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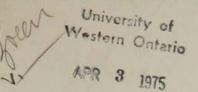
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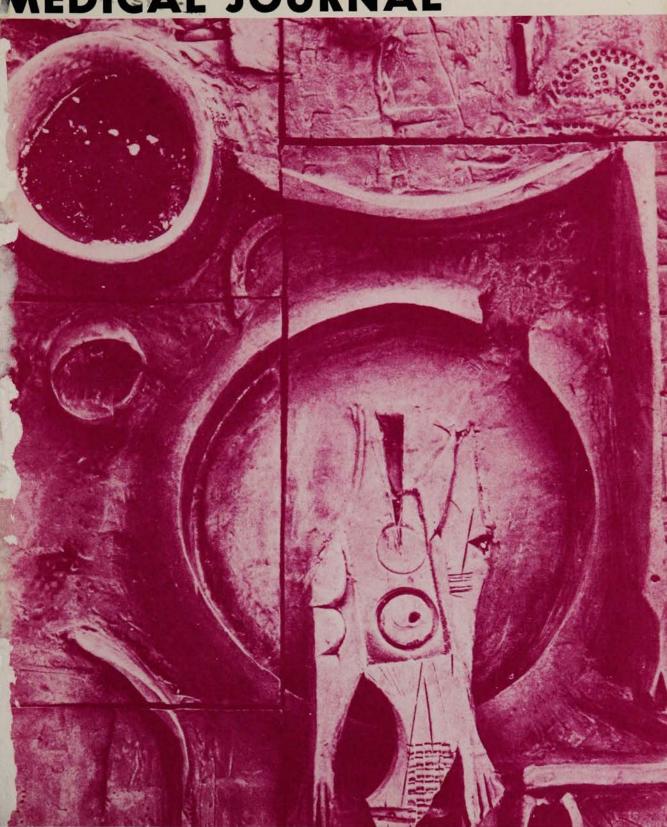
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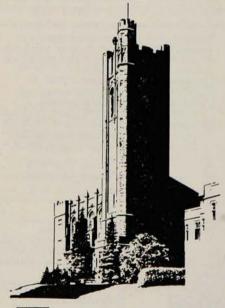
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## MEDICAL JOURNAL

VOL. 42, NO. 1, OCTOBER, 1971

The UNIVERSITY OF WESTERN ONTARIO

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THE UNIVERSITY OF WESTERN ONTARIO MEDICAL JOURNAL is published four times per year by the undergraduate students of the UWO Medical School. Est. in Oct. 1930. Subscription rates \$6.00 per year. Notify any change of address promptly. All editorial, advertising and circulation correspondence is to be addressed to the editor, advertising mgr., and circulation mgr. respectively, UWO Medical Journal, Health Sciences Centre, U.W.O., London, Canada. Printers: Hunter Printing London Ltd., London, Canada.

CONTRIBUTIONS will be accepted with the understanding that they are made solely to this publication. Articles should be of practical value to students and medical practitioners. Original research work is most welcome. Articles should not be longer than 3,000 words, and we will more readily accept those of shorter length. Introduction and summary of conclusions, should be included. Drawings and photographs will be accepted, the former to be in black ink and drawn clearly on white cardboard.

All articles submitted must be typewritten, on one side of paper only, with double spacing and two inch margins on each side. Canadian Press (American) spelling must be adhered to. The format for references is as follows: For books: author(s): title of book, publisher, place, year. For Journals: author(s): title of article, name of Journal (abbreviated as in the World List of Scientific Periodicals), volume: page, year.

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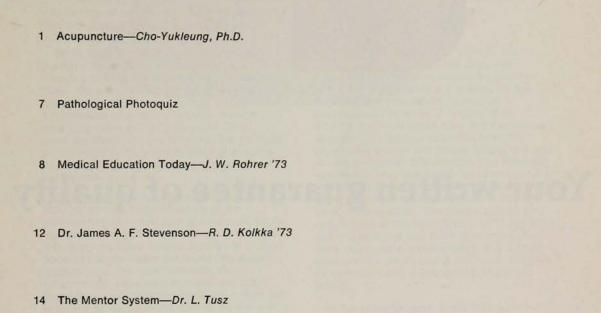
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## Acupuncture

Cho-Yuk Leung, Ph.D.

"Like the computer language which bears practically no hint as to how the electronics function inside the computer, the language of Acupuncture which has baffled many a Western mind as to its correlation to human physiology is every bit as effective . . . ."

Since the lifting of the bamboo curtain to the West much of the mystical East has revealed itself to the Western World. Amongst these, the ancient Chinese art of healing: "Acupuncture", meaning to heal sickness by the insertion of a needle through the skin, hailed by some as the panacea of China, came suddenly into prominence. The publicity also brought forth criticism making acupuncture one of the most controversial issues in the medical world.

I, like many, am caught in the transition from old to new, while standing at the junction between East and West. Acupuncture happens to be part of my heritage and I feel it both my privilege and responsibility to clear some of the confusion the world has about acupuncture. The chief criticism about acupuncture, especially to those who claim they know about Western medicine is that: the language of acupuncture sounds illusive and lacks scientific basis. I find it difficult to argue against that on the surface, but I would suggest that we should take a look at the computer language which is used to solve just about all problems of today, yet does not seem to bear any hint whatsoever to the functions of the electronics inside the computer. Take modern nuclear physics for example, experimental findings often precede the formulation of any acceptable theory. Facts alone prove the effectiveness of our efforts and success is confirmed only by data of statistical average.

