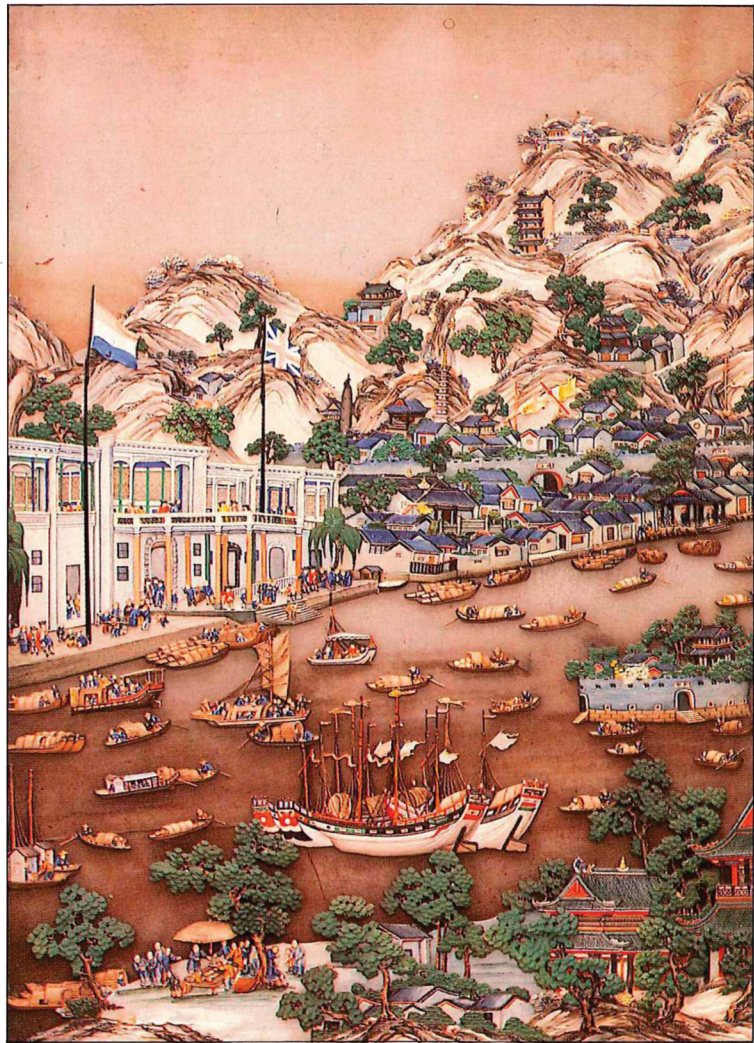


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Number Two 1987





Chinese University Bulletin

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*Cover: Screen carved with a scene of the 'Thirteen Factories' in ivory,
Qianlong to Jiaqing*

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Thirty-third Congregation — Conferment of Honorary Degrees

The University held its Thirty-third Congregation for the Conferment of Honorary Degrees on 26th March, 1987 at Sir Run Run Shaw Hall. His Excellency the Acting Governor and the Chancellor, Sir David Akers-Jones, presided at the ceremony.

The University conferred honorary degrees on five distinguished persons. Professor Samuel Chao Chung Ting was awarded the degree of Doctor of Science, *honoris causa*, Professor Gerald Hugh Choa the degree of Doctor of Laws, *honoris causa*, Mr. Lü Shu-xiang the degree of Doctor of Literature, *honoris causa*, and Mr. William Charles Langdon Brown and Mr. Leung Kau Kui the degree of Doctor of Social Science, *honoris causa*. Professor Ting addressed the congregation on behalf of the honorary graduates.

The Public Orator was Mr. T.L. Tsim, Director of the Chinese University Press, who also wrote the citations.



H.E. the Chancellor with the honorary graduates after the Congregation

Citations

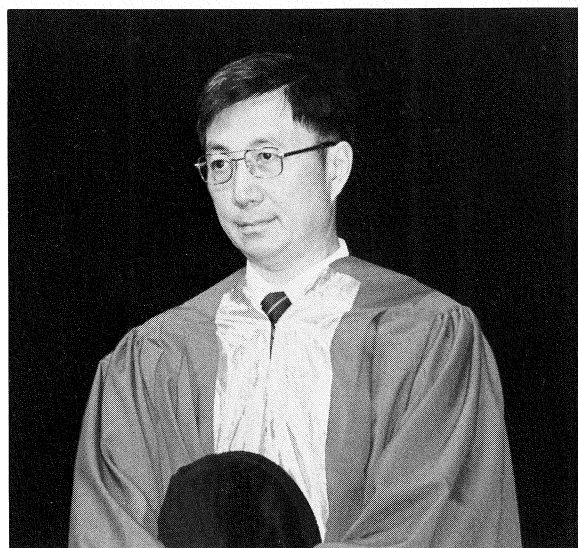
Professor Samuel Chao Chung Ting, Nobel Laureate in Physics

Fifteen years ago, a research group sought permission from the Brookhaven National Laboratory in Long Island, New York to use the famous Brookhaven accelerator for experiments in elementary particle physics. The facilities at the large particle accelerator at Brookhaven were much sought after and the group won the permission against a strong field of competitors. This group was headed by a young scientist, Professor Samuel Chao Chung Ting, then Professor of Physics at the Massachusetts Institute of Technology and, at the age of thirty-six, a rising star in the field of particle physics. The faith of Brookhaven National Laboratory in Professor Ting and his team of research scientists was not misplaced for, two and a half years later, on 1st November, 1974, the group made history with the discovery of a new elementary particle.

Elementary particles are very small, smaller than molecules and smaller than atoms, smaller even than the nuclei of most atoms, but they hold the key to the understanding of the basic structure of the material world. The first elementary particle man discovered is of course the electron; its impact on our lives has been far-reaching and needs no elaboration.

News of Professor Ting's discovery quickly spread in the scientific world. Some scientists called it the most important advance in physics in many a year. *The Times* of London carried the news on its front page. It fell to Professor Ting as leader of the research group to name the new particle discovered, and he decided to call it the 'J' particle, some say after the shape of the Chinese character 丁 (Ting) which is his surname.

This scientific discovery was crowned two years later with the award on Professor Ting of the Nobel Prize for Physics in 1976 which he shared with Professor Burton Richter who, working independently, had also made the same discovery and had called it the ψ particle, hence the name J/ ψ which Chinese physicists sometimes jokingly refer to as 丁/中.



The significance of Professor Ting's discovery is best summed up in the citation which accompanied the award of the Nobel Prize. In this, it was unequivocally stated that 'This discovery has opened new vistas and given rise to great activities in all laboratories around the world where resources are available. It brings with it the promise of a deeper understanding of all matter and of several of its fundamental forces'. The citation went on to say that 'the physics of elementary particles after November 1974 is recognized to be different from what it was before'.

The man whose discovery has made such a significant impact on the world of science was born Ting Chao Chung, son of a professor of engineering and a professor of psychology, both alumni of the University of Michigan. A native of Shandong Province where, it was said, the people were so straightforward that even highwaymen tied bells to their horses to give warning to victims of their approach, Ting Chao Chung shows that same straightforward character as his fellow Shandongese. When asked about what his maxim was in life and work, he replied, 'Do it well. Do it early.' I was not surprised, therefore, to find in Professor Ting's Nobel Prize autobiography that he had been born prematurely when his parents were visiting at Ann Arbor, Michigan. He arrived early and in very good shape. How well endowed he has been intellectually is best seen in this comment of his father, Professor Ting Kuan Hai. He said of his son, 'Chao Chung has always taken a keen interest in mathematics and the sciences. My boy adapts particularly well when the competition is particularly keen. When he was little, he did well in all subjects, except singing.' Mr. Chancellor, we are glad that Ting Chao

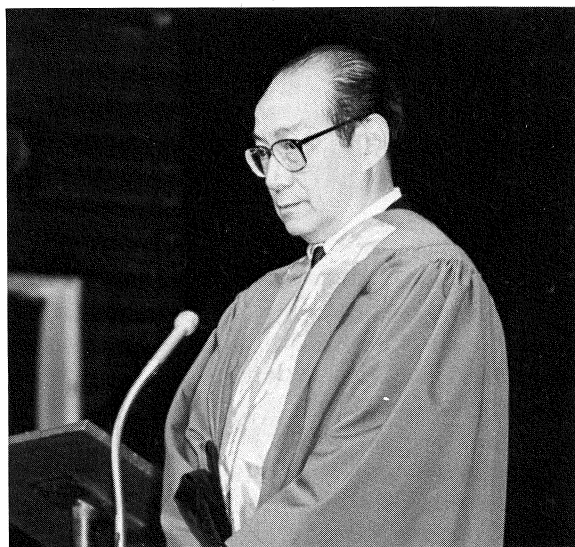
Chung was not a good singer, or the world of physics might well have lost a brilliant scientist to the world of opera.

The early starter's early education was not as smooth as one might have reason to expect, for China was in the midst of war for the first twelve years of young Ting Chao Chung's life. By his own admission, he did not have a regular education until he was twelve years old, by which time he and his family had moved to Taiwan. Eight years later, at the age of twenty, he arrived at Detroit city in the United States of America with \$100 in his pocket. He said of himself, 'I was somewhat frightened, did not know anyone, and communication was difficult.' But old Professor Ting was right when he said his son adapted particularly well when the competition was particularly keen. In three years, Ting Chao Chung had finished two degrees, one in mathematics and the other in physics. In another year he had done his Master's degree, and two years later, in 1962, left the University of Michigan with a doctorate.

From 1962 to his major discovery in 1974, Professor Ting lectured and researched in several of the world's best known universities and research laboratories, including the European Organization for Nuclear Research (CERN), Columbia University, the Deutsches Elektronen - Synchrotron (DESY), the Massachusetts Institute of Technology and the aforementioned Brookhaven National Laboratory. In the year he won the Nobel Prize in Physics, Professor Ting also received the Ernest Orlando Lawrence award. The following year, he was honoured with the award of the Eringen Medal by the American Society of Engineering and Science.

Mr. Chancellor, Professor Ting has the reputation of being totally dedicated to his work and has the habit of approaching research problems with single-minded devotion. But, amidst his normally very heavy schedule, he has found time to make a number of trips to the People's Republic of China and to Taiwan to select Chinese scientists for advanced training through participation in the many projects currently under his charge. Indeed, he has not only found time, but also money for his researchers. Today, there are several scholarships under his name.

Mr. Chancellor, for his truly outstanding contribution as an experimental physicist, for his pioneering work in locating the fundamental building blocks of nature, for his role as an educationist and scientist, I present to you Professor Samuel Chao Chung Ting, Nobel Laureate, world authority on the charmed quarks, himself a man of charm and taste in Physics, for the award of the degree of Doctor of Science, *honoris causa*.



