

FIVE DRAGONS  
ACUPUNCTURE COLLEGE  
CORRESPONDENCE COURSE



LESSON 1  
OF  
31 LESSONS

The Five Dragons Acupuncture College  
accepts the Fair Use Doctrine of the Copyright Laws  
and here-by grants permission to make one copy of this  
**Acupuncture Correspondence Course in 31 Lessons**  
For Educational and Teaching Purposes.

Recommended books to simplify your research are as follows

*Essentials of Chinese Acupuncture*  
*Gray's Anatomy*  
*The Merck Manual*  
*Taber's Cyclopedic Medical Dictionary*

The people of the entire English-speaking world owe a debt of gratitude  
to the acupuncturists and medical researchers  
who have made possible this correspondence course. Thanks go to:

Dr. Nguyen Van Nghi,  
Charles H. McWilliams,  
Dale E. Brown,  
Gregory Delaney

Full acknowledgements are found in Lesson 31

Distributed as shareware by  
Bamboo Delight Company  
P.O. Box 2792,  
Saratoga, CA 95070

<http://www.bamboo-delight.com>



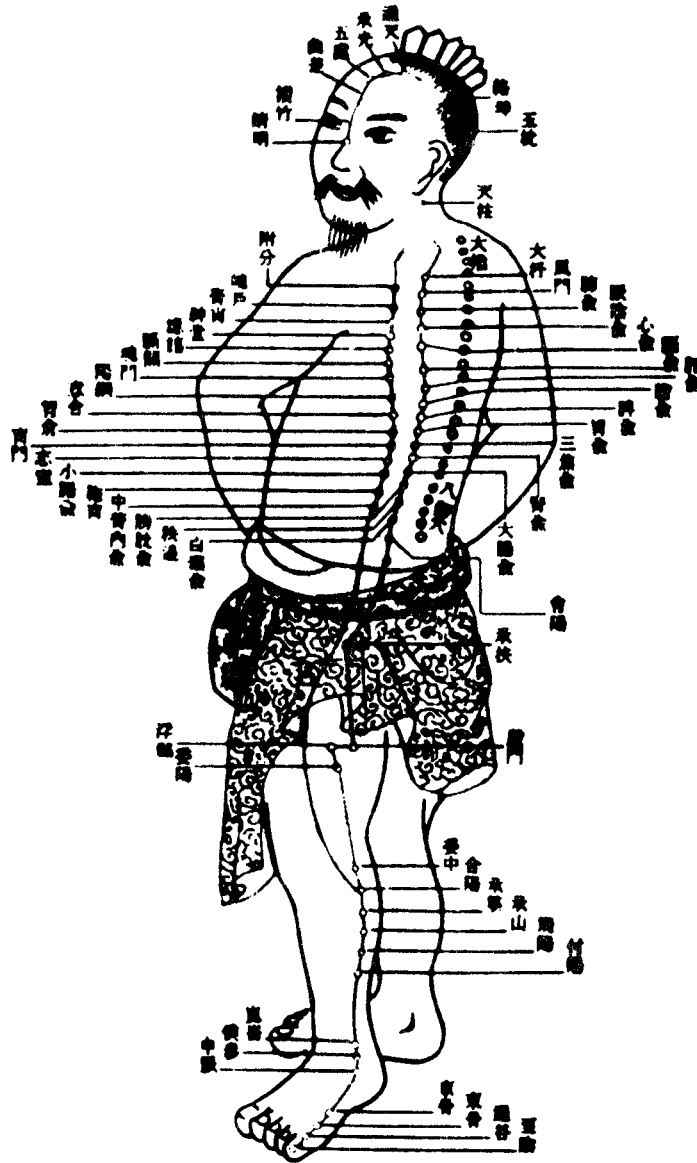
# MODERN & TRADITIONAL ACUPUNCTURE

## LESSON 1

### INTRODUCTORY OVERVIEW

# 針灸

The Chinese symbols for acupuncture above ("Chen-Chiu") mean 'needle' and 'burn'. They appear on the cover of the Institute's booklet and our letterhead, your first course binder (Volume One), as well as on Chinese acupuncturists' office doors. 'Burn', is a reference to the practice of *moxibustion* —mild cauterization (heating) of the acupuncture points with a burning herb called *moxa*. This is covered in detail in a later lesson.



