofts, 1972). Using microdissection techniques we have succeeded in isolating seminiferous tubules (Fig. 5) and have incubated this component *in vitro* with labelled pregnenolone (Δ^5 -pregnenolone-T). The results support the findings in the rat, and confirm that reptilian seminiferous tubules also have the ability to synthesize testosterone from labelled precursor substances (Lofts and Choy, 1971). In addition, however, we have also been able to show that mammalian FSH selectively stimulates this testosterone synthesis (Fig. 6), whereas LH has no significant effect (Lofts, 1972).

Furthermore, by examining the tubule testosterone synthesizing activity throughout the year, it has been possible to demonstrate a seasonal pattern (Fig. 7) which closely parallels the spermatogenetic cycle, and thus supports the earlier findings, based on histochemical observations. The data agrees with the earlier hypothesis that the deposition of large masses of cholesterol-rich tubule lipids represent an accumulation of precursor material which becomes rapidly utilized during periods of high androgen production, presumably as a result of Sertoli cell stimulation by FSH. The close parallel between the cyclic production of testosterone and the spermatogenetic cycle, again suggests a relationship between these two events.

Ultrastructural studies

While the incubation data places the seminiferous tubules on an equivalent basis as the interstitial tissue as a source of testicular steroids, electron microscopy studies have helped confirm the histochemical observations demonstrating that the Sertoli cells are the probable loci of this activity.

In 1961, Christensen and Fawcett demonstrated that in the Leydig cells of the opossum, the smooth-surfaced or agranular endoplasmic reticulum is extensively developed and occupies most of the cytoplasm. In accordance with various biochemical studies on cell fractions, Christensen and Fawcett suggested that this organelle represents the site of synthesis of steroid hormones. This view has subsequently gained considerable support, and there is now general agreement concerning the sub-cellular organelles which are commonly present within accredited steroid-secreting cells (Blanchette, 1966; Christensen and Gillim, 1969; Fawcett *et al.*, 1969; Lacy and Pettitt, 1969). Generally, these are an extensive smooth endoplasmic reticulum; a prominent Golgi apparatus; mitochondria with tubular or vesicular cristae, rather than the lamellar like structures seen in non-steroidogenic tissues; numerous lysosomes and lipid inclusions. Substrates which enter the cell cytoplasm are believed to be converted into cholesterol in association with the smooth endoplasmic reticulum. Side chain cleavage of cholesterol then occurs within the mitochondria, giving rise to pregnenolone, then, by means of the catalytic action of the various dehydrogenase enzymes (including 3β - and 17β -HSD) this substance is eventually converted into androgenic steroids such as androstenedione and testosterone (Christensen and Gillim, 1969). Cell fractionation procedures have demonstrated that the majority of the dehydrogenase enzymes are located in the microsomal fraction derived from the membranes of smooth endoplasmic reticulum (Christensen, 1965; Tamaoki *et al.*, 1969; Tamaoki, 1973). Thus, if electron microscopy shows a cellular structure with an abundance of smooth endoplasmic reticulum and mitochondria with tubular or vesiculate cristae, and histochemical studies indicate the presence of 3β -HSD and cholesterol, then there is now a common consensus that this indicates a steroid synthetic cell.

The presence of 3β -HSD has, as has already been mentioned, been clearly shown in the Sertoli cells of a variety of submammalian vertebrates (Lofts, 1972; Lofts and Bern, 1972; Lofts and Tsui, 1977) and has also been reported within the seminiferous tubules of the mouse (Baillie and Griffiths, 1965; Chung, 1974), opossum (Maier, 1965), dog (Ashbel *et al.*, 1951) and rat (Cameron *et al.*, 1972). A variety of types of dehydrogenases, including both 3β - and 17β -HSD, have also been reported within the human seminiferous tubules (Baillie and Mack, 1966). Lipid in the Sertoli cells of submammalian vertebrates is well established histochemically, but ultrastructural studies have shown that such inclusions are also universally present in a wide variety of mammalian species, including man (Lacy, 1960, 1962, 1967; Brökelmann, 1963; de Kretser and Brugger, 1972; Dym, 1973; Schulze, 1974). Furthermore, the presence of smooth endoplasmic reticulum and steroid-type mitochondria in Sertoli cells have been recorded in a similarly extensive range of mammals (e.g. mouse: Gardner and Holyoke, 1964; Flickinger, 1967; rat: Lacy, 1972; Brökelmann, 1963; rabbit: Nicander, 1967; monkey: Dym, 1973; man: Fawcett and Burgos, 1956; Bawa, 1963; de Kretser, 1968, 1969; Lacy and Pettitt, 1969; Schulze, 1974), and also in amphibians (Brökelmann, 1964; Lofts, 1974), reptiles (Lofts and Bern, 1972) and birds (Fig. 8) (Lofts, 1972). It can be concluded, therefore, that the ultrastructural evidence, when considered alongside the cytological, histochemical and biochemical data, strongly supports the concept of the Sertoli cells being a steroidogenic tissue.

The Sertoli cell and spermatogenesis

The comparative data that have been previously outlined, do, I believe, provide reasonable evidence to support the concept of the Sertoli cell as an endocrine tissue regulated by the secretion of FSH from the adenohypophysis. This is in agreement with the known action of other protein and peptide hormones secreted from the anterior pituitary, such as LH and ACTH, which similarly regulate the functional activity of other more established steroidogenic tissues, namely, testis interstitium and the adrenal cortical tissue respectively. In agreement with this concept are a variety of experiments which have demonstrated that labelled FSH becomes localized within the Sertoli cells (Castro *et al.*, 1970; Castro *et al.*, 1972), and recent biochemical studies have shown that the seminiferous tubules contain specific receptor sites for FSH but not LH (Means and Vaitukaitis, 1972; Bhalla and Reichert, 1974a, b). The biochemical evidence suggests that the Sertoli cell secretion is androgenic, and indeed some recent evidence of Bell (1972) has shown that 100 mg of human seminiferous tubule tissue can bioconvert *in vitro* over seventy percent more labelled androstenedione to testosterone, than an equivalent weight of interstitial tissue. By using the microsomal fractions of these two tissues in the rat, and incubating with labelled progesterone, Lacy *et al.* (1973) have similarly confirmed that the yield of testosterone is higher than that obtained from the interstitium per unit weight of protein (Fig. 9). These observations are in support of the findings of Harris (1973) and Harris and Bartke (1974) who report that the seminal fluid in the tubules contains a much higher concentration of testosterone than peripheral plasma.

It has long been accepted that the activity and maintenance of the secondary sexual characteristics is dependent upon androgens produced by the interstitial Leydig cells, but the possibility that the development of the germ cells might be dependent upon an

androgenic secretion of the Sertoli cells, is a relatively new concept, and might still be regarded as contentious. Nevertheless, the seasonal pattern of events in the testicular cycles of lower vertebrates, and the experimental evidence outlined here, support such an hypothesis. Certainly there is ample experimental evidence to demonstrate that exogenously administered androgenic steroids such as testosterone can have a stimulatory effect on spermatogenesis, and maintain the activity in hypophysectomized rats if given in sufficiently large doses (e.g. Nelson and Gallagher, 1936; Dvoskin, 1944, Ludwig, 1950; Albert, 1961; Clermont and Harvey, 1967). Administration of testosterone can even restore spermatogenesis in rates where the testes have been allowed to regress fully after hypophysectomy (Boccabella, 1963), and in monkeys intratesticular implantation of testosterone pellets have been shown to cause a localized stimulation of the seminiferous tubules (Smith, 1944). That the development of primary spermatocytes has a specific dependence upon testosterone, has also now been confirmed in many recent experimental studies and it is now clear that the completion of meiosis is androgen dependent (see review by Steinberger, 1971; Lacy, 1973). The concentration of testosterone in the rete testis and efferent duct-fluid in the rat is 10 to 20 times higher than in peripheral plasma (Setchell, 1970; Harris, 1973; Harris and Barthe, 1974), and again underlines the probability that spermatogenetic maturation of the germ cells takes place in a milieu of high local androgen concentration. In summary then, it can be concluded that there is much evidence to indicate that spermatogenesis is an androgen dependent process.

During the past 3 to 4 years several groups of workers have reported the binding of testosterone by proteins inside the seminiferous tubules (Vernon *et al.*, 1973; Hansson *et al.*, 1973, 1974; Rennie and Bruchovsky, 1973; Weddington *et al.*, 1975). These androgen-binding proteins (ABP) have been found in the testicular fluid and pass via the efferent ducts to be concentrated in the caput epididymis (French and Ritzén, 1973a, b). They are produced by the seminiferous epithelium since they are present in the efferent duct fluid but absent from testicular lymph (Hansson *et al.*, 1973). A number of studies have shown that the production of ABP disappears following hypophysectomy and reappears in response to exogenous FSH (Hansson *et al.*, 1973; Vernon *et al.*, 1973, 1974; Sanborn *et al.*, 1975), and the discovery that the *in vivo* administration of FSH stimulates the production of this transport protein in the testes of cryptorchid rats suggests that the Sertoli cell is a likely source (Hansson *et al.*, 1973; Ritzén and French, 1973; Hagenäs *et al.*, 1974; Vernon *et al.*, 1974) in view of the well established fact that the germinal tissue undergoes atrophy within the ectopic testis. This is also supported by the observations of Fritz *et al.*, (1974), showing that FSH *in vitro* stimulates the production of ABP in Sertoli cell cultures. Primary spermatocytes contain an ABP within a high affinity for testosterone and dihydrotestosterone (Fritz *et al.*, 1974), and Podesta *et al.*, (1974) have shown that the appearance of testicular ABP occurs in conjunction with the meiotic maturation of the primary spermatocyte. Thus, FSH and androgen binding proteins may provide an accumulation of androgen in close proximity to the androgen dependent germ cells.

All these recent data demonstrating the location of androgen receptors and the production of ABP within the seminiferous tubules, do not, of course, confirm that an androgenic secretion of the Sertoli cells is a key factor, since they might equally well bind testosterone produced by the interstitial tissue which passes into the tubules. It is difficult to disprove this alternative view using mammalian and human tissues. However, reptilian examples do provide evidence to show that the former, rather than the latter interpretation, is most likely the case. In the soft-shelled turtle, *Trionyx sinensis*, for example, the spermatozoa produced by the seminiferous tubules become stored for several months in the epididymal canals (Fig. 10a). During the breeding season fertilization occurs as a result of a discharge of semen from this epididymal reservoir, and during this period the testes are regressed and spermatogenetically inactive. The interstitial tissue, on the other hand, is highly active (Fig. 10b) and peripheral testosterone levels are elevated. So here we have a situation of high androgen production by the interstitial tissue which is strongly positive to tests for 3β -HSD at this time (Fig. 10c), while the adjacent seminiferous elements show no spermatogenetic activity. (Lofts and Tsur, 1977). After the breeding season the interstitial cells regress, lose their 3β -HSD activity and become atrophic. Interestingly, it is precisely during this non-steroidogenic phase of the interstitial cell cycle, that the recrudescence of spermatogenesis occurs in the seminiferous tubules, which now react strongly to tests for 3β - and 17β -HSD (Fig. 10d). The *in vitro* incubation of isolated tubules with labeled steroid precursors, show a high level of testosterone synthesis at this time, suggesting that endogenous tubule androgens are involved in the spermatogenetic cycle, and not androgens of interstitial origin. Pituitary cytology indicates a high level of degranulation in the FSH gonadotropes associated with this period, whereas LH gonadotropes are non-secretory, thus supporting the testicular evidence (Yip and Lofts, 1976).

Conclusions

I hope in this brief, and far from complete, survey of work done, and being done, I have demonstrated the value of comparative studies in increasing our understanding of the hormonal control of testicular function. The naturally occurring cyclic activities of wild species provides a unique opportunity to relate the hormonal status of the testis to the regulation of the seminiferous epithelium. It is my belief that the combination of biochemical and cytological data collected from non-mammalian, as well as mammalian species, provide vital information and widen our understanding of the physiological basis of human spermatogenetic activity, and will eventually influence the treatment of clinical syndromes associated with testicular dysfunction.

The striking potential ability of the tubules to synthesize testosterone leads to the possibility that some of the metabolites found in the tubules may influence events occurring in other parts of the male reproductive tract to which they have ready access via the duct system. Some of our as yet unpublished data indicate this. For example, we have unilaterally ligated the efferent duct of tree shrews and obtained a significant regression in prostate weight in the gland of the ligated side, whereas the non-ligated side remained normal. Abnormal changes in steroid metabolism might promote abnormal changes in other parts of the reproductive tract. This perhaps helps to illustrate that our understanding of testicular endocrinology is still full of complexities and unresolved questions. Such problems provide us with many interesting topics which will keep us busy for many years to come.

REFERENCES

- ALBERT, A. (1961). In "Sex and Internal Secretions" ed W.C. Young, p 305. Baltimore: Williams and Wilkins.
- ASHBEL, R., COHEN, R.B. and SELIGMAN, A.M. (1951). *Endocrinology* **49** 265.
- BAILLIE, A.H. and GRIFFITHS, K. (1965). *J Endocr* **31** 207.
- BAILLIE, A.H. and MACK, W.S. (1966). *J Endocr* **35** 239.

- BAWA, S.R. (1963). *J Ultrastruct Res* **9** 459.
- BELL, J.B.G. (1972). *Experientia* **28** 212.
- BELL, J.B.G., VINSON, G.P. and LACY, D. (1971). *Proc Roy Soc Lond B* **176** 433.
- BERTHRONG, M., GOODWIN, W.E. and SCOTT, W.W. (1949). *J. Clin Endocr* **9** 579.
- BHALLA, V.K. and REIGHTER, L.E. (1974a). *J. biol Chem* **249** 43.
- BHALLA, V.K. and REICHTER, L.E. (1974b). *J. biol Chem* **249** 7996.
- BLANCHETTE, E.J. (1966). *J. Cell Biol* **31** 517.
- BOCCABELLA, A.V. (1963). *Endocrinology* **72** 787.
- BRÖKELMANN, J. (1963). *Z Zellforsch microsok Anat* **59** 820.
- BRÖKELMANN, J. (1964). *Z Zellforsch microsok Anat* **64** 429.
- CAMERON, D., MARKWALD, R.R. and WORTHINGTON, W.C. (1972). *Anat Rec* **284**.
- CASTRO, A.E., ALONSO, A. and MANCINI, R.E. (1972). *J. Endocr* **52** 129.
- CASTRO, A.E., SEIGUER, A.C. and MANCINI, R.E. (1970). *Proc Soc exp Biol Med* **133** 582.
- CHRISTENSEN, A.K. (1965). *J. Cell Biol* **26** 911.
- CHRISTENSEN, A.K. and FAWCETT, D.W. (1961). *J. biophys biochem Cytol* **9** 653.
- CHRISTENSEN, A.K. and GILLIM, S.W. (1969). In "The Gonads" ed K.W. McKerus, p 415. Amsterdam: North Holland.
- CHRISTENSEN, A.K. and MASON, V.R. (1965). *Endocrinology* **76** 646.
- CHUNG, K.W. (1974). *Fert Steril* **25** 325.
- CLERMONT, Y. and HARVEY, S.C. (1967). In "Ciba Foundation Colloquia on Endocrinology" eds G.E.W. Wolstenholme and M. O'Connor, p 173. London: Churchill.
- COLLINS, P.M., BELL, J.B.G. and VINSON, G.P. (1968). In "6th Congrès de Reproduction et Insemination Artificielle, Paris 1968" ed C. Thibault, p 261. Institut National de la Recherche Agronomique, France.
- COLLINS, P.M. and LACY, D. (1967). *Gen comp Endocr* **9** 509.
- de KRETZER, D.M. (1968). *J Anat* **103** 215.
- de KRETZER, D.M. (1969). "Studies on the structure and function of the human testis". M.D. Thesis, Monash University, Victoria, Australia.
- de KRETZER, D.M. and BURGER, H. (1972). In "Gonadotropins" eds B.B. Saxena, C.C. Beling and H.M. Gandy, p 640. New York: Wiley-Interscience.
- DEL CASTILLO, E.B., TRABUCCO, A. and DE LA BALZE, F.A. (1947). *J clin Endocr Metab* **7** 493.
- DVOSKIN, S. (1944). *Am J Anat* **75** 289.
- DYM, M. (1973). *Anat Rec* **175** 639.
- EIK-NES, K.B. (1970). In "The Androgens of the Testis" ed Eik-Nes, p 1. New York: Marcel Dekker.
- EIK-NES, K.B. and HALL, P.F. (1965). *Vitams Horm* **23** 153.
- FAWCETT, D.W. and BURGOS, M.H. (1956). *Anat Rec* **124** 401.
- PAWCETT, K.B., LONG, J.A. and JONES, A.L. (1969). *Rec Prog Horm Res* **25** 315.
- FLICKINGER, C.J. (1967). *Z Zellforsch mikrosok Anat* **78** 92.
- FRENCH, F.S. and RITZÉN, E.M. (1973a). *J. Reprod Fert* **32** 479.
- FRENCH, F.S. and RITZÉN, E.M. (1973b). *Endocrinology* **93** 88.
- FRITZ, I.B., KOPEC, B., LAM, K. et al. (1974). In "Hormone Binding and Target Cell Activation in the Testis" eds M.L. Dufau and A.R. Means, p 311. New York: Plenum Press.
- GARDNER, P.J. and HOLYOKE, E.A. (1964). *Anat Rec* **150** 291.
- HAGENÅS, L., RITZÉN, E.M., FRENCH, F.S. et al. (1974). *J. Steroid Biochem* **5** 382.
- HALL, P.F. (1970). In "The Testis" eds A.D. Johnson, W.R. Gomes and N.L. van Denmark, Vol. II p 1. New York: Academic Press.
- HANSON, V., REUSCH, E., TRYGSTAD, O. et al. (1973). *Nature* **246** 56.
- HANSON, V., TRYGSTAD, O., FRENCH, F.S. et al. (1974). *Nature* **250** 387.
- HARRIS, M.E. (1973). *Biol Reprod* **9** 83.
- HARRIS, M.E. and BARTKE, A. (1974). *Endocrinology* **95** 701.
- HELLER, C.G., PAULSEN, C.A., MORTIMORE, G.E. et al. (1952). *Ann N Y Acad Sci* **55** 685.
- HOWARD, R.R., SNIFFEN, R.C., SIMMONS, F.A. et al. (1950). *J clin Endocr Metab* **10** 121.
- HUGGINS, C. and MULDER, P.V. (1945). *Cancer Res* **5** 510.
- KANHT, F.W., NEHER, R., SCHMID, K. et al. (1961). *Experientia* **17** 19.
- KINSON, G.A., LACY, D. and LOFTS, B. (1964). In "Vth Intern. Congr. Animal Reprod. Artif. Insem. Trento, Italy". Vol. 2 p 440.
- LACY, D. (1969). *J. R. microsc Soc* **79** 209.

- LACY, D. (1962). *Br med Bull* **18** 205.
- LACY, D. (1967). *Endeavour* **26** 101.
- LACY, D. (1973). In "The Endocrine Function of the Human Testis" eds V.H.T. James, M. Serio and L. Martini, Vol.1 p 493. New York: Academic Press.
- LACY, D. and LOFTS, B. (1961). *J Physiol* **161** 23.
- LACY, D. and LOFTS, B. (1965). *Proc Roy Soc Lond B* **162** 188.
- LACY, D. and PETTITT, A.J. (1969). *Micron* **1** 15.
- LACY, D. and ROTBLAT, J. (1960). In "Proc. IVth Intern. Congr. on Electron Microscopy, Berlin 1958". Vol. 2, p 484. Berlin: Springer-Verlag.
- LACY, D., BASS, J.J., BELL, J.B.G. *et al.* (1973). In "IVth Intern. Congr. Endocrinology, Washington 1972" ed R.O. Scow. p 838. Amsterdam: Excerpta Medica.
- LACY, D., VINSON, G.P., COLLINS, P. *et al.* (1969). In "Progress in Endocrinology" ed C. Gual. p 1019. Amsterdam: Excerpta Medica.
- LOFTS, B. (1961). *Gen comp Endocr* **1** 179.
- LOFTS, B. (1964). *Gen comp Endocr* **4** 550.
- LOFTS, B. (1968). In "Perspectives in Endocrinology: Hormones in the Lives of Lower Vertebrates" eds E.J.W. Barrington and C. Barker Jorgensen. p 239. New York: Academic Press.
- LOFTS, B. (1969). *Gen comp Endocr* Suppl 2 p 147.
- LOFTS, B. (1972). *Gen comp Endocr* Suppl 3 p 636.
- LOFTS, B. (1973). In "Breeding Biology of Birds" ed D.S. Farner. p 198. Washington: National Academy of Science.
- LOFTS, B. (1974). In "Physiology of the Amphibia" ed B. Lofts. Vol.2 p 107. New York: Academic Press.
- LOFTS, B. and Bern, H.A. (1972). In "Steroids in Nonmammalian Vertebrates" ed D.R. Idler. p 37. New York: Academic Press.
- LOFTS, B. and Boswell, C. (1960). *Nature* **187** 708.
- LOFTS, B. and BOSWELL, C. (1961). *Proc zool Soc Lond* **136** 581.
- LOFTS, B. and CHOY, L.Y.L. (1971). *Gen comp Endocr* **17** 588.
- LOFTS, B. and MARSHALL, A.J. (1956). *J Endocrin* **13** 101.
- LOFTS, B. and MARSHALL, A.J. (1957a). *Ibis* **99** 621.
- LOFTS, B. and MARSHALL, A.J. (1957b). *Quart J micr Sci* **98** 79.
- LOFTS, B. and MARSHALL, A.J. (1958). *J Endocrin* **17** 91.
- LOFTS, B. and MARSHALL, A.J. (1959). *J Endocrin* **19** 16.
- LOFTS, B. and MURTON, R.K. (1973). In "Avian Biology" eds D.S. Farner and J.R. King. Vol 2 p 1. New York: Academic Press.
- LOFTS, B. and TSUI, H.W. (1977). *J Zool Lond* **181** in press.
- LOFTS, B., PHILLIPS, J.G. and TAM, W.H. (1966). *Gen comp Endocr* **6** 466.
- LUDWIG, D.J. (1950). *Endocrinology* **46** 453.
- MADDOCK, W.O., EPSTEIN, M. and NELSON, W.O. (1952). *Ann N Y Acad Sci* **55** 657.
- MAIER, D.M. (1965). *Endocrinology* **76** 463.
- MARSHALL, A.J. (1951). *Wilson Bull* **63** 238.
- MARSHALL, A.J. (1955). *Mem Soc Endocr* **4** 75.
- MCCULLAGH, D.R. (1932). *Science N Y* **76** 19.
- MCCULLAGH, D.R. and SCHNEIDER, I. (1940). *Endocrinology* **27** 899.
- MCCULLAGH, D.R. and WALSH, E.L. (1935). *Endocrinology* **19** 466.
- MEANS, A.R. and VAITUKAITIS, J. (1972). *Endocrinology* **90** 39.
- MOTTRAM, J.C. and CRAMER, W. (1923). *Q J exp Physiol* **13** 209.
- MOYLE, W.R., JUNGAS, R.L. and GREEP, R.O. (1973). *Biochem J* **124** 415.
- NELSON, W.O. and GALLAGHER, T.F. (1936). *Science N Y* **84** 230.
- NICANDER, L. (1967). *Z Zellforsch mikrosk Anat* **83** 375.
- PERLMAN, P.L. (1950). *Endocrinology*, **46**, 347.
- PODESTA, E.J., CALANDRA, R.S., RIVAROLA, M.A. *et al.* (1974). *J Steroid Biochem* **5** 333.
- RENNIE, P. and BRUCHOVSKY, N. (1973). In "Proc. IVth Intern. Congr. Endocrinol., Washington 1972" ed R.O. Scow. Abstr 198. Amsterdam: Excerpta Medica.
- RITZÉN, E.M. and FRENCH, F.S. (1973). *Acta endocr* Suppl 177 p 387.
- SANBORN, B.M., ELKINGTON, J.S.H., CHOWDHURY, M. *et al.* (1975). *Endocrinology* **96** 304.
- SCHULZE, C. (1974). *Cell Tiss Res* **153** 339.
- SETCHELL, B.P. (1970). In "The Testis" eds A.D. Johnson, W.R. Gomes and N.L. Van Denmark. Vol 1 p 101. New York: Academic Press.

- SMITH, P.E. (1944). *Yale J Biol Med* 17 281.
- STEINBERGER, E. (1971). *Physiol Rev* 51 1.
- TAMAOKI, B.I. (1973). *J Steroid Biochem* 4 89.
- TAMAOKI, B.I., INANO, H. and NAKANO, H. (1969). In "The Gonads" ed K.W. McKerns. p 547. Amsterdam: New Holland.
- TEILLUM, G. (1949). *J clin Endocr Metab* 9 301.
- VERNON, R.G., KOPEC, B. and FRITZ, I.B. (1973). *J Endocr* 57 ii.
- VERNON, R.G., KOPEC, B. and FRITZ, I.B. (1974). *Molec Cell Endocr* 1 167.
- WEDDINGTON, S.C., HANSSON, V., RITZÉN, E.M. *et al.* (1975). *Nature* 254 145.
- YANAIHARA, T. and TROEN, P. (1972). *J clin Endocr Metab* 34 783.
- YIP, D.Y. and LOFTS, B. (1976). *Cell Tiss Res* 170 523.
- ZUCKERMAN, S. and McKEOWN, T. (1938). *J Path Bact* 46 7.

