The history of acupuncture and moxibustion in China is a very ancient one. During the Neolithic Age, stone needles were used in the treatment of disease. Since then, through centuries of clinical practice, our physicians have repeatedly confirmed the value of this kind of therapy and have developed ever more advanced principles, methods and techniques.

In common with other branches of science, acupuncture underwent its share of vicissitudes in the recent past. Only after the establishment of New China did it receive its due share of importance, and only then did the techniques of acupuncture anaesthesia gain ground. Particularly since 1958, for the first time in its history, acupuncture is being subjected to systematic and in-depth study throughout the country, using modern scientific means and with the full backing of the party and the government. Now it has embarked on a new road of development characterised by the integration of clinical research in acupuncture with the basic sciences, and of traditional Chinese medicine with Western medicine.

As with any scientific investigation, research in acupuncture can be expected to progress from the simple and superficial level to the most complex and fundamental concepts. During the past few years we have trained a great many research workers, established new fields of research and introduced new techniques using such tools as isotopes and micro-electrodes, for instance. Thanks to a
In China today, the ancient skills of acupuncture are practised in combination with modern medical methods. Here the needles are being electrically stimulated.

(Photo WHO/D. Henrioud)

Great many scientific experiments, we now know much more about the principles governing the clinical application of acupuncture anaesthesia and how it operates. This has in effect given fresh impetus to the ancient art of acupuncture and has opened up new and exciting avenues in the realm of medicine. At the same time it has stimulated research in neurophysiology, neurochemistry and neuropharmacology.

The late Chairman Mao pointed out many years ago that Chinese medicine is a great treasure-house that should be explored, investigated and raised to a high level. Subsequently, Chinese scientists and medical workers have been working hard to analyse the ancient recipes and prescriptions which have been passed down from generation to generation within families, to evaluate scientifically the traditional Chinese medical systems, to combine those systems and modern medical methods in clinical practice, and to compare and integrate traditional and modern theories and ideas. The field of acupuncture and acupuncture anaesthesia lends itself particularly to this endeavour.

We now recognize that, although acupuncture originated in China and is part of our country's rich medical and pharmacological heritage, this therapy has become the common property of the human race and is a subject of intense interest to medical workers the world over. The further development and progress of this most ancient—and yet most modern—branch of medicine will depend upon the mobilization of the efforts of researchers all round the globe, and we look forward to further strengthening the ties of scientific cooperation.

It is worth recalling that, since ancient times, acupuncture has played an important role in cultural exchanges between the peoples of China and those of other countries. Today, in the new period of socialist construction, when the modernization of science and technology in our country is advancing in leaps and bounds, the time is ripe for us to foster and consolidate with renewed zest the cultural exchanges begun by our forefathers.

Tremendous changes are taking place in modern science and technology, and the speed of progress is breathtaking. All the more reason, then, for us to take a global view of the situation, and to learn new and more advanced techniques from different countries. It is our earnest hope that we may thus learn from the strong points of our medical sciences.
An exact science

It is not claimed that the needles achieve the total abolition of suffering. But, according to one Chinese doctor: "It's not the pain that is important but the patient's reaction to pain"

by John Bland

A girl walks from her hospital bed after 30 days of acupuncture treatment, where a year of "Western" medicine had not improved her bedridden condition. A mere finger pressure on the cheek suffices for a farmworker to have a front tooth pulled without pain. A man lies wide awake on the operating table, with no other anaesthetic than a single needle in the forearm, while surgeons open up his chest and remove a lung tumour.

This was acupuncture in action, Chinese-style, as it was shown earlier this year to a group of about 15 visitors from different countries who attended a WHO seminar on acupuncture in Beijing (Peking) and other regions of China. Some of the participants were physicians, others were anaesthetists; most of them had some experience of the practice of acupuncture. For all of us, to see this ancient science actually being put into effect in China was a revelation.

In a ward with three other women at the Jiangsu Provincial Hospital of Traditional Medicine in Nanjing (Nanking) we met Hou Qing-Yi, aged 26, who had worked in the city's big radio factory until mid-1977, when an attack of the crippling disease myelitis left her bedridden. For more than a year she was given various pills containing chemical compounds which were the products of "Western" medicine; (the Chinese use this term to denote treatments that are not those of traditional practice). She still could not walk, although a little feeling had come back to one leg.

On the last day of February this year, Qing-Yi was brought in to the hospital and started a course of acupuncture, with needles planted in her back, thigh and legs once a day. After ten daily treatments she "rested" for three days, then underwent ten more. By late March she could walk again, aided by two nurses. At the end of the third ten-day spell she could walk unsupported—though balancing was difficult. In June, I watched her walk, pigtails swinging, from one end of the ward to the other. Smiling and free from pain, she assured me there was no doubt in her mind that acupuncture had done her more good than the previous type of treatment. "I hope to leave the hospital in another month", she said.

In the dental unit of Shun Yi County Hospital, some 50 kilometres north-east of Beijing, two adjacent chairs were occupied by local farmworkers. Both needed a tooth extracted from the upper jaw—and both looked understandably apprehensive. In neither case did they receive any sort of injection. The dentist planted a needle in the right cheek of one man and rotated it between his fingers for perhaps 20 seconds. "Open wide" he ordered. The patient obliged; in a swift movement, the dentist drew the tooth. He stepped to the next chair, and this time he used no needle. He simply applied the point of his forefinger to the patient's right cheek and pressed hard for a short time. "Open wide" Out came the tooth.

Through an interpreter, I spoke to both men. One of them admitted to feeling "a slight twinge at first"; now there was no pain at all. The second had felt nothing. Both of them grinned and relaxed. Pain is essentially subjective; I could not "measure" what each man had felt as the tooth was drawn. But I can record that neither of them cried out, nor did they go pale or break out into a sweat.

A more fundamental operation was to take place at the Institute of Tuberculosis and Lung Diseases, not far from the capital. Chou Zhong-ping, aged 44, a cadre worker, had a suspected lung tumour. He was a smoker, though not a heavy one. Afraid of developing cancer, he had asked for an operation to remove the growth, and had specified acupuncture anaesthesia. Half an hour earlier, he had received an intramuscular injection of 50 milligrams of Valium and pethidine—the normal pre-medication for such an operation. Now he lay with his chest exposed on the operating table. A briskly efficient woman acupuncturist felt with finger and thumb for the right spot, then drove a single long needle deep into his right forearm and began to manipulate it up and down, up and down. The time was 9.20 a.m. She was to keep this up for the next one and three-quarter hours.