To use the computer we must learn its language, the same argument applies to the practice of acupuncture. The exact origin of acupuncture is disputable. It is not known who invented acupuncture, but, as far back as can be traced in Chinese history, all the well-known doctors used it to great advantage. Tibet claims that some stone needles for acupuncture had been unearthed. This points to the fact that acupuncture was already in use during the Stone Age. Chinese history only goes back to the reign of Emperor Wang Ti, which is little more than four thousand years. The Emperor was more than fascinated with the art of healing and enjoyed discussing it with his royal physician, Ki Pak, who was an expert in acupuncture. So, as far as we know, Ki Pak was the first one in history to practice acupuncture, but there is no proof

that he was the inventor of this art. The ancient Chinese classic, Nei Jing, was supposed to have been written by Emperor Wang Ti. The contents are queries by the Emperor and answers by Ki Pak, on acupuncture. However, it is debatable whether the book could have been written at such an early period, as at that time the vocabulary system of Chinese characters was not yet perfected. It is possible that the book was written very much later by someone who intended to give the full credit to Emperor Wang Ti, and at the same time to make the book more credible. The book made its first appearance in the Han Dynasty (200-206 B.C.) and it is possible that more than one author were responsible. Nevertheless, it is a most praiseworthy effort, and is still much admired by herbalists and acupunturists of the old school.

In the same dynasty, there lived a very famous herbalist by the name of Hwa Tor, who was also famous for his skill in acupuncture. Hwa Tor's Miracle Needle is acknowledged by all even up to the present days.

Pin Cheuk is the best known acupunturist in the Chinese history. He lived in the Chou Dynasty (770 B.C.). People in the Sung Dynasty (960 A.D.) acclaimed him as the father of acupuncture.

Although people considered Nei Jing a great book, its teaching on acupuncture was not enlightening enough. A thousand years later in the Chin Dynasty (265 A.D.), a man named Wang Po was the first to determine all the various "points" used by acupuncture on the human body, and their uses on different diseases. It was not until the Siu Dynasty (589 A.D.) when diagrams were used to illustrate all the "points" on the human body used in acupuncture. Unfortunately, those diagrams were very crudely drawn, and it is quite impossible for students to learn the correct positions on which the needle is to be inserted. But, those were the only guide lines they had and such diagrams have been in use since then. Only in recent years have really good illustrations been produced by Communist China, in its revival and research of the ancient and almost miraculous art of healing.

Acupuncture was suitably acknowledged by the king in the Tang Dynasty (718 A.D.) and its practice was encouraged throughout the nation. In the Sung Dynasty (960 A.D.) acupuncture was met with higher acclaim and the king ordered the chief Royal Physician, Wang Wei Yih, to publish three illustrated volumes on acupuncture and to order human form diagrams to be carved on stone slabs. The best effort was the bronze human forms with small holes all over the body, representing the positions of the acupuncture points. Annual qualifying exams were held for potential acupuncturists. Candidates were asked to push a needle into whatever "points" on the bronze form dictated by the examiner. These bronze human forms were carefully kept, right up to the Ching Dynasty, when in the Boxer's Rebellion, they were taken away by the invading soldiers. Somehow, one of the bronze forms got to Japan and remained there even to this very day. Actually, the bronze form can only be regarded as a relic of the past, rather than a useful guide to students of acupuncture, as positions of the acupuncture points on the human body differ from person to person, according to their size and build. Only through the guidance of a good teacher and long practice could a student learn to locate correctly the positions of the acupuncture points. Japan was the first foreign country to learn and practice acupuncture. France took up acupuncture later than Japan through the teaching of a Dutchman who brought it to Europe in the sixteenth century, though another source shows that the French learnt the art mostly from the Vietnamese. The French, in turn, taught the Germans. In France, there are several hospitals having separate departments for acupuncture therapy. The Germans, too, have picked it up quickly in recent years. But, owing to their limited knowledge, the results of both the French and the Germans are not as satisfactory as they could have been. Red China has seen fit to popularize the art and the Russians, too, take it home and are researching on it from behind the iron curtain. The British have an Acupuncture Institute of their own and many have been practising acupuncture for years. (Reference for further reading would be given at the end of this article.)

## THE PHILOSOPHY OF CHINESE PHYSIOLOGY

Acupuncture, like all therapeutic processes, requires a knowledge of physiology as an absolute prerequisite for its understanding. Because of its early conception, when modern physiology was unknown, the operational principle of acupuncture was based on the ancient Chinese Physiology.

The fundamental difference between ancient Chinese Physiology and Modern Physiology is that Chinese physiology was mainly derived from the Ancient Chinese through philosophic observation, comparisons and analysis between man and his surroundings. They believed that there is but one Natural Law, which is the 'law of our Universe'. They felt that such a law is simply written in the sky and all around us, executed by the movements and characteristic behaviours of the heavenly bodies and the basic elements found on earth.

They were convinced that all things exist between the two extremities called Yin and Yang meaning negative and positive, representing 'female' and 'male', darkness and brightness (from these, all worldy matters took form), and that the fundamental elements for all matters could be reduced to five basic elements: WOOD, FIRE, EARTH, METAL and WATER.

The correlations and influences among these five elements and the complimentarity between Yin and Yang are believed to govern all things, for between Yin and Yang flows the "life energy", Chi, and the proper flow of "life energy" is the prerequisite for the proper functioning of all beings. (Life energy or Chi is the flow of essence; blood, hormones, etc., necessary for metabolism and the proper functioning of our body; Chi is not confined to flow in the vascular system but spreads along the meridians all over the body.) Believing that the human body is an analogue of the universe in miniature, ancient Chinese classified the organs in our visceral system into Yin-Yang pairs, such that the Yin organs manufacture, store and distribute the life energy, Chi, and are suppliers, in special ways, to the Yang organs which are responsible for consumption, digestion and excretion. The organs are thus paired under Yin and Yang as shown in Table I and Fig. 1.

Using the computer age language, it can be said that the Chinese way of studying physiology is comparable to the studying of a computer by dividing the insides of the computer into black boxes, disregarding the exact electronic circuitry inside and trying to understand instead the function of each of the black boxes and their correlations to one another.

When Chinese talk about the internal organs, they speak of not just the basic functions but also their correlations among themselves and other parts of the body. The following is mainly an abstract of the description of the organs from the famous book of Chinese Physiology, Nei Jing. If we kept in mind the difference of some of the terminology and representations, we would come to the realization that there is, in fact, very little difference between the Chinese Physiology and Modern Physiology.