LEGENDS

- Fig. 1. (a) T.S. Testis of Tree Sparrow in December, showing the regressed seminiferous tubules containing only a peripheral ring of spermatogonia. (b) Dissection of the reproductive organs of a male bird in winter. Note the very small size of the testes (arrowed). (c) T.S. Testis of a bird during the breeding season in April. The tubules are greatly expanded and spermatogenesis is active. All germinal stages, including spermatozoa are now seen in the tubules. (d) Dissection of the reproductive organs of a male bird during the breeding season. Note the enormous expansion of the testes from the winter condition, and the hypertrophy of the efferent ducts (arrowed).
- Fig. 2. Biosynthetic pathway of testosterone production in mammalian testicular tissue.
- Fig. 3. T.S. of Testis of Tree Sparrow embedded in gelatine and frozen sectioned. The sections have been stained with sudan black to reveal lipids. (a) Testis during breeding season showing bunched spermatozoa in the seminiferous tubules, but no lipids. (b) Soon after termination of breeding Sertoli cells begin to accumulate small lipid droplets. (c) The regressed testis of a post-breeding bird showing the densely lipoidal seminiferous tubules.
- Fig. 4. (a) T.S. Testis of normal rat showing the small scattering of fine lipid particles that occur in the region of the sperm heads. (b) T.S. Testis of rat, one week after hypophysectomy. Note the large masses of lipoidal material accumulating in the Sertoli cell cytoplasm.
- Fig. 5. Seminiferous tubules of a snake, the Cobra, separated by microdissection in preparation for incubation studies.
- Fig. 6. Production of testosterone *in vitro* from labelled pregnenolone, by a 250 mg sample of isolated seminiferous tubules from Cobra testis. Mammalian LH had no significant effect on testosterone synthesis, which remained at the control (c) level, but FSH significantly stimulates testosterone synthesis from pregnenolone by the tubule fraction. Testosterone production is expressed as the percentage converted from the labelled precursor.
- Fig. 7. Production of testosterone *in vitro* from labelled pregnenolone, by the seminiferous tubules of the Cobra at different times of year. Testosterone production is highest in March when spermatogenetic activity reaches a peak. The low production in June coincides with the time that the seminiferous tubules are spermatogenetically inactive.
- Fig. 8. Electron micrograph of a Sertoli cell in the testis of a Quail. Note it has all the characteristic ultrastructural features of a steroid-producing cell, namely, smooth endoplasmic reticulum (ER) and mitochondria (M) with tubular cristae (CR)
- Fig. 9. Relative ability of the microsomal and mitochondrial fractions obtained from the seminiferous tubules and interstitium of rat testes to metabolise labelled progesterone to testosterone *in vitro*. Yield/time curves constructed from incubations with equal amounts of the fractions obtained from the interstitium and seminiferous tubules of 6 adult rats (Data provided by Professor D. Lacy, St. Bartholomew's Hospital Medical College, London).
- Fig. 10. (a) T.S. Epididymis of the Soft-shelled Turtle showing storage of spermatozoa in the canals. (b) T.S. Testis during the breeding season. The seminiferous tubules are regressed and spermatogenetically inactive, but the interstitial tissue is hypertrophied and highly secretory. (c) T.S. Testis during breeding season, treated to show 3β -HSD activity. There is a strong reaction showing steroid dehydrogenases in the interstitial tissue, but none in the tubules. (d) T.S. Testis after the breeding season showing a strong 3β -HSD reaction in the tubules, but none in the interstitium.

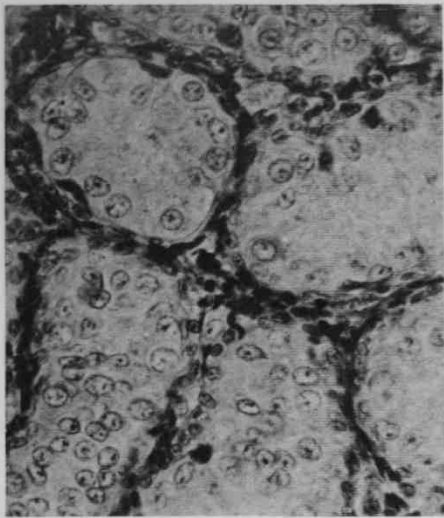


Fig 1 (a)

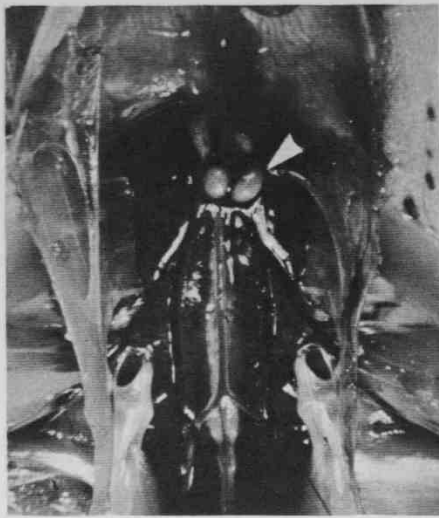


Fig 1 (b)

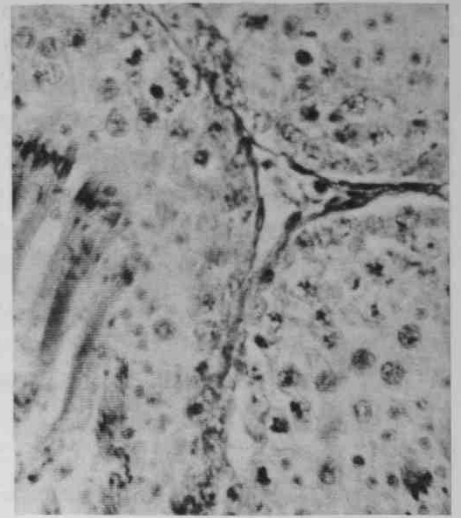


Fig 1 (c)

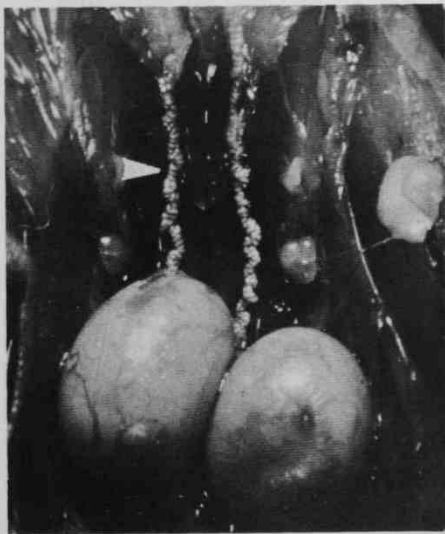


Fig 1 (d)

Pathways of Testosterone Biosynthesis

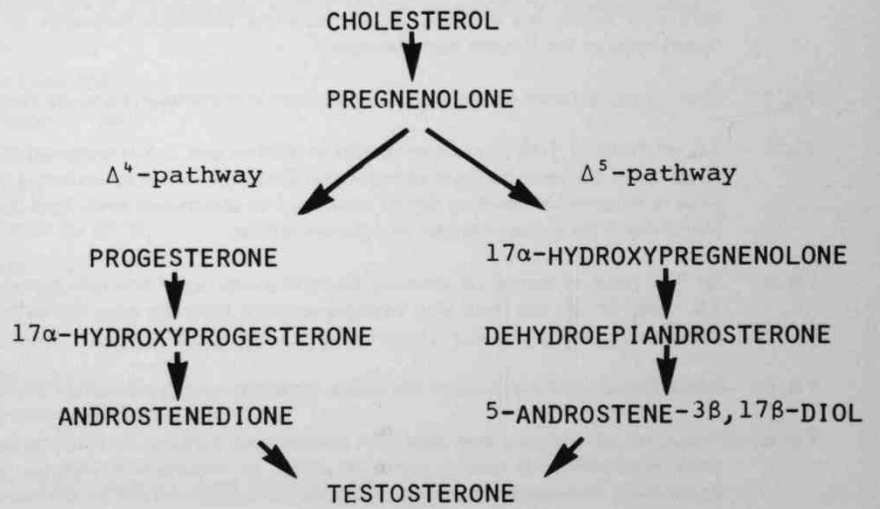
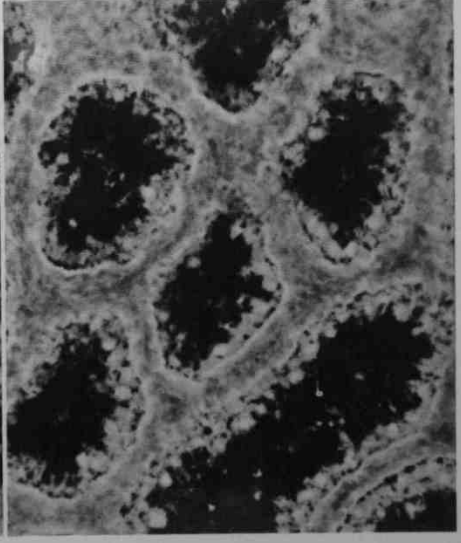
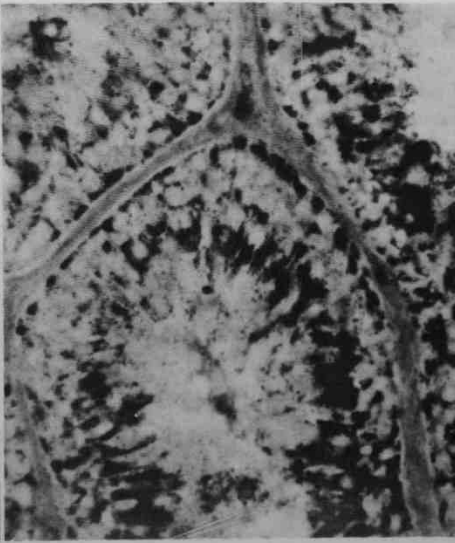
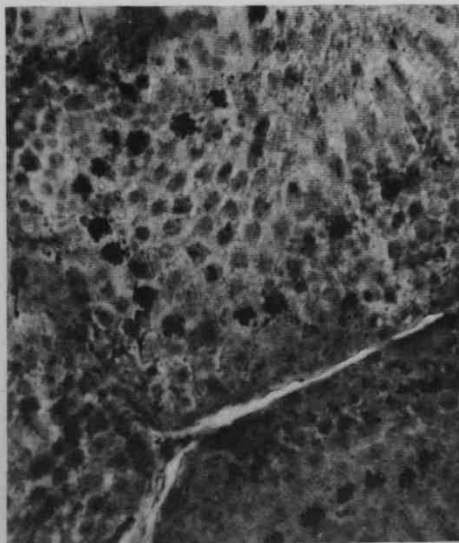


Fig 2

Fig 3 (a)

Fig 3 (b)

Fig 3 (c)



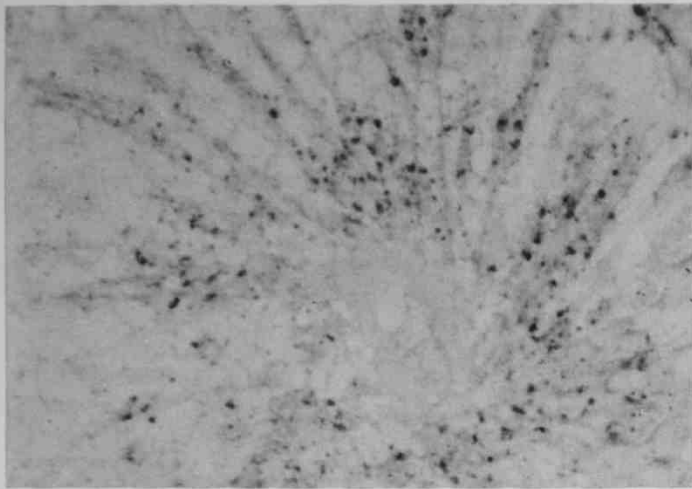


Fig 4 (a)

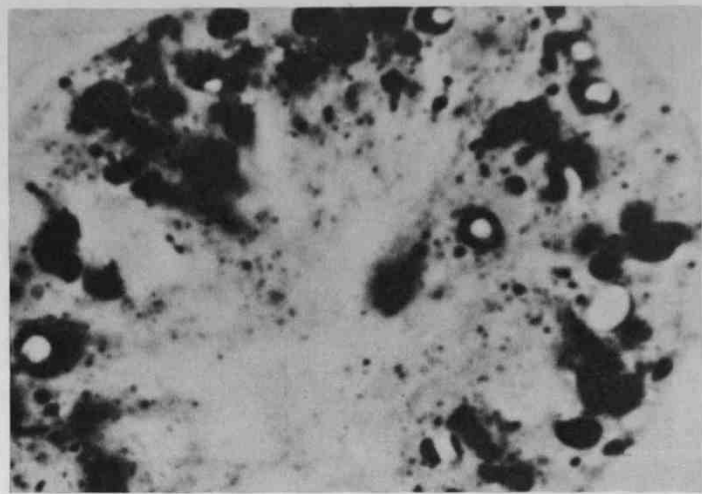


Fig 4 (b)

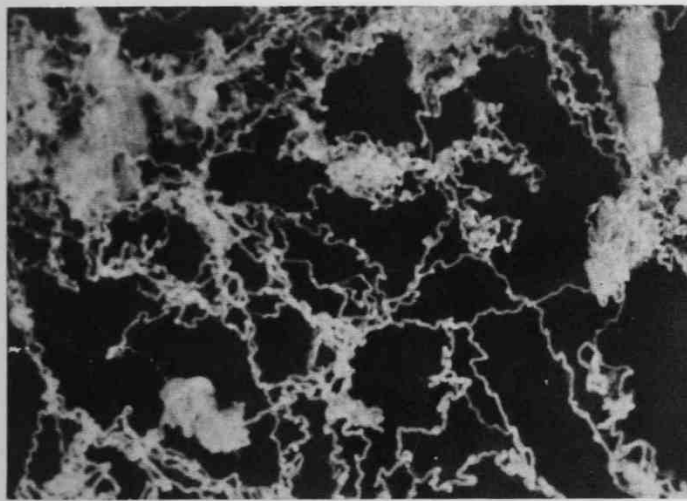


Fig 5

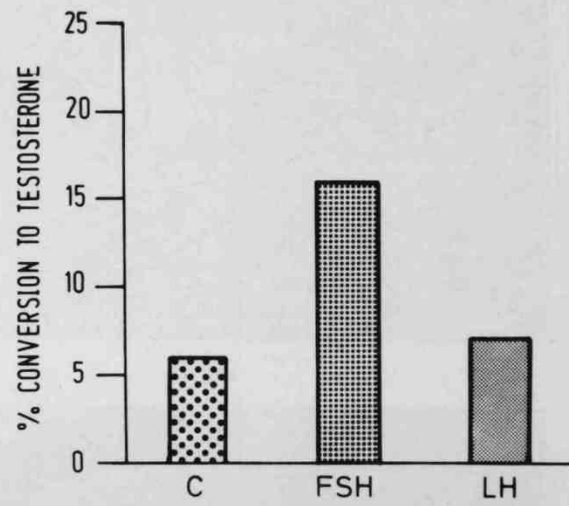


Fig 6

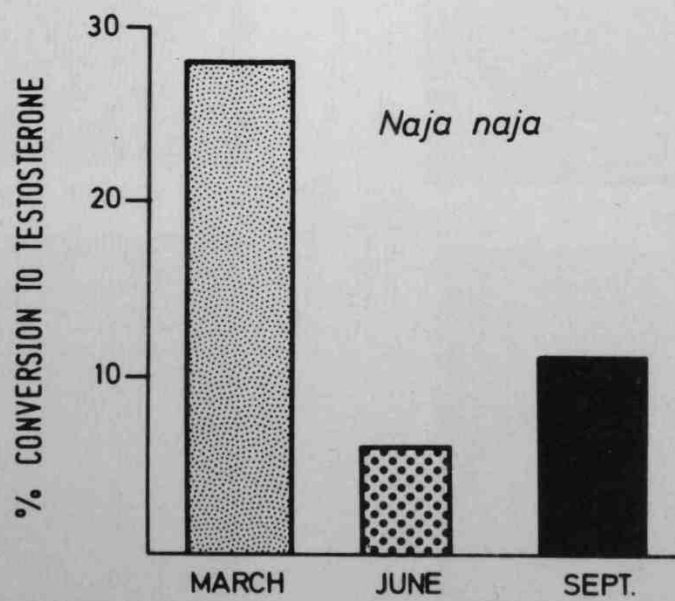


Fig 7

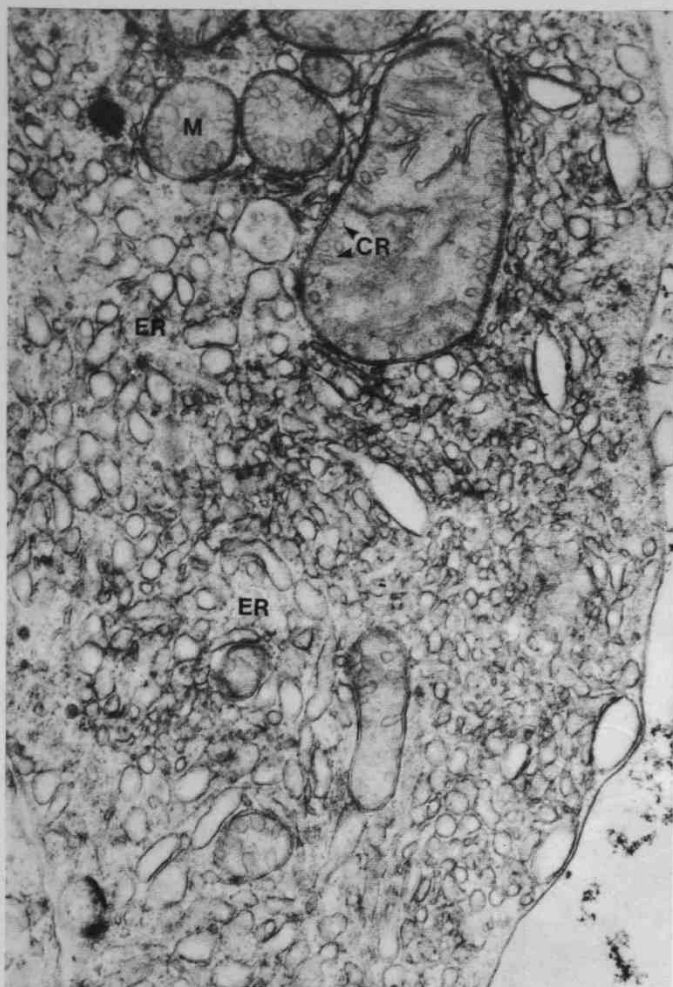


Fig 8

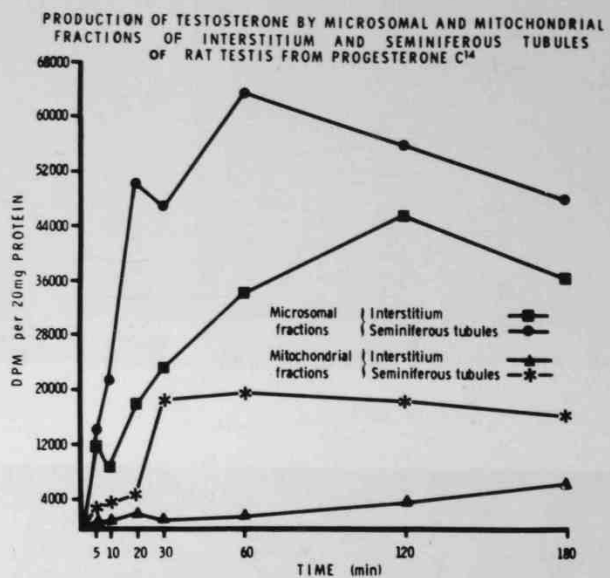


Fig 9

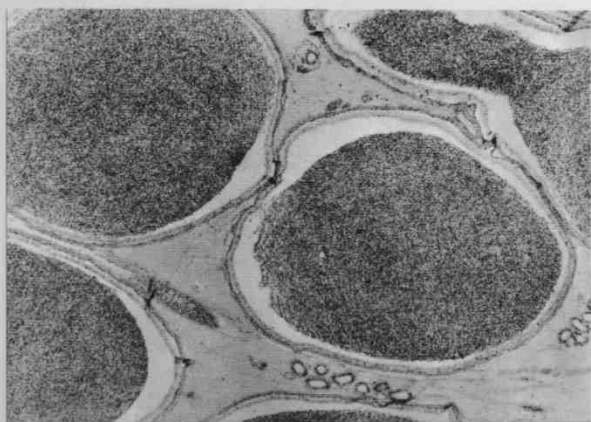


Fig 10 (a)

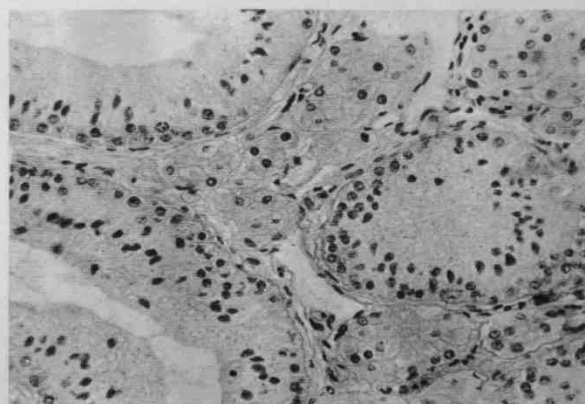


Fig 10 (b)

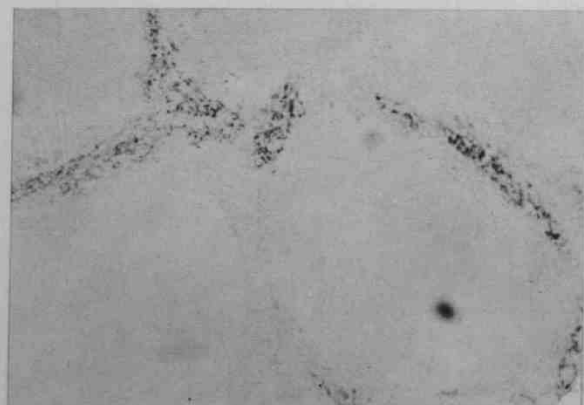


Fig 10 (c)

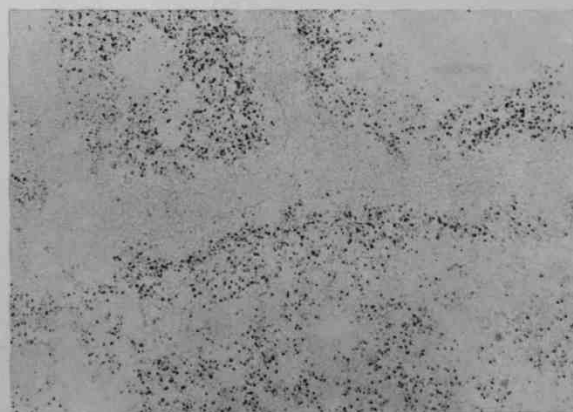


Fig 10 (d)

STRESS AND ILLNESS

SGOSI JUSTALAYMAN

This essay is condensed and re-written from our sociology paper bearing the same name. There is nothing original or first-hand — all materials are but gathered from books and pieced together.

Many people have an antipathy for Sociology or related subjects. Thus, in order to make this article readable, an effort has been made in the selection of materials: only the more interesting parts are retained. The attempt is there, but the outcome may be otherwise.



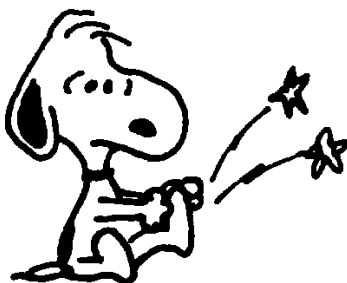
No account can be complete without an introduction. So here it goes ...

On hearing the term 'stress and illness', we are ensnared into associating 'illness' with 'mental illness' only. Well, that is understandable. We often hear Mr. so and so suddenly running into mental breakdown after a tremendous shock such as failure in an exam or death of a lover. This plot has been so prodigiously used by so many authors that out of ten novels you are bound to find at least eight mentioning a character suddenly becoming mad when overwhelmed with stress.



But this is not the whole story. Many different diseases are related to stress as well, the most obvious example being peptic ulcer and hypertension.

Dr. John A. Schindler gave a simplified yet comprehensive explanation:



Now, how does stress bring about a disease? Very simply, most of our disagreeable emotions produce muscle tightness. Suppose that all day long your thinking is acutely disagreeable. You are tightening up muscles. Take your fist and hold it loosely; it doesn't hurt; but hold it tight for a long time and it begins to hurt. The squeeze produces pain. This same kind of muscle spasm can occur in any part of the intestine or even blood vessels.

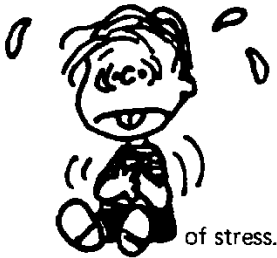


We hear people talk an awful lot about 'stress' nowadays, but what actually does it refer to?

As Dr. Hans Selye defined it, stress is the **nonspecific response** of the body to any demand made upon it.

Essentially different stress-producing factors — technically called **stressors**, whatever their origins, can provoke certain nonspecific but identical biological stress response in the body.

Horror, such as is experienced before the exam or while watching a thriller, is attended by sweating, loss of appetite, feeling of tiredness, more frequent urination, and so on. This spectrum of reactions helps to illustrate the involvement of the various systems in our body when we are under stress.



of stress.

That is, in addition to their specific actions (such as vasoconstriction and shivering in response to cold), all agents to which we are exposed also call for a nonspecific increase in the need to perform adaptive functions and thereby to re-establish normalcy. The nonspecific demand for activity as such is the essence

From the point of view of stressor activity, it is **immaterial whether the agent or situation we face is pleasant or unpleasant**; all that counts is the intensity of the demand for readjustment or adaptation.



It is customary or rather traditional to quote examples and elaborate after giving a formal definition. So, some stressors in everyday life

First, it must be emphasized that stress does not necessarily involve a negative or unfavourable appraisal of a stimulus — stress can result from any situation of more than usual stimulation, even when the stimulus is viewed as pleasant and attractive. Thus, the ecstasy of a re-union can be as stressful as the agony of separation.

agony of separation.



PANIC



ANGER



FRUSTRATION



ECSTASY



ANXIETY

Society itself sets up certain kinds of stresses like occupation and structure. Individual must deal with the anxiety imposed by his culture plus the actual danger. In the interaction with people, we experience pressure such as threats to life, threats of deprivation of basic human needs, expectation.

The necessity to adapt to constant cultural changes, and circumstances like moving into a new home, a new job, hospitalization or pregnancy inevitably create stress on a person.

On the personal level, subjective feeling of individual may also contribute to self-conflict, thus imposing stress on oneself — perception of the self as less competent and less capable of functioning in the accustomed way, feeling of rejection in interpersonal relationship; or perception of past expectations of self and the environment as no longer valid.



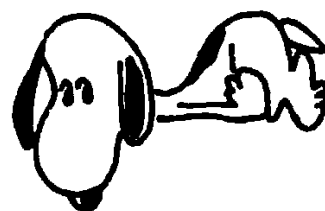
Stress is not something to be avoided. Even when you are relaxed or asleep, you're under some stress.



How does the body react to stressors?