Professor Gerald Hugh Choa, CBE, JP

Mrs. Margaret Thatcher, Prime Minister of Great Britain, when still in opposition in the 1970s once had this to say of Chancellors of the Exchequer, 'Some Chancellors are monetary, others are fiscal and still others are simply budgetary . . .' or words to that effect. In singing Professor Gerald Choa's praises as Professor of Administrative Medicine and Founding Dean of the University's Medical Faculty, I was almost tempted to begin with the words 'Some Deans of the Medical Faculty are clinical, others are pre-clinical, and still others are simply pathological . . .' But as Professor Choa is also a Pro-Vice-Chancellor and one who has much influence over the career prospects of administrative staff of the University, I, wisely I think, thought better of it.

But the three Boards of Studies of the Faculty of Medicine – the clinical, pre-clinical and pathological boards – are really Professor Choa's creation, as is almost everything else in the Medical Faculty, including the course structure, the actual curriculum, and the general design, planning and facilities of the Prince of Wales Hospital, which is generally judged to be one of the best in the region.

Few people in the world have combined so well three distinctive, and equally successful, careers in one person – those of physician-clinician, Director of a major Government department, Dean of a Faculty and Pro-Vice-Chancellor of a university. But Gerald Hugh Choa is never going to be satisfied with a single outstanding achievement. Born under the sign of Aries – Professor Choa had his sixty-sixth birthday five days ago – he will always aim high and surge forever forward until the rest of the field is far behind

him. Professor Choa's academic record bears out this admirable trait in his character. MD (Cheloo University) in 1945, MB BS and MD (Hong Kong University) in 1946 and 1960 respectively, DTM & H (Liverpool University) in 1948, MRCP (London) in 1952 and then FRCP in 1968, followed yet again by the FRCP of Edinburgh in 1972 and, two years later, the FFCM in 1974.

While he was acquiring this string of qualifications, Professor Choa was also teaching at the University of Hong Kong and was, at the same time, serving as a specialist in the Medical and Health Department of the Hong Kong Government. In this latter position, he rose quickly through the ranks and reached the pinnacle of the medical officer's career when he became the Director of Medical and Health in 1970. For his distinguished service to the community, Professor Choa received the CBE from Her Majesty the Queen in 1972, having been made a Justice of the Peace in 1964. As Director, he rationalized and greatly improved the provision of medical services to the community. In his valedictory for Dr. Gerald Choa in the Legislative Council in 1976, the then Governor Sir Murray MacLehose (now Lord MacLehose) had this to say and it is worth quoting at some length:

'He has proved himself a Director of the highest distinction. His contribution has covered a wide field. . . . the opening of the Princess Margaret Hospital, . . . the introduction of a new method of treatment of drug addiction in the form of Methadone detoxication; Government's new and decisive role in family planning; the introduction of geriatric services, the support by Government of the community nursing service . . .

We will remember him in this Council as a most able and courteous colleague and if I might say so as a master of elliptical speech typical of the finest tradition of the mandarin.

Mr. Chancellor, might I just add that elliptical speech is also typical of the finest tradition of academia. It was no surprise, therefore, that when academia beckoned once again, Dr. Gerald Choa responded. Having scaled one peak, he was now ready to take on another. And so in 1977 he became the first Dean of the Faculty of Medicine of the University, and in this role he travelled the world, consulted with his peers, selected the Professors of all major departments and charted the Faculty's development from 'conception' to 'delivery', to use the only two medical terms with which I have some acquaintance. Last year, of course, after nine years of painstaking, sometimes frustrating, but I am sure to him always exhilarating work, the first medical students graduated

from the University and took up their places alongside the medical men of our sister university. Professor Choa looked every bit the proud father and not just the obstetrician who took care of the delivery.

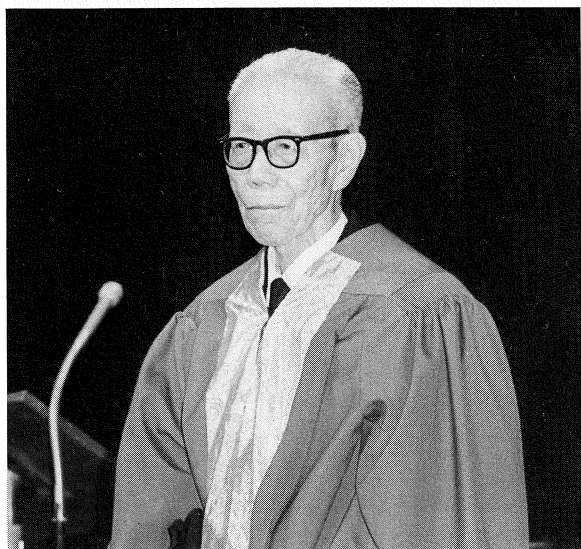
Mr. Chancellor, when Professor Choa knew that I was going to write this citation, he said to me that for him two lines would suffice. I am afraid that is a task quite beyond my ability. But two things about him have made a lasting impression on me; once, when asked whether medical ethics would be offered as a course in the Medical Faculty, he replied 'medical students will learn their ethics from the teachers who have it'; secondly — and this is not generally known — the great satisfaction he takes in having served as a public servant and as an educationist, instead of becoming a very rich doctor. The return to academia has allowed him the peace of mind to write about those aspects of the history of Hong Kong which is familiar to him or which has a special fascination for him. He is the author of *The Life and Times of Sir Kai Ho Kai* and is writing a history of the missionary doctors who served in China and Hong Kong in the last century.

Mr. Chancellor, for his many outstanding achievements as physician, public servant, academic and historian, for his role in building up a medical and health service of the highest standard, for the students he taught, for his role in keeping away those who have no medical ethics, I present to you Gerald Hugh Choa, Pro-Vice-Chancellor and first Dean of the University's Medical Faculty, for the award of the degree of Doctor of Laws, *honoris causa*.

Mr. Lü Shu-xiang

Mr. Chancellor, I am reading this citation with trepidation, for the man we are honouring today is an expert on language structure and common errors in writing. In the English speaking world, the authority of Fowler is often invoked in resolving arguments over the use of or the structure of the English language. In the Chinese language, the authority to whom we turn for enlightenment is Lü Shu-xiang.

A native of Danyang *xian* in Jiangsu Province, Mr. Lü was born in China in 1904. As with many linguists and grammarians, his first love was not language but literature, not just contemporary literature but also classical, and not just Chinese literature but also the literature of the West. In fact, his first degree which was awarded to him by the Foreign Language Department of China's Southeast University in 1926 was in Western Literature. Only when



he was asked to teach Chinese as well as English in a middle school in his native *xian* did Lü Shu-xiang take an active interest in the grammar and structure of his mother tongue. This interest quickly consumed him, however, as he became involved in a major debate with the celebrated Zhu Zi-qing (朱自清) over the place of the Subject in the Chinese sentence. Zhu maintained that the Subject is absolutely necessary. Lü said it is not. Mr. Chancellor, as a linguist yourself and one who is conversant in many Chinese dialects, you will agree that usage is on the side of Mr. Lü.

This famous war of words led to the writing of his first major work on the grammatical structure of the Chinese language. Entitled *The Essentials of Chinese Grammar*, the book by Lü Shu-xiang, generally considered an important ground-breaking work, became a best seller. Other books, papers and treatises followed. In a career spanning over sixty years, Lü Shu-xiang has produced over twenty books and more than a hundred major papers and articles. Like Fowler, he has also edited a dictionary dealing exclusively with usage, the first of its kind in the Chinese language. He had taught at five major universities in China and was the architect of the simplified Chinese characters. He is, even today at the age of eighty-three, an adviser of the National Committee on the Reform of Chinese Characters and an honorary director of the Institute of Linguistics of the Chinese Academy of Social Sciences.

It would be wrong to surmise from what has been said that Mr. Lü's interests are confined to language, linguistics and literature, broad as those subjects may be, for he also studied history, chemistry, geology, biology and psychology. Between 1936 and 1938 he read anthropology at Oxford University and

library science in the University of London. His acquaintance with science has made him not just a theorist in the study of languages but also an empiricist. In a passage which Professor Ting Chao Chung will find ready agreement with, Lü Shu-xiang had this to say of theoreticians whose work is not grounded in factual observation and experiment:

'I have an impression that a great many people are interested in working with theories, but not so many of them are quite as ready to spend time on observation and experimentation. . . . The late Professor Rao Yu-tai of Peking University once lamented the fact that nine out of ten physics students had their minds set on theoretical physics; they did not realize that without experimental physics, theoretical physics could not go forward.'

Being an empiricist, Mr. Lü also supports the idea of learning from the West. On this he has said, 'the important thing is to learn from Western scholars in their study of language, their methodology, and not the mechanical adaptation of their research results.'

Mr. Chancellor, my own humble command of the English language cannot convey to you the wisdom, the sophistication, and the nuance in Mr. Lü's words. They have been distilled, no doubt, from a life-time of learning, of observation, of empirical research and, at the end of it, of theorizing. This is a man who has applied the rigour of scientific enquiry to the study of a discipline which belongs in the humanities. His encyclopaedic mind, his painstaking, methodical approach through over sixty years have produced for us a wealth of information and explanation now generally taken for granted in the study of the Chinese language.

Going through some of this work myself, I found Mr. Lü has written books and chapters of books in the classical Chinese style, in the modern Chinese style, as well as in the English language — excelling, needless to say, in all three. Mr. Chancellor, The Chinese University has as its ideal the fusion of Chinese culture and that of the West. We are also committed to a bilingual education. That being the case, we can find no more shining embodiment of our own ideal than in the person of Mr. Lü Shu-xiang.

Mr. Chancellor, for his immense contribution to the study of the Chinese language, for his many pioneering works which are impossible to list in a citation, for his advocacy of the scientific approach in language studies, and no less for his advocacy of learning from the West and thereby keeping the universality of universities a living ideal, I present to you Lü Shu-xiang for the award of the degree of Doctor of Literature, *honoris causa*.