This ancient chart shows some of the hundreds of acupuncture points on the human body. Whoever, for the very first time sees such a picture is perplexed by the complicated lines and points recorded thereon. Upon completion of this course, one will only be perplexed by 'how on earth' the Chinese could have possibly developed acupuncture so many thousands of years ago.

Currently in the world there are two main systems of medicine in wide spread usage: Western medicine (as we know it in North America) and Oriental medicine (of which acupuncture is such a great part).

The uninitiated reader of the word acupuncture has at once the unpleasant feeling of a needle and a needle prick. The term acupuncture derives its meaning from the Latin words *acus* meaning needle, and *pungo* or *punctura* meaning to puncture. It is a method of preventing, diagnosing, and treating disease and illness, by inserting special metal needles into the body at quite specific and designated locations---the acupuncture points. As a result of a special technique and practice, this needle-prick is often no more painful than the 'bite' of a mosquito.

The origin of acupuncture is lost in antiquity, though it is assumed to have developed from folk medicine. Thousands of years ago, as the story goes, Chinese warriors found that when they were hit with arrows in certain parts of their body, they seemed to recover from ailments in other areas of the body, or noticed a sensation of numbness some distance from the wound. Early folk-lore probably kept track of these puncture points, noticing it was not the size of the wound that was important, but rather the exact spot on the skin where the wound was made. A few hundred years later, possibly some curious medicine men must have taken the observations seriously enough to try it out, and started using chips of stone, then bone and antler 'needles' to simulate this process. Later they switched to metal needles.

Widespread use of acupuncture began about 2600 B.C. when a reigning emperor ordered that acupuncture replace all other forms of medicine, and from that time on, right up to this day, it has been employed not only to cure, but also to keep people in good health. Doctors were, in fact, paid only while their patients remained well; if a patient fell ill his doctor was required to care for him without further charge.

For the next 2,000 years, acupuncture occupied an important place in Chinese medicine. Books were written defining more than 600 effective acupuncture points on the human body and describing ailments from back pains to toothaches that could be cured by it. Special departments of acupuncture were established in early Chinese schools of medicine. By the 19th. century however, the practice fell into disrepute among modern, Western-trained Chinese doctors. Practitioners of folk medicine kept acupuncture alive, but it was forbidden in the more advanced city hospitals.

The Chinese now explain that the decline of traditional medicine was the result of "cultural aggression by the imperialists", combined with "economic aggression". According to them, the West discredited Chinese medicine in order to impose its own pharmaceutical products, and force upon them all the often rather doubtful blessings of Western civilization.

In the first half of this century, the leaders of the Kuomintang (a Chinese political party) tried to stamp out traditional Chinese medicine [herbalism, acupuncture, etc.] by formulating a law to make it illegal. It was defeated by strong popular resistance, and again acupuncture survived. Then came the 'revolution' and Chairman Mao Tse-Tung.

Chairman Mao, has worked at reviving traditional Chinese Medicine in a modern context. In 1949 there were 70,000 Western trained doctors in China and 500,000 practitioners of traditional medicine. When the Peking Research Institute for Chinese Traditional Medicine opened in 1953, Mao required Western-trained doctors to undergo months of intensive training in traditional medicine there. Many Western-trained doctors who studied at the Institute apparently are now very enthusiastic about the use of 'folk' medicine such as acupuncture and herbalism. Now, it is often stated, that ninety percent of China's illnesses are cared for (partly or wholly) through the use of acupuncture.

Perhaps the natural squeamishness of people towards having sharp objects inserted in them may have had some influence on Marco Polo and other visitors to China from the West. They chose to add paper making, gunpowder, silk weaving, tea and noodles to the culture of the West but ignored the art of acupuncture, already at the height of its development while Europe was just emerging from the Dark Ages. In any event, it went ignored by those in the West.