The patient was, to say the least, anxious but he assured us he felt fine. Twenty minutes after the needle went in, the team of three surgeons and a nurse made the first incision in his chest, cut the ribs and manoeuvred their way towards the tumour. Chou Zhong-ping lay still, his eyes open, still perhaps a little tense but—he assured us—feeling no pain.

(Pigtail swinging, 26-year-old Hou Qing-Yi shows how acupuncture helped her to walk — where "Western" treatment failed. (Photo WHO/D. Henrioud)
Left: Twenty minutes before Chou Zhong-ping’s operation for a lung tumour, the acupuncturist inserts a long needle in his forearm. This is the only anaesthetic he will have.

Below: A nurse swabs the patient’s chest with iodine where the first incision will be made, while the needle is manipulated incessantly up and down.

Above: The needle is still in motion; the surgeons have opened up the chest and are probing for the tumour. “No, I can feel nothing. I am fine”, says Chou Zhong-ping. (Photos WHO/D. Henrioud)
"No, I can feel nothing. I am fine", he whispered. A saline drip fed into his foot, to guard against possible shock, and wires led from his body to another room where his cavanic skin reflex, respiration and pulse were being continually recorded. All were normal, without sudden peaks, and remained so throughout the operation.

Chinese surgeons work quickly and well. Colleagues from other countries assured me such a lung re-section might take some three hours in other countries. Dr Tsai Lee-Fou, deputy director of the hospital, told me that one-third of the operations carried out there were done with only acupuncture as anaesthesia. Among the advantages are that patients unfit for general anaesthesia because of poor liver or kidney function can tolerate it very well, post-operative pain is milder, and recovery is usually rapid, with fewer subsequent complications. "What's more", he added, "it's safe, very simple and very economical." Nursing care after the operation is also simpler and there is no post-operative shock.

The tumour was removed; the team began closing up the cavity. Chou Zhong-ping told me; "I feel very good." The gaping wound had been hidden from him by a low "screen" but he had certainly been able to hear what was going on in his chest. Now the surgeons were stitching up the wound. And at 11.05 the acupuncturist withdrew the needle from the patient's forearm; there was no blood, only a tiny mark.

Mr Chou was carefully bandaged and, in order to be transferred to a wheeled trolley, was lifted into a sitting position. This was the only moment when he appeared to be in some pain. Throughout the operation his eyes had followed the photographers whenever possible, and he had been fully aware that the operation was being relayed on the hospital's closed-circuit television. As he was wheeled out of the theatre he raised his arm and waved jauntily, three times, at his little audience.

How does it work?

For me, these episodes were proof enough that acupuncture works, both as treatment and as analgesic. But how does it work? The WHO seminar had been preceded by a huge national symposium on acupuncture, moxibustion and acupuncture anaesthesia. Moxibustion—the burning of moxa leaves either on or near the skin as treatment for a variety of ills—played only a minor role in the deliberations of the 500 delegates, who came mostly from all parts of China but also from every part of the globe. But the papers that were read before this highly experienced audience indicated that, while the Chinese have no doubt whatsoever of the effectiveness of acupuncture, there are a wide variety of theories about the physiological processes involved.

By the 14th century, Chinese doctors had identified by name 657 "points" on the human body which were regarded as the entrances and exits for vital energy. Most of these points lay along 14 "meridians" or "channels" which formed a network regulating the function of the whole body. Stimulating a point or a series of points with needles could cure the ailments of a specific organ. The channels were given such names as "the lung channel of Hand-Taiyan", "the liver channel of Foot-Jueyun". It was an indication of the wide range of views represented at Beijing in June that one paper, while agreeing completely with the effectiveness of acupuncture, argued that neither the points nor the meridians in fact exist. Other specialists assert that the electrical resistance of the skin alters appreciably over each point, and there are elaborate devices on the market which employ this principle to locate the points.

In the West, it is often held that acupuncture is psychosomatic, or even that the effect is "all in the mind". No doubt it was of positive value to Chou Zhong-ping on the operating table to know that 2,000 years of experience in the use of the little silvery needles lay behind the acupuncturist's skill. But if the anaesthetic function of acupuncture lay only "in the mind", how can one explain that the needles—whether manipulated by hand or with their points stimulated electrically—seem to work equally well in veterinary use on animals?

The nature of pain

Much of the debate revolving around the subject concerned the nature of pain. Some speakers at the symposium felt strongly that the correct term should be acupuncture analgesia (taking away pain) rather than anaesthesia (taking away sensation). According to one Chinese doctor, "It's not the pain that is important but the patient's reaction to pain." More than one delegate acknowledged that the needles did not achieve the total abolition of pain. Others emphasized that emotionally quiet patients have a better tolerance towards acupuncture anaesthesia but concluded that its success "is not due to the effects of suggestion".

It has been suggested by Western physicians that the needles somehow "jam" the nerve channels and inhibit their message of pain on its way to the brain. The Chinese themselves are keenly interested in studying that part of the brain called the caudate nucleus. In Nanjing and Shanghai, we saw intensive experiments being undertaken on cats and rabbits as well as on human subjects to determine whether electrically stimulated acupuncture of the caudate nucleus truly raises the subject's pain threshold and thus makes pain more tolerable.

Similar studies, involving highly sophisticated electronic machines, electron microscopy and micro-surgery, are delving into the mystery of endorphins—peptide hormones formed naturally within the body which seem to have the capacity to relieve pain. Endorphins have a comparable effect to opium and its derivatives morphine and heroin, and have even been described as "the brain's natural opium". Efforts are being made to synthesize these substances.

Endorphins are also being considered as contributors to what doctors call the "placebo effect"—the phenomenon observed when a group of patients are given tablets or injections containing no active drug whatsoever and yet respond in large numbers by recording relief from pain or other unpleasant sensations. It is thought that such placebos may act by stimulating the release of endorphins in the brain—provided, of course, that the patient believes the pill or injection will have a positive result.