It is now realized that the emergency release of adrenaline represents but one aspect of the acute phase of alarm reaction to stressors. Equally important in maintenance of homeostasis is the hypothalamo-pituitary-adreno-cortical axis, which probably mediates the development of many disease phenomena.

Studies have revealed that a stereotyped syndrome, characterized by enlargement and hyperactivity of adrenal cortex, atrophy of lymphoid tissue, appearance of gastrointestinal ulcers, and loss of body weight can be produced by different stimuli. These in turn may become precursors of diseases.



If so, why doesn't everybody become diseased?

The fact that even the same stressor can elicit different lesions in different individuals has been traced to 'conditioning factors' that can selectively enhance or inhibit one or the other stress effect. In fact, the stress arising from a situation is based very much on the way the affected subject perceives it, and perception in turn depends on a number of factors — stress becomes the interaction between the external environment and the organisms, with the past experience of the organism as a major factor.



Thus conditioning may be internal (e.g. genetic factor, age, sex or previous experience) or external (treatment with certain drugs or dietary factors). Because of such conditioning factors, a normally well-tolerated degree of stress can become pathogenic and cause 'diseases of adaptation'.



Alas, getting to the 'bone' of the subject: How do stress and illness interact?

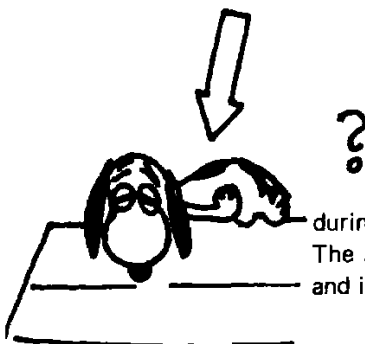
When the stress response fails to cope adequately with a potentially disease-producing situation, the body develops diseases of adaptation. There is an element of adaptation in every disease; but in some, the direct effects of the disease-producers, in some others the body's own defensive adaptive reactions, are more prominent.

Of course, every disease causes a certain amount of stress, since it increases demands for adaptation. In turn, stress plays some role in the development of every disease; its effects — for better or worse — are added to the specific changes characteristic of the disease in question.



Studies have been made to study the effects of the fear of uncertainty on recovery from diseases. Some patients impending abdominal operations were divided into 2 groups. Patients of the first group were informed of the operation they were to undergo, what would become of them, and what pain they would possibly have. Whereas those of the other group knew nothing about their operations.

The results showed that the first group had less complaints, needed less medication, and recovered faster. The inference is obvious.



Not yet the end, because inside the 'bone' there is still 'marrow' — Altered susceptibility to diseases when one is under stress?

Experiment reveals that illness not only occurs with disproportionate frequency in some individuals, but also tends to occur in 'clusters', that is, during discrete periods. During this time, the subject seems prone to major and minor illness, to accidents, and to disorder of mood. Clusters are shown to occur during periods when the environment is perceived as unsatisfying, threatening and over-demanding. The situations, in general, are those which arise out of disturbed relations with family members and important associates, threats to security and status, etc.

These demonstrate a probable relationship between emotional stress and susceptibility to illness.

However, there is some controversy as to whether infectious diseases can be classified into this category.

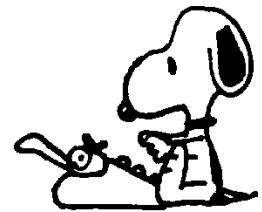
Studies have also been made on athlete's foot. This disease is fungal in origin, and especially prevalent in swimming pools and locker rooms. If two teams use the same locker room, that is, they are essentially exposed to the same stimuli, they should be expected to be equally vulnerable to infection. Interesting enough, research reveals a characteristic pattern — the winning team tends not to develop athlete's foot, while the losing team tends to develop it. The inference is that some elements are operative in the person making him/her **more** or **less** vulnerable to external agents.



When a person is troubled, anxious or worried, he seems more prone to attack by diseases. A similar example is that a person catches cold more easily if he/she does not have sufficient sleep. The explanation is obvious using the above hypothesis, because lack of sleep in itself is a stress.

The only original material available is a survey on Medic '81, so it is very human to put down some results here ...

A 'stress score' is devised to assess the 'intensity of stress', assuming it measurable. In the incidence of headache, we can observe a beautiful correlation between the percentage occurrence of headache and 'stress score' — those under 'greater stress' are more likely to develop headache. Here, of course, we have also assumed headache to be a common disease caused by stress — a good many people who have a headache severe enough to drive them to go to a doctor have that headache because some blood vessels inside or outside the skull is squeezing down so hard from nervous excitation that it produces pain.

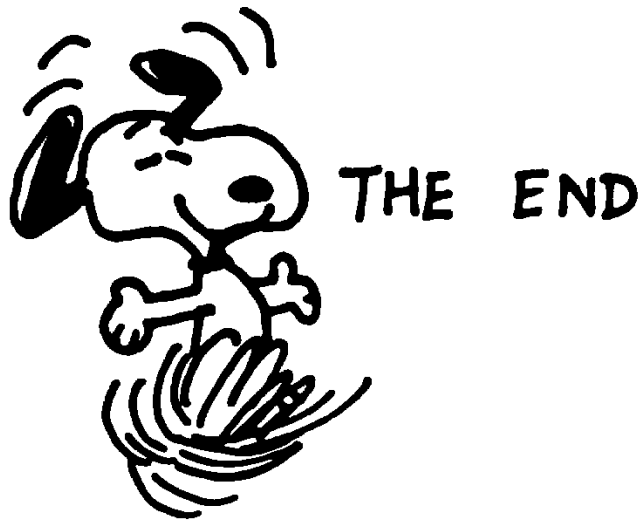


A word that most people rejoice to see or hear: Conclusion

Actually the definition of 'stress' is extremely controversial, especially on the point as to whether pleasant stimuli should be included. But Dr. Selye's definition has been followed as closely as possible throughout.

Also, the research on stress is mainly done overseas, so application of the different ideas to local situations is to be held with some reserve.

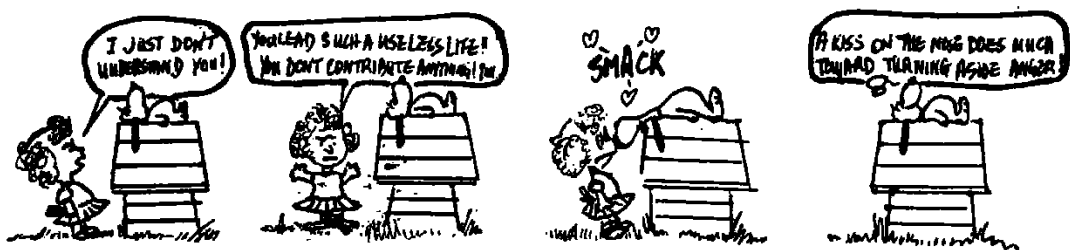
Though the information for this essay, for the main part, is collected from books, there are still likely mistakes in the article because of misunderstanding, misinterpretation or 'mis-wording' by the writer.



Reference

Thanks to Professor Colbourne, Dr. J.A. Precker, Dr. Lam and Mrs. Kathleen Grandpierre for their advice and information. Thanks also to the whole class of Medic '81.

1. Six Steps to Better Health, The Reader's Digest Association, 1972
2. Stress Without Distress: Hans Selye, The New American Library of Canada Ltd., 1974
3. Stress and Disease: Harold G. Wolff, Charles C. Thomas Publisher, 1953
4. Stress and Distress in response to Psychosocial Stimuli: Lennart Levi, Pergamon Press, 1972
5. Beyond the Germ Theory – Human Aspects of Health and Illness: Vivtor J. Freeman, M.D.
6. General Susceptibility to Illness – A selective review: H. John Thurlow, M.A., MD.
7. The Stress of Life: Hans Selye, McGraw-Hill Book Co. Inc., 1956
8. The Physiology and Pathology of exposure to stress: Hans Selye, Mc-Graw Hill Book Co. Inc.
9. Urban Stress: Academic Press, Inc., 1972
10. Your Heart Has Nine Lives: Alton Blakeslee and Jeremiah Stamler, M.D., 1966



A soft answer turns away wrath

Kidney Transplantation in Hong Kong = Facts & Problems

C.H. Leong

There has recently been a lot of publicities concerning the problem of renal transplantation in the press, radio and the television. I have no doubt that they all meant well. Yet one cannot dispute the fact that certain points are probably misinterpreted and, to my mind, certain suggestions are not practicable to the local situation and environment. I am, therefore, prompted to write this in an attempt to clarify the situation so that at least within the medical profession there is an up-to-date view of the situations, the problems and the possible future in renal transplantation in Hong Kong.

Histological Background

The dream of being able to replace the deceased organ with a healthy one is an old one. Stories claiming to have accomplished such procedures can be found both in Christian and Hindu literatures dating back for more than 500 years. The dawn of renal transplantation came at around the turn of the 20th century when Alexis Carrel¹ published his technique for anastomosis of blood vessels. Using his technique, Carrel and Ullman² accomplished the first renal transplant in 1902 and a successful autotransplantation of kidneys in the same year. The first human cadaveric transplant was done in 1950 by Richard Lawer³. It was reported as successful and apparently the recipient lived for some 5 years. Up till then cadaveric transplant for the kidney had been performed with some frequency both in America and Europe. However, it was obvious that although invariably all the transplanted kidneys showed progressive increase in urine output in the first few days, yet after a period of time the urine output rapidly decreased and the kidneys ceased to function. At autopsy the common finding was that of extensive lymphocytic infiltration with destruction of the grafted kidney — a phenomenon which we recognised as rejection.

The obvious second phase in the development of renal transplantation was an attempt to counteract rejection. This in theory could be brought about in two ways: to minimize rejection by properly matching the donor and recipient and to suppress rejection with immuno-suppressive therapy. Unfortunately even with all the modern advancements in medicine the rejection phenomenon is only minimized; furthermore, the use of immuno-suppressive therapy not uncommonly leads to other complications.

In Hong Kong cadaveric transplant was started in the Department of Surgery, University of Hong Kong in 1969. Since then a total of 24 transplants were done. All but one kidney functioned after a period of time, and the 3 years survival figures are satisfactory. The longest survival is now over 5 years and the patient is in perfect good health.

Case Report

L.K.L., M/52. This patient was admitted to our care in 1967 in terminal renal failure and in a semiconscious state. His blood urea then was 450 mgm%. He was put on haemodialysis and subsequently improved and he was maintained on twice weekly 5-6 hours dialysis. During the next 5 years he was well maintained but he developed bony osteoporosis although there was no obvious evidence of hyperparathyroidism — There was a fracture of the femoral neck of left femur for which he required an internal fixation using a pin. He also developed multiple fracture ribs. These were relatively asymptomatic and healed spontaneously. Because of his borderline hypertension, he had a bilateral nephrectomy done within the same period. The histology of the kidneys confirms features of terminal glomerulonephritis.

In 1972 a cadaveric graft was available. The ABO matching was compatible and there was no obvious incompatibility during a direct intermatching test. The transplantation was done in the usual manner into the right iliac fossa. The kidney functioned well and except for some minor rejection phenomenon he did well and has entered his sixth year post-transplant life being maintained on prednisone 10 mgm and immuran 75 mgm daily. His recent IVU showed a nicely functioning kidney in the R.I.F. (Fig. 1).

Is Renal Transplant the Only Method?

When the kidney fails, the products of metabolism will accumulate in the body. These products may be toxic and produce lethal effects. Basically 2 methods are available to remove these toxic products:

1. Renal transplantation — allowing a new kidney to do the job;
2. Haemodialysis — allowing a machine to get rid of the unwanted.

Leaving aside personal feelings, the pros and cons of these 2 methods can be analysed as follows:

There is no doubt that although difficult to procure, a transplanted kidney is a complete kidney, and, if it functions well, provides all that a kidney is demanded of. The recipient runs however into a few basic risks. He has to be put on a life long immuno-suppressive therapy. The possibility of a rejection crisis at any moment, though admittedly the chances and frequency decrease with time, is always there – this may mean another period of hospital stay, possibly insolation and if unfortunate, the removal of the kidney, returning to supportive dialysis until another kidney is available again. Other than all these, however, he returns to a normal life, without being tied to a machine. He will have all the faculties of a normal person in regards to his job, his raising a family and his activities.

A man on dialysis though escapes a major operation is bound to a machine which he has to be symbiotic with at least 2-3 times a week each time lasting for 5-6 hours. The cost of the treatment is understandably expensive. He cannot travel unless he brings along his portable 'kidney' or unless prior negotiations have been made with a dialysis centre to manage him during his visit. Even at best, his 'machine' can only take over one of the many functions of a physiological kidney. His haemoglobin level will be persistently low and this would limit his activities. He runs also the continuous risk of transient infections, septicaemia and the ever possibility of running out of dialysis sites.

The pros and cons though obvious, it would likewise be wrong to be too dogmatic to say which is the superior method. It would appear, however, that for the young, transplantation is the ideal, giving him a complete life for his future; while for an older individual a long term haemodialysis may be beneficial in giving him a reasonable life-span and avoiding a major operation.

The Actual Transplantation Procedure

Having thus said so much about transplantation and its possible advantage, how is the whole procedure brought about?

Basically kidneys are procured from 2 sources:

1. Living donors – these are usually closely related to the recipient (parents or siblings). One of the two kidneys is removed as in any nephrectomies except that care is taken to ensure that a long length of artery and vein are attached to the kidney.
2. Cadaveric donors – here both kidneys are removed within minutes of 'Death'.

Again there are 2 criterias of death:

- a) Brain death – the patient's heart is still beating but E.E.G. on at least 2 occasions have shown complete absence of waves. The kidneys are taken out with the heart still beating. No doubt the kidney from such a 'cadaver' would be extremely 'fresh'. This form of 'death' however may not be morally accepted in many societies.
- b) Cardiac death – here death is only considered when the heart stops and the kidneys are removed within minutes of cardiac arrest.

Kidneys procured in any manner are then perfused with an ice cold (4°C) hypertonic Ringer lactate solution to rapidly cool the kidney and to wash off all the blood cellular elements. They are then stored in this solution inside a sterile container until the recipients are ready for transplantation. Kidneys maintained thus can at least be preserved for 24 hours.

In other countries where an exchange of kidney programme exists the kidney obtained may have to be transported to another country where a matched recipient is waiting. This is done using a 'Belzer' machine where the kidneys are continuously perfused with an ice cold oxygenated plasma protein solution in a pulsatile manner.

The kidney so prepared is then transplanted to the recipient into his right iliac fossa with the renal artery joined to the internal iliac artery and the renal vein to the external iliac vein and the ureter into the bladder through a submucosal tunnel. Very meticulous care is taken for all the anastomosis as the recipients are in no way to withstand any complications.

Properly preserved and performed, the transplanted kidney usually functions immediately and start to produce urine. Of course, some degree of rejections are bound to occur in the years to come.

The Problem

There is no doubt that homograft renal transplantation is the answer to terminal renal failure. The procedure as we have realized is relatively simple and easy to perform. Why then is renal transplantation performed at such a slow rate in Hong Kong?

The basic problem is the inavailability of donor organ, the stumbling block being the reluctance of the next of kin of a deceased person to consent for the removal of an organ from the dead immediately after death. Often times the transplant team is not only faced with a straight negative answer but occasionally they are even threatened. I distinctly remember one incidence occurring a few days after an unsuccessful request for kidney donation of a girl whose brain has been smashed in a traffic accident. The girl finally died and the unfortunate grieved family full of vengeance attempted to assault me as if I was the cause of her death.

The next of kin, however, should not be shouldering all the responsibility for their reluctance is based on some old Chinese superstitious myth coupled with the lack of understanding. For in most peoples' mind, a consent to donate an organ would mean that the doctors would give up the patient in preference to the kidney or that the kidney might be removed while the patient is still 'living'. Let it be emphasized that it is the doctors duty and his pledge to help the sick and treat the dying and it is only when the patient still dies inspite of all possible attempts within his power then the organs will be removed for the betterment of others.

Why not Living Donors?

Before one embarks on using living donors' kidneys, I think one has to balance a few facts:

1. Donor nephrectomies may be associated with complications although reported incidences are low;
2. There is no guarantee that kidneys so transplanted will function or will not face with adverse rejection;
3. Hong Kong is in an environment where genito-urinary tuberculosis is endemic and we lie in the world's 'stone' belt, so that if one is not careful, one may have to manage the donor in years to come for renal failure.

I am not denouncing nor condemning living donor transplants, it definitely has its place and in well matched siblings both the graft's and the patient's survival figures are much better than cadaveric grafts. Living donor transplant, however, should only be done judiciously with both the donor and the recipient well investigated and well matched in their HLA antigens. Both the donor and the recipient should realize the risks they are involved and should be well psychologically adapted to the procedure. The team performing the operation should be one with a good experience in transplantation behind them and should performed with great meticulous considerations. The post-operative management team too should be one that have managed a considerable number of transplantation before. There is definitely no place for a surgeon who does an occasional transplant to take on the task of doing living donor graft for the sake of simply doing it and for sensational reasons.

It is only when all these criteria are well considered and balanced would I accept a living donor transplant as truly and sincerely justified.

The Future

Kidney transplantation in Hong Kong has come, the problems and the needs are there and it will stay!

The future advancement and development of this procedure in our communication should, I think, follow some specific lines.

Cadaveric graft should be the main source to pursue on. To this effect, the administrators and the general practitioners will be the transplanters' best help. The role of the administrator is to launch an educational programme for the mass media; and to make known to the public of the basic need and that they are the best help. This is in no way an impossibility for if one remembers the 'blood donation' situation one would recall that a decade ago most of our bank blood comes from servicemen coming to Hong Kong for holidays while now thanks to the unceasing effort of blood donation campaign the idea has gone round to the local population, and blood donation by the local residents is no more a rarity.

The practicing doctors can help by directly approaching the next of kin of the dying, for he is the man, their family doctor of many years, whom they trust and believe.

A central registry should be set up to keep records of all the patients on the transplantation waiting list together with their tissue typing and other characteristics. On the same issue, a comprehensive tissue typing laboratory with a basic panel to type Chinese and Southeast Asian should be established. This would ensure that a donated kidney will be offered to the recipient that matches best. It would also stimulate further interest, enthusiasm and justification for living donors too, for with a proper tissue matching a better result could be predicted for siblings and parents transplantation.

A Southeast Asian transplantation programme should also be established similar to that in Australia, in Europe and in America whereby kidneys harvested in one country can be flown to another country in accordance with the

tissue matching characteristics. With proper preservation, a harvested kidney can be kept alive and healthy for at least 24 hours, during which time a kidney could easily be transported from one centre to another and hooked up to the recipient.

Advancement in any branch of science can never be made without continuous research for improvement. The local philanthropists should be made aware that transplantation is available and possible in Hong Kong so that instead of donating money to an individual to go overseas for a transplantation and thereby benefiting one individual, the money so donated could be accumulated and used in Hong Kong to establish a research fund for improvement in transplantation.

Finally, one should stress that although it is the transplant surgeon who does the transplantation it is the partnership between the surgeons, the nephrologists and the members of the transplant team that is necessary to obtain maximum benefit and optimum survival for the patients with chronic renal failure.

Acknowledgement

I would like to thank Prof. G.B. Ong for his permission to publish this paper.

REFERENCES

1. Carrel, A. *La technique operatoire des anastomoses vasculaires et transplantation des visceres*, *Lyon Med* 98: 859 (1902)
2. Carrel, A. and Ullman, E. *Experimentelle Nierent Transplantation Wien Klin Wochenschr* 15: 281 (1902)
3. Lawler, R. H. et al *Homo-transplantation of the kidney in the human: a preliminary report*. *J.A.M.A.* 144: 844 (1950)

LEGENDS

Fig. 1 Post-transplantation intravenous urogram



Human Life-Span Development

by
K. S. Francis Chang

Emeritus Professor of Anatomy, University of Hong Kong.

*The days of our age are threescore years and ten; and though men be strong, that they come to fourscore years
So soon passeth it away, and we are gone So teach us to number our days: that we apply our hearts
unto wisdom.*

Psalm 90.

This short communication is largely inspired by the experience my wife and I had with our grandnephew during his stay with us in our humble home for his long Summer vacation. He was a sweet little boy when we saw him last, shortly before my retirement from Hong Kong. In the interim period of a few fleeting years, he has grown to a tall and superbly built "man". His height was in the 90th percentile of his 15-year-old peers in Hong Kong. As we met again when he appeared at our doorstep, our first impression was that we had never met, seen or known him before, for he has changed and grown out of recognition. During the first 2 or 3 weeks, we almost gave up hope of ever being able to cope with him, for he seemed to have all the hallmarks of a spoiled youngster, undisciplined and inconsiderate, thinking only of what he wanted to do and to have without a thought of others, and how his deeds might affect them. At the same time, we found him to be very clever; he has potentialities which truly awe us, potentialities capable of almost anything if he puts his mind to it. His is a case to challenge the best efforts that education, guidance, and direction can provide. We realized that much of our difficulty with him could readily be attributable to the yawning gulf between our ages: he at the dawn of life and we at the eventide. And yet, though still a child, he is a strange mixture of premature maturer, a mature prematurer and, in brains, a superior inferior. We are glad to say that in the latter half of his stay with us, there was warm rapport between us — in fact, I have quite fallen in love with this young lad. We have faith in his future and trust that he will grow into a fine man to our pride and expectations.

There are strange paradoxes in our habitual response to some of the true facts of life such as: while we all do have at least some inkling of age differences and the effects they have on us and on our future, we tend somehow to fail to relate other people's age situations to those of ours, that while we know that life is short, in fact, ridiculously short, we fail to relate our life-philosophy to this reality; that while we know that life is frail but precious, we tend to be so careless with it and casual about it, personally and socially; that while we know human happiness depends ultimately on our relationship with others, we tend to disregard this supreme significance in our daily life.

It is my persuaded belief that we can benefit and gain much wisdom if we pause awhile and reflect on our life-span and its development. The essence of development or growth is change or progress from one state to another. Growth and development are twin words which can be used either singly or together.

Though our life-span development is a continuum which may vary in tempo and progress, it is normally broken up into three major stages. I shall comment briefly on these stages and significant events such as retirement and death.

STAGE ONE:

This stage covers the first 18 to 20 years of our life. It stretches from intra-uterine growth and development, through the phases of infancy, early childhood, mid-childhood, late childhood (prepubescence), and puberty to young adulthood. This stage and all its phases are reasonably well known and charted; thousands of research papers have been published. As Jill Tweedie said: "the predictable crises of childhood have, over the past 25 years or so, been almost alarmingly well documented. The little dears have merely to twitch and some adult will leap in, polishing phrases and buffing up aphorisms: a touch of sibling rivalry here, an imitation-learning there. Spock is in his heaven, all is right with the world." Numerous charts, norms, graphs, manuals and books are readily available on all phases of this stage, for so much attention has been given to it. But as Professor Sir P. B. Medawer said: "Those who argue that our concern is with the preservation of life in infancy and youth, so that pediatrics must forever take precedence over gerontology, fail to realize that the outcome of pediatrics is to preserve the young for an old age that is grudging them. There is no sense in this sort of discrimination."

STAGE TWO:

This stage covers the next 40 or so years. These years are actively engaged with life in general, in further education, in work, in the business of earning a living, in marriage and raising a family. Once the adolescent crunch is over, there are no more manuals or guidelines because research has not been extended into the next stage of human development, that is, adulthood, which has been traditionally conceived as essentially a single entity. Recently, attempts have been made by a few on the American scene, notably by Gail Sheely in her recent book (1977), entitled "*Passages: The Predictable Crises of Adult Life*." From her data of many individual case histories, Sheely constructed a blueprint of adult life pattern, consisting of milestones and transitions from one state of being to another. According to her study, these phases are not only normal but predictable and expected; they may vary in age individually, but they are unchanging in sequence. Her findings are in fair agreement with Eric Erickson's 8 phases of man. She advises that these predictable phases predicate that no part of personality can be ignored without penalties, sometimes severe enough to cause nervous breakdowns. The aim of life is to know one's self, and to seek out intricate pieces of the jigsaw which compose personality and to give each one its place in the pattern. Any element of a character can be buried for a while in the pursuance of other and quite contradictory elements but each must eventually be exhumed and developed if the whole, the human being, is to maintain a state of happiness and equilibrium. The male and female adult patterns are quite different due in part to the role each is customarily expected to play, and in part to an alternating desire for self-expression, for personal propensities, needs, personal autonomy, and liberation from a restrictive regime imposed on them. The husband's and wife's patterns may be out of step with each other; considerable understanding, adjustment, sacrifice, and self-control are needed in order to preserve peace and happiness and, let us hope, the fulfillment of a richer and fuller marital life. Undoubtedly more research is required to confirm her findings and to know more. As Charles Harrington and John W. M. Whiting have pointed out in *Psychological Anthropology* (edited by Hsu, 1972), anthropologists have so far neglected the socialization process and personality development of adulthood. Lacking also is an overall and comprehensive study of the pattern of physical development during passage through this period of life.

To the above, it may not be out of place for me to add that heredity is what we are given; we must accept it as it is, but this does not mean that there is nothing we can do about it. Our success and happiness in life depends largely upon our ability to recognise and evaluate native capacities and limitations, to make the most of the former and to compensate in every practical way for the latter. This cannot be done intelligently unless we know what these capacities and limitations are and how to make the best of them with available resources. Development takes patience and, above all, courage.

Retirement: Stage 2 is brought abruptly to an end by mandatory retirement. Few people think about it until they are close to it. Neither did the legislative bodies which determined the retiring age consider the matter in any seriously profound and responsible manner apart from what seemed expedient at the time. Admittedly, this is a large and complex subject. The strong case against mandatory retirement is that it is based arbitrarily on a fixed chronological age rather than on physiological age, type of work (physical or intellectual), or on differential aging. Paul Woodring in his two-year thorough investigation into the history of mandatory retirement at the age of 65 in U.S.A., made some interesting discoveries, such as: (1) The decision on a fixed chronological age for mandatory retirement is of recent origin, dating back no further than the passage of Social Security Act of 1935; before that time many employers had no fixed age for retirement, and such requirements as did exist varied in different kinds of work; (2) The choice of the age of 65 was made by a small group of youthful New Deal brain trusters who had been assigned the task of drafting the bill to congress; (3) It is questionable that many congress men gave much thought to the giant step they were taking toward institutionalizing retirement; (4) The people most immediately affected were not consulted: no effort was made to find out whether people wanted to retire at 65, nor, it appears, were there any congressional hearings at which the choice of age 65 was discussed and debated. According to K. W. Schaie, who has directed a considerable amount of research at the Gerontology Centre of U.S.C., if a meaningful age were to be selected for retirement today, it would have to be at least a decade later than would have made sense 20 years ago. In Hong Kong, age for mandatory retirement is considerably younger; it is applied mainly to government employees (55) and to the staff of the universities (60). The decision of these correlated retiring ages must be very old, dating back to the conditions, concept and policies of an era about a century ago. Administrators have come and gone with grand renovating ideas and plans, but few, alas, have been original or inquisitive enough to examine and rethink retiring age appropriate for the present era in the light of scientific, technological, medical, public health, and social advances, better living conditions and facilities, and better prospect of life expectation today in contrast to the circumstances of the distant past.