Acupuncture was first introduced into Western medicine in 1683 when the Dutch physician Ten Rhyne wrote a treatise on the subject. But, it wasn't until the 1930's that acupuncture was officially introduced into the Western civilization. This was done by a non-medical man, Soulé de Morant, who had been French Consul in China for many years, and who spoke and wrote fluent Chinese. He published a manual on acupuncture in French: "L'Acupuncture Chinoise". Through his influence a number of "schools of thought" developed, and the attention of the Europeans was drawn to this method.

Some of these "schools" tended toward the pure traditional acupuncture, while others tended towards a very modern approach to the subject. Perhaps it is regrettable that most European acupuncturists have accepted and applied acupuncture by using the old Chinese philosophical concepts without translating them to our present-day scientific knowledge. If they had, acupuncture might today be common in North America. Only a few investigators have made any effort to remove the picturesque and often vague Chinese terminology and replace it by scientific, objective medical concepts, notably Dr. Nguyen Van Nghi and his colleagues.

-----

Thus it was the Chinese, beginning with an accidental occurrence which has certainly been experienced by people in other parts of the world, followed up such observations and developed them into an art of healing----which then spread to Europe, and is only now catching on in North America.

Over thousands of years, acupuncture developed into a reasonably well-organized body of empirical knowledge. Ancient documents and texts were written on the subject in Chinese, but mainly this proven knowledge was transmitted by means of word of mouth, through successive generations. Many schools of thought developed around the different teachers or masters of acupuncture, each with slightly different ideas, concepts and methods, etc.

For each particular acupuncture point, there are observations that have been accumulated over thousands of years. In the past, as in our own time, there were specialists. Some Chinese devoted their lives to the study of a single point, and their work was continued by succeeding generations of men driven by the same curiosity. Undoubtedly, it was partly this over-specialization that helped freeze the acupuncture and pulse theories of the Chinese into the rigid molds in which they are found today and which make them appear so alien to us.

The real masters and teachers of acupuncture kept some of their knowledge secret from their students, passing it on only to immediate family members. Thus the student only got about 75% of the master's knowledge, and then when he taught someone else, they only got maybe 75% of his knowledge, and so on. After a few centuries of this, only a little of the "true" knowledge of acupuncture remained among most acupuncturists, except in certain family groups. When there were no offspring to teach the secret knowledge to, it died with the master.

As a result, some, if not most, of the knowledge was partly lost in the whole process. At certain periods of time, especially during the 'colonial' period, acupuncture was not taken seriously. This did not help matters either. Then, along came the influence of imported Occidental understandings and Western medicines, to transform it even more.



For these reasons, many of the established laws of acupuncture were forgotten, and were replaced by mysterious miracles and ideas, lacking the connection with the original principles and their logical and co-ordinated background. So, today, what we see of acupuncture in most modern "text books" is only a fossil of the giant dinosaur once called acupuncture. What is left of this ancient thing today, is known as "traditional" acupuncture. Traditional acupuncture is that portion of acupuncture that still manages to cling, as much as possible, to The Acupuncture of the ancient Far East, and to the Unique Principle (Yin/Yang) and the philosophy of the order of the universe.

Recently, the whole system of acupuncture has been re-adapted and researched under Chairman Mao's insistence. The study of the ancient documents and manuscripts was supplemented with the corresponding results of experimental research, and the entire system was put on a scientifically and logically (Western logics) accessible basis, which is our modern acupuncture. It is a blend of Eastern and Western medical thought.....although not yet a happy 'marriage'.

The differences between Eastern and Western approaches to medicine are strikingly profound. The most basic contrast is that the Chinese study the living rather than the dead (dissection was illegal in China), as opposed to Western medicine's heavy reliance on autopsies and dissection for diagnosis, research and teaching medical students. To the Eastern mind, a corpse is useless because its 'life energies' are gone.

Secondly, Eastern philosophy treats man's mind and body as one, relating the whole being to the universe, while our practice stems from the ancient Greek belief in the duality of spirit and matter. In other words, Western science has drawn a sharp distinction between clinical medicine and psychology which, in effect, divides the patient in two.