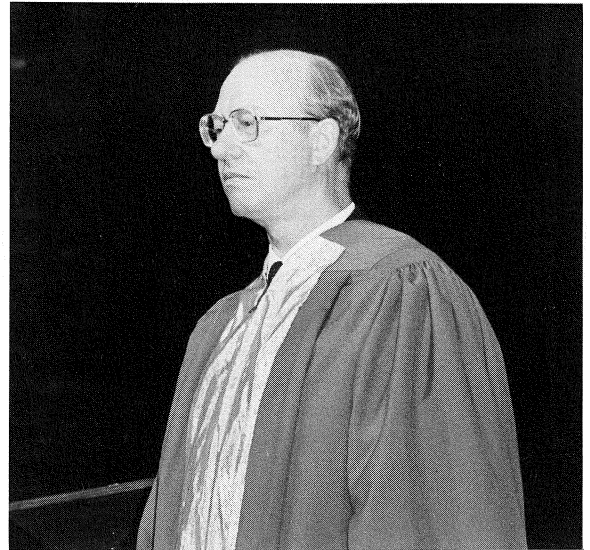
Mr. William Charles Langdon Brown, OBE

Until as recently as two years ago when election to the Legislative Council was first conducted, Hong Kong's legislature was made up entirely of men and women who had been invited by His Excellency the Governor to serve. In the normal course of events, such people would have distinguished themselves earlier in life not only within their chosen professions but also in community service. Be that as it may, the position of Legislative Councillors was not and is not an easy one. In any normal year, the legislative programme by itself would have been quite daunting even when consensus politics was the rule rather than the exception. During the two years when Hong Kong's future was under negotiation between Her Majesty's Government and the People's Republic of China, the amount of work which came the way of Legislative Councillors and the amount of pressure they were put under would have proved too much but for men of stamina and dedication.

We were fortunate indeed in having William Charles Langdon Brown in the Legislative Council when the local currency was put to the most severe test, when the insolvency of certain banks was threatening to throw the whole banking system into crisis, and when issues which could affect the general prosperity of our community were put before the House. As a member of the Banking Advisory Committee and of the Exchange Fund Advisory Committee, he made a significant contribution by keeping a steady hand and a level head during some of the most trying times in our history.

William Brown was particularly well placed to give advice to the Hong Kong Government when it needed it most. Born in London in 1931, he has made a life-long career in banking, mostly in this part of the world, and had become the chief executive of the Standard Chartered Bank in Hong Kong when he was appointed to the Legislative Council in 1980. Bringing with him the pragmatism of a banker and the liberal disposition of an arts patron, he was able to steer a middle course within the Council Chamber, the voice of reason and reasonableness that has won him many friends and supporters, both inside and outside Government circles.

William Brown has held so many public offices and rendered so much service to the community that it would need a list of some pages to do him justice. Besides serving on the Legislative Council and many of its committees from 1980 to 1986, he has also contributed much time and energy to the Council for the Performing Arts, the Community Chest of Hong Kong, the Hong Kong Trade Development Council,



the Independent Commission Against Corruption, the Mass Transit Railway Corporation and the Hong Kong Girl Guides Association. During various times, he had served as Chairman of the Hong Kong Association of Banks, that body which regulates interest rates, the Hong Kong Export Credit Insurance Corporation Advisory Board, which determines the policies of the HKECIC, the Special Committee on Land Supply and the Hong Kong Academy of Ballet, all of them major public offices which demanded of him both time and close attention.

William Brown's association with the University began in 1979 with his appointment to the University Council. From 1982 until 1986, he was Chairman of the Appointments Board and in that capacity gave invaluable guidance to the University's appointments service in the provision of career advice to our graduates and students. He was also a member of the University's Finance Committee which looks after the University's finances, among them the one thing which is very close to my heart — the superannuation fund of all members of staff. When Mr. Brown left Hong Kong to become the Senior General Manager of the Asia Pacific Region of the Standard Chartered Bank, the University missed his good sense, good humour and ready counsel. We are glad, however, to be able to honour him today in a way which is open to the University.

Mr. Chancellor, it is our pleasure to present to you William Charles Langdon Brown, respected banker, former Legislative Councillor, public figure who has devoted much time and energy to enhancing the quality of our artistic life in Hong Kong, and above all, a friend and supporter of the University, for the award of the degree of Doctor of Social Science, *honoris causa*.

Mr. Leung Kau Kui

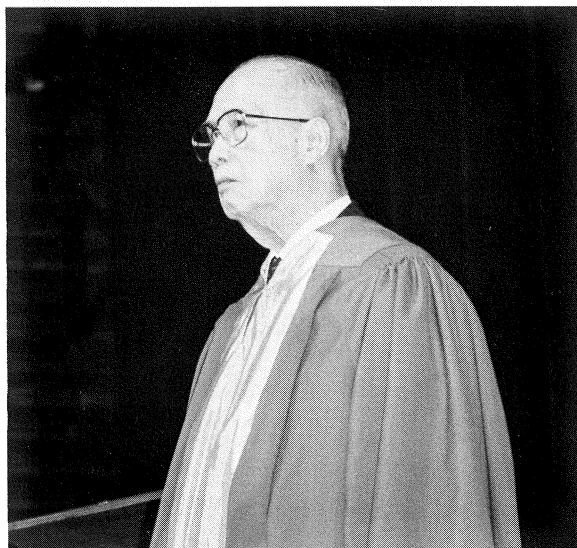
It is often said that Hong Kong thrives on British institution and Chinese entrepreneurship. This is the kind of statement that will find few detractors in a city where the creation of wealth since the 1960s has been quite phenomenal and where the business community has exerted a visible influence over the affairs of the state. To the extent that Hong Kong has been stable and prosperous, both the Government and businessmen should be given most, if not all, of the credit.

To Government must go the credit for creating and maintaining an administration and a body of laws which do not discourage individual enterprise. To the businessmen of Hong Kong must go the credit of seizing the initiative and taking advantage of the freedom that is accorded the business community. There is today a great deal of debate, controversy even, over the future structure of our Government; most of the attention has been focused on the institution of government. But as one very wise philosopher once remarked, 'In the final analysis, what really counts is not the strength of the institutions but the character of the people.'

Mr. Chancellor, in explaining Hong Kong's success, much has been made of positive non-intervention. A factor that has not been given the prominence it deserves is the industry, intelligence and entrepreneurship of the Hong Kong people. Since 1949, we have attracted to these shores not only some of the best and brightest of the Chinese intelligentsia but also some of the best and brightest Chinese entrepreneurs, among them Mr. Leung Kau Kui.

A native of Shunde *xian* in Guangdong Province, Mr. Leung comes from a family that had made its reputation in the silver business for many generations. Under the tutelage of his father, Mr. Leung learned the trade from an early age and quickly established himself as a shrewd businessman in his own right. Success came to Mr. Leung very early in life. By his late twenties, he was already a prominent figure in the silver business in Guangzhou, Zhanjiang, Hankou and Changsha, as well as Hong Kong and Macao.

Hard work and a frugal disposition paid huge dividends. After the Second World War, Mr. Leung became the Assistant General Manager of Hang Seng Bank and later assumed responsibility for Dah Chong Hong in various cities in China. Today of course these two institutions are household names, but the early beginning of business enterprises cannot be easy. This would have been the experience of Mr. Leung as he travelled all over China and indeed the world to pursue



the business expansion that he sought. In 1948 alone, he went to Hanoi, Saigon, Paris, Bangkok, Singapore, Pnom-penh and Vientiane in succession — at a time when overseas travel had not the comfort we enjoy today. As a result of his travels and his great effort, Dah Chong Hong's business operation grew from strength to strength, not only in Asia, but also in Europe and America. True to what Francis Bacon has said about wise men, Mr. Leung was able to make 'more opportunities than he finds'.

By the 1960s when Mr. Leung had reached sixty years of age, he began to spend more time in Hong Kong and was instrumental in building up Dah Chong Hong to the force it is today. The involvement of Mr. Leung's company in Hong Kong can best be seen in the names of the following subsidiaries and associated companies: Triangle Motors Ltd., Honest Motors Ltd., Reliance Motors Ltd., Dah Chong Hong (Motor Service Centre) Ltd., Art's Tailors Ltd., and Hang Dah Shipping Co., Ltd. Apart from its interests in Hong Kong, Dah Chong Hong has operations in the United States, Japan, Singapore and Canada. Mr. Leung is the Executive Vice-Chairman of the group as well as a director of the Hang Seng Bank Ltd. and a director of the Miramar Hotel and Investment Co., Ltd.

Mr. Chancellor, it is sometimes said that local companies are not as supportive of charitable causes as are hongs and multinational companies which have set up business operations in Hong Kong. I think if one looks more closely at the list of donors of any major charity one cares to choose, one will find the names of many well-known local philanthropists.

Only the donations are not made in the names of their respective companies but under their own names.

You will find, Mr. Chancellor, that such personal generosity has also marked the philanthropic benefaction of Mr. Leung Kau Kui. In the last thirty years, he has supported the establishment of numerous primary schools, one secondary college, a health clinic and a home for the aged. He has also donated a sizeable sum towards the Library of our sister university and contributed generously towards the construction of a new academic building on our campus. Outside of Hong Kong, Mr. Leung has supported the

development of St. Hugh's College, Oxford and Zhongshan University in Guangzhou. In his native district Shunde *xian*, he has made generous donations towards a county hall, a hospital, a secondary school, a primary school, a library and a number of silkworm nurseries.

Mr. Chancellor, for his contribution to our business community, for his abiding interest in helping the young, the old and the sick, I have the honour to present Leung Kau Kui, banker, businessman and philanthropist, for the award of the degree of Doctor of Social Science, *honoris causa*.

Address by Dr. Samuel C.C. Ting

Mr. Chancellor, Mr. Vice-Chancellor, distinguished guests, and friends:

In classical Chinese education, *The Four Books* (around 400 B.C.) was considered to be the most important work. *The Great Learning*, one of *The Four Books*, defines personal education, at its basic level, as 'the investigation of things' and 'the extension of knowledge', the latter being a corollary of the former. This is indeed a most apt description of the development of modern learning, which has its foundation in hands-on studies, or what people today call experiments.

However, 'the investigation of things for the extension of knowledge' in its actual sense was set at a discount in traditional Chinese education. This may be attributed to the fact that traditional education aimed not so much at the discovery of new knowledge as at maintaining the established social order. It is explicitly said in *The Great Learning* that the investigation of things and the extension of knowledge are means by which one may achieve sincerity in thought, rectify the mind, develop a cultivated personality, build a harmonious home, get a country well-governed, and eventually realize the highest Confucian ideal of a well-ordered world. Consequently, the real significance of 'investigating things for the extension of knowledge' was lost, and nobody could tell what it meant.

Everyone here, I believe, has heard of Wang Yang-ming (1472-1528), a great Confucian scholar of the Ming Dynasty, whose philosophy very well represents the traditional Confucian attitude towards practical experiments. Wang one day resolved to follow the instructions set out in *The Great Learning*,

starting with 'the investigation of things'. He decided on the bamboos in his garden as the object of his 'investigation'. So he took a chair to the garden and, sitting squarely before the bamboos, racked his brains for seven whole days. His 'investigation' resulted in nothing more than a headache. Very evidently, he mistook the investigation of external objects for the investigation of one's inner self. This was a palpable and almost impossible mistake which appears at once surprising and deplorable to the modern man.