The members of the WHO seminar also
saw a variety of machines for stimulating the needles electrically, the multiple stimulation of needles, and even experiments with lasers to see whether they might be more acceptable than acupuncture needles for treating the very young and the very old. They also cut out the need to puncture skin and tissue, with the attendant risks.

But even more impressive than these "high technology" studies was the degree to which acupuncture is a completely accepted part of medical practice in China. From the best-equipped city hospital to the simplest "brigade medical centre", every health unit routinely employs the needles in the service of medicine.

At a sanatorium in Hangchow for the personnel of the Shanghai Railway, the acupuncture ward was sandwiched between the unit for microwave and electrostatic treatment and the hydrotherapy (water treatment) room. In the Shun Yi Hospital again, a 70-year-old man was already considered cured of the blood condition that had troubled him; however he was afraid of a relapse and expressly asked to continue receiving acupuncture. The physician planted a total of nine needles from his left elbow to his left heel—while the elderly patient complained loudly at each insertion. Nothing in the Chinese texts says that the needles should be planted painlessly! In other clinics we saw this procedure used to ease the pains of a mother whose first baby had just been born, to encourage the expulsion of gallstones, to treat an eye-disorder in a young girl. And at a village an hour's drive from Shanghai, in the tiny room which represented the cooperative medical centre of the Tung Fa Production Brigade, a barefoot doctor was applying four needles to ease the backache of an old farmworker.

During three weeks of visits to a wide range of hospitals and health units, I saw scores of needles in use—but not a single needle being sterilized. In the hospitals, the physicians insisted that they were indeed sterilized, while in the rural areas I was assured that cases of hepatitis or other infections resulting from acupuncture were "unheard of".

A considerable part of the debate at the WHO seminar, and to a lesser degree at the national symposium, concerned the possibility of transferring the practice of acupuncture to other countries. Many countries already have experience of it,
although the quality of the practitioners varies widely. Let there be no misunderstanding: the Chinese regard acupuncture as an exact science, and if they are shown any wild misuse of the needles they are liable to greet it with laughter.

Referring to the position outside China, one delegate from South-East Asia declared: "A situation is developing in which this practice is getting into the hands of more and more unqualified people who do not possess any kind of medical knowledge. To practise acupuncture, its theories have to be understood. To acquire a comprehensive understanding of these theories and how they should be applied, a prospective acupuncturist should be one with a systematic training in medicine, whether it be Western or traditional. If anyone without such qualifications dares to take up the profession, then it is but inevitable that he or she will do more harm than otherwise both to the science and to the patient who seeks treatment."

Another delegate, from Western Europe, was less intransigent. He posed the question "How does acupuncture fit into Western medicine?" and answered himself: "However successful acupuncture may be, the Western world does not need it. The future of acupuncture does not lie with the West or the East but with the Third World, where one child in three dies from poverty or disease before the age of five—five million each year. The Third World cannot afford Western medicine."

Underlining that traditional medicine is cheap to administer and effective to use, he went on: "All countries in the Third World need a five-year traditional doctor course and an 18-month 'barefoot doctor' course. The latter would learn acupuncture techniques, herbal medicine and other treatments. They would recognize danger signs in illness, work in the rural districts and be the people's first line of defence in illness. Any case which is beyond them would be referred to the urban hospitals. In this way it is practicable to introduce a comprehensive health service serving all the world by the year 2000."

Arguments such as these will continue to be heard for many decades to come. But the starting-point for debate is surely no longer "Does acupuncture work?" but "How can acupuncture best be applied to serve humanity?"
A new lease of life

The success of acupuncture anaesthesia and the cure of bacillary dysentery by acupuncture have shattered the belief that merely a psychological illusion is involved

by Huan Xian-Ming

We in China regard acupuncture as a vital and integral part of our country's traditional medicine. As is well known, it had its origin during the Stone Age and, with the accumulation of experience obtained through continuous practice, has gradually taken shape in a unique series of theories.

Its spread to Asian and European countries took place very early in history, constituting an important part in the interchange of medical knowledge between our country and abroad. But, owing to discrimination against, and suppression of, traditional medicine in old China, the science of acupuncture was subjected to devastating attacks.

After liberation, thanks to Chairman Mao and the Chinese Communist Party, who attached great importance to the inheritance and development of traditional medicine, this branch of study took on a new lease of life, like a withered tree that regains its vitality with the advent of spring. In 1959, with a view to developing this science, the Ministry of Health convened a meeting in Shanghai for an academic discussion of acupuncture and traditional Chinese medicine, which was at last smashed, and in recent years, under the leadership of the Chinese Communist Party headed by Chairman Hua Kuo-feng, order was restored out of chaos.

In a climate of political stability, scientific research work has again been called upon to play a basic part in our socialist construction and the four modernizations; the field of academic research is once more redolent with the balmy air of spring, budding with life and energy. Now at last we find full expression in the policy set forth by Chairman Mao during his lifetime of “Letting a hundred flowers bloom, and a hundred schools of thought contend”.

From the 1950s to the 1970s a great effort has been put into developing traditional medicine. There have been twists and turns in the road, but the results have been good. National policy requires the active promotion of Chinese medicine enterprises and the integration of Chinese and Western medicine.

This policy called first of all for the establishment of combined centres for medical treatment, teaching and research. Before 1949, most doctors of traditional Chinese medicine could do no more than practise privately. Since 1952, several centres have been started in various parts of the country. That year in Shanghai a Chinese medicine clinic was established, and from then on we saw the development of hospitals, clinics and institutes. From 1956, each hospital at municipal and district level had its own department of traditional Chinese medicine, and some of the larger hospitals acquired special departments to study acupuncture anaesthesia or other specific fields.

The need also arose to train an army of health workers at all levels, skilled in the combined forms of medicine. During the initial stage of liberation, there were in Shanghai 3,361 doctors of Chinese medicine. Today we have raised this number to 6,008, recruiting new personnel from the Chinese Medicine Institute on the one hand and taking on professional “apprentices” on the other. Starting in 1956, we organized special two-year and six-month courses, the guiding principle being one of voluntary participation. Quite a number of doctors trained in Western medicine and with some clinical experience were thus encouraged to study Chinese medicine.