Also the Chinese seek to restore a body's organs, rather than augment them as we commonly do in the West. For example, when a hormone level is low, instead of injecting a patient with the deficient substance, acupuncturists try to stimulate the body so that the organ itself regains its power to produce enough of the required hormones.

Finally, although Western physicians have recently devoted more attention to preventative medicine, prevention has been the main emphasis in Chinese culture for centuries. In fact, the highest criterion for a skilled 'doctor' in ancient times was his ability to detect signs of illness long before overt symptoms appeared.

Had dissection not been forbidden, the Chinese might have developed a medical system similar to the West's. Given their meticulous ability to observe, their immense practicality, and their amazing intuition, they may even have created a far superior one. (Perhaps they have, in their acupuncture, but for the student, this remains to be seen yet.)

Instead, the Chinese performed an even harder task. They reduced the complex human body to factors that easily agreed with their philosophy, drew parallels between health, society, and nature, and invented a form of treatment, acupuncture, that did not depend on correct scientific and anatomical knowledge. Acupuncture cures illness because it relies upon a single principle: MAN ECHOES NATURE. Nature is precise, therefore man is precise. The working of nature can be systematically set down, and so can the physical workings of man. Predictable order reigns in nature and in man, and the acupuncturist depends on the body to act as nature does.

The traditional theory underlying acupuncture postulates that 'vital or life energy' (called "ch'i" and pronounced 'chee' as in cheese) circulates constantly throughout the body, much as does blood, by means of invisible pathways known as meridians. There are twelve main meridians with many secondary meridians or vessels criss-crossing the body. The

meridian pathway system can be compared to the network of airways which are shown only on an aviation map, but are not in existence in the sky.

The meridians run along major parts of the body and terminate at the tips of the fingers or toes. These must not be confused with the anatomical nerve channels or paths in the body though. Each meridian is associated with an internal organ of the body, such as the lungs, heart, kidney, etc. Thus we speak of the meridian of the lungs, the heart meridian, the kidney meridian, etc.

The meridians are the most important theoretical basis of Chinese acupuncture, just as anatomy and physiology are important to students of the orthodox Western medicine. A thorough understanding of the meridian (pathway) system, is needed for clinical diagnosis and treatment with acupuncture.

Following each of these twelve main meridians (invisible pathways) are a series of sensitive points along the skin--- the acupuncture points. It is these points, detectable by hand as well as by electronic apparatus, that are treated most commonly by the insertion of acupuncture needles. The meridians' routes can be mapped or 'traced' by joining up the perceptible acupuncture points that lie along them.

It is on the knowledge and discovery of over 1000 such strategic points on the body surface that the greater part of the art of acupuncture rests. Please remember that the many acupuncture points do not exist in isolation...they are arranged into mainly twelve lines, in accord with the meridians they follow and belong to. Thus, one can now speak of the 'points of the lung meridian', 'the points of the heart meridian', etc.

The Chinese believe that disease is the manifestation of a disturbance in the body's balance of life energy (which can be either positive or negative energy). The aim of acupuncture is to bring this energy back into balance by acting upon the flow of energy within the various meridians, using specific acupuncture points thereof.

The basis of acupuncture lies in ancient Chinese philosophy. Chinese medicine is based on "Taoism" (pronounced 'dowism') which is the belief that man is simultaneously a small version of the world about him (microcosm); and an integral part of that world or universe (cosmos). He therefore follows the same immutable course marked by night and day, the four seasons, growth and decay, birth and death, etc., as does the universe.

To live in health a man must learn to live in 'harmony' with the universe and so with himself. Taoists see the universe as a cosmic field of force in which two basic elements, Yin and Yang\*, are eternally complementary and eternally changing. Yang, the positive, corresponds to the sun, day, heat, light, dryness, male and life, etc. The negative, Yin, corresponds to the moon, night, cold, darkness, water, female and death, etc. Yin and Yang are seen as dynamically opposing, yet harmonizing energies in the universe.