STAGE THREE (Post Retirement):

This stage covers about 20 years, roughly as long as Stage 1. All states of mental and physical aging may be seen until life runs its full circle. Some age slowly and some decline quickly. Some keep contemporary, even ahead of their times, richer in wisdom, insight, and experience. Some old people produce monumental work in old age; for example, Edison, who did much of his best work between 70 and 80, and Titian who painted his masterpiece at 85; but generally old age is not coincident with intense activity and productivity. Jean Rostand, an eminent French scientist, said in a radio interview (translated into English by A. H. Brodrick, 1955) that in all sincerity he deemed old people to have a most important intellectual and moral role to play in society, adding "I am not just saying this because I am myself approaching the age of 60. I used to hold the same view when I was quite young. Just think. If old age were in need of a champion, would not one single old man — I am thinking of Einstein now — be enough to rehabilitate the whole group of

the aged? Even if we leave on one side the great achievements and the great discoveries we owe to old men, we must never ignore those precious and quite irreplaceable strata of wisdom, doubt and incredulity that Time lays down on the spirits of those who have been proved worthy to survive for long and to venerable old age."

Few people anticipate growing old with any particular relish. Some strive against it with all their might and main. What do they fear? In many cases it is not death that they dread. They see their life-long friends, companions, and loved ones pass on one by one. In their losses, they are sad, forlorn and diminished.

Considerable research has been done and is continuing on the mechanism of aging, covering wide fields of physical, chemical, environmental, biological, hormonal, psychiatric, and emotional factors.

Death: According to Lewellys Barker only rarely do old people know, when on their death beds, that they are about to die. Osler made a careful study of the mode of death and the sensations of the dying in the case of some 500 persons. He stated that about 90 of the 500 suffered bodily pain or distress, 11 showed mental apprehension, 2 were positively terrified, 1 expressed spiritual exaltation and 1 bitter remorse. But, he continued: "the great majority gave no sign one way or the other; like their birth, their death was a sleep and a forgetting." To prolong the suffering of the incurably sick and of those racked with pain is, like war, a misuse of science. In this respect, we are at present still in the Dark Ages.

Death is a broad exit admitting people from all directions, unlike the narrow public arch at birth, of which Goethe said: "this is the arch under which all mortals must pass" (except birth by caesarian section).

Seeing how short our life-span is, there seems really no place for inordinate ambition and personal aggrandizement. On the other hand, it gives ample opportunities in the service of others and to the promotion of Peace and Happiness.

The Hereafter: When Confucius was asked about life after death, he shrewdly avoided giving a direct answer by saying: "As we do not know about life, what is the point of asking about life after death?" Personally, I prefer keeping an open mind because we are ignorant about so many things at present.

May I end by quoting the following poem by Yuan Mei (1715-1797), translated by Father J. A. Turner, S.J.?
(*A GOLDEN TREASURY OF CHINESE POETRY*).

Still planting trees at seventy!

Yet mock not, neighbour,

My wasted labour.

Yes, mortal men

Must die, But when?

Fortunately

None can foresee.

栽樹自嘲 袁枚

七十猶種樹，
旁人莫笑癡。
古來雖有死，
好在不知知。

* This is the last article written by our late Emeritus Professor of Anatomy – Professor K.S.F. Chang – submitted to us through a close friend and a former student of his, Dr. Frank C.Y. Cheng. Professor Chang passed away on the 14th of April 1978 and we would like to express our greatest sympathy to both his family and friends.

**MAY BE YOU'D
LIKE TO KNOW**



Something about Anaesthesiologists

INTRODUCTION

It is a wrong notion held by some of us that an anaesthesiologist is one who merely knocks a patient unconscious in the O.T. In actual fact, anaesthesiology is one of the specialized branches in medicine which embraces a wide spectrum of skills and technique. In this article, the reader may gain an ABC of what an anaesthesiologist really is. .

ROLE IN HOSPITAL

Before an operation, an anaesthesiologist is responsible for ensuring that the patient is in the optimal or best-fit condition for surgery. Naturally, he has to make visits to the patient concerned, when the physiological condition of the patient is assessed and documented. Psychological support and reassurance during this period sometimes prove to be very beneficial – it is something an anaesthesiologist is ready to give. Furthermore, prior to operation, the anaesthesiologist is the one who determines if any pre-medication is necessary.

An anaesthesiologist has quite a heavy burden to shoulder in the O.T. Needless to say, commensurating with the type of operation, a general anaesthetic or regional anaesthetic is applied before hand by the anaesthesiologist. Without any interruption, he has to monitor the patient's conscious level, blood pressure, respiratory rate, cardiovascular status etc. and to conduct blood transfusion if required. He tries to maintain the patient in the best possible shape during the operation. Throughout this period, he is on the vigilance in case any emergency should arise when he will notify the surgical team without delay.

After the operation is performed, the job of an anaesthesiologist is far from finished. He is responsible for the recovery and resuscitation of the patient inside the recovery area. He also takes part in the resuscitation of in patients in the ICU. When the necessity arises, artificial respiration or cardiac massage is administered.

To teach the medical students, a few anaesthesiologists are invited by the USU as honorary lecturers.

THE MAKING OF AN ANAESTHESIOLOGIST

The MBBS degree is a prerequisite for picking up the specialty. After which, one may work as a medical officer in a government hospital with sub-specialty in anaesthesiology. It needs a minimum of 4 years of working experience before one is allowed to sit for higher fellowship examinations such as FFARCS in United Kingdom or FFARACS in Australia. (Anaesthesiology is one of the few remaining specialties that allows one's higher qualification to be directly recognised in the USA.)

If you are thinking of becoming an anaesthesiologist, a good knowledge in physiology, pharmacology and physics is favourable.

THE STATUS QUO

Under the Medical and Health Department, the number of anaesthesiologists employed is about 50 (including consultant anaesthesiologists). The turnover rate is quite high, and vacancies are indeed far from saturation. A substantial number of anaesthesiologists takes up private practice.

CONCLUSION

In short, an anaesthesiologist has a key role to play both inside and outside the O.T. Undoubtedly, the task of an anaesthesiologist seems appalling, nevertheless, it is certainly a challenging and rewarding profession.

Something about Radiotherapists

Not long after the discovery of x-rays by Prof. Dr. W.C. Roentgen, professor in physics at the University of Wurzburg, ionising radiation was used in the treatment of diseases. Ignorance of the radiobiological effects of such radiation among the pioneering radiologists of the earlier part of this century led to tragic consequences due to its carcinogenic effect causing skin cancer and leukaemia in the radiation workers. Today the vast knowledge of the effects of ionising radiation accumulated throughout years of research and clinical experience enabled the International Commission of Radiation Protection to formulate strict sets of rules and regulations for the safe handling and use of irradiating apparatus and sources, so that the work of a radiotherapist is now no more dangerous or hazardous than that of a surgeon or a physician.

What is Radiotherapy

Radiotherapy is the use of ionising radiation in the treatment mainly of malignant diseases. Whereas previously many benign conditions were also treated with radiotherapy, the numbers so treated are now much less because of the possible carcinogenic effect. The major benign disease in which radiotherapy is still considered to be the treatment of choice is thyrotoxicosis, where it is found to be safe.

Ionising radiation causes cell death through the deposition of energy within critical targets in the cell, believed to be mediated through free radicals produced by the interaction of ionising radiation and body water.

Modern radiotherapy employs many different equipment and sources of radiation. Linear accelerators of many million electron volt energy are the most powerful machines producing deeply penetrating x-rays. Other machines use radio-active isotopes, such as cobalt-60, emitting gamma-rays, also in the million electron volt range.

For more local and superficial techniques, sources of radio-isotopes such as radium-226, cobalt-60, caesium-137 contained in specially constructed applicators are inserted into body orifices as in the treatment of carcinoma of the cervix.

Another form of radiotherapy involves the systemic administration of radio-isotopes. Examples of these are the use of phosphorus-32 in the treatment of polycythaemia vera, and iodine-131 in the treatment of carcinoma of the thyroid and thyrotoxicosis.

Newer forms of radiotherapy use beams of particles such as electrons and neutrons.

Radiotherapist

A radiotherapist is involved in the use of ionising radiation in the treatment of diseases. His counterpart, the diagnostic radiologist, uses ionising radiation and other radiation, such as ultra-sound, in the diagnosis of diseases.

The work of a radiotherapist includes clinical duties. He collaborates with his clinical colleagues in the investigation and diagnosis of the disease and in making the fundamental decision as to whether or not it should be treated by radiotherapy. He is responsible for the medical care of the patient undergoing radiotherapy, and for ensuring that adequate records of the patient and his treatment are kept.

A radiotherapist also plans his patients' treatment. The aim of treatment planning is to irradiate a defined volume of tissue and to deliver to it a dose considered as optimum. He is assisted by a hospital physicist and radiographers in these tasks.

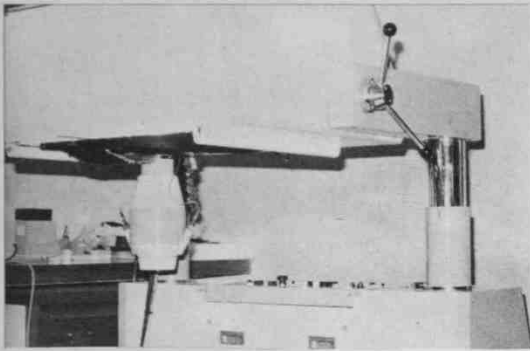
The Institute of Radiology and Oncology of the Medical and Health Department is an approved training centre of the Royal College of Radiologists, and in-service training programme is carried out continuously. Candidates accepted for training should have at least one year's clinical experience after full registration. After 12 months' preparation he will be permitted to sit the First examination of the F.R.C.R. Candidates who have passed the First examination will be permitted to sit the Final examination three years after commencing their training, having held approved posts throughout the three-year period. Candidates who have passed the First examination are also eligible to sit the D.M.R.T.

Examinations of the Conjoint Board on completion of two years' training.

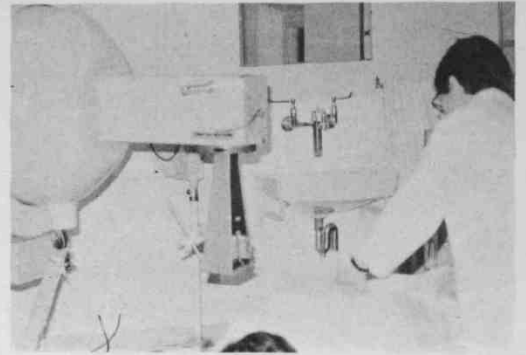
Cancer Problem

Cancer is to-day the largest single killer in Hong Kong, and as the general population ages, cancer will assume greater and greater importance as a public health menace.

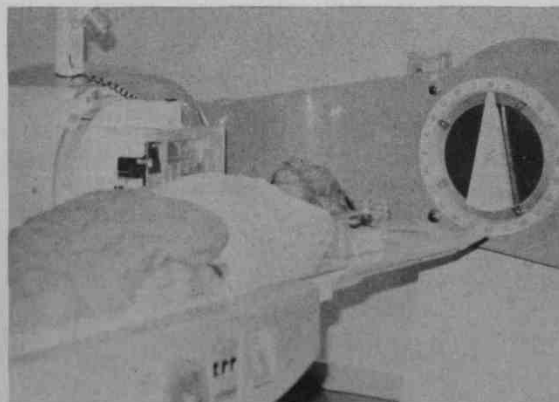
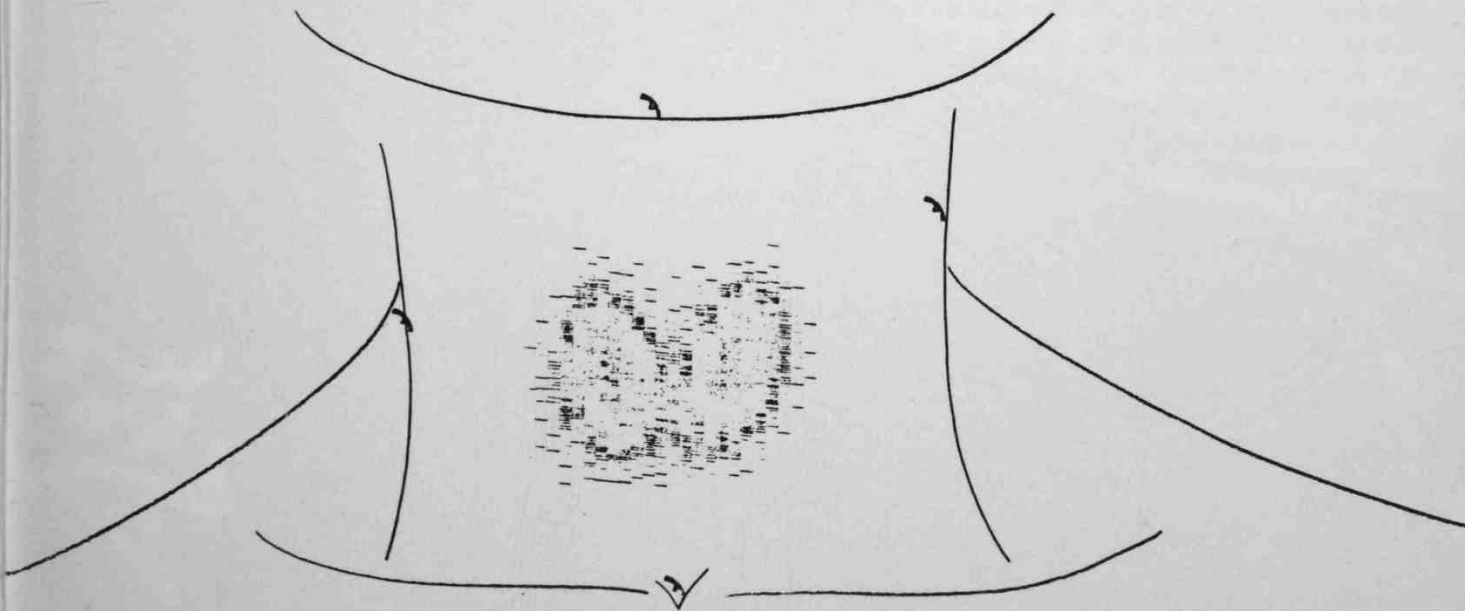
Radiotherapy is an important weapon in the fight against cancer, being capable of curing many different forms of cancer by itself or in conjunction with surgery and/or chemotherapy, and offers a rewarding and meaningful career to a young doctor who wishes to serve the community in which he lives.



Rectilinear Scanner



Maxitron-250



Cobalt Machine



張

相信每個人都做過夢，在夢裏您可能品嚐到願望達成的歡欣，或失望的痛苦；您可能留戀過夢中溫馨的情景，也可能因重臨那您設法逃避的境界而恐懼、驚惶，……但無論如何，夢總是給予人一種神秘的感覺，那是由於我們對於「夢」本質的無知。夢中的所見所聞，往往離奇怪誕，似乎毫無系統，可是有些夢又似乎與現實生活有密切的關係，並且有時還會使人把夢當做判斷禍福的徵兆。古時的印度、波斯、希臘和埃及都有「夢經」，根據夢境來推斷人事的禍福。中國周朝時代，甚至設有「掌夢」的官職，替皇帝大臣們占定夢中所見的吉凶。那麼究竟作夢是什麼一回事？我們為什麼會作夢呢？夢有什麼功能呢？近代科學家對於夢作了很多研究，我們在這裏姑且將他們對於夢的論議歸納起來，試在剖析一下夢的性質。

(一) 為什麼會作夢？

(甲) 一些生理學家認為夢是大腦皮層受外界刺激後殘留痕跡的再現。人在睡眠時，接受外界刺激的大腦皮層的神經細胞大都休息了，可是有一部份細胞仍然興奮着，睡眠前所受的刺激痕跡在這些細胞內發揮作用，於是人就會做夢了。所以，夢裏所遇到的人和事，很多都是想過、聽過、見過或做過。這和心理學家所謂夢是「客觀」經驗的再生所吻合。

(乙) 夢可能是由於外界或內在的刺激所引起

如果說外來的刺激是構成夢境的原因，那麼「實驗性地製造睡夢」是否可能呢？心理學家莫里 (Morry) 作了一個實驗。他實驗的方法是靠在椅背上睡覺，叫人在他人睡以後，給予種種刺激（事先不作任何報告），結果得到以下的結論：—

- (I) 拿著剪刀和鉗子，在耳邊敲響——夢中就會聽見鐘響的聲音，慢慢的，這種聲音就變成了警鐘之聲。
- (II) 聞香水——他夢見自己在香水店。
- (III) 點燃火柴，然後給他嗅——結果夢見自己置身海中（這時風由窗外吹入），然後是火藥庫爆炸的現場。
- (IV) 用點着的紅燈籠，在他面前幌動——這回做的是颶風夾着閃電，及強烈暴風雨的夢。這種颶風，曾在莫里在英、法海峽所親身經歷過。

然而，在睡眠中繼續活動的知覺還有「身體內部的感覺」。但是由於睡眠時對外界的注意力減弱，身體內部的感覺要比其他刺激更能帶給強大的作用，引起作夢。尤其當膀胱受壓迫，肚子非常的餓，或心臟有病時，很少會不做與這些器官有關的夢。下面是一位四十七歲婦人所作的夢：「我拉開廁所的門，不料，裡面竟躺着一個人。看他好像呼吸非常困難。我心想他一定是個癲癇症的人吧！一面想，一面退回自己的房間，但又很想上廁所，於是又去了。但那人仍躺在那兒，這回是睡得很平靜。大概是癲癇症發作之後太累的緣故，可是我卻忍不住了。」

夢到這裡，她醒了，原來她是小便很急呢。

(丙) 夢是個人內心的願望或恐懼所引起的

如妻子夢見出征的丈夫平安歸來，或夢見丈夫受傷於沙場，被送往醫院，這都是因個人的憂慮或願望所致。佛洛伊德 (FREUD) 為證明夢是願望的實現 (WISH-FULFILMENT) 的理論，他將自己作的夢作了以下的解釋：—

伊瑪的打針 (Irma's injection) ——『我曾以精神分析治療一位與我家素有交情的女病人，由於不時擔心着萬一失敗將會影響我與她家人的友誼，而使我倍感棘手。但很遺憾，她在我手中的治療經過並不太順利，結果在患者的不同意下我們中斷了治療。有一天我的同事奧圖醫生拜訪了這患者——伊瑪的鄰居，回來後與我談起。於是我問起她的近況，所得的回答是：「看來似乎好一些，但仍不見有多大起色。」那種語氣聽來就有如指責我的不對，就在當晚我作了如下一個夢：有一個大廳裏賓客雲集，伊瑪就在人叢中，我走近她，劈頭第一句話就責問她為甚麼迄今仍未接受我的「辦法」。我說：「如果你仍感痛苦的話，那可不能再怪我，那是你自己的錯！」她回答道：「你可知道我最近喉嚨、肚子、胃都痛得要命！」這時我才發現她變得那般蒼白、浮腫，我不禁開始為自己以前可能疏忽了某些問題而擔心。於是把她帶到窗口，藉着燈光檢查她的喉嚨。正如一般常有假牙的淑女們一樣，她也免不了有點不情願地張開嘴吧，其實我以為她是不需要這種檢查的……結果在右邊喉頭有一塊大白斑，並有小白斑排成像皺縮的「鼻甲骨」(turbinal bone) 一般。於是我很快地叫 M 醫師來再做一次檢查，證明與我見一樣。……M 醫師今天看來不同於往常，蒼白、微跛，而且臉上鬍子刮得一乾二淨……。現在我的朋友奧圖也站在伊瑪旁邊，另一個醫生里奧波德在叩診她的胸部，並說道：「在左下方胸部有濁音 (dullness)。又發現在她的左肩皮膚有「滲透性」病竈 (infiltrated focus) (雖隔着衣服，我仍可摸出這傷口)，M 醫師說：「這毫無疑問是由細菌感染所致，那沒甚麼問題，只要拉拉肚子，就可以把毒素排出來」。……而我們都十分清楚這是怎樣搞出來的，大概不久以前，奧圖由於伊瑪當時身體不舒服而給她打了一針「Propyl……propyls……propionic acid……trimethyl lamin」(那構造式我可清楚地看到呈現在我眼前)……其實，人們是很少這般輕率地使用這種藥的，而且很可能當時針筒也是不夠乾淨的……。」佛洛伊德用了十多版去分析這個夢，他認為『整個夢的結果，就在於表示伊瑪之所以今日仍活受罪，並不是我的錯，而應該歸咎於奧圖的，由於奧圖告訴我，伊瑪並未痊癒，而惱了我，我就用這夢來嫁禍於他。「通常這種針，我們是不輕率就打的」；這完全是在指責奧圖的不對。記得當天奧圖告訴我伊瑪的事時，我心裏頭就這麼罵他：「你怎麼這般不明是非，輕率地聽信伊瑪家人一面之詞」，但這「輕率」的打針又使我聯想到，我那用過量「古柯鹼」(Cocaine) 而死的朋友，以及可憐的馬迪拉……。很明顯地，一方面我是藉着這夢在推卸我的責任，而對不利於我的人一一報復，而另一方面我卻始終擺脫不開良心的自譴。』

(丁) 有些夢，作夢的原因都不能用以上三點所解釋的，如：

(I) 互夢：

這裏有一個實例，是葛里森博士 (Dr. Adele A. Gleason) 於一八九二年二月從紐約州的 Elmira 寫來的：

「一八九二年一月二十六日，星期二，晚上在兩點到三點的時候，我夢見自己站在一個黑暗的樹林裏一個孤寂淒涼的地方。一種巨大的恐懼湧上心頭，似乎一個很熟識的人出現了，走向我這裏來，搖動一棵靠近我的樹，樹上的葉子開始燃燒冒出火焰來。這個夢極為生動鮮明。四天以後，我見到了夢中的那個熟人，對他說：「星期二夜間我有一個很奇怪的夢。」他說：「你別告訴我，讓我來說明那個夢，因為我知道我也夢見了相同的事。」於是我一點也沒有說，他複述了那個夢一遍。從那天做夢醒來的時候，他才知道同時也有人做了這個夢。」

葛里森博士把她做夢的時間寫得很肯定，是因為她醒來的時候看過她的錶。早上起來她在記事簿上寫下

來：「驚夢之夜——J. R. J.」，這三個字母是她朋友喬斯林 (Mr. John R. Joslyn) 的縮寫。喬斯林是一位律師，他在同一時間所寫的紀錄如下：

「一八九二年一月二十六日，星期二，我夢見在一片孤寂的樹林裏，我曾在那裏打獵，也曾於入黑之後在那裏走過。在那裏我遇見一位朋友，他站在離路邊有十呎遠的矮樹叢中，顯然是被我所看不見的某種東西嚇得不能走動，並且呆了。我走向他身邊並且搖動那矮樹叢，於是落葉就燒起來了。數日後我遇見這位朋友，她是一位女仕，她說在星期二早上做了一個很生動的夢，我說：「我先把我的夢告訴你」，於是沒有她的任何提示，我說出了一個跟她的相同的夢。做夢之後立即就醒了，由附近鐵道上某一列夜車我知道了時間，因此確實知道是在同一夜某一時間做的夢。這列夜車經過 Elmira 的時間是清晨三時。」

看起來似乎這種夢是精神感應的，卻沒有自然根據的合適解釋。



(II) 預兆性的夢：

以下是一個著名的例子：

林肯總統於被行弒前數天，曾告訴他的好友Ward Hill Lamon 有關他所做的一個夢。夢中，林肯見到一名侍衛正在看守着一具停放在白宮東翼的一間房的屍體。當他問及那屍體是誰的時候，那侍衛告訴他：「是總統。他被人行刺了。」

分析：

①可能是林肯的精神感應：

推理上，林肯「預兆」性的夢和被刺的事皆非預料之外。生前，林肯曾屢次從信件中被警告有關一羣煽動份子正在策劃行弒他。此外，多項行刺計劃也受到他密切的關注，林肯本人亦十分瞭解他正處於一個不利的地位，生命時刻受到威脅。

②統計結果

從純數學觀點上分析，每天有這麼多的夢和做夢的人，必定有一些會實現的。

再看看從精神研究學會報告第十一卷，五七七頁所摘述的例子：

「桂女士是住在伯父家裏的，和伯父情如父女。她夢見在一個春光明媚的早晨，和姐姐在客廳裏欣賞園中繁茂的花朵和覆在花上的微雪。夢中得知伯父在距家三哩的一條驛馬路旁死去。身穿深色粗線衣服，馬站在他身旁，屍身用禾稈墊著由農家蓬車送回家來。她和姊姊等候屍車回來。蓬車抵達後由兩位熟識的朋友把伯父的屍體搬運上樓，因她的伯父身材高大，體重不少，所以感到非常吃力。上樓時伯父的左手垂下，觸碰到欄干。這些情景歷歷如繪，使她恐懼莫名，以至驚醒。

早晨起來，深感不安，便詳盡地告訴伯父，並請求他不要再單獨騎馬經過某一特別路徑。他答應以後騎馬行經該路時必定帶一隨從同行。

夢境逐漸淡忘。兩年後，她作了同一個夢，一切細節絲毫不變。桂女士怪責伯父不守諾言，他承認偶然有破例。四年後，桂女士出嫁，不再住在伯父家中，遠遷到倫敦，那時她正等待初次臨盆。先一夜即感到不適，再次作了同一個夢，所不同者，是在倫敦寓所的臥室而不是在伯父的客廳，而告訴她這噩耗的是一位身穿黑衣的紳士。醒來困惑異常，但因病體不支，故暫時忘懷了。數日後，醫生囑她寫信給伯父。信抵達時，是她伯父死前兩日。