Since traditional and modern medicine differ from each other in methods of diagnosis as well as in practice, two quite different sets of theories have arisen, each having its own strong points as well as its own weaknesses. It was impossible in the past to apply to traditional medicine the experimental methods that were at the disposal of modern science, and therefore much of the valuable experience obtained through practice could not be substantiated by objective data, the more so since traditional medicine has been restrained by conservative ideas of long standing. As a result, the study of theories could go no further than the stage of summing-up and comparing experiences.

In order to coordinate the two different systems and turn them into a new, unified medical science and pharmacology embodying the cream of both medical sciences, it is imperative for us to follow consistently the policy of integration both in practice and in research, and to assimilate completely the new theories and technology of modern science.

Already many of the old concepts have been revised. For instance, the success of acupuncture anaesthesia and the cure by acupuncture of acute bacillary dysentery have shattered the belief that the effect of these procedures is nothing more than a psychological illusion. The cures effected by acupuncture and traditional Chinese medicine in cases of acute abdominal diseases have discredited the idea that nothing short of a surgical operation is efficacious. In these and in other fields, some initial progress has been made and, as one who has devoted over 40 years to the clinical practice of acupuncture, I am firmly convinced that the way has been paved for further striking advances in our new, integrated medical science.
The talk of the town

"Western" or "Chinese"—why do we discuss medicine in such isolated and culturally relative ways, while disciplines like chemistry, mathematics and physics know no such boundaries?

by Frederick F. Kao

Acupuncture therapy was “reintroduced” to the Western world relatively recently, and this reacquaintance of West with East marks one of the most interesting chapters in world medical history. Although acupuncture had been known to the West for centuries, its reintroduction as a clinical method made an astonishing impact on Western people and established medicine; indeed it became the “talk of the town” after news reports some eight years ago about the use of acupuncture in China as a means of producing anaesthesia for major surgery. This flurry of publicity in the West evoked a wide spectrum of reaction, from disbelief and condemnation as hypnosis or a hoax, to the creation of new hopes for the treatment of many diseases.

The spread of Chinese medicine to neighbouring countries came early in world history. The Silk Road, in existence at least since 1000 B.C. for the exchange of silk with countries as far away as Europe, may also have been used to transmit medical knowledge from China to other countries. In 219 B.C., the Chin emperor sent an emissary to Japan to obtain the elixir of immortality, an event that marked the first recorded migration of Chinese to Japan, and in 541 A.D., China sent physicians to Korea. The first written acupuncture classics were brought to Japan 11 years later. There was a large scale diffusion of Chinese medicine to South Pacific territories and to the Arab world as well; Avicenna (980-1037) adopted some Chinese concepts of the energetic channels or meridians in his medical writings.

Specific mention of acupuncture in the Western world occurred as early as the 16th century, and in the following century it was described by two surgeons employed by the Dutch East India Company. According to some historians, Félix Vicq d’Azyr (1748-1794) was the first French author to mention acupuncture as a form of therapy. In the 19th century, it was quite popular in France and other European countries for treating a variety of diseases; the French Académie des Sciences even appointed a commission to study it.

In 1829, in Sweden, Gustaf Landgren wrote a thesis on acupuncture as an academic presentation for the degree of Doctor of Medicine at Uppsala University. This was subsequently translated into English and was published last year in the American Journal of Chinese Medicine. Acupuncture on animals and on man (through self-experimentation) was performed in Europe even before the time of the French physiologist Claude Bernard (1813-1878), who was considered the father of experimental medicine. It was also used to treat suppressed menstruation—a fact that may have implications for future studies in fertility and population control.

Despite Europe’s awareness of acupuncture over the past three centuries, recorded interest in it appeared to subside in the late 19th century. The oscillation phenomenon observed in any medico-scientific development makes historians dizzy. Even in China, Ching Dynasty officials in 1822 ordered medical colleges to suspend the teaching of courses in acupuncture. Shortly after this, the introduction of Western medicine to China began. In 1914, the Northern Military authorities of China actually expressed a desire to abolish Chinese medicine completely. This was in a period of Chinese history when old and new, indigenous and modern, were in conflict. Again in 1929, the ruling Kuomintang Party ordered the abolition of Chinese medicine because it was considered unscientific; this order was subsequently rescinded when medical workers demonstrated against the decision.

The revival of acupuncture in modern China after 1949 was preceded by an important event in Europe. After a long period of silence, great interest in acupuncture was revived in France by Georges Soulié de Morant, who was in China in the early years of this century. As a French diplomat, Morant went to investigate an epidemic of cholera in Southern China, and was fascinated to observe that some patients recovered after receiving acupuncture treatment. On his return to France, he translated and studied much of the vast corpus of Chinese medical literature. He was not a physician, but was instrumental in the reintroduction of acupuncture to France. Later he became caught up in medical politics and finally suffered from persecution by his professional colleagues—a fact which has a bearing on the present-day question of whether acupuncture should be practised only by physicians and their peers, or by other “non-medical” health workers.

As a result of Morant’s devotion and effort, the epoch-making book L’Acupuncture chinoise was published in 1939. It created a new era in French medicine
which led to the widespread practice of acupuncture in major hospitals and clinics, formal teaching and research at medical schools, and a new breed of Sino-French medical doctors and scholars of great distinction who developed and introduced new modalities of acupuncture.

This rebirth of interest in France had a sweeping influence elsewhere in Europe—particularly in Germany, Austria and Scandinavia. Many textbooks and voluminous publications on acupuncture appeared in different languages, including the 18 volumes of the Deutsche Zeitschrift für Akupunktur and the 1,200-page Nouveau Traité d'Acupuncture by E.H. Niboyet.

Reintroduction in America

Acupuncture has been in practice in the Chinese communities of America for over a century. But the dust stirred by its recent reintroduction to the United States was at first so thick that even historians and academicians could make little sense of it. Western medicine was to some degree put to a genuine test through its reacquaintance with the medical theories and practices of other cultures.

It was a news report by James Reston on 25 July 1971 which sparked the subsequent blaze of interest in acupuncture in the United States. He sent an article from China which appeared in the New York Times under the heading “Now About my Operation in Peking”. He reported that the use of acupuncture following his appendectomy had involved the insertion of needles into the outer part of his right elbow and below the knees, and their manipulation to stimulate the intestine and relieve pressure and distension. He wrote: “I leave with a sense of gratitude and regret. Despite its name and all the bitter political slogans on the walls, the hospital is an intensely human and vibrant institution. It is not exactly what the Rockefeller Foundation had in mind when it created the Peking Union Medical College but, like everything else in China these days, it is on its way towards some different combination of the very old and the very new.”