As these two elements comprise the balance of energy in the universe, so they comprise the balance of man's vital energy or his ch'i. The ch'i flows through the body along the meridians, which originate in one of the principal internal organs and then surface to run along the outside of the body in lines, sometimes as close as a millimeter or two beneath the skin. The meridians are able to telegraph signs of internal illness in any major organ to the outside, and are also able to transmit stimuli back to the internal organs from the outside.

Disease develops because there is either too much Yang (over stimulation) present or too much Yin (sedation) so that the two forces are not in homeostasis (balance). In more modern language we have too much "positive" or too much "negative". The Chinese concept of the Yin and Yang energies may to some extent be compared with our theories of the functioning of the sympathetic (Yang) and parasympathetic (Yin) nervous systems.

\*Yin and Yang are covered in detail in subsequent lessons.

The malfunctioning meridian (out of balance) is discovered by taking the pulse by the old Chinese method. According to Chinese traditional medicine there are twelve pulses\*, not just one. The pulses are taken on the wrist and in a manner similar to which Western physicians are familiar with. However, instead of there being just one place to take it at, the Chinese contend there are more such places. As an example of diagnosis, if the pulse beats more than seventy times a minute, the affliction might be regarded as Yang in character; and if less than seventy times a minute, it may be Yin.

The superficial pulses, those closer to the surface, are connected to the Yang organs, while the deep pulses are said to connect with the Yin organs. By intricate examination of these pulses the Chinese acupuncturist claims to be able to deduce which meridian(s) are out of balance, and thus which organ is afflicted.

The acupuncturist determines his patient's Yin or Yang condition and if there is an imbalance, treats him for what he foresees will go wrong if not corrected. He aims at prevention wherever possible. Should illness actually exist or arise, he treats the person, not the illness. Remember, a disorder is thought to be due to a malfunction or imbalance of the ch'i as it circulates throughout the body along the twelve main meridians or pathways, so correction of the out of balance pathway(s) should cure the illness.

By inserting fine stainless-steel needles into appropriate acupuncture points, the acupuncturist affects the energy flow---either stimulating it or sedating it. He thus restores equilibrium (homeostasis) to the energy system, and the patient is returned to health. Instead of needles, electrical stimulation, massage, ointments, heat (moxibustion), silver ion pellets, and even laser-beams (Russians) can, and are, being used as other possibilities.

\*The twelve pulses and their utilization are covered in a separate lesson.

# 手太陽小腸經圖

額髻口ヲケマクトモテ見レハ  
 指シルニ處目ノ外此骨ノ通リ  
 高骨ノ上三解目有ナリ聽宮  
 耳ノ前小耳ト云者此處乳  
 有頰骨ノ横ノ後ノ骨間也

前谷榎奉篋三ノ  
 横文腕骨ノ腕側ノ  
 腕骨ノ先陽谷則  
 腕骨ノ後隔一骨付

一坐是ハ如圖ニテ見レハ  
 一坐是ハ如圖ニテ見レハ  
 一坐是ハ如圖ニテ見レハ

支正陽谷小海  
 真中如圖

心經ノ  
 少海隔一骨如圖ニ  
 于見レハ肘ノ尖骨ノ

天窓天容結喉後三寸斗トアリ前  
 大腸經ニ天窓杖突結喉後三寸ニ當リ  
 此付マウ頰ノ大節ノ前天容曲頰ノ  
 後ト云者ヲ筋考可一取



Drawing from a secret eighteenth century acupuncture book.

Obscure as all this may sound and initially appear, if the reader considers it carefully in the light of the results actually obtained through its application, he will find the concepts, the philosophy and the procedures valid in the sense that they actually work. The principles can be verified through application, and this is really the only important thing.

The Chinese explanation of all this is a pragmatic one, however exotic it may seem to those unfamiliar with Oriental thought. The trouble comes when Westerners try to seek a hypothesis that is not only scientifically demonstrable, but is also intellectually satisfying within their own philosophical, physiological and scientific framework. This then is acupuncture's challenge to the West.....it works, but WHY and HOW?