#### A. THE YIN ORGANS

#### 1. The Heart

The heart is the 'king' of the organs, it governs all organic functions and controls the spirit of man, assuring his well being. This is because the heart is the governor of blood circulation. The state of the heart is reflected on the facial complexion. Associating with the heart is:

#### —The Pericardium

The pericardium is described as the controller of the heart's pumping action and the master of the blood circulation. The functional well being of the heart thus depends upon the state of the pericardium.

#### 2. The Liver

The Liver is the 'general' of the organs. It regulates the amount of blood in circulation and acts as a reservoir for formation and storage of blood in the vascular system.

Liver is the supplier of muscles, for it produces the nutrients derived from food intake and passes them on through blood and Chi in circulation to the muscles. Malfunctioning of the liver leads to weakening of the muscles. The state of liver is shown on the nails, for nails are the extension of the muscles in the philosophic sense although they are really a derivative of the skin.

#### 3. The Spleen

It must be noted here that when ancient Chinese spoke of the spleen they actually meant the combination of spleen and pancreas together, as can be seen by the functions they assigned to the spleen and the lack of mention of pancreas in the literatures. Of the spleen, Nei Jing says:

—"The spleen (pancreas) processes and digests. Its influence is effected through the meridians connecting the stomach and the esophagus and is complementary to the stomach."

- —"Spleen governs the flesh in our body. Its state is refected on the lips."
- —"Spleen governs the four limbs, for the the four limbs must derive their energy from the digested food."
- —"Spleen collects, processes and stores blood and helps the well being of organic functions."

#### 4. The Lung

The lung is the master of Chi, the life energy, which is a combination of the air we breath in and the flow of small nutriment in our body.

All organic functions are supported by the lung. (Regulation of respiration.)
The effect of body fluid in lung could affect metabolism, cause cough and upset the control and regulation of the body fluid distribution.

Since the lung governs respiration and the skin pores also associate with breathing, skin is said to be the associate of respiration and the lung the master.

 The Kidney (while no adrenal gland was mentioned in Chinese physiology, from the description given, the adrenal gland functionally was considered as an associate of the kidney.)

The kidney holds the essence for reproduction. It affects the production of bone marrow and controls the development of bone. Its state is reflected in the state of hair. The poor state and the loss of hair is blamed on the malfunctioning of kidney.

It governs the agility of man.

Kidney weakness results in back-ache and lack of energy. The kidney regulates the distribution of body fluid. The purest of all goes from the lung to skin, the kidney filters and excretes the undesirable waste to the urinary bladder for final disposal.

Associating with kidney is Ming Mun, the "portal of life", where all essence and spirit of life reside (again in part due to functions of the adrenal gland) the fire or Yang energy of the otherwise Yin organ kidney is centred in the portal of life. Its proper functioning is vital to our health.

#### B. THE YANG ORGANS

These are the organs responsible for food consumption, digestion, processing, transporting and excreting waste matters.

#### 1. The Gall Bladder

It stores bile juice for digestion and is believed to have ability to lighten the effect of emotional disturbance (bilious temperament).

#### 2. The Stomach

It is like a store-house of food, a receiving and processing depot for nutriment. It joins the esophagus through The Phun Mun (cardiac orifice) and empties into the duodenum through the Yau Mun (pyloric orifice).

#### 3. The Small Intestine

It exists between the stomach and the large intestine. It digests and absorbs nutriment from food and delivers them to the appropriate organs for further use in metabolism.

#### 4. The Large Intestine

It's responsible for the absorption of water and the elimination of waste products.

The Urinary Bladder
 It stores and discharges urine.

#### 6. Triple Warmth. (San Jiao)

- The upper San Jiao controls the distribution of body fluid, governs the well being in general;
- The middle San Jiao governs the manufacture of Chi (due to the action of Lung and Stomach, the receptor for air and food), and all the processes in between;
- The lower San Jiao governs the filtration and disposal of waste matter.

The following is an attempt to explain the Yin-Yang organ pair relationship stated by the ancient literature. While the small intestines are the gateway in our body to the nutriments derived from food, it takes the pumping heart to circulate and deliver the essence to the appropriate cites in our body. It is the action of the heart that puts the good work of the small intestine to use. Also, blood supply to the small intestine is essential for its proper functioning. This can be interpreted to mean that the heart is complementary to the small intestines.

Now, let us consider the second pair of Yin and Yang organs i.e., the Liver and the Gall Bladder. The fact that the liver supplies the gall bladder with bile juice is enough to see why the liver is named the supplier (Yin) to the gall bladder (Yang).

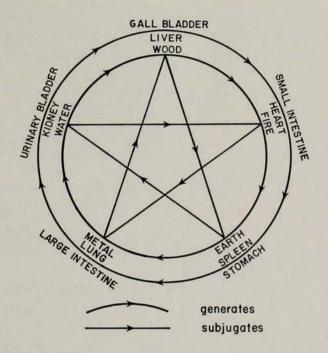
It is easy to understand why the Chinese look upon spleen as a Yin organ and the stomach as Yang, for the the Chinese believe that the spleen (which includes the pancreas) affects digestion of food and bad blood and compliments the stomach for its digestive power.

The lungs and large intestine are the next pair of Yin-Yang organs. We know that both the lungs and the large intestine are responsible for getting rid of waste or purifying our system. The lungs rid our blood of CO<sub>2</sub>, replacing it with oxygen and hence enabling our internal system to function. Without the work of our lungs, the efforts of the large intestine would be futile. In fact, the functioning of the large intestine may be severly hampered. The lung and the large intestines are, therefore, complimentary to each other.

The kidney supplies the urinary bladder with urine and the Chinese classify this pair of organs—the Kidney YIN and the urinary bladder YANG.

The pericardium, which consists essentially of a strong, conical, fibrous sac called the fibrous pericardium, with the serious pericardium inside, encloses the heart. It sets a limit to the allowable expansion of the heart during diastole, limits the inflow and hence also the stroke volume of the heart. Thus, the size of the pericardium determines the maximum possible output per beat. Because of the importance of the vascular system as the supply line in our body, the influence on our organic functions by the pericardium cannot be over emphasized; that is why this organ is sometimes referred to as the organ of circulation and sex (a Yin organ). As stated above, the San Jiao (an imaginary organ) is divided into three sections, controlling practically all the internal organic functions (therefore, a Yang organ). The influence due to pericardium (circulation, sex) on San Jiao (triple warmth) can easily be inferred. Pericardium is, therefore, the Yin organ complimentary to San Jiao, which is Yang.