A month later, Reston wrote as follows in the New York Times: “In the present delicate state of Chinese-American relations, one problem is that the few Americans permitted to visit here are not qualified to judge or even understand many of the things they are shown.

China’s use of needles instead of drugs as anaesthetic in major surgery is only an illustration of the problem, but pending the day when experts are allowed to come back to China, the amateur will have to report as best they can... Chinese officials like Chinese doctors make a great deal of wanting to help the whole family... so maybe the time has come to get some serious medical exchange going between Washington and Peking. Something is really going on here, and it is clearly too important to be left to the reporters.”

These were to prove to be prophetic words. His report was greeted by a diverse reaction. “I have seen the past and it works” was the title of an article representing one end of the spectrum which praised the accomplishments of the Chinese. Accusations that it was hypnosis or a hoax lay at the other extreme. Middle-of-the-road opinions called for further study and research.

The spread of Chinese medicine to neighbouring countries occurred early in world history, and it may even have been transmitted by travellers along the Silk Road to Europe. The earliest written acupuncture classics are known to have reached Japan in the 6th century A.D. The illustrations on these pages are taken from early Chinese medical textbooks; the picture above shows that the theory of the “points” was applied equally to veterinary medicine.

The great demand for further knowledge about acupuncture made political leaders respond. The New York State Board of Medicine, which regulates the practice of medicine in that State, adopted the following position on acupuncture: “Acupuncture is not an accepted medical procedure in the State of New York at the present time. The New York State Board of Medicine regards acupuncture involving the human body as an experimental procedure which falls within the practice of medicine, and hence, can be performed lawfully in New York State only by or under the direct supervision of a physician licensed in this state, and in an institution appropriate for human research.

“The Board recognizes the need for, and desires to encourage, further research in the techniques, mechanisms of action and uses of acupuncture. However, because acupuncture is considered at this time strictly as an investigational procedure, it should be performed only in medical centers and teaching hospitals having committees on human research, which will provide the necessary peer review of protocols and appropriate monitoring of such studies.”

Due to public interest and demand, the US government too gave increasing attention to acupuncture. The National Institute of General Medical Sciences, a branch of the National Institutes of Health of the US Department of Health, Education and Welfare, called a conference in 1973 with about 100 participants which explored the analgesic properties attributed to acupuncture. The ad hoc committee on acupuncture of the National Institutes of Health subsequently concluded that this practice held some promise as an anaesthetic for certain surgical operations and for the treatment of certain acute and chronic painful conditions, that it was not a panacea, and that well-designed and controlled scientific studies were needed before it could be considered for widespread use in American clinical practice.

As a further result of this conference, the National Institutes of Health, the American Heart Association and the Veterans Administration gave some 36 project grants in the following years, most of them dealing with the problem of pain in relation to acupuncture. Agencies such as the Food and Drug Administration, the Federation of State Medical Boards and others have maintained the position that acupuncture should be classified as an experimental procedure and have suggested provisions for its control and regulation.

Initiatives in the American private sector have also had a certain impact. The Institute for Advanced Research in Asian Science and Medicine has been working for seven years in the areas of research, publication and scholarly exchange. The author, in his capacity as director of this Institute, has attempted
to develop a multiplicity of bridges for the flow of scientific information and cooperation between China and the United States.

Unfortunately, acupuncture remains something of a political football in the developed world. Rhetoric competes with scientific research. Thanks to training seminars which have been accredited by various state boards of medicine, there are now several thousand physicians and other medical professionals who have training in acupuncture as an adjunctive medical procedure. This compares with countries such as the Federal Republic of Germany where there are some 15,000 medical acupuncturists, and with comparable numbers in Austria, Denmark, Finland, France, Italy and the United Kingdom. It is not known how many of those who are inserting needles into human bodies for the treatment of disease are qualified physicians or the equivalent. Controversy still rages over who should practise this healing art and over the proper policies regarding research and training. At present, Finland is the only country outside of China which has integrated the teaching and practice of acupuncture into the medical curricula of all its medical schools.

Acupuncture has often met with serious scepticism following its reintroduction to the Western world over the past decade, but in China, scientific investigation has indicated new directions for clinical practice and research in this field. Acupuncture anaesthesia was discovered in 1958 in China and, only two decades later, it has already been employed in surgical procedures involving over two million patients. If it had not been for the phenomenon of acupuncture anaesthesia, perhaps Western physicians would still find acupuncture somewhat implausible.

Extraordinary progress

Further evidence of its efficacy is now available to the West. From the big national meeting on acupuncture and acupuncture anaesthesia held in Beijing (Peking) in June this year, it is evident that extraordinary progress has been made. Acupuncture has been shown to be efficacious in the treatment of coronary artery disease by increasing the circulation of the coronary arteries and improving the function of the left ventricle. It has also been used in treating bacillary dysentery; it does not kill germs but rather increases the resistance of the body. In surgery, acupuncture anaesthesia has been found suitable in brain surgery, open-heart surgery, pneumonectomies and many other procedures. It has been shown that over 100 medical diseases can be treated with acupuncture with some beneficial effect. These results have been demonstrated in more than 8,000 scientific papers published in China over the past two decades on the theory and practice of acupuncture therapeutics.

What of the future potential of acupuncture in developed countries? Acupuncture made progress in the West because Chinese scientists established a precedent for integrating basic scientific principles in medicine with the indigenous medical technique of acupuncture. This precedent is now being extended on an international scale. That acupuncture can alter immunological mechanisms in the body, stimulate the release of analgesic and mood-altering peptides, and
The talk of the town

Left:
San Francisco street scene. Acupuncture has been in practice in the Chinese communities of America for over a century, but its recent reintroduction to the United States has to some degree put Western medicine to the test.

(Photo Len Sirman ©)

Right:
The US National Institutes of Health ruled that acupuncture held some promise as an anaesthetic and as a treatment, that it was not a panacea, and that controlled scientific studies were needed before its widespread use in American clinical practice.