某晨，獲報伯父到訪。怎料入室者是位著黑衣的紳士。桂女士即哭著說「上校必定去世了。我已知一切，夢已告訴我了。」在詳細詢問下，夢裏所發生的事完全應驗，即使手觸欄干的細節，亦絲毫不爽。搬屍的人，亦如夢一樣。所不同的，便是繁花和微雪。桂女士後來聽聞族人說，花及雪都不是死亡的標記。」



(二) 究竟人在睡眠後何時作夢呢？

如果根據眼球的轉動，人的睡眠可以說是由「快速眼球轉動」睡眠 (Rapid-eye movement, REM Sleep) 和 Non-REM Sleep 所組成。在嬰兒時期，REM 出現的週期是每隔一小時左右，而成人則隔一小時半左右，即每晚大約出現四、五次。而每次為時可由五分鐘至一小時之久。事實上，REM 睡眠是精神健康所不能缺少的。

芝加哥大學教授克萊特曼和他的學生做了一項實驗，叫醒凡在睡眠的被測驗者，問他：「你有作夢嗎？」如果他在眼球沒有轉動時被叫醒的話，那他會回答：「我沒有做夢。」可是，如果當他的眼球頻頻轉動時叫醒他，那他會回答：「是的，我正在做夢，我夢見和朋友一起遊玩……。」他會詳盡地將夢中所見所做的事情說出來。在 351 次這樣的叫醒測驗中，有 80% 在眼球轉動時被叫醒的都說有做夢，而且夢境記得相當清楚；而在眼球沒有轉動時被叫醒的例子中，只有 7% 是說有做夢的，而且記憶模糊，零碎不全。於是一些科學家便認為夢境是在 REM 睡眠中出現的。但也有人持相反的意見，認為這只能證明夢記憶得最清楚是在 REM 睡眠時，而作夢可能是在 REM 睡眠前或整晚都在作夢。又有許多人以為夢境中所發生的一切，有如閃電般迅速，但科學家所得結果將之推翻，指出夢境的每一動作，所需活動時間，與醒著時一樣。

(三) 夢的功能：

(甲) 夢可以幫助夢者了解本身不自覺的慾望

這些不自覺的慾望與自身不能並存，因此必須轉變為一種自身所贊許的形式。如：

某夫人在夢中看見她十五歲的女兒死在箱中。這種夢，在理論上，根本不能想像為願望的實現。可是她說，在作夢的前一夜，她曾與人討論過英文的 BOX 等於德文的什麼話的問題。

其實，BOX 就是「箱子」的意思，而她的夢裡就出現了箱子。

從這個夢的其他部份，弗洛伊德的想像是：她一定知道 BOX 和德文的 Buchse 是同一語源的單字，同時也知道 Buchse 是指女性性器而言的俗語。因此立了個假設：認為箱子裡的女孩，指的就是母體中孩子。

當弗洛伊德這樣說明時，她不否認夢的「真象」正是願望的表現。她和許多年輕的婦女一樣，對於懷孕並不感興趣。而且還巴不得早些流產。甚至曾在夫妻鬥嘴之後，憤怒之餘猛烈的捶打自己，企圖致使流產。

，因此夢中出現的那個死女孩，便是願望的實現。但事實上，這已是淡忘了十五年的願望了。

(乙) 夢可幫助我們解決問題，有助於創作和發明。如化學家開克雷發現苯精 (BENZENE) 的結構，就是由於他夢見集結成長而濃密隊伍的原子，像蛇一樣地互相糾纏迴轉著，其中的一條蛇竟然自己咬著自己的尾巴，不停地旋轉。這個夢使他觸電般醒悟過來，假設了苯精的結構。

(丙) 可用作心理治療 (Psychotherapy)

夢常把生活裏未能解決的問題再提出來，致力於尋求解決的方法。通常同一個問題會多次出現在夢境裏，但解決的方法可能隨著病人的心理轉變而異於每一夢境中。

有一個對於生活完全失去信心的人，老是夢見自己趕不上火車。但接受治療後，他夢見剛剛能趕上火車，那表示他已開始恢復信心。後來，他甚至夢見自己在開火車，那是因為他已把生活弄得很好。

但在我們利用夢來作心理治療之前，我們必須了解夢的直正意思。可是釋夢有很多困難：

(I) 夢很少直接說出真正的意思。它支吾其詞，只用象徵來表示，或用隱喻和類推。

(II) 有多種釋夢的理論，不知何去何從。

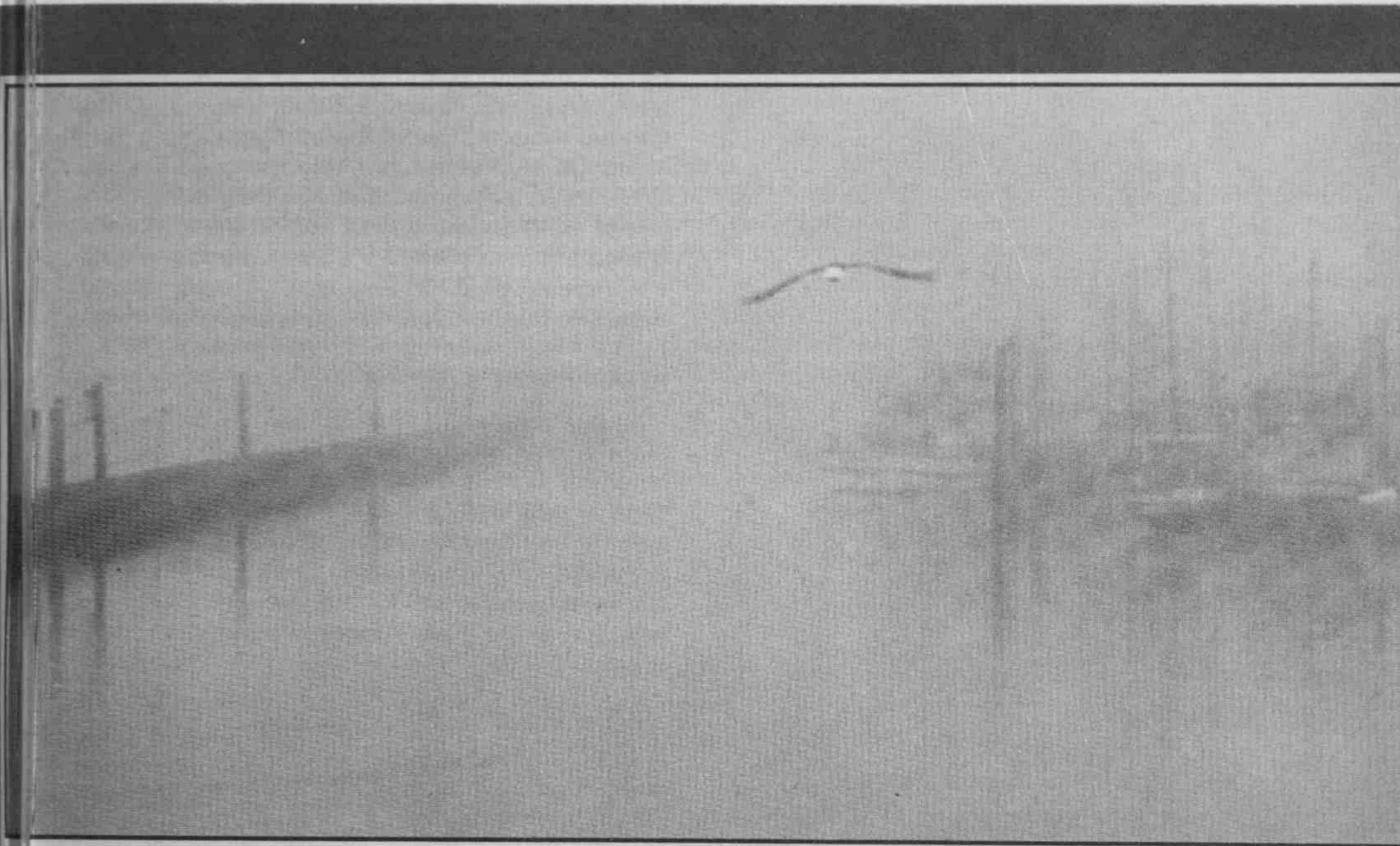
普遍來說，目前有兩種從心理角度去解釋夢的方法：一是傳統的「心理分析」方法 (psychoanalytic approach)，藉着夢者的自由聯想而得到隱藏於夢中的意思或叫「隱意」(latent content)，另外的一個處理方法則為「內容分析」(content analysis)，認為夢的表面內容或叫「顯意」(manifest content) 仍有其價值，是值得研究的。

在心理分析 (Psychoanalysis) 一門中，亦有三種釋夢的理論：一是佛洛伊德的理論，認為所有夢都是表達人的非理性和離羣性 (all dreams are expressions of the irrational and asocial nature of man)；二是楊格的理論，認為夢是顯示超越個人的潛意識的智慧；三是佛洛姆的理論，認為夢是表達任何各種的精神活動，包括我們最「好」(理性)的和最「壞」(非理性)的。

因此在實際從事時，我們應給予各種解釋的可能性以均等的機會，然後再經一個逐步減少的過程，使歸納到一個真正的原因。

雖然科學家們對於夢作了很多研究，顯然我們對於夢的真正性質仍不十分了解，這亦使它對我們繼續有其魅力；正像千古以來一樣。

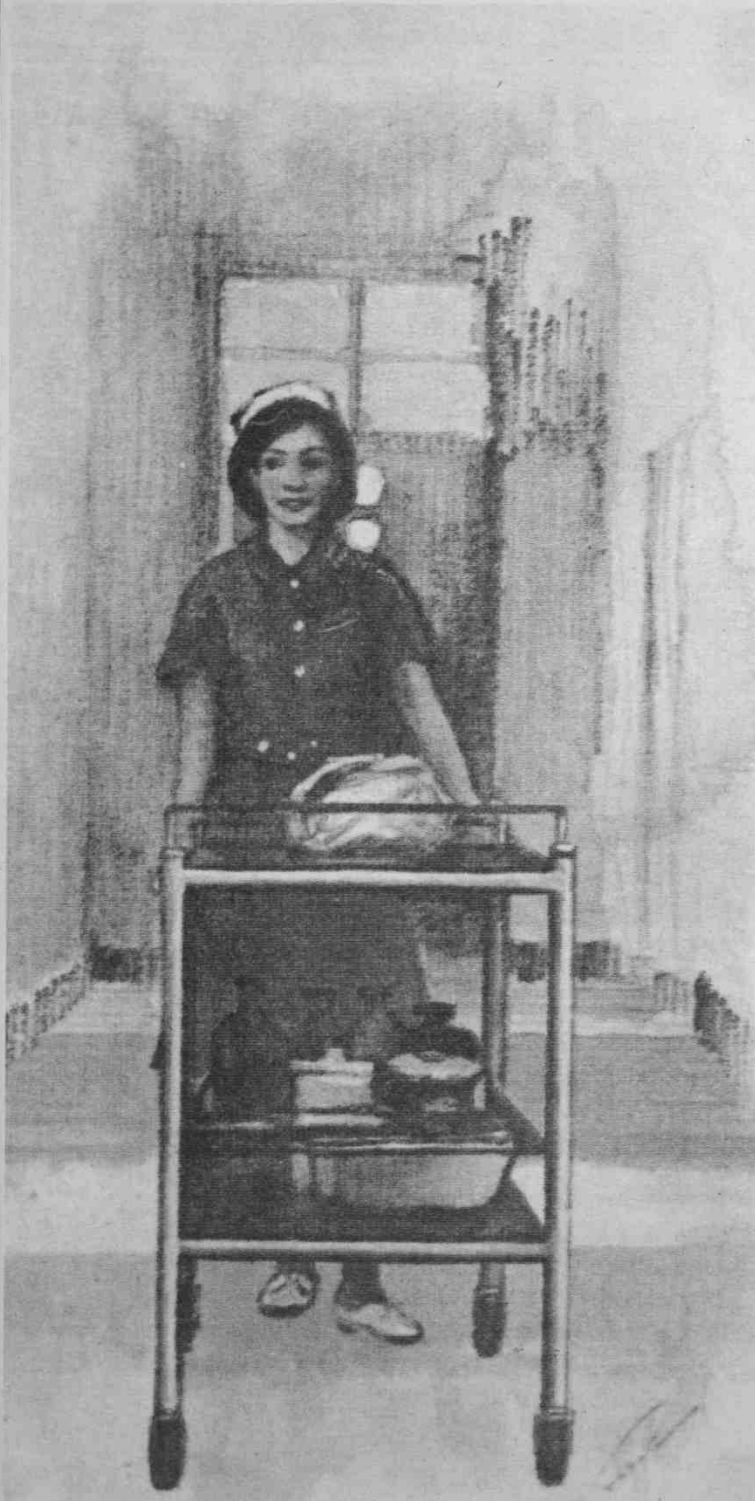
× × × × ×



在那疑幻疑真的國度裏，
你經歷過多少
莫名的絕望、
忽然的狂喜；
遨遊過幾許
蓬萊仙境、
人間地獄。
有溫馨的依戀
也有
驚悚的奔逃。
拋開你那充滿警覺的
緘默，
也許你
仍會懂得說：
「我關心」：
也許你
仍未忘記怎樣為別人
歡笑和下淚。
然而
早晨的鈴聲再一次
把你帶回那
慣常的漠然裏。

陳少本

NURSE TRAINING IN HONG KONG



INTRODUCTION

Nurse training in Hong Kong is mainly divided into two types: the General Nurse Training and Psychiatric Nurse Training. There are two different courses, the two-year and three-year courses. As nurse training in Hong Kong is hospital-based, all nursing schools are situated in approved hospitals. The schools of nursing in Princess Margaret Hospital and Castle Peak Hospital are responsible for the training of Psychiatric Nurses. The three-year course schools of general nursing are situated in Queen Mary Hospital, Queen Elizabeth Hospital, United Christian Hospital, Caritas Medical Centre, Hong Kong Sanatorium and Hospital, and Tung Wah group hospitals. And there are eight hospitals running the two-year course general nursing training, they are: Kowloon Hospital, Gramham Hospital, Hong Kong Sanatorium and Hospital, Our Lady of Maryknoll Hospital, St. Teresa's Hospital, Heaven of Hope, and Tung Wah group hospitals.

REQUIREMENT

If one is between 18 to 26 years old, has a genuine desire to help people, is the sort of person on whom others can rely on and is physically fit, then one is likely to be suitable for training. The minimum academic requirement for the three-year course is passing five subjects in the HKCEE, including English, Chinese and at least two science subjects. While for the two-year course, the applicant should have completed Form 4 or above standard.

PUPIL NURSE

The training of the 'pupil nurse', in the two-year course, majors in bedside care of patients. The final test is based mainly on bedside nursing skill. The total period spent in the classroom is approximately 14 weeks. The teaching is in 'block system'. Practical training lasts approximately 86 weeks in the wards under the supervision of the tutorial staff and/or senior nursing staff in the wards. Every pupil nurse after completion of the two-year training can sit for the Nursing Board Enrolment Examination.

STUDENT NURSE

In the three-year course, the training of the 'student nurse' is wider in scope and a higher proportion of time is allocated to theoretical work. The study course is again arranged in blocks which last for 34 weeks. During these 34 weeks, the student is taught the art of nursing skill as well as other allied science subjects by experienced teaching staff and medical specialists. There are examinations to assess the student's knowledge after each block. Also, a period of practical training takes place following each block in the hospital wards, so that the student nurse can have a chance to correlate the clinical practice with the theories. The clinical experience available are: General Medicine, General Surgery, Paediatrics, Gynaecology,

Orthopaedics, Cardio-Thoracic Surgery, Neuro-Surgery, Genito-Urinary, Otorhino-laryngology, Ophthalmology, Dermatology, Operating Theatre Technique, C.S.S.D., Casualty Department and Specialty experience. This training enables the student nurses to undertake the care of patients suffering from various medical and surgical conditions and to recognise deviations from the normal which should be reported to senior medical and nursing staff. It also provides student nurse with sufficient knowledge and confidence in assisting the senior nursing staff in health teaching and giving advice to patients and their relatives before or on discharge of the patients. During training, student nurses have to live in the Nurses' Home. And they are also required to work in shift duties. After the three years' training, student nurses have to sit for the Hospital Final Examination and the Hong Kong Nursing Board Registration Examination.

PROSPECT

There is a great variety of posts in hospitals with different levels of responsibility. Usually the graduated student nurses are assigned to work in each different wards for at least 6 months after their registration. Moreover, there are many post-graduate training courses open to registered nurses and enrolled nurses. For example, there are the one-year course for midwifery and 18-month course for psychiatric nursing. Besides, hospitals also provide in-service training, for both registered and enrolled nurses, and refresh courses in different special fields. A registered nurse can continue his/her study overseas. These trainings include clinical specialty, education and administration. In some cases scholarships may be awarded for such overseas study schemes.

CONCLUSION

The work load of the student nurse is quite heavy, they have to be rather diligent; but their work is, indeed, rewarding, meaningful and full of challenge.



TREATMENT OF DRUG ADDICTION BY Acupuncture Electro - Stimulation

a talk given by Dr. Wen Hsiang-Lai

Acupuncture is an ancient art that has been practised in China for a long time. Like all other aspects of Chinese medicine its fundamental principle is the concept of Ying & Yang, and that the will being of the body depends on the balance of the blood (血) and the energy (氣); any disruption of the balance is to be corrected by administration of herbs and application of acupuncture.

All over the body there are 14 meridians and along these are a total of some thousands of points or foci where the needles are applied. When a needle is applied to a point, the somatosensory system, the autonomic nervous system, and the neuroendocrinological system are to be affected, which means a close relationship between acupuncture and the nervous system. Electro-stimulation is nowadays used in acupuncture by connecting the needles, as electrodes, to an electric impulse generator. Presently AES (acupuncture electro-stimulation), in addition to its being used in the treatment of many diseases, has gained itself great prestige for its performances in anaesthesia, analgesia and, recently, treatment of drug addiction.

The present AES programme is conducted under Dr. Wen Hsiang-Lai in the Out-patient Department of Tung Wah Hospital as well as in Shek Koo Chau Rehabilitation Centre. Being the neuro-surgeon in Kwong Wah Hospital, Dr Wen was invited to China in 1972 to study brain operations under acupuncture anaesthesia. After returning to Hong Kong, Dr. Wen started to practise the same technique on his patients. One day he had a patient who was an opium addict and was knocked down by a car and was unconscious on admission. It was decided to coagulate his cingulate gyrus to relieve his addiction by putting two electrodes into his brain, one on each side. He was put under acupuncture anaesthesia, 2 points in the ears and 4 points in the hands. It so happened that the patient was having withdrawal syndrome. After 15 minutes of AES he told Dr. Wen that his withdrawal syndrome was disappearing; by 30 minutes, before the required anaesthesia was acquired, he reported that all his withdrawal syndrome had gone. The operation was cancelled, and AES was repeated when the next incidence of withdrawal syndrome came. Again it worked. The same was then tried on some other addicts in the ward, and the results were encouraging. So Dr. Wen started digging into the matter.

The research work started by 1972. Of those experiments performed one was on rats. Two groups of rats were addicted by injection of morphine for 56 days. (In order to simulate the long term addiction as in human, such a long term programme was chosen instead of a short term one such as by implantation of narcotics in the body.) One group was then put under AES and the other not. The group under AES appeared more docile, while the other group was much more restless. Naloxone was then injected to both groups in increasing small dosages. The group not under AES at once manifested withdrawal syndrome: stretching, fur spreading, wet dog shake, and defaecation. The group still under AES remain more or less the same except for a little defaecation.

The model established so far for the action of AES and the interaction of AES with naloxone is in fig (1).

In the unaddicted condition an endogenous narcotic, endorphin, is produced by some nervous tissue(i), mainly in the limbic system and the periaqueductal grey matter. Now the periaqueductal grey matter is the main receptor region for pain and drug addiction; implantation of electrodes here has successfully abolished pain. It is proposed that endorphin will cause a presynaptic inhibition in the pain pathway by binding to opiate receptors in the presynaptic membrane and hence depolarising it(i). It is also established that AES will increase the endorphin level in blood, i.e, increased production. Naloxone, on the other hand, is reported to block analgesic effect of AES. When a person takes in a

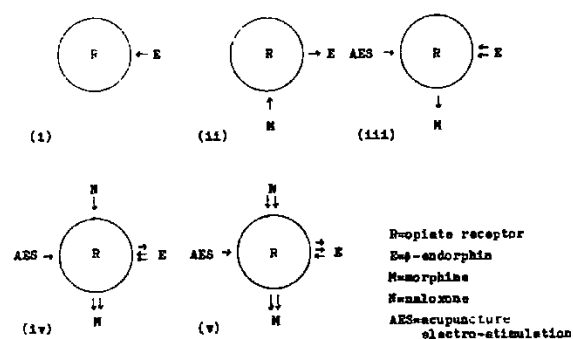


Fig (1)

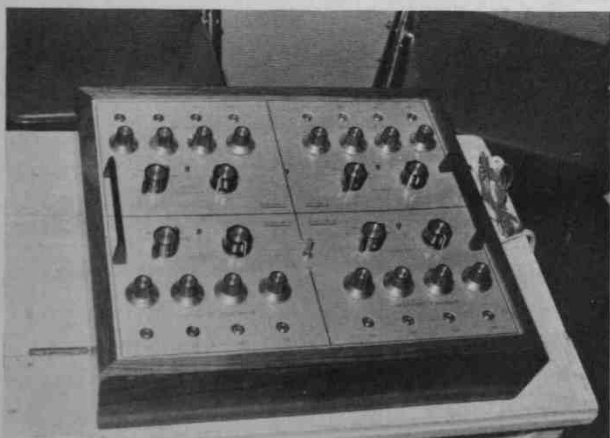
narcotic drug such as morphine the opiate receptors are occupied and endorphin release is inhibited by negative feedback(ii). Addiction is the condition when tolerance for morphine has developed and endorphin is constantly being inhibited. Hence on withdrawal of morphine, withdrawal syndrome develops. AES increases endorphin production and thus removes the withdrawal syndrome, as well as displacing the morphine from the opiate receptors(iii). When naloxone in small amount is given at the same time, morphine is further displaced (up to 90% as reported by some workers); some endorphin is also displaced but not as much as to precipitate severe withdrawal syndrome(iv). If naloxone is given massively, most of the endorphin will be displaced, and a full blown picture of withdrawal syndrome develops(v).



Dr. Wen Hsiang-Lai



When the treatment was applied to human subjects, the results were promising. Out of 50 treated subjects, there were 9 failures. 2 of them got full blown picture when dosage of naloxone was doubled; one had cirrhosis of liver and hence could not metabolise naloxone properly; one developed full blown picture before naloxone was administered, and two after first injection; one proved uncooperative and the last two managed to continue on drugs in the ward. Up to the time the talk was delivered, more than 100 cases were treated and still these were the only 9 failures, i.e., a 90% success. An alcoholic has also been successfully treated in a 14 day programme.



Equipment used in AES.

At present, the technique is much simplified. Only 2 points one at the concha of each ear are needed. Sterile needles are applied subcutaneously to half a cm; average 4 to 5 volts — is usually used, and the frequency is usually 125 Hz, square waves of 0.5 msec width. In-patients are on a programme of 7 to 8 days; at first they are treated 3 to 4 times a day, each lasting 30 to 45 minutes; later it is reduced to once a day. For out-patients, the programme spans over 14 days. In fact the frequency of treatment required depends on for how long they are addicted and how much drug they have been taking each day and what route. During the AES, the patient can control the current by himself; usually a current produces "butterflies in the ears" is enough. The instruments now used are all locally made and so are not expensive. In addition to larger ones that are intended to be used in group-therapy for in-patients, smaller ones by the size of packs of cigarettes are under consideration so that the patient can carry the machine around easily.

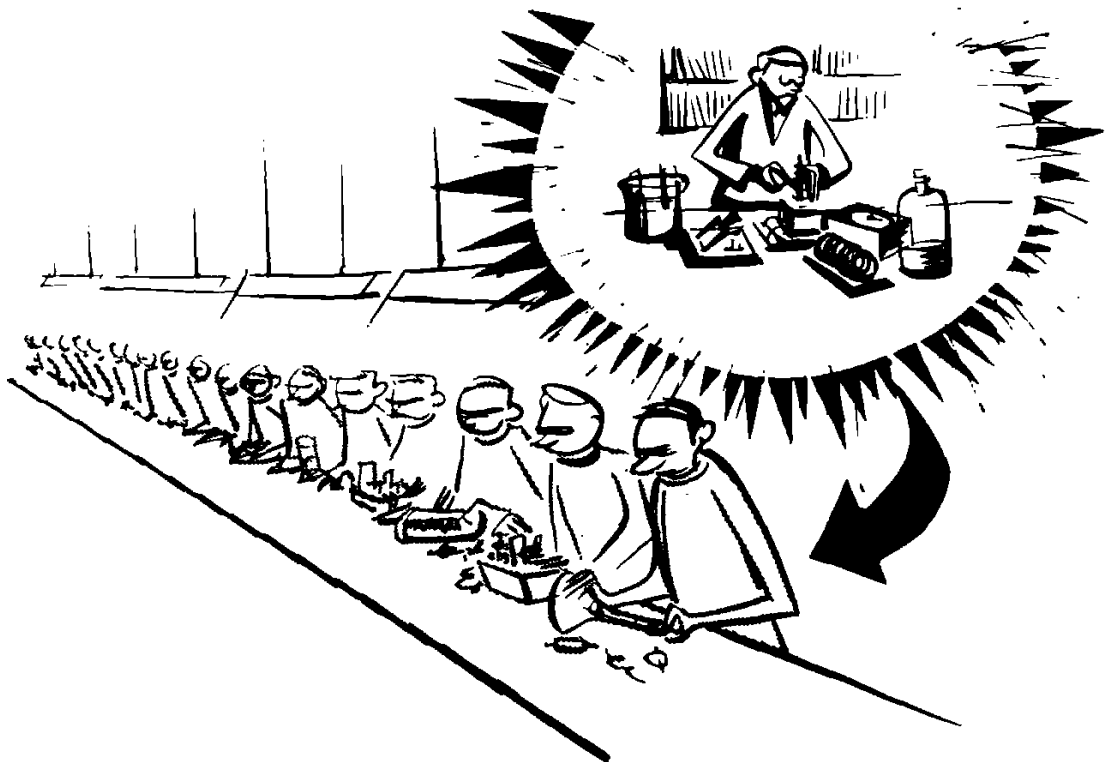
Up to the time of the talk, 308 patients have benefited after the programme started in July 1977. Two groups each of 60 have already accomplished the programme. A 60% of attendance rate have been noted. It is not costly.