In the next issue, the laws of the five elements and the twelve meridians would be described. The laws govern the correlations among the organs and the behaviour of Chi, the flow of life energy. Through the understanding of these facts the concept of acupuncture therapy was born.



CORRELATIONS amongst the 5 ELEMENTS and their
RELATIONSHIP to the ORGANS

Ed. note: this article is the first of a 2 part series.

#### TABLE I

YIN YANG Earth Heaven Moon Sun Darkness Light West & North East & South Right Left Autumn & Winter Spring & Summer Lower Upper Fall Rise Interior Exterior Fire Water Abdomen Back Cold Hot Wet Dry Weak Strong

Relating to man the Law of Yin Yang gives:

Male

Female

Regarding the organs and functions in our body:

Small Intestine	Heart
Large Intestine	Lung
Gall Bladder	Liver
Stomach	Spleen
Urinary Bladder	Kidney
Triple Warmth San Jiao	Circulation Sex or Pericardium
The Chi or Energy	The Blood

Ed. note . . .

Dr. C. Y. Leung is a native of Hong Kong. His father, Dr. T. S. Leung, an acclaimed healer, is proficient in traditional Chinese medicine and an authority in Acupuncture. It was through his father that Dr. C. Y. Leung came to learn this Ancient Art of Healing since his early age.

Dr. Leung took his undergraduate training as an Electrical Engineer at the University of London in England. He obtained his M.A. in physics at the University of Toronto doing research on optical pumping (the fundamental mechanism used in Lasers). His Ph.D. was also obtained from U. of T. The topic of his research was in Atomic Molecular collisions using the technique of Nuclear Physics. Dr. Leung is now with the Department of Physics at the University of Western Ontario doing research in Medical Physics. Some of the projects he is working on at the present are:

- Color probe for the blind (to give the blind color perception)
- Effects of Laser irradiation on the color receptors on the vetebrate retina
- 3. Laser coagulators for eye surgery
- 4. Acupuncture

\* \*

#### Keep The Faith Baby

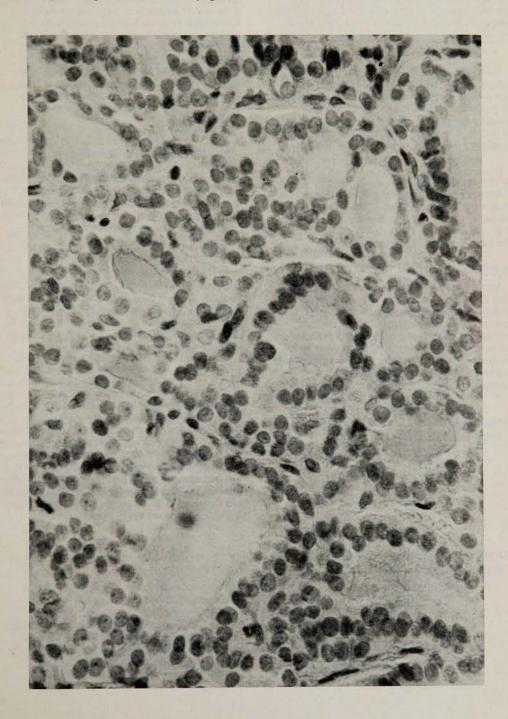
As an example of mystery in medicine, may I relate one personal experience. When I was a medical student, I spent a well-remembered afternoon in the Out-Patient's Department of a famous Scottish hospital. A lady arrived to see the physician in charge. She explained at great length how the pains in her legs had disappeared, and called down the blessings oh heaven on the head of the wonderful doctor who had prescribed such healing medicine. Glancing at the case history, the doctor asked the patient how often she had taken the medicine. "Weel", she replied, "it didna say onything on the bottle, so ah juist took a tablespoonful three times a day after ma food." The doctor nodded, and told the good lady that she need not return. She promptly left, overcome by relief and weeping tears of gratitude.

When she had gone, our mentor showed us the prescription from which the "medicine" had been made. It was an aconite, belladonna, and chloroform liniment, to rub on the painful limbs. After discussing the matter, we came to the conclusion that the liniment had not been strong enough to destroy the lining of the stomach, but that the taste must have been sufficiently vile to persuade the lady that the "medicine" was effective. Faith had done the rest.

Dr. Sutherland Scott in Diagnostica, Number 8, 1969—"Medicine and Murder"

## Pathological Photoquiz

This Pathological Photomicrograph is of a specimen obtained from a 64 year old man. What is your diagnosis? Answer on page 13.



## Medical Education Today

J. W. Rohrer '73

Sixty-one years have passed since the publication of the Flexnar Report on Medical Education. The evils he exposed such as, Commercialism, poorly equipped laboratories and unqualified instructors have long since vanished.

However, the problems facing medical educators today, though of a different nature, are just as foreboding. The rapid expansion of biomedical knowledge combined with a surging demand for medical care has resulted in further examination of medical schools by medical educators.

The results of such scrutiny are as numerous as the medical schools in which they were instituted. Two of the more readily discussed revisions are: the restructuring of medical school curriculum into "blocks"; and the pass-fail system of grading.

#### BLOCK METHOD OF INSTRUCTION

Instructions using the "block" approach may be defined as a period of time during which the student devotes his time to only one or two major subjects. At the completion of the course in these subjects he then enters another block with instruction again in only one or two major subjects. An example of this method is seen below in a scheme of instruction at the Chicago Medical School:

#### THIRD YEAR

Third year schedule is as follows:

	-	wks.
Psychiatry	8	wks.
Ob. & Gyn.	8	wks.
Pediatrics	8	wks.
Surgery	12	wks.
Medicine	12	wks.