(Photo WHO/F. F. Kao)

Affect the motility of certain organs would not have been known if Western scientific principles had not been available for integration with traditional Chinese procedures and theories. Acupuncture and other traditional forms of medicine also have much to contribute through their stimulation of international scientific perspectives and theories.

Western medicine has made great progress and has come a long way from leeches to open-heart surgery, from Mendel's pea-pods to the manipulation of the DNA molecule. This progress has been astonishing, and yet people still ask the question, "Why are we doing better but feeling worse?" Undoubtedly, Western medicine is awesomely sophisticated. Can acupuncture be integrated with it? In the West, there seems to be an increasing search in the present era for alternatives in medical practice and health care. Many medical problems still elude our ability to treat them. Why not look towards a realm of medical practice which might seem "exotic" but is potentially efficacious?

Even while Western physicians are trying to accommodate "exotic" medical practices into their clinical work, important research on the mechanisms of acupuncture is in progress and must continue. One of the prime examples of this is the study of the relationship between endorphin release in the brain and the effect of acupuncture analgesia. In a sense, indigenous medical techniques such as acupuncture may serve to stimulate the elaboration of international scientific theory and research, while alternative physiological concepts may someday be shown to have scientific validity. The process of integrating traditional knowledge with scientific method is of great promise and requires further support by medical institutions and governments.

The fact still remains that, despite rapid progress in medicine, the majority of mankind does not have adequate medical care. Modern medicine, with all its glittering apparatus, sophisticated procedures, dexterous surgery and wonder drugs, has not alleviated the suffering of the world's people. On the contrary, medicine has at times become an economic and cultural burden, an industry which supports itself at the individual's expense, which stresses the cure of disease rather than the cultivation of health-oriented attitudes. Medical alternatives which have the cultural and historical sanction of a given people's tradition may comprise a valuable component in an overall health care effort.

Medicine is as old as man. Indeed, modern Western medicine is itself a distillation of "folk" or "traditional" medicine. It has gained credence as the international standard of medicine, though in the same breath we talk about Asian medicine, Indian medicine, Tibetan medicine and Chinese medicine. Why do we talk about medicine in such isolated and culturally relative ways, while other disciplines such as chemistry, mathematics and physics know no such boundaries? The incomplete development of an international medical consciousness has led to a peculiar partitioning and tribalization of medicine. We are living in an exciting age—one in which we may yet experience the metamorphosis of world medicine into a truly international and integrated system, based on scientific research and cultural respect, which will be at the service of all the peoples of the world.
Traditional Chinese medicine, which includes acupuncture, has been largely integrated with "Western" medicine in China. Patients entering hospitals and clinics may opt, if they wish, for the whole spectrum of antibiotics or other modern drugs. Or they may prefer to take the door that leads to the traditional medicine department.

Here they will receive ancient herbal remedies that have stood the test of time — pills, ointments, infusions made from plants, roots, barks or fungi. Often such remedies are made up on the spot by traditional pharmacists according to recipes that were handed down through the generations and are now collated into a great storehouse of folk wisdom.
A common purpose

Since traditional and “Western” medicine have the same objectives—to cure and relieve the human body, they should not compete but rather complement each other

by Jean Schatz

The practice of healing through acupuncture which has been handed down over thousands of years in China offers a relatively simple technique for treating a large number of illnesses. Using no more complex instruments than a few metal needles, mostly of steel, and triangular probes, some rolled leaves of the plant artemisia (for moxibustion), and cupping glasses, the practitioner is able to regulate the energy of the human body.

In ancient times the Chinese considered the body as a kind of field of energy which was channelled through certain lines of force called “currents”. From birth to death, this energy flowed quite precise routes along a network of so-called meridians. Distributed along this network, at certain very specific localities, were the controlling energy centres, the acupuncture “points”, of which more than 800 were recognized.

It is at these points that the practitioner operates by needling, or sometimes by cauterization (the technique known as moxibustion), either in order to tone up or to disperse the energy. The latter flows along well-coded routes, and the “currents”, stemming generally from a higher centre of the body, serve to compensate for any weaknesses.

Toning up involves summoning energy into a zone of deficiency from other areas where there is an excess. Dispersing the energy, on the other hand, means driving energy away from areas where it is in excess towards the areas of deficiency. To put it another way, what is required is to tone up a vacuum and to disperse an over-superfluous, thus restoring the state of balance in the forces which animate each individual human being and putting him (or her) in harmony with himself and with his environment.

This balance, which allows the free circulation of energy within the body, is what the Chinese call health—a state which is as much mental as physical, clearly an entirely original form of medicine, differing from the Western science in the way it explains the functioning of the organism and in its therapeutic method. The daily practice of acupuncture enables the practitioner to recognize that this technique responds to the authentic functioning of the body even more closely than Western medicine. And in turn this explains the success it enjoys in curing certain ailments and also in acting as an effective analgesa during surgical operations.

Analgesia is one of the big success stories of acupuncture. It serves to reduce the pain felt by a patient while allowing him to retain full consciousness and touch sensation. It is triggered off by the stimulation of certain specific points selected according to which part of the body is to be rendered insensitive and in keeping with the logic of Chinese physiology. This method of overcoming pain was discovered in China in 1958, and since then has won great prestige and popularity. Now it is practised in other countries and, for instance, was introduced into France in 1971 by Nguyen Van Nghi.

The analgesic effect can be explained just as well by the traditional concept of medicine as by the Western one. The method used is said to act by liberating encephalins and endorphins at different levels of the nervous system. In other areas the selected acupuncture points appear to stimulate the fundamental system of meridians. The importance given to maintaining stimulation throughout the operation and to keeping a conversation going with the patient suggests that these activities help to keep the energy circulating. Thus it is a kind of stasis of energy, retarding its circulation, that causes pain, and what is needed is to “stir up” the organism in order to prevent this effect.

Traditional and Western medicine have the same objective, which is to cure
and relieve the human body; they should not therefore vie in competition but ought rather to complement each other. It is with this aim in view that medical teaching is carried out in the East, particularly in China but also in Japan, Korea and some parts of the Soviet Union. In these countries, acupuncturists are taught their skills meticulously and learn the functioning of the human body both in the light of Chinese and of Western science. The student is initiated into Chinese physiology as laid down since ancient times, but also gets to know the most sophisticated Western techniques.