The views held by Wang are however understandable when considered in the social context of his time. For one traditional Confucian belief was that there was in this world a never-changing truth, originating from the heart of a 'sage', who upon discovery of this truth would impart it to the man in the street. It was thus believed that the principles contained in the classics could be 'applied to the four seas, and handed down to thousands of generations'. Experience tells us that such a belief is simply not appropriate for our modern world.

As one engaged in scientific research, I feel I can talk more knowingly about science. I will therefore begin with a discussion of the importance of an experimental spirit in the scientific field.

The history of scientific development illustrates clearly that new knowledge may be acquired only through field studies and experiments, and not through inspection or pure philosophical talks.

Experimental procedures consist not in passive observation, but in active, planned investigations. For instance, to examine the properties of the bamboo, one has to plant it for the special purpose of studying how it grows. One also has to cut off its leaves for examination under the microscope. Knowledge cannot be acquired with the hands idle.



(From left) Professor Hsu Baysung, Dr. the Hon. P.C. Woo, Professor G.H. Choa, Dr. W.C.L. Brown, Professor Samuel C.C. Ting, Sir David Akers-Jones, Dr. Leung Kau Kui, Dr. Lü Shu-xiang, Dr. the Hon. Q.W. Lee, Dr. Ma Lin

The experimental process does not lie in wild conjectures. It requires a concrete, carefully-worked-out plan. Of particular importance is the formulation of a suitable objective, which will serve to guide the whole research process. The choice of an objective depends on the judgement and inspiration of the experimenter. An acute sense of discernment, courage and perseverance are all important factors in a successful experiment.

From what has been said, we may understand why breakthroughs in basic knowledge are events of rare occurrence, and why the development of learning in human history depends very much on pivotal discoveries made by a small number of people.

Today, the same cultural heritage which once guided Wang Yang-ming's thoughts still makes its effects felt, and continues to obsess the traditional Chinese scholar in his way of thinking. This explains why most Chinese students are given to theories and abstract thinking, while experiments and practical work are set at naught. Chinese students can usually do well at school and get full marks in examinations, but are at a loss to know what to do when confronted with research work that requires initiative and original thinking.

In this regard, I may quote as evidence my personal experience. Brought up as I was in the traditional education system of China, I imagined, when I left for the United States to pursue my higher education, that I would be able to do well as long as I studied hard and followed my teachers' instructions in everything. Nothing could be further from the truth. I discovered right from the beginning of my studies that it would not do to depend solely on teachers, and that one must take initiatives, ask questions and have ideas of one's own. As I had not

been mentally prepared for this, I had to quickly develop a new strategy to proceed. What proved most dismaying at that time was that the only recourse I had, turning to books for help, turned out to be totally useless.

It is my opinion that, in academic research as well as in handling all other affairs in the world today, a genuine interest in 'investigating things for the extension of knowledge' is indispensable. We need to foster an experimental spirit in our general education. This means that whether we are engaged in scientific research, humanistic studies or personal affairs, we should always be alert to falsehood and be prepared to seek for the truth of things by taking positive actions. At a time when the world and our social environment are changing with ever-gathering speed, and when cultural exchanges are becoming increasingly frequent, we must not accept blindly all that was held as 'truths' in the past, nor should we wait for the guidance of some 'academic authorities'. We must depend on our own sense of judgement, which can only be developed through practice.

In conclusion, today, with drastic changes going on everywhere around us, it will not be amiss to uphold, in its actual sense, the principle of 'investigating things for the extension of knowledge', as set out in the classics several thousand years ago. One can find in this principle a twofold significance: first, objective investigations provide the only reliable way to the attainment of truth; second, the investigatory process involves imaginative, well-planned research rather than passive, detached observation.

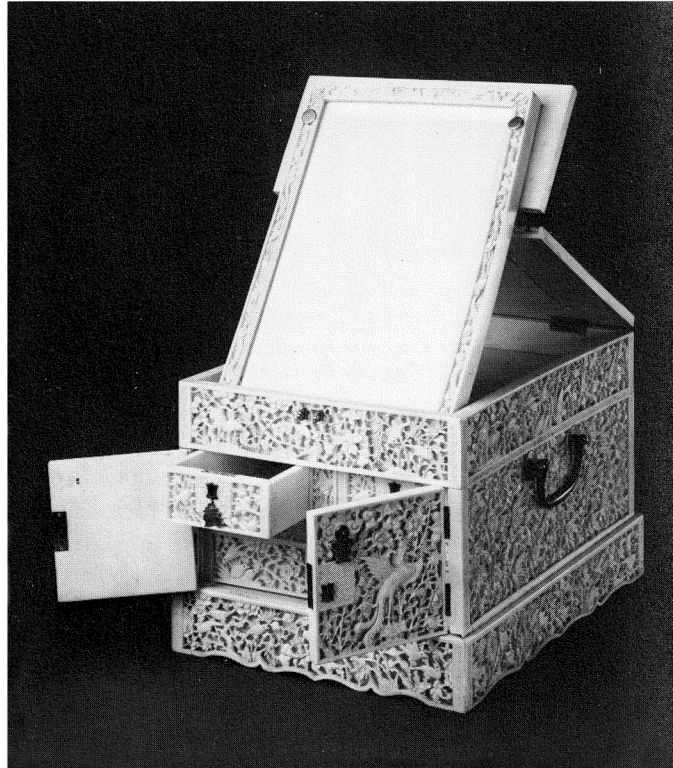
I hope our generation will arrive at a new understanding of an old principle and, by putting it into practice, make the experimental spirit a genuine part of Chinese culture.

Exhibition of Tributes from Guangdong to the Qing Court

The University mounted an exhibition of 'Tributes from Guangdong to the Qing Court' from 28th February to 12th April, 1987. A preview of the exhibition, jointly organized by the University Art Gallery and the Palace Museum in Beijing, was held on 27th February. Dr. Ma Lin, the Vice-Chancellor, officiated at the opening ceremony. Mr. Yang Boda, Deputy Director of the Palace Museum, led a delegation of five experts to attend the opening ceremony and preview.

The exhibition is the second cooperative project between the Palace Museum and the Art Gallery, the first one being the exhibition of 'Paintings by Yangzhou Artists of the Qing Dynasty' held in November 1984. It is also the sixth exhibition devoted to the arts and archaeology of Guangdong Province organized in conjunction with museums in China. The series of exhibitions is a manifestation of the strong support of Chinese museums in realizing the Art Gallery's objective to promote the study of Guangdong culture. On the significance of the exhibition, Dr. Ma stated in his opening address, 'The present exhibition, featuring different categories of tributes from the local officials in Guangdong to the Qing court, will demonstrate the flourishing development of the arts and handicrafts as well as economies and overseas trade in Guangdong. Particularly noteworthy are the rich array of decorative arts in this exhibition. The superb craftsmanship of the Guangdong artists commands our admiration and their distinctive local characteristics inspire in us a sense of affinity. The exhibition also represents the results of long years of academic research conducted by Mr. Yang Boda, Deputy Director of the Palace Museum, and experts of the Palace Museum. They undertook the arduous task of identifying the Guangdong tributes from the vast holdings of tributes from various provinces. Moreover, their research work is substantiated by the *tribute lists* and other documents of the Qing court. All ninety-two items included in the exhibition are on public viewing for the first time and it is surely an opportunity to be treasured by the community of Hong Kong.'

The ninety-two items of provincial tributes



*Ivory cosmetic box with a mirror; Tongzhi to Guangxu reign,
Qing Dynasty*

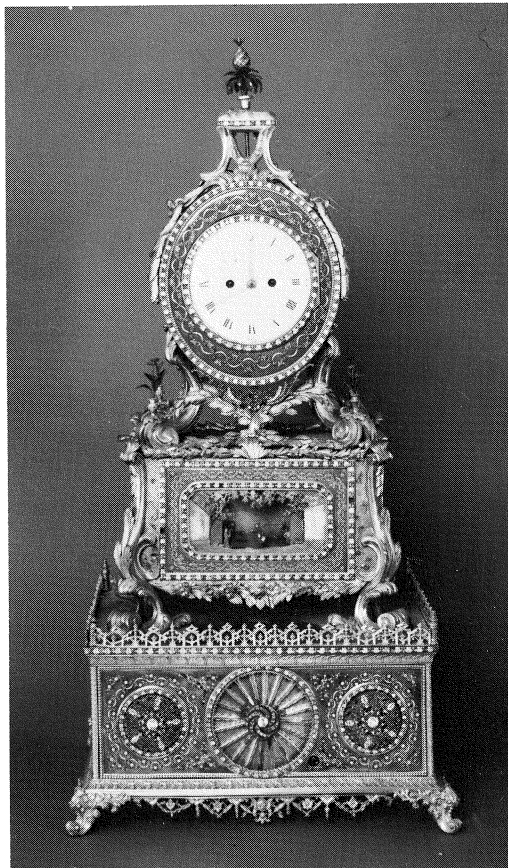
featured in the exhibition were all selected from the Palace collection and can be grouped under three categories: native products, foreign articles, and decorative pieces. The first category, native products from Guangdong, included coconut shell bowls, fans, Duanxi inkstones, etc. The second category, made up of European goods imported through Guangzhou, included telescopes, sundial and snuff and snuff boxes, etc. The last category consisted of ivory carvings, enamelwares, potted landscapes, clocks, painted glass and screens, etc. Of special note were the enamelwares, which were well represented by close to one-third of the total number of exhibits in the various techniques of *cloisonné*, *champlevé*, *basse-taille* and painted enamels. This fact establishes Guangzhou as a major centre for the production of enamelwares in the Qing Dynasty. The imposing *zitan* screen fitted with enamel panels testified to the monumental scale achieved by the Guangdong craftsmen, whereas the ivory gourd-shaped pomander, measuring only 7 cm in length and 4 cm in width, fascinated the viewers with the intricacy of the openwork design. The painted enamel box with fit-in trays inside was a rare example marked by delicacy of decorative pattern and richness in colour. Alongside these exhibits, relevant *presentation lists* and *tribute files*, on loan from the First Historical Archives of China, were also on display.

The rare items exhibited provided first-hand material for the study of the tribute system of the Qing Dynasty and the arts and handicrafts of Guangdong. A fully illustrated catalogue of 140 pages, with all plates in colour, has been published. The introduction to the catalogue is a long article by Mr. Yang Boda, who discusses in detail the characteristics of tributes from local officials of Guangdong, the influence of foreign technology on the handicrafts of this province and the status of Guangdong handicrafts and their contribution to the decorative arts of the Qing Dynasty.