The belief that illness deep in the body can be treated externally sounds impossible to many. In acupuncture the belief is based on the concept that diseased organs can be affected from a certain point on the skin, through the conveyance of the invisible meridians. As some of you will know, manipulative therapy is being used to produce results close to or far away from certain points of the skin, i.e. reflexology, chiropractic. Acupuncture points have been used to develop massage techniques already by different "schools" of massage throughout the world, although often they are not aware that they are using acupuncture points.

---

One must remember that acupuncture was not the Chinese physician's only means of controlling antagonistic forces that caused diseases and illnesses. He also used medicines made from plants, minerals and animal substances. These were often prescribed in addition to acupuncture treatment. Other forms of therapy generally administered by specialists in their field were massages, dieting, therapeutic baths, and a form of gymnastics involving complex breathing exercises.

Westerners often are amazed by the fact that, in acupuncture, the skin is frequently punctured at points distant from the diseased organ or the site of pain. In heart disease, for example, the needle is often applied to the little finger. This amazement dwindles, however, in the case of the common heart problem angina pectoris. In angina pectoris, the pain moves across the chest, down the arm, and terminates in the little finger---following the path of the traditional heart meridian very closely.

But, do these meridians actually exist? Modern biology provides a rational theory for the existence of these pathways. Simply stated, the stimulus of one area of the body with needles, etc., has an effect on another area of the body, because of basic embryonic relationships between the various tissues and organs.

In its very early development, the human embryo is composed of a few simply constructed cells which will divide many times; the genetic code within them dictating what parts of the body they will give rise to. The early cells have three basic layers --- ectoderm, mesoderm and entoderm. Parts of the ectoderm, or surface layer, will specialize into skin, hair, nails, etc., and the entire nervous system. The entoderm, or innermost layer, will develop into linings of internal organs such as the stomach and intestines. The middle layer, or mesoderm, will become parts of the body between the other two, such as bones, muscles, blood vessels, etc.

Throughout the development of the human embryo, these different parts of the original cells are intimately connected. When the completely formed human being emerges from its mother's womb, the connections are gone from view. The meridians of acupuncture may represent the connections that were present between the various portions of the cells before they became parts of the human being. Another way of putting it would be that the acupuncturist treats the internal organs by pricking points on the skin that were once vitally associated with them.



This possibly explains the meridians. The actual acupuncture points can be felt with the finger, and sometimes seen with the eye (once you know exactly where to look for them) or pinpointed with an electronic instrument. Now, what about this 'energy' the Chinese are speaking of?

It has been scientifically demonstrated in recent years that humans, as well as other living things, actually do show an aura consisting of undefined streams of energy which are revealed by a complicated process of high-frequency electrical photography. The process, called Kirlian Photography, has shown emission of energy from the specific areas traditionally called acupuncture points. It is believed that in this case they are photographing energy fields, and acupuncture theory postulates an energy system that exists within and extends beyond the body. This then, may be the answer.

Perhaps the theory of acupuncture, whatever it is, is no more complicated than some electrical force or electromagnetic theory, or the theory of the atoms. It took scientists decades to develop rationalizations for immunology (vaccinations) and psychoanalysis. Even today, no one has quite explained the complexities of the common cold; nor has how aspirin works been precisely defined, although its use is considered safe and without the need for a prescription.

Many researchers have commented that there may be a firm relationship between HOW and WHY acupuncture works and some of the phenomena observed in the field of parapsychology--- which recently is being accorded the status of a science by itself. They feel that acupuncture is more closely related to the 'psychic' form of healing, rather than the physical forms of healing (conventional Western medicine), and as such may belong more to the realm of the 'spiritual' healer rather than the medical doctor.

This Institute has been one of the first to investigate acupuncture from the standpoint of it possibly being more of a psychic mode of healing, than a physical modality. We are

convinced that there is a relationship between those happenings which we cannot understand or explain (at this time)---the 'unusual' parapsychological events---and the healing of the human body by the strange 'unconventional' methods (possibly including acupuncture).