The Discoverer



The Developer



From Discovery to Development

LIFE IN MEDIC (II)



港大田徑運動會，醫學院全場冠軍。

港大國際田徑運動會

醫學院冠全場

四項縮大會新猷霍英東頒獎

仔運動場舉行決賽。全部賽事共卅一項。醫學運動會，昨午假香港面熱鬧，盡是精英所在，故各項目競逐過趨激烈，爭而而之，場起，經過一番關門，醫學院人顯馬壯，本屆說說整整軍紀武後，狀頗當強勁，惟男子組成績較差，僅以十分之微屈居大席，理學院名列第三。

禮強(社會)昨日各項目成績亦不理想，得女子李瑛壓芳，在百公尺，獲紀錄為一公尺七四。文學院女子組實力難以二分之五秒五拾元，殊非佳績。此外，文學院代表胡燕青在八百公尺賽後，大會邀請贊助助人霍英東及港大文學院院長該會會長李錦發將各項成績列后：

項目	第一名	第二名	第三名	首名成績
一百公尺	鄭劍雄	高升	徐偉	十一秒七
二百公尺	鄭劍雄	高升	徐偉	廿四秒七
四百公尺	鄭劍雄	高升	徐偉	五十三秒六
八百公尺	鄭劍雄	高升	徐偉	四分十二秒六
一千六百公尺	鄭劍雄	高升	徐偉	十八分五十四秒一

項目	第一名	第二名	第三名	首名成績
一百公尺	馬耀仙	黃小娥	鍾小玲	八秒
二百公尺	馬耀仙	黃小娥	鍾小玲	十八秒四
四百公尺	馬耀仙	黃小娥	鍾小玲	三十九秒八
八百公尺	馬耀仙	黃小娥	鍾小玲	一分零二秒
一千六百公尺	馬耀仙	黃小娥	鍾小玲	四分零二秒

女子組

四百公尺：馬耀仙、黃小娥、鍾小玲

八百公尺：馬耀仙、黃小娥、鍾小玲

一千六百公尺：馬耀仙、黃小娥、鍾小玲

三千二百公尺：馬耀仙、黃小娥、鍾小玲

五千公尺：馬耀仙、黃小娥、鍾小玲

八千公尺：馬耀仙、黃小娥、鍾小玲

一萬公尺：馬耀仙、黃小娥、鍾小玲

一萬五千公尺：馬耀仙、黃小娥、鍾小玲

二萬公尺：馬耀仙、黃小娥、鍾小玲

三萬公尺：馬耀仙、黃小娥、鍾小玲

四萬公尺：馬耀仙、黃小娥、鍾小玲

五萬公尺：馬耀仙、黃小娥、鍾小玲

六萬公尺：馬耀仙、黃小娥、鍾小玲

七萬公尺：馬耀仙、黃小娥、鍾小玲

八萬公尺：馬耀仙、黃小娥、鍾小玲

九萬公尺：馬耀仙、黃小娥、鍾小玲

十萬公尺：馬耀仙、黃小娥、鍾小玲

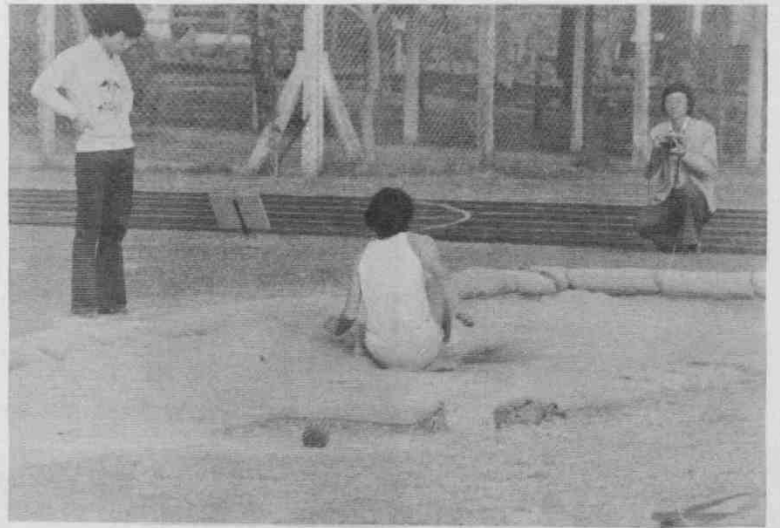
女子個人冠軍：馬耀仙。亞軍：鄭劍雄。季軍：理學院。

男子個人冠軍：馬耀仙。亞軍：理學院。季軍：醫學院。

全場總成績：醫學院。



SOAR.....



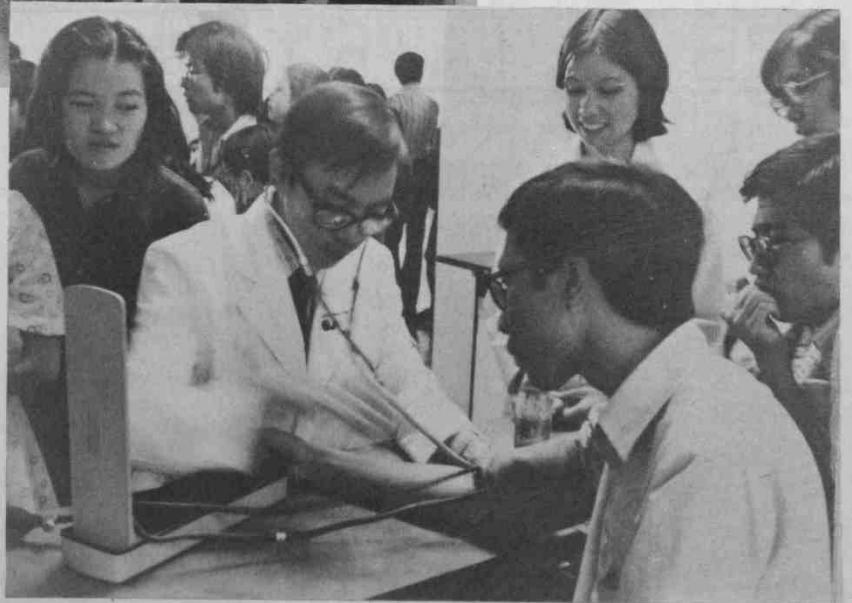
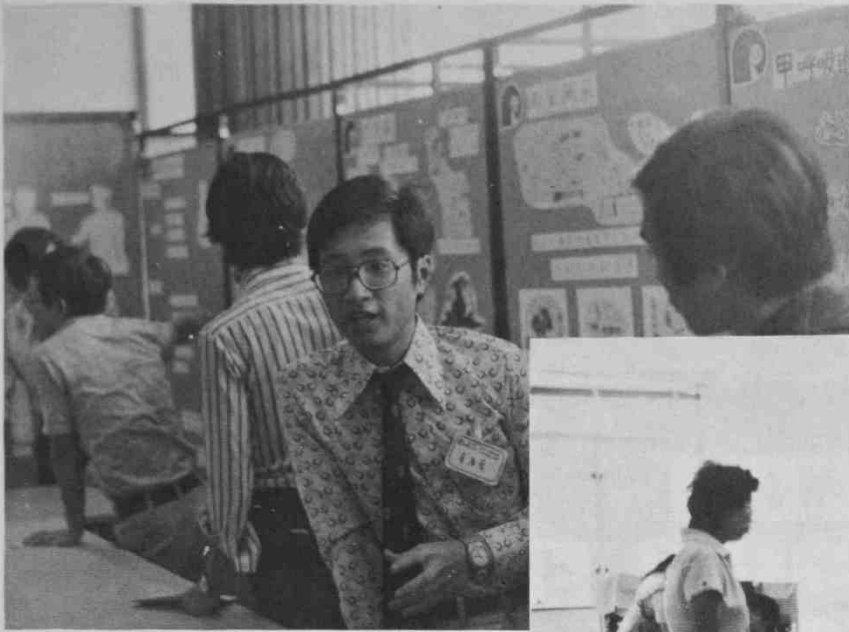
.....HAPPY LANDING ON YOUR.....SORE!



威晒!









ANATOMY 解剖學



BIOCHEMISTRY 生物化學



COMMUNITY MEDICINE 預防及社會醫學



GYNAECOLOGY & OBSTETRICS 婦產科



MEDICINE 內科



MICROBIOLOGY 微生物學



ORTHOPAEDIC SURGERY 骨科



PAEDIATRICS 小兒科



PATHOLOGY 病理學



PHARMACOLOGY 藥學



PHYSIOLOGY 生理學



PSYCHIATRY 精神病學



SURGERY 外科

級子

CONTRIBUTIONS

雜記二則

馬

(一) 從解剖課想起

第一次看到赤裸的屍體。

我禁不住猜度他過去的遭遇：他可能經過戰亂和挫折，他可能擁有過幸福和成就，他為何會在這兒？然而有一點是肯定的——他，像億億萬萬的人，是微乎其微，生死都不由己。

三島由紀夫曾經這樣寫：「屍體只是供人看的，所謂『看』，平常並沒甚麼意味，但此刻卻能證明那是生者的權利，也是一種殘酷的表示……使觀者能確證自己的生存。」人類這麼多的禮儀，只有喪禮自己是不能參加的。

日本人愛觀賞櫻花；櫻花每年在四月開放，前後只一星期，日本人用櫻花比喻人生，感嘆它的美麗和短暫；相信輪迴的日本人認為生命是連綿不斷，一生過了還有來生，像櫻花年復年的開放。然而我感覺到死亡像一個BLACK-BODY，進去的就不再出來了。

醫生；他可以看到生命的誕生，續斷的衰敗和最後的死亡。他可明白這究竟是甚麼的一回事？是否看得多了，反而會失去敏銳的感覺？我害怕，有一天我也會如此。

(二) 歌

三年前我在美國。

十一月底是美國獨有的感恩節（又名火雞節），我和一班來自世界各地的留學生被邀請到賓州MANHEIM鎮的幾個家庭渡佳節，難得有輕鬆的機會，心情很愉快。

接待我們的美國人都非常和藹可親。每個學生被邀請至一個家庭，與他們的家人一起過節，另外每日又有集體活動，如參觀蠟像館（介紹美國歷史）和朱古力工廠，茶會及聚餐等。學生們都操着不純正的英語彼此交談，語中很多時都流露出對本國文化和建設感到驕傲的神態。其中有一個來自馬來西亞的華僑，與我特別談得來，並且處處照顧我。

一晚茶會後，主人們提議每個學生唱他的國歌，於是先後便有人唱出希臘的、土耳其的、法國的、馬來西亞的、約旦的和其它的國歌，不久就輪到我了——

然而我沒有唱。

我唱甚麼呢？那時的我，剛剛離開一個微妙的地方，那兒沒有人強迫你唱別人的國歌，卻有人有意無意地不讓你知道自己需要一首國歌，有一首國歌。當時，我感到數十雙眼睛都集中在我身上，他們都渴望知道我如何應付這個問題。

幸而，在我那視政治為洪水猛獸的中學時代，我仍有機會學到很多流傳久遠的中國民歌。無論如何，我不忘記我是中國人，與中國人中國文化有着不可斬割的連繫；於是——

我唱出一首中國人的歌。



只有喪禮是自己不能參加的

The nightmare has ended; the outcome of my supplementary is a fanfare – I get my reward; I have passed the examination.

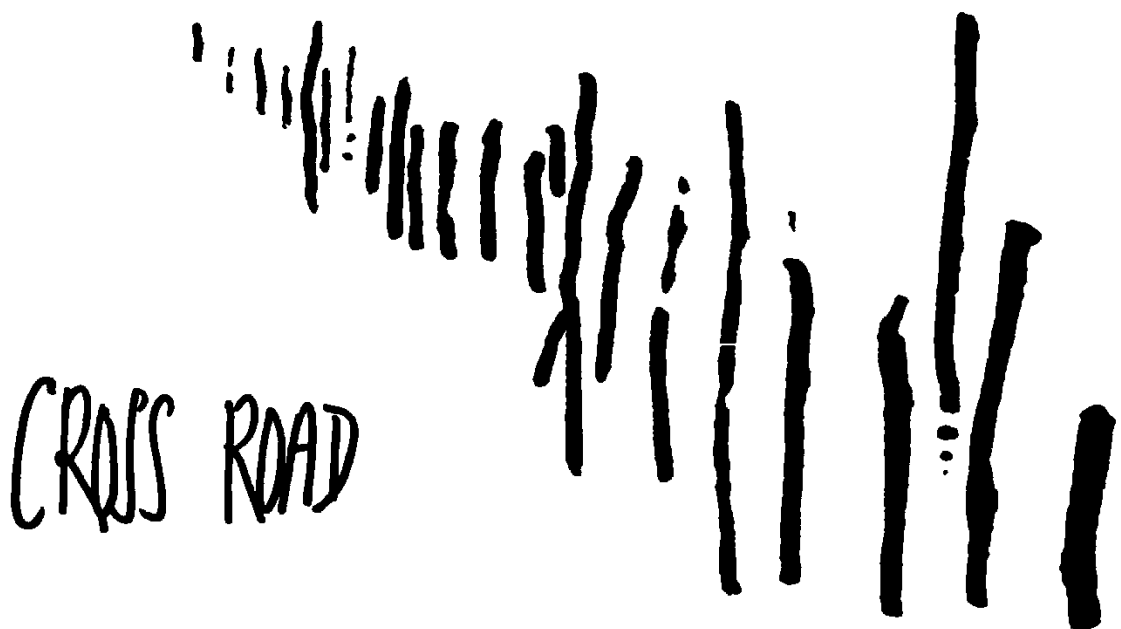
Indeed I feel a bit cagey to divulge my personal experience. So intimate, yet so invaluable this experience is to me that I nevertheless would dare to share with all those who have dreams, aspirations and beliefs and not yet disillusioned in spite of many defeats. There is nothing fabulous in this memoir of myself. I just wish to share it with you.

Almost all medical students look forward to their final days of happiness, fun and excitement in their last summer vacation before Third year. But some people, like me, got something quite different – a supplementary examination, 2 months' hard work and even nightmares. Everything looked so gloomy that I simply loathed living. Things went so bad that I had to resort to valium, T. M., self-hypnosis and such eerie thing as 'music therapy'. But they did not help. Then in my desperation came a group of friends – let's call them the 'K' group. They offered me assistance in my study and gave me much inspiration. During the 2 months' toil I prayed more, and I never forget the contribution of a very special friend – 'She' – who gave me much impetus and hope for me to survive that critical period.

Now, fareware to preclinical anatomy. Although this year is only the start of an endless journey which has no return, there is a thrill for one to look back over the years to find out what lessons one has learned from the past. This is like 'Vanity Fair' – wins, losses; excitement, drear; sweetness, bitterness; conceit, disillusion. There were a lot of challenges and I tried in the past to meet them up as far as my strength and patience allowed. As a medical student and at the same time a keen amateur of music and languages, I did not realize how difficult it was to allocate properly my time and energy to these seemingly irrelevant subjects. I pledged to take risk, however. Unfortunately I failed, quite badly. I lost my balance completely and so depressed I became that I always stayed away from people as far as possible. In the meantime I wished to be left alone in peace, to pray, to think and solve my problems. It was obviously unfair to blame anybody but myself, yet there were other reasons as well. To make things even worse a family tragedy turned my world up side down just before the 1st M. B., B. S. examination. This utterly confused me. The aftermath was then well-predictable. This series of events, however, has taught me a great lesson. Now at least I have some ideas of how to make the best use of my resources in facing challenges and disasters, and to understand myself better.

Today I still find myself in a crossroad. Disillusioned by the past, I am looking forward to a more predictable, more meaningful and, hopefully, brighter future. But I realize that only the present means something concrete to me, and in order to get whatever I want, I must work hard, undaunted by personal odds and the uncommendable past. Painful experience strengthens my religious faith. It teaches me how to pray, and more importantly, how to make prayers come true. Lying ahead are three years of hectic student life, alongside with a tight budget, I must satisfy myself with a limited variety of materialistic living. But I still believe, to those who hold on to their beliefs with perseverance and sensibility, fate is in their own hands.

The Named



CROSS ROAD

The September sun greeted the new ones
Sailing into Medicine in triumph
Fresh and eager hearts, burning hopes and ideals all aglow
What would befall us time would know

* * * * *

A not-too-busy year, a year to enjoy
Despite tutorials and term tests, there's still much to rejoice
Some joined activities, each after his own sort
Sports for the sportsman
And balls for the "gentleman"
With whom ladies' particulars were never out of their lot

Some nestled in security,
A world of their own
Enjoying life's amenities
A smooth way with no discord sown

With some, study was their sole pursuit
The quest of knowledge was their root

Cupid the mischievous prince
Shot with a chivabrous grin
In a year so gay and festive
Hearts fell easily captive
Bemused by the magic charms
Fainting into one another's arms

Some struggled for meaning, ideals were high flown
Luck'ly none was so desp'rate to have his head blown

* * * * *



otions

The death tolls had rung
Every heart was atremble at the coming run
Spring sipped in but none could feel the green
Little red flowers dotted the way but who had seen?

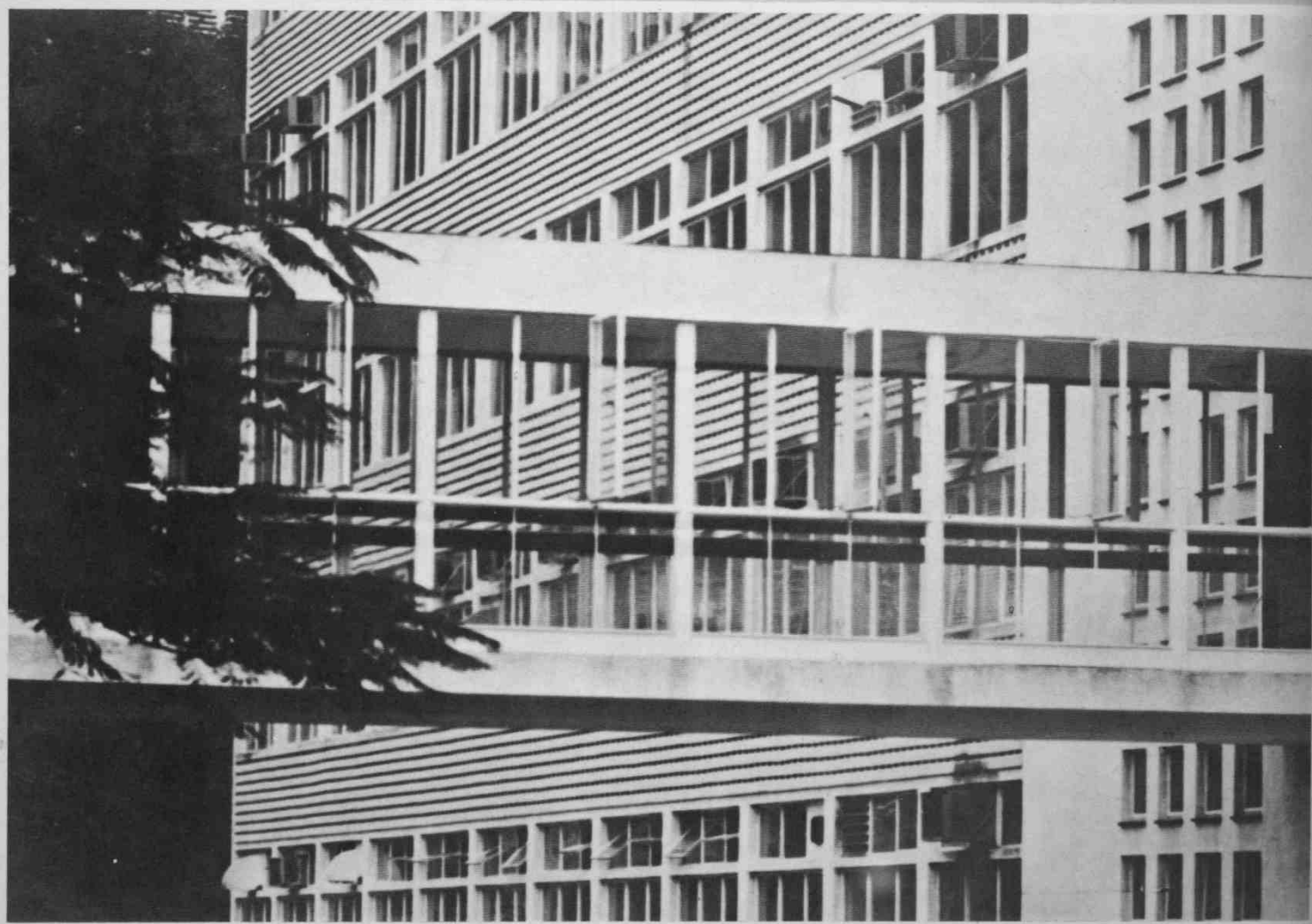
Professor had said such and such
So in constemation we rush and rush
In the library was a deadly lush
And gloom befell us from dawn till dusk
Our face was a ghostly ash
And life seemed such worthless trash!

* * * * *

September again, two years have gone by
With relish or remorse in mind?
White coats and ties, smart and clean,
Doctors-to-be, with confidence beam,
A bright morrow without a sore
So many have settled for
A good life with no lack
Success, money and marriage all ahead.

Yet, it's a long and winding road
Our responsibility a heavy load
How many will abide by
Where our ideals lie?
How many will fall away
From that noble and princely way?

Pray that we'll all do our little bit
That others' lives will by our glow be lit.



新 丁 雜 感

盼望著！盼望著！醫學院的取錄信終於收到了。

兩年來——不是，應該說是多年來夢寐以求的日子終於來臨了。

踏入醫學院的大門，心情是多麼興奮啊！然而在這興奮的心情中，自己總覺得有點迷惘，因為雖然當醫生是多年來的願望，可是這祇是往日下意識的感覺，認為做醫生可以救人，是好事，所以嚮往有朝一日可以身披白袍，懸壺濟世。現在又怎麼樣呢？自己有機會進醫學院讀書了，可再不能祇是下意識地嚮往醫生的生涯了。

醫科的功課很繁重嗎？真正當醫生是甚麼一回事呢？怎樣才能做一個好醫生呢？自己是否適合讀醫科呢？……一連串的問題浮現在腦海中，自己沒法一一解答，心裏起了一連一連的疑惑，一日不衝出這個疑團，心中的興奮總帶點迷惘。

幸好在迎新月和迎新營中，很多「師兄師姊」對我這些問題都提供了很多寶貴的資料，在一些講座和討論中，自己也領悟不少，有很多地方自己以前竟全未想過，所以感受很深，例如醫科雖然是一門專業知識，但要做一個好醫生就不能單靠醫科知識，對其他方面，例如社會問題，世界大事等，亦應該有較深入的了解，將這些知識與醫學知識相配合，才能發揮更大的作用，對社會作出更大的貢獻。

另一方面，醫生面對的並不是一條斷骨或是一條有問題的食道，而是面對一個「人」，所以醫生除了要針對疾病的治療外，還要充份了解病人的環境和心理，盡量幫助病人「全面」康復。

最後一點，就是做醫生要充份了解和執行自己的責任，徹底遵守醫學道德，對病人負責，對自己也要負責。

這些一片一片的回憶，很是零碎，也很散亂，然而在這些片段中，我卻對醫科有了較深的了解，自己也充滿了信心，接受行將展開的新挑戰！

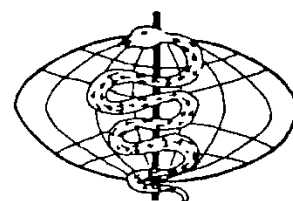
中學倏倏七載，
此時此地難再，
憶往事，
望前程，
身在青黃之界，
雄心萬丈，
立志堅強，
他日濟世為懷。

一九七七年九月十七日

陳仲謀

Our Foreign Counterpart

e. H. Li



IFMSA

Somehow, it dawned upon me one afternoon when I was very bored that it might be a good idea to write about the foreign delegates in the 26th general assembly of IFMSA in Denmark. Admittedly, ten days is too short a period to know a new friend well. Admittedly too, the delegates may not be typical of his or her colleagues. However, the following account, (albeit subjective and in violation with the basic principle of random sampling in Statistics) may well give you a glimpse of what a foreign medical student is like, or failing that, may serve as an anecdote to drive away whatever boredom that may be overwhelming you at present. So here it is.

DENMARK The Danes say they are by nature cold, so the warmth that the hosts and hostesses enveloped me with must be something rather special. Very carefree, many young Danes regard premarital sex as common as trying on a new winter suit. If it suits you, feels warm and within your financial capability, O.K. If it doesn't, change it.

I met quite a number of 'living together' couples in Denmark and they told me that the system works. The only reason they obtain a marriage certificate later on, they say, is to obtain legal security for any children they may have. Don't laugh, they are all people of normal intelligence. I would have scorned this practice before I went to Denmark but I am not sure if I hold that opinion now. One such pair worths mentioning – B.L., a girl of mixed Norwegian and Danish blood 'living together' with P.G., both medical students. She was so warm-hearted, so softly speaking, so lovely and he was so good-natured, calm and frank that you could not find a better match. They met and started 'living together' just this spring. To them, I send my best wishes.

Denmark has too many doctors so that their status is not as high as that in H.K. Norway has an insufficient number of doctors and some senior Danish medical students actually go to Norway on vacation to be hired as assistant doctors there. And they receive salaries for their services. Is this not a marvellous idea?

INTERNATIONAL FEDERATION OF

GERMANY D.S., a big German medical student, speaks fluent English. He is a man of strong character; one who will never yield to public opinion contrary to his own. Honest enough to admit his ruthlessness in shouting 'no confidence in the Chair' in a hot discussion, he later apologised to the Chairman for being a trifle childish. He is a great dancer — something of a professional.

FINLAND Somewhat cold, the Finnish people speak a language quite distinct from other Scandinavians. Nevertheless, their command of English is, by all standards, beyond reproach.

AUSTRIA The Austrians have a Medical education system different from that of most countries. Once they have completed the uppermost grade in high school, they are guaranteed to study in whatever field they choose in the University. So, there are many thousands of students in the Medical Faculty — all of varying academic standards and whether or not a medical student can make it to graduation depends on himself. No limit as to how many years of study one can go through — so far as he can tolerate it, any high school student can expect to be a doctor someday.