Mr. Yang was also invited to give a lecture on '18th-century Decorative Arts with Guangdong Artist's Marks from the Qing Imperial Household Workshop' on 2nd March at the Institute of Chinese Studies.

(Upper right) Clock with mechanical figures; Qianlong reign, Qing Dynasty

(Lower right) Painted enamel you with handle and tao-tie pattern; Qianlong reign, Qing Dynasty



Conference on China and Europe: 16th–18th Centuries



The mutual fascination between China and Europe during the seventeenth and eighteenth centuries characterizes this first phase of cultural contacts between the two worlds. A large number of European missionaries, notably Jesuits, and merchants came to this part of the world in the seventeenth century and brought back reports of a fascinating and immensely wealthy China. A period of fascination with anything Chinese thus followed and nearly all the great minds in Europe commented on China or even wrestled with Confucian ideas filtered into Europe. The vogue reached its height in the eighteenth century, represented by artistic as well as intellectual sinophilism: great philosophical and literary names, such as Leibniz, Voltaire, Pope and Rousseau were all associated with the fashion. China was almost considered a model of rationality and enlightened government for Europe to imitate.

On this side of the world, besides Christianity, the missionaries also brought astronomy, mathematics and pragmatic technologies to China. For over two centuries, they charmed the Chinese people, and some leading intellectuals were impressed enough to become Christians. Still more were attracted to the scientific achievements of the West, and the introduction of them obviously revolutionized Chinese way of thinking on heavenly and earthly subjects. Until today, the Chinese people still generally think that the period of introduction of Western knowledge, though 'unfortunately' accompanied by Christianity, was a meaningful one.

Cultural interchange was not high in the agenda at least for the Chinese since 1949 and historical

studies of this period therefore declined. In the West, great scholars such as Donald Lach continued to publish important works, but fewer and fewer historians seemed to feel encouraged or competent enough to go into the field. Thanks to the increasingly open policy of the Chinese government, however, it has now become easier for scholars in and out of China to resume the study of this period of mutual fascination and to redefine its contemporary significance.

In view of the recent developments and with the encouragement and support of Goethe Institut, the Office of International Studies Programmes (OISP) of this University, to celebrate the tenth anniversary of its Asian Studies Programme, organized an international conference on the subject. Indeed, what better way to commemorate the tenth anniversary than to hold such an international conference to discuss the values and implications of cultural exchange which the Office is entrusted to carry out!

A total of twenty-six scholars from all over the world attended the Conference: they included Jonathan D. Spence (Yale), Wolfgang Franke (formerly Hamburg, now at Zhongshan), Guliano Bertuccioli (Rome), Lothar Ledderose (Heidelberg), Nakayama Shigeru (Tokyo) and He Zhaowu (Tsinghua). The twenty-four papers presented are divided into five general areas: (1) historical background: recent studies especially in relating the late Ming history with the world-wide price and commercial revolutions are reported by William Atwell. Other papers deal with silk trade (Chuan Han-sheng) and Ming intellectuals (Chiu Ling-yeung). (2) Christianity and its impact in China: papers range from the en-

counter between Chinese intellectuals and Christianity (Thomas H.C. Lee), to reflections on Matteo Ricci (Jonathan Spence) and Xu Guangqi (John Young, He Zhaowu), to figurism (Michael Lackner), and to Japanese responses to Jesuit missions (Nakayama Shigeru) and missionary reports on Ming China (Bertuccioli). The influence of Western learning on Chinese studies in the eighteenth century is also discussed (Zhu Wei-zheng). The papers suggest new dimensions in our understanding of many missionaries as not only religious leaders, but also human beings: they were impressive observers of life and changes in China, but they were also susceptible to misunderstanding the Chinese culture. (3) Intellectual dialogues and confrontations: issues on the introduction of Chinese philosophy into Europe (Knud Lundbaek), how European political thinkers reacted to Chinese ideas (Gunther Lottes and Walter Demel), how the Enlightenment (David Mungello), eighteenth century European literature (Theodore Foss and Donald Lach) and France in general (Danielle Elisseff-Poisle) treated China are dealt with in the papers. Most papers are well-researched and have broken into new territories so far unmapped. They undoubtedly will help us better understand how, especially in the eighteenth century, European thinkers had used and abused China in their fights for enlightenment. (4) Scientific

and technological transfer: papers on the introduction of Western sciences into China (Ho Peng Yoke) and the significance of scientific transfer (Francesca Bray, Orun Kim) are presented. Bray pointed out some of the problems in Joseph Needham's interpretation of technological transmission. In addition, two well-researched papers deal with the introduction of Western cartography and geography into China (Lin Tong-yang) and how Chinese intellectuals reacted to the new geographic knowledge (Bernard Luk). (5) Art in between two worlds: two excellent papers introduce the different degrees of influence of Chinese art in Europe (Lothar Ledderose) and how Chinese painting was influenced by its European counterpart (Mayching Kao).

After the four-day conference, some delegates went to Macau to visit this first entrepot in the East-West contacts. Father Texiera led the tour to the fascinating, though now largely forgotten, part of Macau.

The Conference was made possible with the support of many cultural agencies, Cathay Pacific Airway and friends within the University. It is actually in this spirit of cooperation that the task of the Office becomes possible and its call for cosmopolitanism and open-mindedness meaningful.

— Thomas H.C. Lee, Director of OISP

1987 Sports Medicine Conference — Sports for the Elite Athletes

The 1987 Sports Medicine Conference, on 'Sports for the Elite Athletes', was held on 11th and 12th April at Hotel Riverside Plaza in Shatin. Jointly organized by this University and the University of Pittsburgh, USA, and sponsored by the Amateur Sports Federation and Olympic Committee of Hong Kong, the Conference was the first international meeting on sports medicine held in Hong Kong. The aim of the Conference was to disseminate advance theory and practical knowledge of sports medicine, and promote communication and cultural exchange among the participants local and abroad.

Over 500 coaches, medical doctors, physiotherapists, and physical educators attended the Conference, and some eighty of them came from seventeen countries including the United States, Canada, the United Kingdom, Australia, China, Japan, South Korea, Singapore, Indonesia, Holland, the Philippines

and West Germany. World renowned experts were invited to give plenary addresses on the frontier knowledge in sports medicine and sports science. Highlights of the programme included: (1) Sports injuries management — athletic injuries of the shoulder, knee, back and the eye; recent advances in arthroscopic surgery (2) Paediatric sports medicine (3) Sports Physiotherapy (4) Special sports — wheelchair marathon; marathon; dance; special Olympic (5) Sports medicine topics — diabetes and sports; asthma and sports; sports nutrition (6) Sports science topics — sports physiology; sports psychology (7) Physical fitness programme — elite athletes testing.

Besides plenary sessions, there were symposia, free paper presentations, workshops, audio-visual and poster presentation. A technical exhibition was staged to demonstrate some of the recent technology advancement in sports science and sports medicine.

Conference on China's SEZs and Open Policy: Development and Prospects



A conference on 'China's Special Economic Zones and Open Policy: Development and Prospects', organized by the Centre for Contemporary Asian Studies and partly sponsored by the China Merchants Steam Navigation Co. Ltd., Hong Kong, was held at the Cho Yiu Conference Hall from 2nd to 4th April, 1987. The Conference was opened by Dr. Ma Lin, the Vice-Chancellor, and Chairmen of the various sessions included Professor R.Y.W. Kwok, Professor Ambrose King, Professor E.K.Y. Chen, Professor T.B. Lin, Dr. Y.C. Jao, Dr. C.K. Leung, Dr. S.K. Lau, Dr. P.N.S. Lee and Dr. K.S. Liao. Dr. K.Y. Wong, coordinator of the research programme on China's Open Policy and Special Economic Zones and Chairman of the organizing committee, chaired the closing session.

About fifty specialists and scholars took part in the three-day Conference, including ten participants from mainland China. The twenty-six papers presented examined issues of the open policy and special economic zones from a variety of viewpoints, and the themes of the sessions fell into the following areas: (1) issues of planning, particularly the uncertainty and fluidity of the planning environment in the special economic zones and the implications of dependence on outside capital for development, and regional planning for coordinated and integrated development in the South China region; (2) effects and implications of the open policy on welfare provision and on the

spatial distribution of well-being in urban China; (3) social changes and social problems as a result of the open policy; (4) foreign direct investment and management issues in special economic zone enterprises; (5) fiscal policy and foreign exchange control in China; (6) economic reform, changes in the structure of production and the exploitation of land resources in the special economic zones; (7) electricity supply and port development; (8) urbanization and urban structure; and (9) critique of China's special economic zone policy and models of development. The papers presented were almost equally divided between micro-level analyses which dealt with issues and problems in specific economic development zones and open cities, and macro-level approaches which examined the implications of the open policy on the whole country. Fruitful academic exchange has been achieved especially between scholars from China on the one hand and local and overseas participants on the other who often held quite different concepts and viewpoints on various issues. At the closing session, many of the participants expressed the need for continual dialogue and cooperation between different institutions in China and Hong Kong which have been actively engaged in China research, and for further conferences to be held in various places.

Proceedings of the Conference will be published in due course.

— K.Y. Wong

News in Brief

CUHK (Amendment) Statutes 1986 and 1987 Gazetted

Statutes of The Chinese University of Hong Kong (Amendment) Statutes 1986 and 1987 went through legislation recently.

* *Statutes of The Chinese University of Hong Kong (Amendment) Statutes 1986* (a) allow the total number of Fellows sitting on the Senate to vary according to the number of Colleges; and (b) provide that Senate does not have to wait until an Assembly of Fellows is established before exercising its powers to make recommendations regarding teaching posts and teachers in a College.

* *Statutes of The Chinese University of Hong Kong (Amendment) Statutes 1987* specify the situations in which a person is eligible for re-election as Dean of any Faculty.

Dr. Q.W. Lee Made New President of Institute of Bankers

Dr. the Hon. Q.W. Lee, Chairman of the University Council, and Chairman and General Manager of Hang Seng Bank Ltd., has recently been appointed President of the Institute of Bankers in Hong Kong. Dr. Lee is to succeed Sir Michael Sandberg, who has retired.

Dr. Q.W. Lee Appointed Chairman of Board of Trustees of Sir Edward Youde Memorial Fund

Dr. the Hon. Q.W. Lee has been appointed Chairman of the Board of Trustees of the Sir Edward Youde Memorial Fund for a period of three years with effect from 1st April, 1987. The Board, with Lady Youde as one of its four members, will decide on how the fund, now standing at HK\$80 million, should be spent towards the cause of education.