#### FOURTH YEAR

Fourth year schedule is as follows:

Surgery	8	wks.
Medicine	8	wks.
Out-Patient	8	wks.
Selective	8	wks.
Elective	12	wks.
	-	

44 wks.

The block is used in all 4 years at Chicago and hence not only in the pre-clinical subjects but also on the clinical services. In a review of 87 medical schools we have found that 21 (24%) employ the block approach in the first two years whereas 67 (79%) have chosen the block system for Third Year students. The use of blocks in Third Year does not necessarily mean the extension of Third Year to 44 weeks—the length of instruction varies from school to school

The block allocation of time and departments has certain advantages: the student can focus his attention on one or two subjects; departments have more time for small group instruction; and at the conclusion of their respective block, professors then have considerable amounts of time for research of their practice.

Disadvantages under the block system include: student boredom and frustration due to the lack of subject diversity; difficulty in planning continuity of instruction; and due to specialization the shortening of the blocks in order to implement new ones.

Student boredom is perhaps the most detrimental facet of the block system. However, imaginative and diversified instruction may overcome this problem. The use of correlation clinics, seminar groups where students present the lesson, audiovisual aids and alike may be the answers to the problems incured by lack of diversity. At present the schools using the block approach are satisfied and are really giving the system a chance to prove or disprove its merit.

#### PASS-FAIL GRADING

The pass-fail system of grading is not a new method of evaluation nor is it a new problem for medical educators. The motivational function of grading and ranking has obvious limitations in medical school. The intrinsic motivating characteristics of "a grade" do not coincide with Sir William Osler's thought that

The hardest conviction to get into the mind of a beginner is that education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation.

George Miller (1969) complements this concept in the following statement:

If a medical student is to assume more and more a role of the graduate student and of a mature, self directing adult, if he is to develop the habits of continuing study required of a physician in our society, then he must be freed from the clutch of motivational grading and reporting practices.

Miller (1961) listed 4 basic functions of reporting grades: (1) administration— promotion, transfer, and graduation; (2) information—inform the student of his progress; (3) guidance—identifying special abilities, interests, and weak-points; and (4) motivation—rewarding students for good performance.

Because of the concern that grading techniques do not achieve these objectives many studies have been conducted to review grading procedures in medical schools. The chart below is summary of these studies including our own:

Mixed-grading system varies as to year.

Other-ranking student in order.

One can see a shift in the direction of Pass-Fail in recent years. Abrams (1971) reported that 27 (66%) of schools using Pass-Fail were satisfied while 9 (22%) were not satisfied. We have found the main arguments against pass-fail to be: inability to rank students for awards and internships; loss of student motivation; and ineffective reinforcement of the student. Problems of a more severe nature may not be apparent at this time due to the relative short life of the use of pass-fail on a large scale. However at

present the majority of schools using pass-fail are satisfied and are not contemplating any change in their method of evaluation. Although one must remember that most of these schools keep files on their students, the contents of which are confidential. The question of student performance under the pass-fail system was recently considered by Jessee and Simon (1971). They asked students to keep a log of their activities during the day in order to ascertain how students in a school using the pass-fail system spent their time. They concluded that pass-fail did not result in a decrease in time spent by students "in pursuit of their medical studies" and found that pass-fail may, in some cases, allow internal motivation to come to the surface.

The foregoing is an attempt to relate a few pertinent facts on only two of the many revisions occuring in medical schools namely, block instruction and pass-fail evaluation.

The data presented is derived from a study of medical schools conducted by myself under the direction of Dr. Bruce Squires and the Curriculum Policy Committee, Faculty of Medicine.

In this age of increasing awareness of medical student opinion it is important that you be knowledgeable of the issues at hand, and speak to them in an informed manner. I hope that the date presented herein may aid you in forming your own opinions so that you may comment on these issues when asked to do so.

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Miller, G.E., Teaching and Learning in Medical School, Cambridge, Mass. Harvard Press, 1961.

#### COMPARISON OF RECENT SURVEYS OF GRADING PRACTICES IN MEDICAL SCHOOLS

	Dubé 1968 N = 98		Abrams 1971 N = 90		Squires & Rohrer N = 87	
Letter—Number	53	58%	31	34%	36	41%
Pass—Fail	26	28%	41	46%	46	53%
Mixed	13	14%	16	18%	4	5%
Other			2	2%	1	1%

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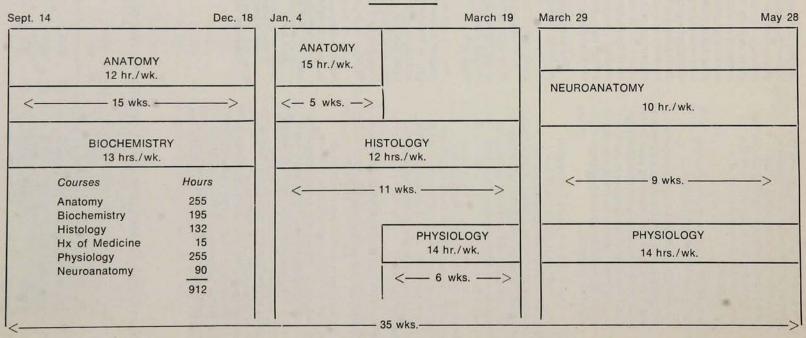
#### A. COURSE DURATION:

-4 years

-Final years (2) are clinical clerkships

#### B. SESSION SCHEDULE:

#### FIRST YEAR



#### SECOND YEAR

t. 14 Dec	18 Jan. 4	March 19	March 29	May 2
PATHOLOGY		PATHOLOGY		
13 hrs./wk.		12 hrs./wk.		
	<	— 11 wks. ————————————————————————————————————	< 9 wks	<del>&gt;</del>
MICROBIOLOGY	MICRO	PHARMACOLOGY	PHARMACOLOGY	V. 7.4
9 hrs./wk.	9 hrs./wk.	10 hrs./wk.	10 hrs./wk.	
COMMUNITY MEDICINE 3 hrs./wk.  PHYSICAL 2 hrs./wks.	rs.	IICAL SUBJECTS 8 hrs./wk.	CLINICAL SUBJECTS 12 hrs./wk.	
Pathology 314 Microbiology 162 Pharmacology 140 Comm. Medicine 42 Clinical Subjects 212 884				
		34 wks		

## Dr. James A. F. Stevenson

R. D. KOLKKA '73

Dr. James A. F. Stevenson, Professor of Physiology and Dean of the Faculty of Graduate Studies, died in Zurich, Switzerland while on route to Munich, Germany to attend the meetings of the International Union of Physiological Sciences as a member of the Council. He was 53 years olds.