ITALY Contrary to my expectation, the Italian delegates were actually quite cold in appearance. M.F., a doctor just graduated, had small penetrating eyes and a halo of beard around his mouth. He said he would like to know more about Chinese medicine, especially acupuncture. His colleague, a tall thin fellow, befriended a female delegate and you can imagine how they spent their leisure hours together.

ICELAND Really as fair as ice and as tall as an iceberg, the Icelander spoke little in the meeting. In complexion, he did not look cold though, so I suspect he is something of a paradox.

JAPAN He is a typical Japanese — short, fair, polite and a bit restrained. Rather quiet, he had possibly taken the words of Confucius to his heart — think twice before acting.

EGYPT The delegation was just a mixed heap. They made people mad because of their internal conflicts and they almost never allowed anything to be settled before their own opinions, pros or cons to the issue, were heard.

NIGERIA He spoke with a quiet voice. I think he

would have been elected as President of IFMSA had he been speaking more in the meeting. He is nice to talk to.

SUDAN I met these two dull-black skinned delegates even before I had reached the place of Assembly. They seldom showed their feelings and the younger delegate — a dental student, had the habit of laughing through the nose that gave one the impression that he was sneering rather than laughing the first time one heard it.

SWEDEN Her glasses obviously too large for her, she has a serious complexion and a stern face that makes people think twice before speaking to her.

YUGOSLAVIA She was a nurse before she studied medicine. She said, 'I love dancing. When I dance, the melody streams through my blood.' So as you can imagine, she was a perfect partner for the German delegate D.S.

GREECE A warm people, the Greeks loved dancing and singing. Polka is possibly their best loved dance and they danced their heads off when the opportunity presented itself.

FRANCE A man of enigma. He came to the Assembly when the meeting was already half way through. He put a French-English dictionary on the table and calmly sat there for the rest of the three days without speaking or possibly without even understanding what the others were talking about. What on earth did he pay the thousand bucks for? Viva de France for the Assembly fee!

ISRAEL Speaking faster than their tongues can roll, the two delegates gave others the impression that they were high-strewn people. The little lady got her chance to describe her country's new medical education system in depth and her male colleague was elected President of IFMSA 1977/78 so their efforts had not been wasted. They are nice people and the lady gave me a book mark in exchange of my pair of chopsticks. (fair deal, eh?)

GHANA The chocolate skin delegate has four loves — (1) pop music (2) dancing (3) going to discotheques (4) photographing them "in action" (i.e. when swaying to and fro with the music) Summarizing, they loved enjoying themselves.

AUSTRALIA Two lady delegate en route to Sweden to do their clerkships, the Australian delegates held no mandate to decide for their member countries. Speaking

MEDICAL STUDENT ASSOCIATIONS



perfect English imbued with metamorphosis, they remind me of former heavy British colonial influence in Australia.

SWITZERLAND Two delegates were present – C.S., the acting President of the Swiss Medical Students' Association, and J.R., the Director of the Standing Committee on Environment. They spoke with some Swiss-German accent and both were nice to talk to.

U.S. A. D.M.R., a heavy "Uncle Sam" with a dense moustache, can improvise and make people laugh their heads off at the dining table. He said he would like to specialise in orthopaedic surgery and I am sure he has not only the muscle but also the gut to fix fractures bare-handed.

D.M.D., another American delegate, had reddish gold hair and a quiet complexion. He was physically a kid compared to his American colleague.

C.S.S.R. R.N. has been attending IFMSA General Assemblies for the last fifteen years or so. He was a medical student the first several times he attended the meeting but he is now a demonstrator in pathological anatomy.

He is such a veteran that he can almost recite the Constitution of IFMSA from the end forwards. He was the delegate in the meeting whose speech is best substantiated by the Constitutions.

A socialist country, CSSR allows limited student participation in international affairs and so R.N., a teacher, was sent as a delegate.

RHODESIA From a place of turmoil, the delegate was a friendly white lady who had expressed sympathy for the black in Rhodesia. She distinguished herself in the meeting as a fine secretary to several working committees.

UGANDA The delegate came from the country of Amin. He had therefore an interesting topic for talking after the meetings. As is true for many other African delegates, he loves music and dancing.



The Holy Art Of Healing

by L.C.H.

A birthday cake I received this morning
From Joseph & Pauline, with good tidings
And on the piece of paper was typed the words of greetings:

“To A.C.H.L., our prospective doctor” – & cheerings
I could not but smile and to myself, saying
“Thank you, my dear, your love for me,
I know, need no revealing.”

But there’s something in the typing
that sent my heart a-beating
out of phase my heart went propping,
and a thought came a-dawning.
What of me are people thinking
a rare species called doctor-to-be or a human being?

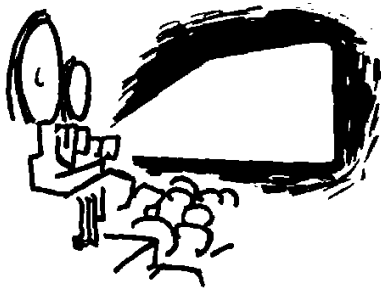
There’s a tendency now up-cropping
to send therapeutics computerizing
A doctor without a warm heart nourishing
is just a cold machine operating.

The thought put me into a-shivering
Am I to be loved ‘cause I am going
to be a doctor-machine running
holding the fate of patients at life’s trimmings
or am I to be loved, as a lovable human being?

I do not want the office in the street of Downing
I do not crave for the fame of Linus Pauling
I just want to be a good physician practising
as did the penicillin discover Fleming
to save the lives of people awaiting
I will treat them with the knowledge
I have been accumulating
from my years of schooling

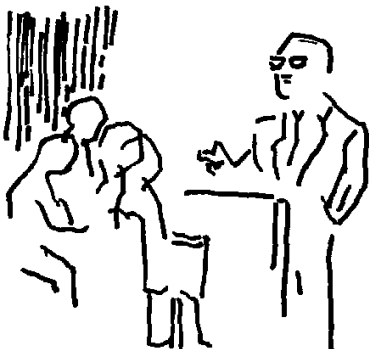
To be a perfect curing machine or just a normal human being?
God knows I want no way of compromising
Both sides of the coin I love possessing
I want to be a lovable doctor practising
As a lovable human being
practising the art of curing.

Love me, my relatives & friends, as a human being
and not as a machine for therapeutics – vending
Need not remind me too often, dear
that I’m going to be a physician practising –
practising the holy art of healing.



做專題 結合學科抒己見
辦中周 關心祖國爭上游

日期：十月廿一至廿六日
地點：香港理工學院
主辦：香港專上學生聯會
第五屆中國周



十月是整個認中活動的高潮，熱氣騰騰的日子，草展，預展，正式展覽，以及其他節目如步行籌款，電影，書展等等，一個接着一個，節目可說是多采多姿，醫科同學雖然功課繁忙，但為了要搞好中國周，也盡量抽出時間，所謂羣策羣力，多一個人，多一分力，其中實不乏感人的例子。五年班同學在功課繁重的時候，還在理工趕通宵；二年班在考COMPRE首幾天，也還忙着搞預展，諸此種種，同學的熱誠，衝勁，皆表示出同學對認識國家的一般熱誠，對於和我們身體內流着同樣血液的人民，對之加深瞭解，乃是天經地義的事。

「齊步走，各院同學結友誼；
為中周，齊心合力把錢籌。」

隨着每年中周節目的逐步擴大，經費日益增加，加上港大欠交兩年會費，財政產生困難，於是遂有今年的中周步行籌款，同學們齊心合力，既可鍛鍊身體，又可把錢籌，又可增進友誼，廣交朋友，一舉數得；是日天公造美，陽光普照，清風送爽，同學們都渡過了一個愉快的早上；我們醫學院不讓別人專美，籌得四千多元，全個步行總共籌得超額的十萬元，財政的問題於焉迎刃而解。

至於在醫學院裏的配合活動，計有電影「愚公移山」，書展，PROF. LISOWSKI 的講座「中國的健康保養制度」，參予的同學相當多。其中電影「愚公移山」是較突出的一部電影，由紀錄片之父伊文思在中國拍攝，雖然只選影了其中四輯，但新中國的新面貌，仍可在影片中深深的感覺得到。可惜的是因成本關係而要收入場券，不然的話此片將可更為普及，能夠讓每一位同學都分享到。

誠然在工作的過程中所受到的困難，阻力是不不少的，但憑着同學們的羣策羣力，都能夠將困難一一克服。專題研究展覽最後一天，突起狂風驟雨將理工平台上的展品摧毀，但這可阻不了同學們的熱忱，立刻在休息室重新佈置會場，彼能夠讓來賓繼續參觀。

其實我們始終堅信，要正確的對待事物，就一定要抱着一個客觀開放，坦誠相待的態度，對不足的地方要提出，對既有的成績要肯定，只有通過直接的參予，互相交流，才能深化認識，提高自己的思想領域。本屆中國周雖然在某方面仍有不足的地方，但所得到的成績，廣泛發動同學，齊參予，齊給意見，是比過往四屆是進步的。專題研究，讓不同興趣的同學，就自己學科，定出題目，以不同形式表達，充份的發揚了百花齊放，百家爭鳴的開放精神；只有通過這種民主的精神，才能夠讓同學加深認識，增進對國家民族的理解：

做專題，綜合學科抒己見；
辦中周，關心祖國爭上游。

隨着學生運動這幾年在各大大專院校的蓬勃發展，要走出象牙塔，多認識自己周圍事物的同學愈來愈多，同學們再不甘心於埋首書堆，做一個蛀書蟲。醫院裏可喜的亦有同樣的趨勢，參加活動的同學愈來愈多，從健康委員會的大型展覽，認中活動，電影籌款，中山醫學院參觀團，以及步行籌款等等，無不捲入了百多同學，積極的參與，透過形式不同類型的活動，去擴闊我們的眼界，從而去摸索出怎樣做一個好醫生，切切實實的貫徹我們將來濟世救民的責任。

中國在這廿多年來的發展，是驚人的，西方國家莫不為之矚目；而醫療服務方面是其中最有一環；針刺麻醉，斷肢再植，赤腳醫生等等無一不逆西方的傳統醫療制度而行，但卻得到令人嘆服的成就。讀醫科的我們，相信都會感到很有興趣。而在參加認識中國活動的當兒，抱着從認識中國醫療制度這個基層出發的同學，相信為數不少。在往年以至前年的中國周展覽，醫科同學的探討，都離不開中國的合作醫療，赤腳醫生，針灸等等；但其實我們認識國家，決不單單局限於醫療方面，還有其他很多很多的方面，人民生活，政府制度，措施等等。最近國家提出了四個現代化的宏圖，要在本世紀末發展成一個農業，工業，國防，科技都現代化的強國；這些都是我們所渴望認識的。所以今年的認中活動，就作了一個很大的嘗試，衝出了醫療服務這個框框，定出了中國糧食，家庭計劃這兩個題目出來，試圖從一個比較陌生的題目出發，去認識我們的國家，從而深化我們的認識。今次，在一定程度上我們得到了肯定的成績，相信將來的認中活動，會朝着這方向走，逐漸將我們的眼光一步一步的擴大。至於以外的兩個題目，中國的基本醫療以及一個中國醫生的成長，意思是希望能照顧一些初步參加的同學，畢竟這方面是他們較為渴望知道的。

在港大裏，醫學院是最早成立認中籌委的。早在六月，一年班同學初放暑假的時候，便辦了兩次座談會，大家交換意見，商訂如何去開展今年暑假的大型認中活動。及後經認中籌委的成立，工作大綱的初步擬定，認中活動於焉展開。雖然覺生會的態度不明確，醫學會幹事會亦未決定是否參加本屆的學聯中國周，但認中活動的方針我們仍然是定了，基本上是以專題研究為中心，定了四個題目，各就自己的喜愛參加。經過同學們的反覆研究，實踐，走遍了圖書館，報社，終於最後定了中國基本醫療，家庭計劃，糧食，以及一個中國醫生的成長四個專題題目出來。除此之外，還希望輔以書展，講座，電影種種形式，不同類型的活動，去適合同學，達到將認中活動的訊息傳遞到每一位同學的目的。此外今年更加設了文娛康樂組，將活動辦得更更有聲有色，更活潑生動，真正的符合每一位同學的不同旨趣。我們文康組的小組合唱，話劇，白攬，在幾次的表演中，可得到其他院校同學不少的讚美呢！

單單局限於醫學院裏，的確對於我們的認識，有很大的阻礙，和工程學院，理學院合辦了幾次的座談會，交流會，對於要將我們的圈子擴大，和其他院校同學一齊合作，交流，辦活動的熱切要求也愈來愈大；及後醫學會評議會決定參加中國周，正好供給了一個很好的交流機會，和其餘院校同學，互相幫忙，互相提意見，大大將我們的思想領域提高。真正的達到「一支竹會易折彎，幾枝竹一扎斷折難」的合羣精神。

師長們的勉勵是感人的，在走訪各位教授講師，邀請作為中國周顧問的當兒，所得到的意見，嘉許，的確給予我們極大的鼓舞，連一些外籍教授如ROSE COLBOURNE, PROF. LISOWSKI 等，對於中國的認識，熱忱，簡直令我們這些炎黃子孫也感到汗顏，從而也感覺到我們辦認中活動是正確的，連外國人也關心我們中國的事情，身為中國人的我們，能不對國家加深認識嗎？

苦 雨

以乾裂的黃土張口
迎接那
淅瀝的雨

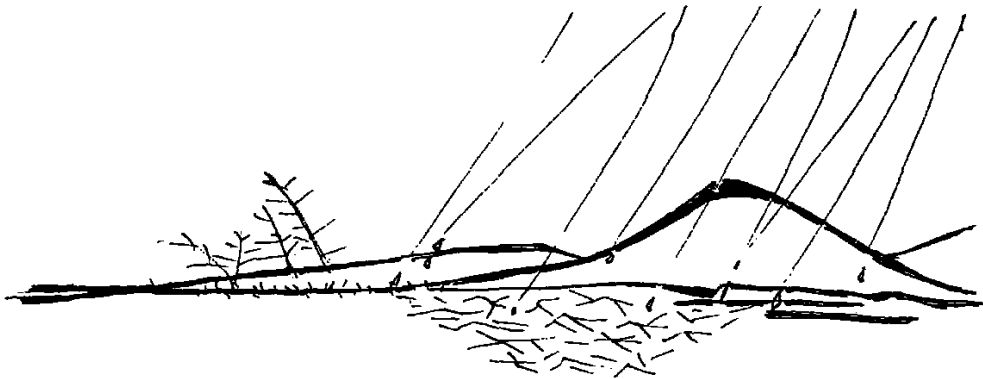
獨立·巷口
等待·再等待
直到雨中
時間都被沖走
只剩下一片空白

不識愁滋味的少年
為賦新詞
於是
我徘徊雨中
期望沾染雨的瀟灑

他們說雨是眼淚
淒怨纏綿
他們說雨是珍珠
閃耀生輝
我說雨是石頭
打在臉上身上
轉眼不留痕迹
卻給予心靈
戰鼓擂擂的捶擊

雨，原是苦的

羣



對奕的孩子

盧維基

從來沒有一個自認為智慧的高等動物不動腦筋。
從來沒有一個自認為會動腦筋的人不會下棋。

× × × × ×

斜斜的晨光，透過半掩的窗戶，弄醒了整個病房。

雖然有很多護士在走來走去，阿嬌在奔波，太陽在照耀，鮮花在發出馨香，但是在那一片慘白色中，沒有人感覺到半點生氣。

在床上躺著的，通是懶洋洋的身軀，帶著沒精打采、滿佈繃紋的面孔。

「早晨，阿伯。」那個想打破整個叫人不自然的氣氛的阿嬌開口道。

「早——晨——」他勉強動了一動咀角。

情況或許可以不是這麼僵——病房裏還有幾個十來歲的孩子。

× × × × ×

通常護士們都很喜歡有幾個孩子在病房裏，讓他們為這個死氣沉沉的世界帶來一絲絲的童真、活潑、快樂。

可不是嗎？

在這個死寂的環境裏的一個角落，那幾個孩子還有自己熱鬧的世界。

「早晨，強仔，剛仔。」護士小姐也想侵入他們的天地裏。

「嘻嘻……」他們回報以頑皮的笑聲。

護士小姐心也甜了。無奈，她很忙，以至想嚐多幾匙蜜也不能。

「阿三十四號，我們來下棋好嗎？」

除了下棋外，還有甚麼可以消磨這樣長的日子？

「好！」剛仔跑回三十四號床，拿自己的棋子過來。

一場殺得天昏地暗的爭戰開始了。

「將軍！」

「車擋，沒事。」

「再將！」

「你將我不死的。」強仔充滿信心道。

強仔只不過十二歲，但已有五呎高，身材結實，聽說功課還是蠻不錯呢。剛仔也不相上下。他們入院也只不過是爲了同一個小手術——割包皮而矣。難怪他們在這裡相遇後，便儼似青梅竹馬的老朋友了。

強仔開始反攻。剛仔也守得相當穩重。

似乎他們的棋藝也不錯。那個××××也不是五歲就殺敗了高手麼？

他們充滿激情的聲音引來了下文。

文仔雖然已是十三歲，但身體就比他們孱弱，且患有先天性的

裂隙和裂脣(Cleft palate)；通常這類孩子都會有自卑的心理，但文仔卻很勇敢，時常都想克服這個弱點。

「我也要玩！」文仔滿懷高興地道。

誰要跟他比個高下？

「讓我試試這個弱仔的實力，好嗎？」強仔在剛仔耳邊細

語。

另一場交鋒又開始了。

還下不了幾步，強仔就發覺阿文根本就不是他的對手。

「唔，我要凌辱這個弱仔一番。」他心裏想。

「哈哈，死官車！」

「哎，我不這樣行了！」文仔想挽回這一隻車。

「不，不，舉手不回的。」剛仔在旁嚷著，「下棋要講頭腦

，講技術，不夠技術便要認命，怎可以回棋？你是不是不想做君子啊？」一派老氣橫秋的樣子。

文仔的車沒有了。

「有時人生出來是弱就是弱了。」強仔邊下邊說。

「小心，你這樣行，又死馬了。」強仔在「提醒」他。

文仔心裏很不舒服，但仍要堅持下去，心想要很小心每一步。

「將軍抽車！」連餘下的車都失掉了。

「大局註定是失敗了，但是，我要盡力，得失算得什麼？」

他在自己安慰自己。

一隻又一隻的棋子給吃掉了。強仔越來越興奮，他向著另一個目標進發——「剝他的光豬。」在旁的剛仔嚷著。

紅棋終於一隻也不留在棋盤上了。

「人「水皮」就是「水皮」了。」

「老師說，進化論就是『弱肉強食、物競天擇』。」剛仔又在嘲笑他。

「再來一盤！」

「水皮鬼，我不和你玩了。剛仔，我和你再玩。」

× × × × ×

一股的失落感罩著文仔。

「難道我生來就是弱者？」

「難道弱者就不能剛強？」

「難道弱者就要被淘汰？」

「難道弱者就要被征服？」

「我就是弱者？」

「他們是強者？」

「爲什麼我要和他們玩？」

「爲什麼我不和那邊那個弱仔一起？」

「……………」

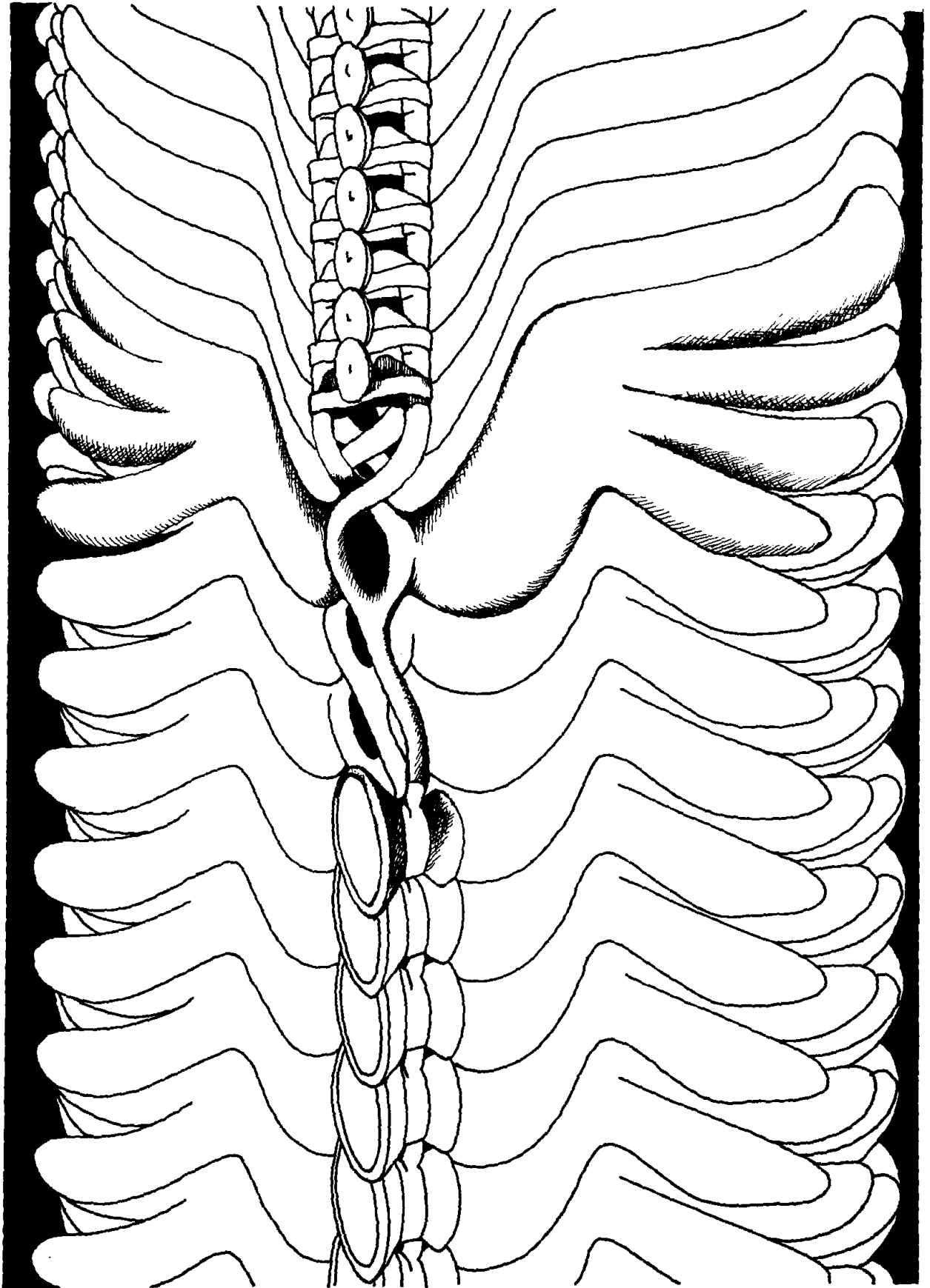
一個本來不屬於這個年紀的表情——疑惑、無可奈何、迷惘

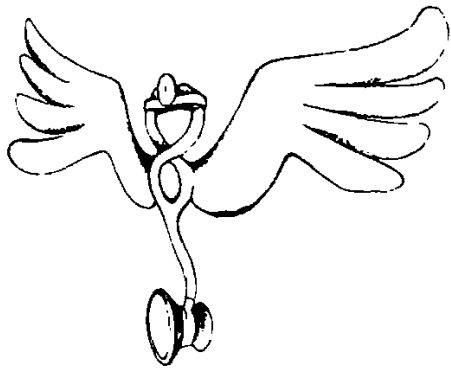
混合著強強——浮在這塊蒼白的臉上。他不知道憑著什麼他可以

堅持下去。

連那唯一一點點的生氣也從這個病房消失。

還是那一個死寂的氣氛。





我的觀

士敏土

幫傑補習完畢後便匆匆的趕回學校。在走到教務處的走廊上遇到琪。

「啊，你好似得了！」

但我仍是半信半疑的走到書記面前，在那剩下的數張成績單裏找尋那屬於我的。對，成績告訴我人醫科將不成問題了。我那時的感受很難形容，但絕非狂喜，我祇知不負很多人的期望，真不知是一個責任的完成或是一個理想的初步實現。

我曾為這成績驕傲過，好像那一切是自己應得的，是全憑自己的努力換取到的。我到底顯示出我勝過很多人。但……嗚，靈怎麼樣了，我們班裏的「博士」定應考得不錯。

「他看到成績單後，一聲不出的便走了。」一個同學這樣的告訴我。

「勤力仔」又如何？他那讀書的幹勁真令人佩服，將來又要並肩作戰了吧。

「他考得不理想，人醫科恐怕沒希望了。」

這消息傳到我耳中時我便反問自己：我是值得的嗎？或是他們不夠運呢？這別人看起來頗普通的事，為我來說是一個上天的安排、一個賜與、一個奇蹟。我曾許諾過要珍惜此機會，亦盡力去尋求這「安排」有什麼意思及對我有什麼要求。

× × ×

迎新期間便開始受到高班同學們的「殷勤招待」。雖不能一一認識他們及現時大家見到面亦很少打招呼，但我感謝他們的指導及幫忙。到底擺起「太仙款」或不自覺或間中顯示出「太仙風度」的祇佔極少數。但願自己那時發自喜悅及興奮的傲氣沒有惹起一個高班同學的反感。

× × ×

購買舊書的擠湧情形現仍為很好的閒聊話題。競爭似處處都存在着。「先到先得」似成了一項不易的真理。講室及圖書館內的霸位、做實驗時的爭先用儀器及看示證，難道那祇是顯示出設備的不足嗎？

經過了頗著重理論的臨床前課程而踏入臨床課程之際，心裏不其然泛起一興奮的心情。祇可惜有時此興奮與熱誠卻把競爭尖銳化起來。在老師臨床講授之際，誰不欲自己一試視察病人。但有極少部份熱誠的同學，不知道是不自覺或欲自我炫耀一番，總搶先下手。在時間不足之情況下，排後者當然未能充份練習。其實有誰願意花時間等待呢，但總得有先有後才算公平。假如將自己的學習建於剝削他人的學習機會，那就未免太過了。我敬重那些時抱謙讓的同學，或且你會說他們愚蠢，但我佩服他們那做人的原則。

× × ×

開學初期真有新鮮感，新相識舊知己共聚一堂，例覺熱鬧。經過這些年來總算知道每一個同學的名字或至少認識那些面孔，但「真正」認識的又有多少？見到面沒打招呼，在巴士上遇到亦情願分椅而坐的仍有人在。「關心每一位同學」似祇是一個理想吧了。不過亦有不少人找到一羣很要好的朋友，祇望他們緊密的友情不會把自己隔開而拒人於外。