New Members of Advisory Board and Committee

* The following have been invited by the Vice-Chancellor to serve on the Appointments Board until 31st July, 1989:

Mrs. Elizabeth Wong, Director of Social Welfare, Social Welfare Department, to succeed the former Director, Mrs. Anson Chan, who had served on the Board since 1984.

Mr. Y.T. Li, Director of Education, Education Department, to succeed the former Director, the Hon. Michael Leung, who had served on the Board since 1984.

* Mrs. Annabella Ip, newly appointed Personnel

Manager of Philips Hong Kong Limited, has been invited by the Vice-Chancellor to serve on the Advisory Committee on Electronics until 31st December, 1987. Mrs. Ip is to replace Mr. Patrick Wong on the Committee.

University Members Serve on Outside Committees

(1) The following members of the University have been appointed/reappointed by His Excellency the Acting Governor to serve on various boards and committees:

* Mr. Lin Shou-chin, Senior Lecturer, and Dr. David W. Faure, Lecturer, both of the Department of History, have been reappointed members of the Antiquities Advisory Board from 1st January, 1987 to 31st December, 1988.

* Dr. Richard M.W. Ho, Lecturer in Chinese, has been appointed a member of the Jubilee Sports Centre Board from 13th March, 1987 to 12th March, 1989.

Dr. Ho is also an Appointed Member of the Regional Council from 1st April, 1987 to 31st March, 1990.

* Dr. Ho Hin-hung, Senior Lecturer in Physics, has been appointed a member of the Board of Governors and of the Council of the Hong Kong Baptist College, both for the period from 1st January, 1987 to 30th June, 1989.

* Professor S.T. Chang, Professor of Biology, has been appointed a member of the Agricultural Products Scholarship Fund Advisory Committee and the Marine Fish Scholarship Fund Advisory Committee, both for one year with effect from 1st April, 1987.

(2) The following members have been nominated to represent the University on outside committees:

* Professor David Punter, Professor of English, and Dr. Wong Kwan-yiu, Senior Lecturer in Geography, on the Hong Kong Selection Committee for the 1987 Commonwealth Scholarships tenable at the two universities in Hong Kong.

* Professor S.W. Tam, Professor of Chemistry and Dean of Graduate School, on the Council of the Hong Kong Polytechnic for a further term of three years, effective 1st April, 1987.

Professorial Inaugural Lecture

Professor David Punter, Professor of English, delivered his inaugural lecture, "An Unextinguished Hearth": Thoughts on the Study of English', on 13th March, 1987.

New UPGC Member

Mr. John Lo Siew-kiong, Managing Director of Tek Devices Ltd., a member of a number of official boards/committees including the Industry Development Board and Town Planning Board, has been appointed a member of the University and Polytechnic Grants Committee for a term of three years from 1st April, 1987. Mr. Lo is to succeed Dr. Andrew Chuang, who has resigned.

Gift of a Sculpture from Dr. Szeto Wai

Dr. Szeto Wai, Architect of the University from 1963-1978 and Honorary University Architect since 1978, has recently donated to the University a bronze sculpture to be placed on the platform in the University Square.

Measuring approximately six metres high by four metres wide, the sculpture is the work of a renowned Taiwan sculptor, Mr. Ju Ming. Dr. Szeto's gift also includes the construction of a garden, styled after the Roman Forum, to the north of the platform fronting a pool.

BA Faculty Established a Microcomputer Laboratory

The Faculty of Business Administration established a Microcomputer Laboratory on 9th March. Located in Room 218 of Sui-loong Pao Building, the Laboratory is installed with twenty-two microcomputers for teaching and research purposes.

College Visiting Scholars

* Five New Asia Ming Yu Visiting Scholars visited the College in the period from March to May: Professor Jonathan Spence, George Burton Adams Professor of History, Yale University, USA, visited the

College from 16th to 20th March; Professor Richard S. Thorn, Professor of Economics, Pittsburgh University, USA, from 28th March to 5th April; Professor Chen Jun-min, Vice-President of Shaanxi Normal University, from 16th to 23rd April; Professor James Durbin, London School of Economics and Political Science, University of London, from 18th to 23rd April; and Professor Wang Fu-ren, Director of the Research Institute of Ethnology and Chairman of the Department of Ethnology, Central Institute for Minority Nationalities, from 28th April to 3rd May.

Professor Sho-chieh Tsiang, a world renowned economist, visited New Asia College as its S.Y. Chung Visiting Fellow from 21st to 30th March. Professor Tsiang is a member of the Academia Sinica, the President of the Chung Hua Institution for Economic Research, and Professor of Economics, National Taiwan University.

CU Graduate Becomes Rhodes Scholar

Miss Dorothy Wong Suk Chee, a 1986 graduate with first class honours in English from this University and presently an Executive Officer of the Hong Kong Government, has been awarded the Rhodes Scholarship, becoming the second Hong Kong student ever to win this highly prestigious academic award. Miss Wong has already been admitted by University College, Oxford for an MPhil course in Management Studies and she hopes to proceed to a PhD course afterwards. She plans to return to Hong Kong after her studies.

Established in 1902, the Scholarship is a symbol of the highest achievement to young scholars the world over. Some seventy-six Rhodes Scholarships are granted each year in seventeen countries, and the Scholarship is always held at Oxford University.



*Miss Dorothy Wong
with the Vice-Chancellor
at his office*

Interview with Professor Samuel C.C. Ting



The following is a record of an interview with Professor Samuel C.C. Ting on 25th March, 1987 at the University by Dr. Kenneth Young, Reader in Physics, and the Editor, Chinese University Bulletin.

Q. You were awarded the Nobel Prize in Physics in 1976 for the discovery of the J-particle. Would you like to explain to our readers what led to the discovery of this heavy elementary particle and what is the significance of your discovery?

A. One of the main purposes of the work of a physicist is to find out what is the fundamental building blocks of nature and what is the basic constituent of matter in the universe. In ancient China, people took gold, wood, water, fire and earth to be the five elements of the universe. Gradually people realized that there are many chemical elements like iron, mercury, etc. and by the 17th century, they began to know the chemical elements. Indeed by the end of last century, through the work of Dmitri Mendeleev, they came to know that there is a periodic table. So, at the beginning of this century, we viewed the world as being made of about one hundred chemical elements; we call them the building blocks of nature. And then, electrons were discovered and the nucleus of the hydrogen atom, in other words the proton, was discovered. This led to a change of our concept from a few hundred basic elements to two basic building

blocks — electrons and protons. Subsequently more and more proton type of particles were discovered, and by 1960, we came to know of a few hundred subatomic particles, such as heavier electrons such as muons, and protons, neutrons, kaons, etc. At that time, we changed our concept again, taking the few hundred subatomic particles as the basic building blocks of nature. In 1964, people began to think that maybe the world is made of smaller building blocks known as quarks and began to construct a theory. According to the theory most of the elementary particles or subatomic particles are made of three types of quarks. And that indeed could explain most of the phenomena, practically all of them. In 1974, my group did an experiment leading to the discovery of the J-particle. The J-particle is very different from all the few hundred subatomic particles in two senses. First, it is much heavier, and second, it lives much longer. It lives about ten thousand times longer than other particles. Now, why is it much heavier? And why does it have such a long lifetime? The explanation is that the J-particle does not come from the three quarks but from a new quark. So, that work of ours shows that there must be a fourth quark, and that three quarks cannot make up the world: there must be four. But if you have four, there could be five, six and so on. I was awarded the Nobel Prize mainly for that work.

Q. Would you please tell us the process of your discovery?

A. From 1964 to 1972, I worked in Hamburg with the Electron Accelerator. There I used very high energy lightwaves and let them hit a nuclear target. I was able to demonstrate that light, ordinary light, changes itself to a massive particle when the energy is high enough. That is indeed very strange, because we know light normally has no mass. Most of my work in these years had shown that all these light-like particles have a mass, about the mass of a hydrogen atom. I was asking myself, why do all these particles only have the mass of hydrogen? Could it be a heavier one? To look for heavier particles, we did an experiment, a very complicated one because these particles are very difficult to find. At last we found the J-particle, which basically is like lightwave except that it has a much heavier mass.

Q. During the sixties much of the fashionable physics of that time was strong interaction, Regge poles and so on, and yet you weren't doing that. Why did you choose the particular branch of physics that you did?

A. This is a very good question. I always feel that there are basically two kinds of experimental physicists. The first kind follows the trends: they do what the theoretical physicists tell them to do, but then they are always behind people. The second kind picks a topic of their own. If you want to pick a topic of your own, clearly, most of the people do not support you, and you really have to believe what you are doing is important.

Q. Is your research team funded by many governments?

A. My research team for the J-particle was funded by the United States Government. My work in Geneva is performed at CERN, the European Centre for Nuclear Research, and is funded by thirteen governments.

Q. May we know the scale of funding for your current experiment?

A. We have 400 PhD physicist and about 1,000 technicians, and a little bit more than 100

million US dollars for equipment. For salary, maybe another hundred million US dollars for four or five years. But this is only a very rough estimate because in my group, there are many people from China and from the Soviet Union. For those from socialist countries, the salary is very different.

Q. Why do so many governments support your research?

A. There are only four places in the accelerator at CERN where one can do experiments in high-energy physics. I have designed an experiment which is fundamentally different from the other three experiments and our purpose is to find out the origin of masses. We attempt to answer the question why different particles have different masses and where mass comes from. The topic is very interesting and that's the main reason for government support.

Q. When you say where mass comes from, I assume you are looking for Higgs particles?

A. Higgs particle is one, SUSY particle is another, and technicolor is yet another.

Q. You just gave a reason for government support but surely you cannot expect a senator to understand why this experiment is more significant than the other?

A. The major support comes from three governments – Switzerland, the Soviet Union and the United States, and in these countries the people who make decisions to support the physicists certainly understand the importance. Even though it costs 100 million US dollars, the amount is still too small for a senator to be bothered with. It is still at the operational level of government.

Q. If I may follow this up again, there is now possibly a growing feeling among physicists in other specialities, biophysicists and so on, who say that 100 million US dollars could be used to do a lot of biophysics, or fluid mechanics or what have you, and therefore we should re-think our priorities. Would you comment on this?