In this way the two canons of medicine can set up house together and peacefully coexist. In other words, the medicine of our times is being adopted and illuminated by the principles of universal energy given to the world more than 2000 years ago in the book called the Nei Jing, which is the true "Bible" of the acupuncturist.

In order to transcribe traditional medicine in modern medical terms, the acupuncturist has to stick to a very strict methodology. For instance, he must be capable of translating the ideograms of the ancient texts; this means that Western acupuncturists have to address themselves in this case to specialists in Chinese culture.

In the Far East, efforts are being made to understand Western medicine through the inspiration of the principles of acupuncture. First place is naturally given to the latter in explaining clinical phenomena because it is regarded as more authentic. Thus the causes of disease are attributed to variations in the energy pattern of the body rather than to changes in the balance of the nervous system. The books published today in Beijing on the subject may express the energy changes in their equivalent neurological terms, just as in other contexts the functional phenomena occurring in the major systems of Western medicine have been described, such as the cardiovascular and endocrine systems. But the study of the "currents" remains what it always was in these works, and the terminology used is that of the ancient treatises.

In these countries of the Far East, traditional Chinese and Western medicine are taught in proportions which vary according to whether the student is destined for a doctorate in Western medicine or for a career in acupuncture. In the former case, the course of studies will consist one-third of traditional medicine, that is, acupuncture, the pharmacopoeia, dietetics and physical medicine. In the second case, the proportion will be the other way round: one-third of the time will be devoted to such subjects as physiology, clinical medicine and Western therapeutic methods.

In other countries, there are quite different problems in the teaching of acupuncture. In the first instance, some 50 years ago, it was the doctors of Western medicine, and particularly specialists in homeopathy, who practised acupuncture. Even though it was a non-physician, Georges Soulié de Morant, who first introduced the practice to Europe, it was a French doctor, Roger de la Fuye, and his followers who spread it through such countries as Belgium, Germany, Italy, Spain and the United States. After Soulié de Morant another doctor, Nguyen Van Nghi, contributed to the fame of acupuncture in the West. His great merit is to have awakened the scientific conscience of practitioners by recalling in his teaching that it is an original technique and not some speciality of Western medicine. Until he appeared on the scene, and despite the teaching of Soulié de Morant, acupuncture in the West was more often than not a form of reflexotherapy (treatment involving the deliberate irritation of part of the body). It used Chinese terms but could only explain the mechanisms involved by reference to Western medicine. Thus in order to account for a specific pain, it was necessary to refer to the nerve distribution in the affected region.

Acupuncture was viewed as a department of general medicine, with the same status as neurology or rheumatology, and indeed was considered as simply a kind of stimulotherapy.

The teaching of acupuncture in the West is to a large degree veiled in considerable ambiguity. The traditional data are presented in varying proportions, either in a highly simplified form or else in subsidiary courses at the end of the studies.

This instruction is generally offered over a three-year period in one or two lectures or practical exercises a week, and usually relates to the standard texts on traditional medicine. So the student may learn the system of principal and secondary meridians and their related points, then the elementary rules of controlling the vital energy according to Chinese teaching, and finally the choice of points and the way of using them to treat diseases—but diseases as described in Western textbooks rather than as presented in the Chinese literature.

Thus the treatment of sinusitis (a Western term) is tackled under the headings "running nose", "lung cough" and "abyssal waters of the nose", which require action bearing on the clarification of the lungs, the obstruction of the stomach and displacement of heat from the gall bladder to the brain—yet all these terms will be incomprehensible to the student who has not followed a traditional acupuncture training course.

In Europe, the teaching of acupuncture follows a variety of different patterns. Broadly speaking, the Soviet Union and the countries of Eastern Europe as well as Austria still regard acupuncture as stimulotherapy. Teaching in France tends to be Westernized, except in the schools that have followed the teachings of Nguyen Van Nghi. But Belgium, the Federal Republic of Germany, Greece, Italy and the Netherlands, to name but a few, do follow Nguyen, and for some years past the European School of Acupuncture has offered opportunities for refresher courses at which traditional and modern Chinese texts, in good translations, are presented and commented on.

As for acupuncture analgesia, this is more generally taught and practised in Austria, Greece, Italy and Eastern Europe, and also in Argentina. Thus its teaching is tending to spread in the West and generally throughout the world. Let us hope that the teaching and practice of acupuncture will continue to gain ground, and will always be undertaken in an essentially Chinese spirit.
Acupuncture: the WHO view

It is clearly not a panacea for all ills; but the sheer weight of evidence demands that acupuncture must be taken seriously as a clinical procedure of considerable value.

by R. H. Bannerman

Acupuncture has been applied as a therapeutic medical technique in China since at least two thousand years ago, when stone knives and other sharp instruments were used. The term itself is derived from the Latin words acus—needle, and punctura—puncture.

Only two generations ago the practice of this technique was still confined to those who inherited it, and was handed down from one generation to the other together with the “golden” needles which were then in use. Thin filiform needles are inserted into various parts of the body to treat a variety of diseases and, since 1958, acupuncture has been used as analgesia for surgical procedures. Needles are typically left in position for anything from fifteen to thirty minutes during treatment, and for much longer periods during surgical operations. They are manipulated in twirling or push/pull movements, or they may be activated by pulsed electrical stimulation. An acupuncture-like effect can also be obtained by deep finger pressure, so-called acupuncture. Other more recent approaches to the stimulation of the recognized acupuncture “points” include the use of ultrasound and lasers.

Moxibustion represents a special form of point stimulation, and involves burning pieces of drug plants, generally the moxa leaf, either on the head of the acupuncture needle, so as to conduct heat into the body, or in some cases actually on the surface of the skin.

The medical procedure of acupuncture therapy is today being accorded greater attention in several Asian and European countries and also by WHO under its Traditional Medicine Programme. This practice requires knowledge of the system of anatomy and pathophysiology which is inherent in Chinese traditional medicine. The body is thought to be pervaded by a system of energy channels in which circulates vital energy or force, termed "shi". Most of the acupuncture points are located on these channels or meridians, although some are also located on the human ear.

Acupuncture is an important therapeutic method within the Chinese traditional system of medical theory and practice. It is often used in combination with other therapeutic measures, but some practitioners adhere strictly to traditional theory, while others use the technique empirically and in accordance with Western-style diagnosis and concepts of pathophysiology.