Current psychic researchers see acupuncture as a sort of "missing link" between the physical plane and the psychic or paranormal plane, in that it is something that seems to "put it all together---something one can put their finger on". Acupuncture relates or ties together many of the concepts of metaphysics, parapsychology, 'life energy theories' and so on, to the physical world or plane.

Western physicians and scientists can no longer avoid looking at the whole question of body energies as utilized by the Chinese for thousands of years in their healing system and the 'unconventional' healing methods that Western man has whispered about for centuries. The medicine of the Occident and the Orient have now met, and this Institute believes that the 'medicine' of the world will not be the same when the reverberations finally cease.

Although Western medical science to date has done little formal study of acupuncture, various preliminary theories have been offered on its powers to relieve pain. One idea is that of auto-suggestion or some form of self-hypnosis, but the successful use of acupuncture in animals and in infants rules out the psychological factor as a total explanation. Other pain theories, involving the blockage or "jamming" of nerve impulses in the brain or spinal cord, are admittedly still based on conjecture. Regarding the curative powers of acupuncture, a European doctor has speculated that stimulation of the endocrine glands, via the nervous system, may raise antibody levels sufficiently to strengthen the body's resistance to disease, but this notion too is really only guesswork for the moment.

Western acupuncturists and the Chinese themselves cannot furnish a physiological explanation for the practice yet. Chinese researchers say it operates through the nervous system, and that's about all they know to date. Its current practice, like its origin, is linked to concepts of energy flow, and balance, etc. These concepts are often baffling to those in the West who are schooled in traditional Judeo-Christian thought. Since all this is still tied to Eastern philosophy, the theory and practice of acupuncture invite the skepticism of the American medical establishment.

Certainly, acupuncturists have nothing to fear from scientific research into acupuncture's possibilities. Their capabilities and results are incontestable. If these were precisely defined and demarcated, the science of acupuncture could make its entrance into official medicine in North America, more rapidly.

Acupuncture and acupuncture anesthesia (should properly be called 'analgesia') presents a fascinating challenge to the "objectivity" of Western science and its application to mankind. It challenges everything---cultural, scientific, medical, economic and political biases. The question the American public is asking, or should be asking, is: Will we have to wait another four or more millenniums before acupuncture finds wholehearted acceptance in the West, and its challenges are resolved?

For the first time in two decades, American doctors, reporters and scientists have penetrated mainland China. For 22 years, we have been in total isolation of Chinese medicine. Suddenly, as these "new" reports of acupuncture are being revealed, one wonders who has been isolated from whom. That alone warrants study, for we have much to catch up on, and much to learn from the Chinese. You, already know this though!

There have been many attempts to place the principles of Chinese medicine within the framework of modern science.

Some of its effects have been verified scientifically, and they are consistent with the ancient Chinese theories. However, no explanation of acupuncture has yet satisfied scientists. Its meridians and vital energy remain a mystery---- closely related to the mystery of life itself and the forces that 'created' it.

This supports the view that since we have no complete scientific explanation of how acupuncture works, it cannot be practiced honestly without knowing the way of thinking that led to its development, and the Chinese principles upon which it is based. Outside of its philosophy, and concepts, acupuncture loses all meaning, until the questions it raises are answered--HOW and WHY.

This way of thinking totally different from ours, has one immediate consequence: The lack of explanation in some parts of this course. The student should bear in mind that while the Occidental has a need to explain what he discovers, the Chinese simply discovers and classifies. Trying to explain every aspect of Chinese medicine would lead us into too many unverifiable hypotheses.

To study acupuncture is therefore to gain a better understanding of Chinese thought---to begin to penetrate mental structures that, at first, seem not only foreign to us, but even antagonistic.

The vocabulary of acupuncture, with its picturesque allusions to dragons and elements, energies and Yin/Yang, is the outcome of the Chinese mode of thought, the result of an indigenous cultural and philosophical idiom, self-developed and isolated from the rest of the world by high mountains and deep oceans. Here is a world of thought unto itself. To penetrate this world, tolerance and intellectual humility are needed.

In taking this course a new world is opening up before you, a world abounding in symbolism and mystic images, but rich also in genuine knowledge of man's living and dying and re-birth.