- A. I think high energy physics is always in the frontier. It is really the driving force for physics: you can see that atomic physics was the high energy physics during the twenties and thirties, nuclear physics was the high energy physics during the forties and fifties. Without high energy physics, sooner or later you reach an end. Certainly the fields you mentioned are very important, and they should also be supported. Generally speaking, the money used in research is still very, very small compared to United States defence, and weapon development.
- Q. *What about the less well-off countries? You just mentioned China.*
- A. Well, China has a very good team of physicists working with us mainly because they can learn new technology. The technology we use is not commercially available. Even for poor countries the amount is still very small compared to other national expenditure.
- Q. *Do you see your research as having any application on different time scales?*
- A. From pure research in high energy physics to application there is normally a twenty- to thirty-year time span. A major development in high energy physics at the end of the last century was the discovery of X-rays and now X-rays are widely used in everything – its application began in the thirties. In the thirties it was the discovery of nuclear fusion, and fission and neutrons. In the fifties, they became a source of energy. So maybe what we are doing can be used in the next century – it is hard to tell.
- Q. *I asked the question because especially in a community like Hong Kong, people who fund research tend to ask for rather immediate impact on the community.*
- A. Instant impact does not exist, except in technical spin-offs, like developments in superconductivity, development of fast computers, data handling and processing. Nevertheless, most of these come from developments in high energy physics. The application of a major discovery in high energy physics often changes the life of men.
- Q. *What is your opinion on the misuse of science?*
- A. Misuse of science is like misuse of medicine: it always exists. It is a very unfortunate thing but I do not know what one can do about it. Certainly it will be much nicer if the discovery of nuclear fusion and fission is not used in weapons. The basic motivation for people to do research is to satisfy curiosity. If you don't do it, other people will do it. You do not have a monopoly.
- Q. *So preventing the abuse of science is not within the power of scientists?*
- A. Certainly not. A scientist can refrain from participating in military research – I do not do any military research – but once the result of our research is known, many countries can use it, some for good, some for bad. But the point is even if I do not do this research, other people can discover the same thing.
- Q. *You are a very successful physicist, do you think that there are really born scientists?*
- A. Well, I would say, to be a good scientist, you have to have the following qualities. The most important one is, you have to believe what you are doing is the single most important thing in your life. You have to decide this is the thing you are going to do and nothing can stop you, and you do not really care whether you will get good results or not – most of the time you do not get good results. The second most important thing is, you really have to have some self-confidence. The progress of science is always achieved through a few people. It is not the majority who control the progress of science, it is the minority. It is only one or two persons who manage to completely revolutionize people's ideas. To revolutionize means to destroy the old ideas which most people believe in. To do that, you certainly have to have self-confidence. The third thing is something which I'll call intuition, namely to choose a topic, and that is something a little bit hard to define. Some people can choose a topic and some people cannot. I would say those three are the important ingredients of a successful scientist. The fourth one is luck; some people are luckier than others.

- Q. You didn't say whether these ingredients are born or bred.*
- A. I think it must be a combination of both. If you flunked in every one of your physics examinations, you certainly cannot be a great physicist. On the other hand, if you get 100 in every one of your examinations, you most likely won't be a great physicist either.
- Q. You talked about self-confidence and intuition, how do these develop? Most young people when they start out in their career, do not have these qualities.*
- A. It is hard to tell, you gradually develop these very slowly.
- Q. What part does training play in your success?*
- A. I always believe training is not very important. At least for me, I didn't go to school until I was twelve years old and until I went to Taiwan, because I grew up during the war time in China. Then I went to the University of Michigan, which is not the best school in the world, only a good school. I gradually developed my interest when I began research on my own. I have never believed that a good grammar school education is very important. Indeed when I was in Taiwan, I certainly was not the best student. The best student means you have to be good in every subject. I was reasonably good in a few subjects, mathematics, chemistry, physics and history.
- Q. But we could take the word training in a broader sense. Certainly somewhere along the line you got the message that high energy physics is extremely important. Somebody in the underdeveloped parts of the world might be stuck in a school where he gets the idea, for example, that measuring the viscosity of fluids is good physics research. So by training if we mean exposure as well, would you still say that training is unimportant?*
- A. While I was an undergraduate at the University of Michigan I used to do measurements of shockwaves, not so far from viscosity, and theoretical physics. Gradually I lost interest, but I was not afraid to change; the moment I lost interest I left. I began studying engineering, but then I realized that I could not understand drawings and I left. I would still say that what is more important is the ability to choose a topic. If you choose something you don't like, and if you are sure of this, you'd better not stay there. The longer you stay, the more time you waste.
- Q. Just now you said that in the first twelve years you didn't receive any formal education, but did you receive any informal training, as in Chinese culture?*
- A. Not really, because life was rather difficult during World War II. Both my parents were university professors, and they always had many interesting visitors coming to our house. From their conversation, I heard the names of Faraday, Dirac and Newton ever since I was very young, but I only knew their names and what they did, a little bit.
- Q. Do your parents have much influence on your career?*
- A. I would say they have a good influence on me by letting me alone. In most Chinese families the parents push their children to do this and that. It is a little bit unfortunate that most of the traditional Chinese families not only push the children, but even choose a topic for them.
- Q. In addition to being a scientist, you are playing the role of manager in your research group. How do you bring so many scientists of high-calibre together to work in your laboratory?*
- A. Let me tell you what I do. I choose a topic and design experiments. I sort of guide these people in the physics sense. I do not do management. I make my decisions based on physics. Very seldom do two physicists agree, let alone 400 physicists. What I normally do is I figure out how this thing should be done, how I want it to be done, and discuss it with my collaborators and then I make a decision.
- Q. Do you know how these scientists feel about working in such a large team?*
- A. This is a very complicated experiment and although there are 400 scientists working together, you often find there is not enough people. So everybody is quite busy and most of them believe that this is a very good experiment. You can only drive people forward because they are interested and have a common

goal. Besides, there is a keen sense of competition. In science, there is no number two: whoever discovers first receives all the credit, the second, third, and fourth will not get any credit. That also drives people forward.

Q. It is sometimes said that for the really junior people (graduate students and postdocs) working in such a large team, some of them feel that they are such a small part of the experiment that they get discouraged and some good, young scientists are therefore deterred from entering experimental high energy physics. I wonder whether that is true?

A. Yes, that's true more in other groups, but not in ours. We have been very careful, mainly because of what you said, in selecting students, making sure that we only get the very good ones. A very good student, no matter how many people there are, will stand out. It is the average or the a-little-bit-above-average or a-little-bit-below-average students that will be in big trouble in large groups. For the super-good ones, you cannot suppress them.

Q. You've made many trips to mainland China and Taiwan to select young scientists to join your group. How do you select the really good young people?

A. We use the doctoral qualification examination developed at MIT and at ETH, Zurich – the Technical University in Zurich, a very famous school, and try it out on the existing students in the group. It is a four-hour examination, open-book. The problems are so designed that if you understand them, you can finish them very quickly. If you don't, no book will help. In China, every year one or two professors from our group will go to the universities there to select their best students to take the examination. After the examination is taken, simultaneously in many places in China, the papers are sent back to us and we grade the papers ourselves, just to avoid any misunderstanding. Then out of the sixty people or so we choose ten for an interview. Then sometimes I, sometimes some other professor, go to China to interview the students, also for four hours. We ask the students to pick a subject on which we hold a discussion. Based on their performance

at the interview, we choose four or five of them. They are normally very young, around twenty years old.

Q. What do you think of the progress in physics made by the Chinese on the Mainland and in Taiwan?

A. I would say the students that we have selected from mainland China and from Taiwan are of about equal standard. But in mainland China we have more good students to select from, mainly because there are more people. In Taiwan, it is a little bit unfortunate that the best students do not study science, they are more commercially oriented.

Q. How many of them do you have in your group?

A. I don't know how many in total. On and off, probably a little bit less than 200 as from 1979.

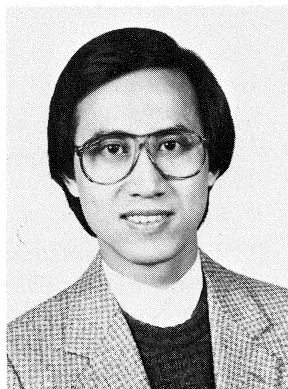
Q. How do they compare with scientists from other countries?

A. It is more difficult for them. Language and communication with other people are the main problems. Also the spirit of competition is not very strong in socialist countries. Scientists from the PRC like to stay by themselves, like to speak Chinese. Because of this, I have gradually established a tradition when they come to work with us: they are not encouraged to speak Chinese. Gradually I try to break down their habit of always grouping together and knowing very little about the outside even after many years abroad. If you want to compete on an international scale, you really have to understand what other people are doing.

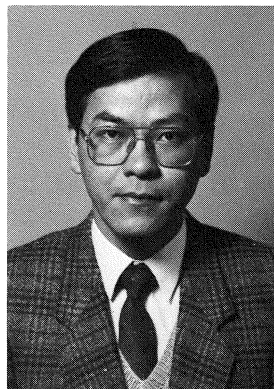
Q. One final small question: do you see in the next decade or so, the centre of high energy physics will move from CERN in Europe to say, the Super-conducting Super Collider (SSC) in the United States?

A. You know a few months ago the President of United States authorized the SSC, 82 km in circumference, and one of the conditions for approval is that it must be built in the United States. The reason for this move is that the United States wants to gain leadership. Eventually, the centre of high energy physics may go back to the United States.

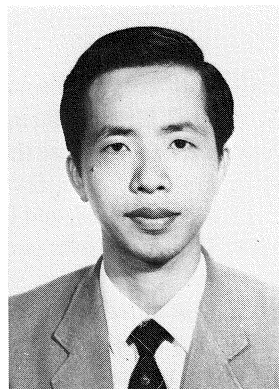
Profiles



Dr. Chan Wing-wah



Mr. Tai Chiu-ming



Mr. Tam Sau Sum

Dr. Chan Wing-wah

Lecturer, Department of Music

Dr. Chan Wing-wah received the degrees of Bachelor of Arts from The Chinese University of Hong Kong, Master of Music and Doctor of Music in composition from the University of Toronto, and is a Fellow of Trinity College of Music, London (FTCL) (composition). He was awarded an American Bicentennial Scholarship (1979) and a Commonwealth Scholarship (1980-85) and was the first prize winner in the 1981 International Double Reed Society Composition Contest. In 1986 he was invited by the German Academic Exchange Service to the International Vacation Course for Contemporary Music in Darmstadt, West Germany where his music was performed.

Dr. Chan's compositions include three symphonies, an overture written for the tenth anniversary of the Hong Kong Philharmonic Orchestra, a piano concertino and many chamber works. Performers of his music have included the Fires of London, the Hong Kong Philharmonic Orchestra, and the Hong Kong Children's Choir.

Apart from teaching at this University as Lecturer in Music, Dr. Chan also gives theory courses at the Hong Kong Academy for Performing Arts.