Dr. Stevenson was born in Nanton, Alberta in 1918. He was educated at McGill University where he received his Honours B.A., M.A., and M.D. degrees. Following his internship, he served as a captain in the Royal Canadian Army Medical Corps from 1943-44 and from 1944-46 was Assistant, then Nutritional Advisor to the Directorate of Medical Services, Canadian Army Overseas. He completed his military service as a Major in the RCAMC.

In 1946 Dr. Stevenson went to the Department of Physiological Chemistry at Yale University as Caverhill Fellow. (McGill University) He came to Western in 1950 from Yale's Department of Physiology and Psychiatry where he had advanced to the position of research assistant and Assistant Professor. In 1951 Dr. Stevenson became Professor and Head of Western's Physiology Department, a position he was to hold for 18 years, and his long association with medical students had begun.

Most of the students exposed to the medical curriculum at Western came to know Dr. Stevenson during their first year Physiology course. His lectures on homeastasis, acid-base balance and the regulation of body water gave some insight into his research area, but few realized that he was one of the world's authorities on energy exchange and water balance. An author of 176 papers, abstracts and review articles, Dr. Stevenson was actively involved in the scientific community. He was editor of the Canadian Journal of Physiology and Pharmacology, editor of the Newsletter of the International Union of Physiological Sciences. and a member of the editorial advisory board of Physiology and Behaviour. In addition, he was a member of 16 Canadian and world societies; in the last 10 years holding executive positions on 6 of them, this included being President of the Canadian Physiological Society, President of the Biological Council of Canada, Vice-President of the Association of the Scientific, Engineering and

Technological Community of Canada, and member of the Councils of the International Union of Physiological Sciences and the Nutritional Society of Canada. Dr. Stevenson was also involved in a great number of domestic and international physiological committees and conferences, being chairman in many instances.

It is evident that Dr. Stevanson would not sit idly while the world passed him by. He wanted to become involved, as a leader, not a follower. This is clearly seen in his role in the administration of the university. He was Dean of Graduate Studies and a member of 27 of that Faculties' committees. He was vice-chairman of the University Senate and served on 10 of its sub-committees. Dr. Stevenson was one of the first Senators elected to the Board of Governors and served on 5 of its sub-committees. He also served on 15 other university committees.

Somehow this man still had energy to spare and with it served the community. He was an Honorary Consultant at Victoria and St. Josephs' Hospitals, a Research Consultant at Westminster Hospital, and a former Chairman of the London Public Library Board and Art Museum.

I saw the drive in Dr. Stevenson when I became one of his graduate students. He was Department Head at the time, and would arrive sometime before eight in the morning (I was never there early enough to know exactly when) and leave at six in the evening. Many of his weekends were also spent in his office. He was extremely busy, yet always willing to see one of his students when they had a problem. We had an understandinghe wouldn't bother us if our research was going well, and we wouldn't come to tell him every day that everything was all right. However, if we got some interesting results, or the expected did not occur, Dr. Stevenson was eager to see us so the matter could be discussed at length.

When he became Dean of Graduate Studies we saw less of Dr. Stevenson, only because he spent most of his time in his other office. However, his new position did not change our relationship even though his work load and responsibilities were much heavier. He spent the first hour or two of every morning in his Physiology Department office and was freely available to us then. If, as was often the case, one of us should arrive after he had left, a quick call to his secretary meant we could see him later in the day.

One of Dr. Stevenson's most interesting quirks could be seen when attending seminars or meetings with him. Very soon after the speaker began, Dr. Stevenson would lean back, put his chin on his chest, and slowly close his eyes. To all appearances he was asleep, and would not stir until the speaker was finished. As soon as questions were called for, however, he would invariably begin directing the most pointed and relevant queries at the person who gave the presentation. Somehow he was able to digest and store complex information while resting his mind and body. Perhaps this unique ability gave him the boundless energy he posessed.

Like other dynamic individuals, he not only worked hard but also played hard. His colleagues would know more about this than I, but I can recall several Physiology Department parties during which a heated debate could be heard in a crowded corner

of the room, and Dr. Stevenson would be in the very thick of it and loving every minute. He enjoyed debating, not arguing. He would deliberately throw out a provocative statement to see what the response might be. Membership in the Baconian Club in London had sharpened his tongue, but he always took his debating in fun and would become upset if others did not.

Members of the academic community and the Physiology Department were not the only ones to see the lighter side of Dr. Stevenson. He enjoyed mixing with medical students, and I can recall one First-Second Year party at A.K.K. not too many years ago in which he was anchor man on a Faculty "Boat Race" team that was narrowly defeated by a team from Meds '71 or '72.

Perhaps Dr. Stevenson's greatest failing was that he tried to spread himself out too far without spreading himself thin. He was always willing to accept a new research or academic responsibility but was unwilling to spend correspondingly less time on a previous one. He was both a politician and a researcher, being able to mix politics into his research (as evidenced by the executive positions he held in the societies of which he was a member) and probably mixed research in with his university politics. For one man to equal his achievements in either the scientific or academic communities would be admirable. To do it in both would be unique.

\*

\*

#### Answer to Pathological Photoquiz

#### HISTORY:

A 64 year old man sustained a pathological fracture of his left femur. The fracture site was biopsied and was reported as metastatic follicular carcinoma of the thyroid gland.

The patient's thyroid gland was not palpaple, and there was no cervical lymphadenopathy.

The thyroid scan showed the right lobe to be slightly larger than the left lobe, but there were no 'hot' or 'cold' nodules seen.