雖然從小便被教導要愛護每一個人，但總發覺不知怎的有些人看上去那麼不順眼，其實他們從沒得罪我而且是和藹良善的人。或許是我的修養不足。還好經過這些年來大家不斷的接觸與交往，那股無明的嫌惡已不復存在。或許祇有通過不斷的接觸，人才可以打破那誤解。

上病房面對病人之際，我發覺「愛你的近人」並不是十分易行的事。那些病人他們沒有美麗的面孔，祇掛著與疾病掙扎的軀體。他們沒有和藹的笑容，祇有麻木及痛苦的表情。要關心他們確要很大的愛心。祇望自己將來仍能緊記，自己學識的一點一滴，有不少均是來自病人。亦希望那呻吟的聲音及愁苦的面孔和消瘦的身軀，能於自己沒心機讀書時給與自己鼓勵。

與講師們的距離仍很生疏。和善的老師定有不少同學向他們請教。講授技巧好的當有比較多的學生上堂。有一點仍覺可惜之處是有些講師們仍常以「考試」一詞來「提醒」學生讀書。

× × ×

起初爲了承行那先前的諾言，我真的悉心應付那些功課，但後來發覺那種生活真乏味，而即使盡了全力，書本仍是沒法讀得完。難道大學生活就止於讀書嗎？

於是我便走出書本，試圖去認識大學週圍的事物，嚐試去思考各類問題。那爲鍛鍊思考及邁向獨立確是一很好的途徑。

人的思想各有不同是很自然的事，祇可惜有一些同學倒不能接納一些想法與自己不同的同學。雖說「真理越辯越明」，但往往於辯論時，人總不能拋開偏見，不自覺地將貶斥放於辯論中及傳給無辜的下一代，似乎疏忽了專重他人的思想。其實那有人是全對的，大家均是在霧中探索的人。某一方往往認爲祇有自己能看到附近的事物，而對方則處於霧中，誰不知很多時大家都是在圈外轉而沒有真正的試圖走進對方的圈內察看對方一番。事物亦因觀看的角度不同而有所差異。當在某一問題的辯論上出現不利時，那時才說這是「我的」意見，「我的」看法，他人便得尊重，便無權異議。或許人的地位越高便越難承認錯誤。

眼見一羣熱心的同學爲著大家的福利着想，拋開學業，放棄娛樂來爲大眾服務，換來的竟有一些不善意的批評，質詢，冷淡的反應，我佩服這羣同學的熱誠與堅忍。但當自己反省時倒覺慚愧，試問除了投票外，自己

可作過什麼支持他們？自己不是時常不爲已得到的而感激，反爲那未得到的而埋怨嗎？又爲什麼自己總是作那沉默的大多數中的一份子，見到自己認爲對及不對的事物不發一言呢？

× × ×

考試時候的滋味真不好受。精神的壓力仍是熾烈。由早到晚的對着書本，真是訓練耐力的好時候。還好有自己的學習小組，大家一起努力，悶了又可閒聊一番，日子才不那麼難過。然一個人的力量真的有限，萬事假如都要一個人孤單的去完成的話，那人生可苦了。讀大書的當然過，但讀細書的亦不會肥佬，那倒是值得思考的問題。考試過後我們倒懷疑自己記憶力的持久性。

× × ×

最後我要說的是我愛醫學，醫生並非淨是一種職業那麼簡單。但願在這醫科生涯中我能找到我的目標及做人原則，多尋求人性美好的一面！

台灣私人醫院的院名，都冠以開業醫生的姓，例如林外科，蔡小兒科，王婦產科。有一位眼科醫生姓左，診所稱做「左眼科醫院」。很多觀光華僑看到左眼科醫院，認爲分科精細，歎爲觀止。

加工處理

某人去牙醫處拔牙。

「拔一齒要多少錢？」

「十五元。」

「不到兩分鐘的工作時間，你要收十五元嗎？」病人又說。

「你願意，我可以加長時間，慢慢地拔，不妨加工處理。」

醫生的診斷

一位醫生爲一婦女診病，告訴她：「保持身心健康的秘訣，須要不發脾氣，不要爭吵，不要大哭大鬧，否則，你會發生嚴重的毛病。」

一位男病人問醫生說：「這位太太大概患着心臟病吧？」

醫生笑說：「她的心臟很健全。我不過爲着我們男人着想，對所有已婚的婦女，都提出同樣的勸告，這樣可使我們作丈夫的快樂長壽。」

診病

有一個婦人去看病，反覆不停地訴說她的病況，醫生只好說：「請你伸出舌頭來！」然後用壓舌板，壓住她的舌頭，說：「現在讓我問你幾個問題。」

The Road Not Taken

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveller, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;

Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.

I shall be telling this with a sign
Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less travelled by,
And that has made all the difference.

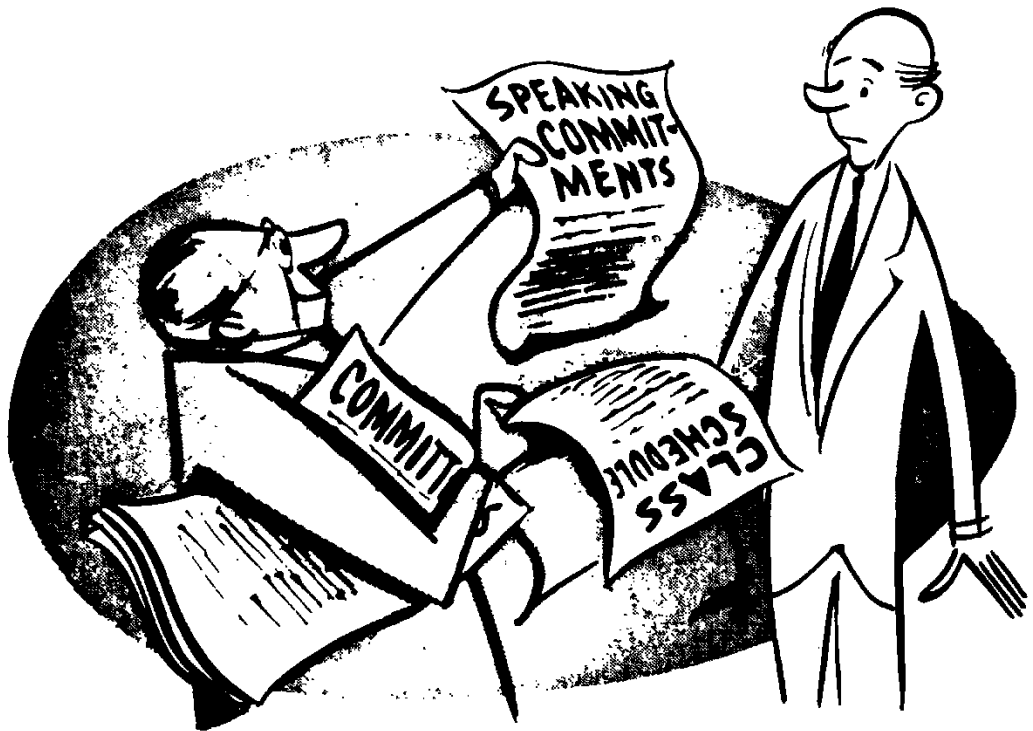
By

— Robert Frost —





A DREAM.....

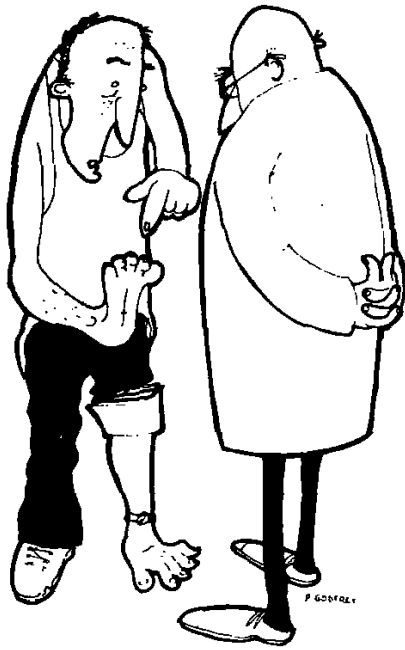


.... IN REALITY

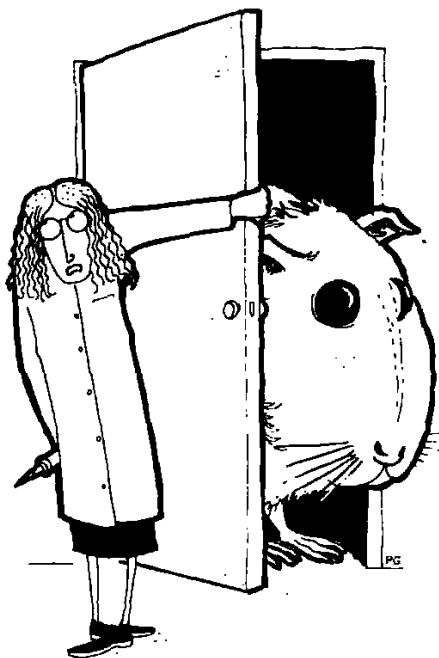
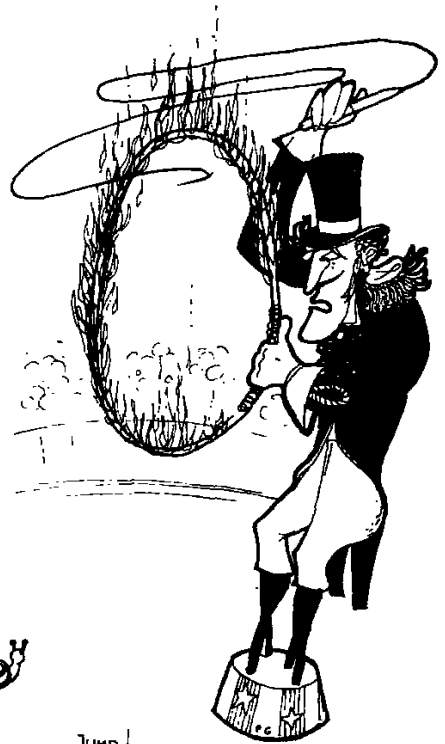
Do You Know



- that with **multiple births**, as with giants and centenarians, exaggeration is the rule. Since 1900, two cases of nonuplets, five cases of octuplets, 19 cases of septuplets and at least 23 cases of sextuplets have been reported. Jamaica has the highest incidence of multiple births at 4 per 1,000.
- that **the brain** has 1.5×10^{10} cells each containing 10^{10} macromolecules. Each cell has 10^4 interconnections with other cells. At the age of 18 the brain loses some 10^3 cells every day but the macromolecular content of each cell is renewed 10^4 times in a normal life span.
- that **the commonest illness** in the world is coryza (acute nasopharyngitis) or the common cold.
- that **the commonest disease** in the world is dental caries or tooth decay, known to afflict over 53% of the population of the U.S. During their lifetime few completely escape its effects.
- that **the most infectious of all diseases** is the pneumonic form of plague, with a mortality rate of 99.99%. Leprosy transmitted by *Mycobacterium leprae* is the least infectious of communicable diseases.
- that **the most notorious of all typhoid carriers** was Mary Mallon, known as Typhoid Mary, of New York City. She was the source of the 1903 outbreak with 1,300 cases. Because of her refusal to leave employment, often under assumed names, involving the handling of food, she was placed under permanent detention from 1915 until her death in 1938.
- that **the greatest recorded blood infusion** is 2,400 pints, required by a 50-year-old hemophiliac, Warren C. Jyrich, when undergoing open heart surgery at the Michael Reese Hospital, Chicago, in December, 1970.
- that **the most protracted operations** are those involving brain surgery. Such an operation lasting up to 31 hours was performed on Victor Zazueta, 19, of El Centro at San Diego Hospital, California, by Dr. John F. Aleksne and his team on January 17-18, 1972.



**! THINK ONE OF YOUR STUDENTS
PUT ME THE WRONG WAY ON THE
OPERATING TABLE**



***SIR - DID YOU TELL ME TO INJECT THE GUINEA PIG
WITH 3 OR 3,000 MG OF THE HORMONE?**

Journal of
Hydrology

Volume 100, Number 1, 1988

ISSN 0022-2875

Published by the American Society of
Civil Engineers

1801 Alexander Bell Drive
Reston, VA 20191

Subscription rates: \$100 per volume
for institutions, \$50 for individuals

Single copies: \$15 per issue

Advertising rates: \$100 per line per issue

For more information, contact:
ASCE Publications Department

1801 Alexander Bell Drive
Reston, VA 20191

Phone: (703) 295-6000

Fax: (703) 295-6001

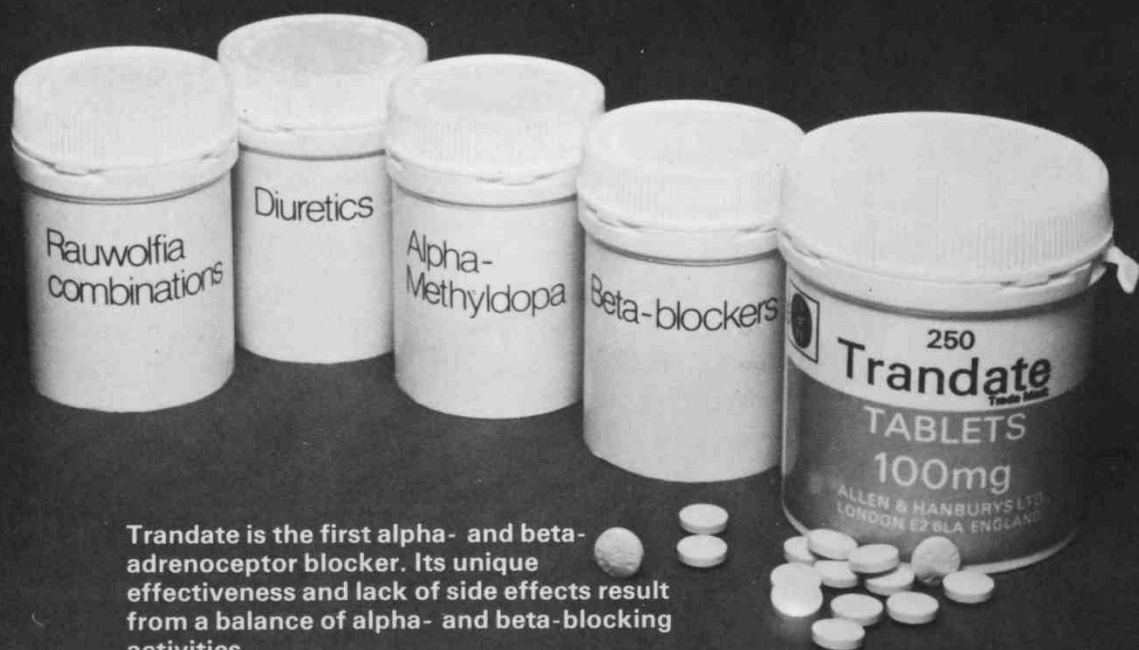
Telex: 68000

Internet: <http://www.asce.org>

ADVERTISEMENT

For Hypertension

-a real advance in treatment



Trandate is the first alpha- and beta-adrenoceptor blocker. Its unique effectiveness and lack of side effects result from a balance of alpha- and beta-blocking activities.

Trandate

(labetalol)

the first alpha-beta blocker

Glaxo

Trandate is a trade mark of Allen & Hanburys Ltd. London E26 LA, England, a member of the Glaxo group of companies

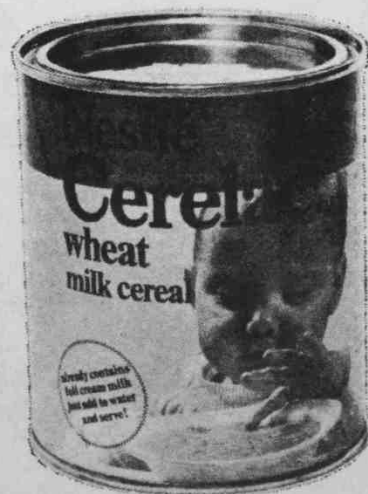


The ideal baby cereal enriched with full-cream milk. And in seconds...

Cerelac a complete meal for baby.

You just add Cerelac to previously boiled water and your baby has a complete meal in seconds.

When baby's about 6 months old, instant Cerelac is an ideal choice. Because Cerelac is a nutritious and delicious wheat cereal enriched with vitamins, calcium and iron and the added goodness of fresh full cream milk. And Cerelac is not only nourishing for your baby but so convenient for you to prepare. You won't keep baby waiting. Cerelac's always ready.



NESTLE



Man, Too, May Soar

From his moment of birth man constantly seeks to free himself of the fetters binding him to himself and to his environment.

He embarks on a quest for new ideas. He aspires to greater proficiency.

He strives to achieve today that which he hadn't yesterday... and to become tomorrow that which he wasn't today.

This spirit is every man's ability to soar.

It has been the source of great advances in medicine, agriculture and chemicals by The Upjohn Company.

It is the commitment of people who know... of people who perform.

It is their promise of an even greater future... that each may excel and together all men may soar.

Upjohn

With the Compliments

of

Upjohn Company S. A.

Butacote[®] updates the Butazolidin[®] formulation Geigy

"Although the normal sugar coated (Butazolidin[®]) and enteric coated formulations had a similar therapeutic effect, the enteric coated significantly enhanced gastric tolerance and the patients preference for this formulation."

Practitioner 205, 671 (1970)

Availability Each enteric coated tablet contains 4-butyl-1, 2-diphenylpyrazolidine-3, 5-dione (Phenylbutazone B.P.) 100 mg in containers of 100 and 500.

Detailed literature describing any Geigy product will be supplied on request.

With Savlon Hospital TRADE MARK Concentrate only the pathogens suffer

Savlon's remarkably low toxicity makes it unique amongst antiseptics

Think what this means:

A wide range of applications

'Savlon' can be used on damaged tissues and tender surfaces.

Sensitivity reactions rarely occur

'Savlon' can be used confidently time and time again, even though it has greater penetrating properties than other antiseptics.

In short, 'Savlon' combines antibacterial effectiveness with cleansing power and tissue toleration.

Isn't it time you tried it?

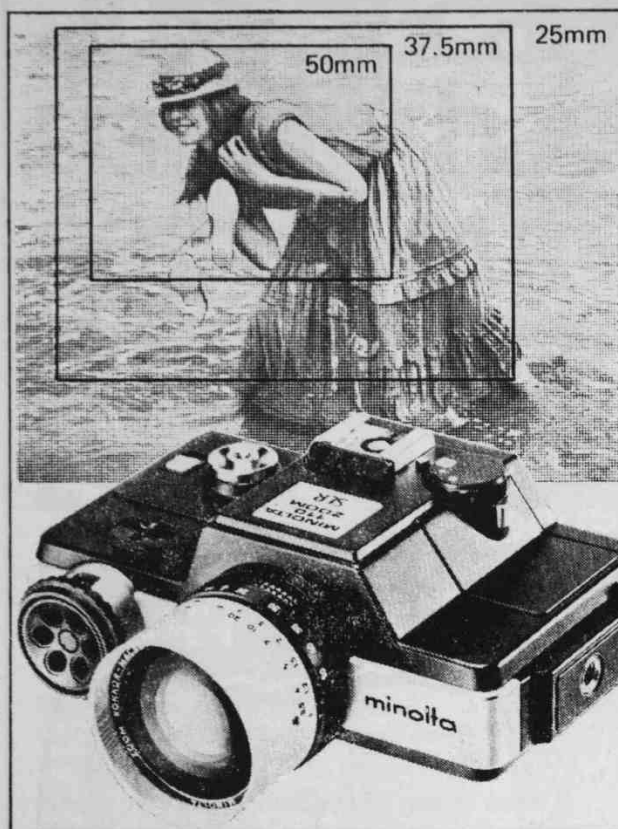
Savlon Hospital Concentrate
-the safe solution



Imperial Chemical Industries Limited
Pharmaceuticals Division
Alderley Park Macclesfield
Cheshire England

Sole Agents in Hong Kong:
ICI (CHINA) LIMITED,
Union House, 16th Floor.





The unique Minolta 110 Zoom SLR

Only Minolta could produce this totally new breed of camera – the electronic-brain, 110 cartridge-type single lens reflex camera that zooms and computes with macro capability.

AVAILABLE AT ALL LEADING
PHOTO SHOPS

Minolta

With the Compliments

of

THE HONG KONG CENTRAL HOSPITAL LTD.

玉泉橙汁 多橙多汁
 玉泉忌廉 夠香夠甜



Just because we don't usually have much to say for ourselves doesn't mean there isn't much to say about Mazda.

We're older than you think!

Our first Mazda vehicle, a three wheeled truck, was produced in October, 1931.

And now, we're one of the major automobile exporters in the world.

In April 1977, the eight millionth Mazda rolled off the assembly line. It has taken years of hard work, but now we are exporting to Asia, the Middle East, Europe, North America, Central and South America, Africa and Oceania.

We practice a philosophy called "Value Engineering"

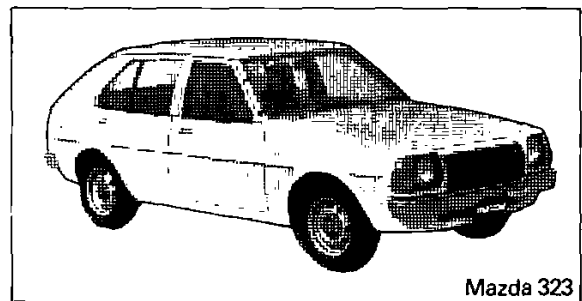
Our constant aim is to provide the greatest possible value within a set target budget. In customer terms, this means production of functional, attractive, versatile cars and trucks, quality-built at economical prices.

We're working on emission problems to help un-pollute the environment.

We are able to comply with the 1978 Japanese exhaust emission standards, using the Stabilised Combustion System for piston engines and the Lean Combustion System for our rotary engines. Bot systems, in fact, are based on Mazda's current exhaust emission control technology.

Our passenger and commercial vehicles suit changing traffic patterns, driver needs.

Traffic congestion is a fact of life and a test of endurance for today's driver. Cars and trucks, like people, need to be tougher to take the strain. We build with that in mind, and add all the comfort we can, to make the driver's lot a happier one.



Mazda 323

Our Mazda dealer in Hong Kong is Fidelity Motors. A member of The Inchcape Group of Companies.

You can contact them at any of their showrooms listed below.



FIDELITY MOTORS

(A member of The Inchcape Group of Companies)

58B Paterson Street, Hong Kong. Tel: 5-792929

12 Yim Po Fong Street, Mongkok, Kowloon. Tel: 3-969292

192 Main Street, Yuen Long, New Territories. Tel: 12-774226

MAZDA

The more you know about Mazda, the more you know about cars.

**THE FIRST AND FOREMOST
MEDICAL DEFENCE ORGANISATION**

**DOCTORS AND DENTISTS REGISTERED IN HONG KONG
ARE ELIGIBLE FOR MEMBERSHIP**

THE MEDICAL DEFENCE UNION

3 Devonshire Place
London W1N 2EA

The Medical Defence Union offers
the medical and dental professions
advice and assistance on all
medico-legal matters and provides
members with protection worldwide
except U.S.A.

Murine[®] 2



eye drops

- soothes irritation
- removes redness
- moisturizes
- cleanses



“妙蓮2號” 眼藥水

功能解除刺激，
消除紅腫，
滋潤眼睛，
並使眼睛明亮。



“妙蓮2號”眼藥水，除俱有妙蓮的一切功效外，更含消除紅腫的成份，提高眼睛微絲血管的收縮能力，促進血液循環，使紅腫刺激的眼睛回復光亮自然。

“妙蓮2號”一滴就掂

Rotary Press Company
文華印刷公司

致 意

香港北角英皇道六五九號東祥工廠大廈11樓D座
電話：五一六一一四四九

一九七七——七八歲次丁巳

東華三院主席張威臣 副主席

鄧爾邦 馬清偉 邱木城 馬介璋

總理

范伯豐 文禮提 嚴葆華 連建平
呂志和 楊炳炎 湯景賢
王國良 梅應春 劉惠棠
曾永剛 張子方 陳少雄

致意

With its four world-renowned chemical concerns, Basle, the two-thousand-year-old university city on the Rhine, may justly claim to be a home of modern pharmaceutical research. A decisive part in the chief developments of the last thirty years in hormone therapy, analgesia, treatment of infectious, cardiovascular and mental diseases has been initiated and successfully carried out in the laboratories of this traditional centre of science and learning.



has played a representative part in this success with its pioneering work in the synthesis of vitamins, antibiotics, tuberculostatics, sulfonamides and narcotics and with original contributions to psychopharmacotherapy. As a worldwide organization subscribing to the standards and demands of basic scientific research, Roche seeks, tests and produces

BETTER MEDICAMENTS FOR BETTER THERAPY

CONTENTS

	Page
I. Elixir Editorial Board 1977	5
II. Message	8
1. From the Dean	9
2. From the President	11
3. From the Chairman	12
III. Elixir Loan Fund	13
IV. The Medical Society 1976-77	14
1. Office Bearers of The Hong Kong University Medical Society HKUSU 1976-77	17
2. Our Chronography	19
3. Health Committee	25
4. Fraternity Committee	27
5. Caduceus	29
6. Elixir	30
V. From the Classes	32
VI. Extract from the Gazette	42
VII. Life in Medic (I)	56
VIII. The Anatomy Department in focus	64
IX. The Academic Side	72
1. Some thoughts on Medical Education in Hong Kong	73
2. Testicular function: A comparative viewpoint	80
3. Stress and Illness	91
4. Kidney Transplantation in H.K. — Facts and Problems	97
5. Human Life Span Development	101
X. May be you'd like to know	104
1. Something about anaesthesiologists	106
2. Something about radiotherapists	107
3. 夢	109
4. Nurse training in Hongkong	115
5. Treatment of Drug Addiction by Acupuncture Electro-stimulation	117
XI. Life in Medic (II)	120
XII. Contributions	126
1. 雜記二則	127
2. Cross road	128

3.	Reflections	129
4.	新丁雜感	132
5.	Our Foreign Counterparts	133
6.	The Holy Art of Healing	136
7.	認中……七六~七七	137
8.	苦雨	139
9.	對奕的孩子	140
10.	我的觀	142
XIII	Do you know	146
XIV	Advertisement	148
XV	Contents	162