Mr. Tai Chiu-ming

Assistant Secretary, College Office, United College

Mr. Tai Chiu-ming graduated from Chung Chi College of this University in 1975 with a BSSc degree in Economics. He obtained a Certificate in Hospital Administration from the Extra-mural Department of the University of Hong Kong in 1978 and a Diploma in Public Administration, specializing in Health Ser-

vices Management, from the Hong Kong Polytechnic in 1984.

Shortly after his graduation, Mr. Tai joined the Hong Kong Federation of Youth Groups and was posted to the Lam Tin Youth Centre in Kwun Tong as the Worker-in-charge. In September 1976, he left the Federation to join the Medical and Health Department, Hong Kong Government as an Assistant Hospital Secretary (later retitled Hospital Administrator II). He was first posted to the 'Kowloon and New Territories Group' and was responsible for the personnel matters of all clerical and minor staff working in over 130 medical institutions in Kowloon, New Territories and the outlying islands. In 1978, he was transferred to the Castle Peak Hospital, which was then the only psychiatric hospital in Hong Kong, and in 1980, he was transferred again, to the Princess Margaret Hospital. He was promoted Hospital Administrator I in May 1982. In October 1983, he was posted to the Planning Unit of the Medical and Health Department Headquarters, responsible for the development of new medical projects. The major projects in which he had actively involved included the Tuen Mun Hospital, the Eastern District Hospital and the extensions of the Tang Shiu Kin Hospital and the Queen Elizabeth Hospital. He was promoted Senior Hospital Administrator in January 1986.

Mr. Tai joined this University in December 1986 as the Assistant Secretary of United College.

Mr. Tam Sau Sum

Assistant Secretary, Personnel Section, Secretariat

Mr. Tam Sau Sum received his secondary education at Queen's College, Hong Kong. He graduated from the University of Hong Kong in 1970 with a BSocSc

(Hons.) degree, in Social Work and Sociology, among the first batch of Social Science graduates of that University. He received his MSocSc degree in Public Administration from the same University in 1980, again among the first batch of postgraduates of this programme. He is a Member of the British Institute of Management (MBIM).

After obtaining his first degree, he joined Caritas-Hong Kong as a Social Worker. Eighteen months later, he accepted an offer to serve as Secretary of the Hong Kong Football Association Ltd., where he combined his work with his favourite hobby. For eight

years, he worked tirelessly towards the promotion of the number one spectator sport in Hong Kong. His next appointment was at Ryoden Electric Engineering Co. Ltd., where he worked for five years, first as Assistant Manager, then promoted Senior Manager of the Administration Department. Just prior to joining this University, he served for two years as Director of the Administrative Services Department of the Federation of Hong Kong Industries.

Mr. Tam was appointed Assistant Secretary of the Personnel Section of the University's Secretariat in November 1986.

Personalialia

(From 1st March to 15th April, 1987)

I. Appointments

Academic Staff

Faculty of Medicine

- Dr. David Wynne L. Davies
Visiting Lecturer in Anaesthesia
- Dr. John Kurt Orton
Visiting Lecturer in Anaesthesia
- Dr. Raymond Glyn Thomas
Visiting Fellow, Diagnostic Radiology and
Organ Imaging
- Dr. Chan Kow-tak
Honorary Clinical Lecturer in Orthopaedic and
Traumatic Surgery
- Mr. G.R. Ford
Honorary Clinical Lecturer in Surgery
- Dr. Ma Fong-ying, Gordon
Honorary Clinical Lecturer in Orthopaedic and
Traumatic Surgery

School of Education

- Mr. Fong Kan-hay
Senior Instructor

Administrative Staff

- Mrs. Lam Hui Kong-wai, Jane
Executive Officer II, Dean of Students' Office,
New Asia College
- Mr. Lam Kar-po, Perry
Executive Officer II, Dean of Students' Office,
Chung Chi College
- Ms. Janice Kay Wickeri
Managing Editor, Research Centre for Trans-
lation
- Miss Wu Yee-kam, Edith
Probationary Assistant Librarian, University
Library System
- Miss Yeung Yuk-ling, Cecilia
Executive Officer II, Academic and Examina-
tion Section, Registry

II. Retirement

- Mrs. Sylvia Shen
Deputy Librarian, University Library System

Seminars • Concerts Exhibition

* The Japanese Studies Section organized a lecture on Japanese culture on 2nd March entitled 'The role played by the overseas students during the modernization of Japan and China' by Madam Ogawa Yoshiko, Director of Madam Soong Ching Ling Foundation, Japan, and wife of Mr. Ogawa Heishiro, the first Japanese Ambassador to China after the resumption of Sino-Japanese diplomatic relations.

* The Physical Education Unit and the Hong Kong Post-secondary Colleges Athletic Association jointly organized a Sports Workshop from 6th to 8th March. The Workshop included in-depth discussions on the latest techniques in the training of track-and-field athletes, the basic requirements for an excellent basketball player and the elementary concept of racket sports. Speakers at the Workshop were coaches from China and Hong Kong.

* The Centre for Contemporary Asian Studies and the Department of Government and Public Administration jointly organized the following lectures by Research Fellows of the Institute of Economics, Chinese Academy of Social Sciences on 12th March:

- 'The contemporary Chinese society and the capitalist class' by Professor Wang Jingyu; and
- 'The question on capitalism in contemporary China' by Professor Zhang Guohui.

* The Faculty of Medicine and the Pharmaceutical Society of Hong Kong jointly organized a series of education seminars for practising pharmacists at the Prince of Wales Hospital on 12th, 19th, 26th and 31st March.

* The Department of Psychology and the Centre for Hong Kong Studies jointly organized a seminar on 'Intergroup model of second language learning', conducted by Professor Howard Giles, Professor of Psychology, University of Bristol, UK, on 16th March.

* The Department of Accounting and Finance organized the following lectures:

- 'Going public' by Mr. Donald Tsang, Manager, Listing Department, Hong Kong Stock Exchange, on 17th March.
- 'Trade and project financing in China' by Dr. Jean-Claude Gruffat, General Manager, Banque Indosuez, on 7th April.

* New Asia College organized the following lectures and seminars by its Ming Yu Visiting Scholars:

- A dinner speech on 'A historian's reflections on contemporary China' by Professor Jonathan Spence, George Burton Adams Professor of History, Yale University, USA, on 18th March (jointly organized with the Yale Club of Hong Kong, the Yale-China Association and the Office of International Studies Programmes).
- A seminar on 'The impact of Japanese financial liberalization on world and regional capital markets' by Professor Richard S. Thorn, Professor of Economics, University of Pittsburgh, USA, on 1st April (jointly organized with the Department of Economics).
- A lecture on 'The problem of syncretization of the three great traditions – on Confucianism, Buddhism and Taoism – in China' by Professor Chen Jun-min, Vice-President of Shaanxi Normal University, on 22nd April (jointly organized with the Department of Philosophy).
- A seminar on 'Statistics and statistical science' by Professor James Durbin, London School of Economics and Political Science, University of London, on 22nd April (jointly organized with the Department of Statistics).
- A lecture on 'China's policy on minority nationalities' by Professor Wang Fu-ren, Director of the Research Institute of Ethnology and Chairman of the Department of Ethnology, Central Institute for Minority Nationalities, on 29th April (jointly organized with the Department of Anthropology).

* The Institute of Chinese Studies organized a seminar on 'Significant advances made in the archaeological studies of the Zhou Yuan Area in Shaanxi', conducted by Professor Shi Xingbang, Director of the Institute of Archaeology, Shaanxi Province, China, on 23rd March.

* New Asia College organized a public lecture on 'My experience with the economic development in

Taiwan' by the S.Y. Chung Visiting Fellow of the College, Professor Sho-chieh Tsiang, on 23rd March. Professor Tsiang is President of the Chung Hua Institution for Economic Research, and Professor of Economics, National Taiwan University. This lecture was jointly organized with the Department of Economics.

* The Department of Chemistry organized the following seminars:

- 'The nature of seat-ligand fitting, quantitative study of steric effect in coordination chemistry' conducted by Professor Li Xingfu, the Institute of High Energy Physics, Beijing, China, on 24th March.
- 'Polyfluoroalkane sulfonic acids, synthesis and reactions' conducted by Professor Huang Weiyuan, Shanghai Institute of Organic Chemistry, Academia Sinica, China, on 13th April.

* The Department of Paediatrics organized a lecture on 'The use of recombinant DNA technology in inherited diseases' by Dr. K.C. Tan-Un, Tutor of the Department of Biochemistry, University of Hong Kong, on 24th March.

* The Department of Religion and the Hong Kong Christian Study Centre on Chinese Religion and Culture jointly organized a lecture on 'Is there one true religion or are there many?' by Professor Hans Küng of Tübingen University, West Germany, on 29th March at Kowloon Union Church.

* The Department of Government and Public Administration organized a lecture on 'Journalists: traitors or guardians of the public interest?' by Dr. C.F. Forsyth, Fellow and Director of Legal Studies, Robinson College, Cambridge University, on 1st April.

* The Department of Statistics organized the following seminars:

- 'Some unexpected results in conditional expectations for forecasting' conducted by Professor Howell Tong, Mathematical Institute, University of Kent, UK, on 15th April.

– 'An overview of structural equation models' conducted by Professor Peter M. Bentler, Department of Psychology, University of California, USA, on 16th April. This seminar was jointly organized with the Department of Sociology and Hong Kong Statistical Society.

* The Department of Music organized:

- A lecture-demonstration on 'The singing style of Chinese folk song' by Ms. Barbara Fei, a famous singer, on 9th March.
- A voice master class conducted by Professor Désiré Ligeti, a world renowned Hungarian-born baritone, on 24th March.
- A four-hand piano-duet concert (on one piano) performed by Professor David Gwilt, Professor of Music and Ms. Marilyn Watson, on 30th March.
- A chamber music concert performed by Professor David Gwilt, and the following students: Tsui Ying-fai, Ho Sui-wa, Leung Bo-wan, Leung Tim-sing and Cheung Yuet-siu, on 8th April.

* An exhibition of 'Selections from the Art Gallery Collection' is being mounted by the Art Gallery from 28th April to 13th May. Exhibits include more than one hundred objects from the Art Gallery collection, ranging from Chinese ceramics, bronzes, rubbings to calligraphies and paintings. Some of the recent acquisitions are also on display.



Su Renshan (1814-1949?); Bodhidharma; A leaf from the album of Figures, Landscapes and Flowers (Exhibition of Selections from the Art Gallery Collection)



Painted enamel vase; Qianlong mark and period, from a Guangdong workshop; Height: 50.5 cm; Mouth diameter: 16 cm (Tributes from Guangdong to the Qing Court)