A total thyroidectomy was then carried out; the gland weighed 20 grams. There was a 1.5 cm. firm nodule within the right lower lobe, histologically similar to the material from the femur.

#### DIAGNOSIS:

Metastatic follicular carcinoma of thyroid in bone. (Pathologic fracture of left femur).

#### **DISCUSSION:**

Autopsy studies have detected osseous metastases in about 40% of patients dying of disseminated carcinoma. Carcinoma of the prostate, breast, lung and kidney frequently metastasize to bone.

Carcinoma of thyroid (particularly follicular carcinoma) although less common, is noted for metastasis to bone. This case is particularly interesting since the presenting feature was a pathologic fracture of the femur from an occult primary carcinoma of the thyroid. The failure of the I<sup>(3)</sup> thyroid scan to detect and localize the lesion was probably due to a recent intravenous pyelogram.

Provided by Dr. Turnbull, Victoria Hospital

## The Mentor System

Dr. L. Tusz

The Mentor System at Western is unique among Canada's medical schools. Now in its sixth year of functioning, it provides an opportunity for the medical student's meeting the profession on an non-academic basis.

The system was created to preserve an aspect of medical school experience (an aspect the more easily felt than defined) that was being jeopardized by the "old" school's closeup.

The "old" medical school was advantageously situated on South Street just at the doorsteps of Victoria Hospital. This close proximity of class and clinic ensured that from his first day there, the medical student was exposed to matters of the classroom, the laboratory and the bedside in equitable balance-and more importantly, that he was exposed to doctors both professionally and casually. A small enrolment and this relatively close contact engendered an early and easy student-doctor familiarity, this familiarity fostering respect that matured to become mutual. It hastened the development in the student of those characteristics of a physician unlikely to be gleaned from textbooks.

However, with the incorporation of the Medical School in the Health Sciences teaching complex on the University campus, with the creation of autonomous departments to teach the "Basic" sciences and with the rising student enrolment, these valued experiences were threatened. The school was now physically split; students of the first two years (on campus and battling the basics) were separated from half their schoolmates (in the hospitals several miles away) as well as from many of the clinically active doctors.

The Mentor System, with Faculty and Student Co-Chairmen, was established as a Committee of Faculty Council to organize functional mentor groups: to be non-tutorial but to meet socially through the school year.

Initially each group consisted of an interested doctor and two students selected randomily from each of the class years. Each group was permitted to discover its own format of functioning.

Being so structured and arbitrarily established, it was not surprising that some groups have fared less than well. In the first year a third of the groups failed as a consequence of either waining interests or overt personality mismatches.

In subsequent years more mentors have been recruited, the group sizes reduced to an average of five students, other than those in first year given the option of participating and students encouraged to initiate the contact with their mentor. Thus in the past year, about two-thirds of the student body participated and in 80% of the cases apparently to both the students' and mentors' satisfactions.

These statistics, though should not be read as success. In some instances the disappointment of the student whose mentor groups over four years somehow just never met matches in degree the elation of the fortunate student who is now enjoying a preferred interneship/residency thanks to a mentor's fair letter of reference. There are, too, those students who never had a mentor and continue unconcerned.

The Mentor System is unnatural. It contrives to generate spontaneity in an artificial situation, consciously thrusting student and doctor together. Optimistically the opening of the University Hospital will render the system redundant.

Just possibly when that hospital is completed and the medical student, basic scientist, clinician and other members of the evolving Health Team meet on a common problem, some new spirit as valued as that of the "old Medical School" will develop. Realistically: with the pressure to increase student enrolment in the school and with the Cosmopolitan hospital evolving the sub-sub-specialists closetted behind numeralled doors along fluorescent lit, air-conditioned, terrazo halls; both doctor and student may have to content himself knowing few others well, having nodding acquaintance with many.

## News and Views

#### MEDICAL FACULTY CHANGES

Following are recent staff changes in the Faculties of Dentistry and Medicine. All changes are effective July 1, 1971 (June 30, 1971 in case of resignations) unless otherwise indicated.

In the Department of Anatomy, DR. B. A. FLUMERFELT, has been appointed Assistant Professor.

In the Department of Bacteriology and Immunology, DR. DEAN H. PERCY, has been appointed Assistant Professor.

In the Department of Anatomy, DR. M. J. HOLLENBERG, Associate Professor and DR. K. HOSHINO, Associate Professor, have resigned.

In the Department of Pathology DR. S. GURSELL, Clinical Lecturer, has resigned effective March 12, 1971.

In the Faculty of Medicine, in the Department of Anaesthesia, DR. W. L. MILLMAN has been appointed Clinical Lecturer, effective June 1, 1971.

In the Department of Clinical Neurological Sciences, DR. N. JAATOUL, has been appointed Lecturer, Division of Neurology.

In the Department of Community Medicine, Division of Epidemiology and Preventive Medicine, DR. ELIZABETH SMITH, has been appointed Clyinical Lecturer; Division of Family Medicine, DR. L. BRUBACHER, has been appointed Instructor (part-time), DR. A. R. MEREDITH, Instructor (part-time), and DR. R. S. SHEARER, Instructor (part-time).

In the Department of Medicine, DR. D. AHMAD, has been appointed Instructor (parttime), effective February 1, 1971, DR. D. T. JONES, Assistant Professor, DR. J. PURRES, Clinical Lecturer, effective March 1, 1971, DR. R. N. REDINGER, Assistant Professor, and DR. G. J. TEVAARKERK, Instructor.

In the Department of Obstetrics and Gynaecology, DR. F. POSSMAYER, has been appointed Assistant Professor.

In the Department of Paediatrics DR. R. J. BOLTON, has been appointed Clinical Lecturer, DR. M. R. F. JENNER, Assistant Professor, and DR. H. C. SOLTAN, Clinical Associate Professor.

In the Department of Pathological Chemistry, DR. R. M. BARR, has been appointed Assistant Professor and DR. R. HOBKIRK, Professor. In the Department of Psychiatry, DR. B. N. CORRIN, has been appointed Instructor (parttime), effective January 1, 1971.

In the Department of Surgery, DR. J. P. SWEENEY, has been appointed Instructor (part-time), effective February 1, 1971.

In the Program in Occupational Therapy, MISS MARILYN ERNEST, has been appointed Lecturer and MR. J. S. MACK, Lecturer, effective June 1, 1971.

In the Program in Physical Therapy, MR. N. THIRUCHELUAM, has been appointed Instructor (part-time).

In the Department of Community Medicine, Division of Family Medicine, DR. C. T. LAMONT, Associate Professor, has resigned effective July 31, 1971.

In the Department of Diagnostic Radiology, DR. L. H. MULLEN, Instructor, has resigned effective April 4, 1971.

In the Department of Therapeutic Radiology, DR. LOIS MYERS, Clinical Assistant Professor has resigned.

DR. FREDERICK N. LEWIS, of the Department of Pathology, has been elected President of the Western Ontario Branch of the Defence Medical Association of Canada.

DR. LEWIS S. CAREY joined the Faculty of Medicine on July 1, as Professor and Chairman of the Department of Diagnostic Radiology. Dr. Carey also has been appointed Chief of Diagnostic Radiology for the new University Hospital.

DR. GILBERT F. D. HESELTINE has been appointed Professor and Chairman-Elect of the Department of Psychiatry, of the Faculty of Medicine. Dr. Heseltine, who is currently Senior Psychiatrist at the Royal Victoria Hospital, and Associate Clinical Director of the Allan Memorial Institute, McGill University, will join the Department on September 1 and will assume the Chairmanship on January 1, 1972. He will be chief of Psychiatry at the new University Hospital.

In April, the Senate approved the separation of the Programs in Communcation Disorders, Occupational Therapy, and Physical Therapy into three distinct Programs of the Faculty of Medicine, rather than under the overall Program in Medical Rehabilitation.

MISS S. MORGAN has been named Director of the Program in Physical Therapy for a five-year term, renewable.

MRS. M. TRIDER has been named Director of the Program in Occupational Therapy for a five-year term, renewable.

DR. F. J. ROUNTHWAITE, Head of the University Department of Otolaryngology has been named Acting Director of the Program in Communication Disorders (Speech Pathology and Audiology) until June 30, 1972.

### DR. TEW APPOINTED FACULTY OF MEDICINE PROFESSOR EMERITUS

The Faculty of Medicine is honored that Dr. W. P. Tew has accepted an appointed as Professor Emeritus. After 37 years of distinguished service, Dr. Tew retired as Professor and Head of the Department in 1957. Dr. Tew was awarded an L.L.D. by this University in June, 1965. He continues an active practice in Obstetrics and Gynaecology and has retained an active interest in the Faculty of Medicine as Chairman of its Archives Committee.

## Class News

#### **MEDS '73**

Clinical experience now begins for Meds '73—for the majority of us who are almost completely without experience in hospital procedures, do's and don'ts, permissables and impermissables, it's the beginning of a frightening time. One fellow classmate came out with what I thought was a very honest statement. He is so unfamiliar with his new surroundings that he has to learn the locations of the men's washrooms.

We've been re-allocated to new clinical groups with the hopes of getting to know more people outside of those chosen few who have shared our lack of knowledge for the past two years. We all know that it is better to remain silent and appear ignorant than to open your mouth and remove all doubt, but our clinicians unfortunately do not hold by this adage. I'm afraid this is the year we all learn that the only reason you open your mouth is to change feet.

Two new members have been added to the class and we hope they won't have too much trouble adjusting. A few hints to misters Gysler and Spector; ties are definitely necessary whereas a clean face and neat hair is unfortunately of great help.

People were lucky enough to travel again this summer. Alan Reddock made it to Africa and "B", Paul Walker and Larry Kramer survived Europe. I've been told that Bob English also managed to survive—his wife's driving that is. She had a bit of trouble with the combination of wet road, high speed and super highway. John Crosby worked in England while Marg Paul travelled in the opposite direction to spend time in B.C. The list of newlyweds is, as always infinite, so I won't bore you by naming them all.

John Kelton has been blessed with the honoured position of social vice-president for this year. He can only do a god job with the help of us all so please give as much support as possible. This year is only as enjoyable as YOU make it.

Betty Marchuk

#### **MEDS '72**

With little to go on other than fleeting comments spoken on the run by a disappearing shadow, news of the class of '72 must needs be rather disjointed and incomplete if not warped beyond recognition. Rumour has it that our editor, faced with the looming task of compiling this year's journal, decided he needed some feminine support to ease the long dreary nights, and legalized it all on September 4th. Congratulations also go to Blair and Betty Marchuk, Jim and Maureen Cooper, Robin and Jo-Anne Inkster, and Bob and Jane Hay. Swelling the class nursery are babies Hartzell, Little, and Kadrie.

The class has no lack of international travellers as a result of summer electives. Off to England went Derry Hyatt-Williams and John Stewart, Jim Patterson, Jim Cooper, and Ken Warren. Paul Zickler had a taste of his ancestry in Austria. Ted Quigley combined business and pleasure in Bermuda, Marg Bains was in Port Alberni, B.C., and Dixie Esseltine had the experience of working in an all-black town in Mississippi. Kaysie and David Boyd are spending their electives in British Honduras, and John Taylor is soaking up the atmosphere in Pondicherry, India. No doubt other er(x)otic places have been popular among 72'ers during the last few months, but they're being kept secret.

Marilyn Hopp

E. Note: Regretfully Meds '74, Meds '75 Class News was not available at press deadline.

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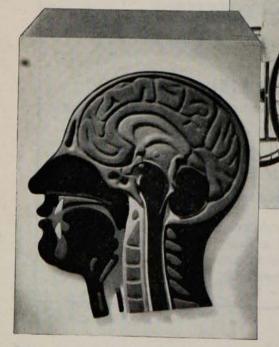
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18 minutes

G11E Parkinson's Disease and its Treatment by Stereotaxis

(color), 12 minutes

G16E The Genetic Code (color), 17 minutes

G106E Faces of Depression, 28 minutes

G107E Emotional Factors in General Practice, 43 minutes

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