A WHO Interregional Seminar on Acupuncture, Moxibustion and Acupuncture Anaesthesia was held in Beijing (Peking)
Delegates from all of WHO's six Regions attended the WHO Interregional Seminar on Acupuncture and Moxibustion and Acupuncture Anaesthesia, held in Beijing (Peking) earlier this year.

(Photo WHO/D. Henrioud)

in June 1979, attended by 15 participants from 12 countries. Its purpose was to discuss ways in which priorities and standards could be determined in the areas of acupuncture, clinical work, research, training, and technology transfer. The group watched clinical acupuncture being used for a variety of purposes, including analgesia for major surgical procedures, such as brain and lung surgery, radiographic diagnosis of gastrointestinal disorders, and a variety of medical conditions. They also visited leading institutions where research is being carried out into the mechanisms of acupuncture and acupuncture analgesia.

Such investigations may contribute to the general understanding of pain and pathophysiology. As part of traditional medicine, acupuncture was developed over many centuries by empirical research and field testing. That its scientific elucidation according to international scientific standards is a relatively recent enterprise serves to add to its general scientific interest.

However, such scientific investigation must be closely correlated with demonstrations of its clinical efficacy. Many claims have been made for its usefulness; apart from its uses mentioned above, it has been applied as a treatment for drug abuse, and more recently, it has been employed as a diagnostic aid and in conjunction with fluoroscopy in gastrointestinal diseases. Clearly, it is not a panacea for all ills, and is certainly not without risk, but the sheer weight of evidence demands that acupuncture must be taken seriously as a clinical procedure of considerable value.

What is an acupuncturist?

The question of acupuncture's clinical application cannot be considered separately from that of training health personnel in its use. What is an acupuncturist? How much need one know to practise acupuncture responsibly? What would an optimal training programme consist of for acupuncture practice in primary health care, in surgery, and in research? What effect will international differences in nomenclature and terms have on future initiatives in acupuncture training? How can China's experience help in this field? What are the legal and administrative obstacles to acupuncture
training and practice in various countries? What standards of professional ethics are relevant in the practice of acupuncture to assure a high quality of care to the people and to protect them from unscrupulous practitioners or inexpert treatment? Answers to these questions require serious thought now that this technique is being undertaken in many parts of the world by practitioners of different training, expertise, or professional and academic backgrounds.

Acupuncture requires further scrutiny in the context of socio-economic, cultural and health care policy. Its technical simplicity and successful application to primary health care and the work of “bare-foot doctors” and other health workers, particularly in the rural areas in China, provides a model for adaptation and ready transfer to the developing countries. Any surgeon with clinical experience of work in tropical countries will readily appreciate the potential benefits that could be derived from acupuncture analgesia for both major and minor surgical procedures. Between fifteen and twenty percent of all surgical operations are now said to be performed with acupuncture anaesthesia in China, and with an overall success rate of between seventy and eighty percent.

The history of acupuncture in neighbouring Japan dates back more than one thousand years when it was disseminated from China. During the last century it was nearly abandoned, but the present decade has seen considerable revival of interest with the establishment of well organized training courses and research activities. Today, an estimated 6,000 doctors out of a total of 120,000 are said to practise acupuncture.

The practice was introduced to Europe during the eighteenth and early nineteenth centuries, but modern acupuncture therapy has only been developed seriously and scientifically since the end of the Second World War. Efforts have been made to explain its mechanisms and effects in modern scientific terms, and surgical operations are now being performed using acupuncture in combination with Western analgesic techniques.

The WHO Interregional Seminar drew up the following provisional list of the diseases that lend themselves to acupuncture treatment. This list is based on clinical experience, and not necessarily on controlled clinical research; furthermore, the inclusion of specific diseases is not meant to indicate the extent of acupuncture’s efficacy in treating them:

**Upper Respiratory Tract**
- Acute sinusitis
- Acute rhinitis
- Common cold
- Acute tonsillitis

**Respiratory System**
- Acute bronchitis
- Bronchial asthma (most effective in children and in patients without complicating diseases)

**Disorders of the Eye**
- Acute conjunctivitis
- Central retinitis
- Myopia (in children)
- Cataract (without complications)

**Disorders of the Mouth**
- Toothache
- Post-extraction pain
- Gingivitis
- Acute and chronic pharyngitis

**Gastro-intestinal Disorders**
- Spasms of oesophagus and cardia
- Hiccough
- Gastroptosis
- Acute and chronic gastritis
- Gastric hyperacidity
- Chronic duodenal ulcer (pain relief)
- Acute duodenal ulcer (without complications)

**Disorders of the Skin**
- Acute and chronic colitis
- Acute bacillary dysentery
- Constipation
- Diarrhoea
- Paralytic ileus

**Bewildering variety**

From the outset of the WHO Interregional Seminar, it was clear that an almost bewildering variety of indications existed for the clinical application of acupuncture therapy, while opinions varied from one country to another about the disorders for which it was most recommended. It was agreed that specific contra-indications to the use of acupuncture include pregnancy, needling of tumour sites, skin infections, and the presence of a cardiac pacemaker. There are obvious risks attendant on any kind of needle insertion into the body, particularly where vital structures might be punctured.

During the past decade, there has been a growing convergence between the most advanced research knowledge from physiology, biochemistry and pharmacology, and knowledge obtained by research in the field of acupuncture; that is to say, a convergence of modern international science with traditional Chinese medicine. For example, in more than 600 cases
The old and the new.

Left: A centuries-old drawing in a Shanghai museum shows medical students trying their skill on a larger-than-life model. The correct “point” was plugged with wax and the model was filled with water; if the student pierced the right spot, he was rewarded by a tiny fountain.

Right: Today’s techniques for stimulating the “points” include the use of lasers. A technician demonstrates on a small anatomical model at the Jiangsu Provincial Hospital of Traditional Chinese Medicine in Nanjing.

(Photos WHO/D. Henrioud)

of coronary heart disease, the effectiveness of acupuncture in relieving the symptoms was over 80 per cent. In 645 cases of acute bacillary dysentery, 90 per cent of the patients were cured within ten days, as judged by clinical symptoms and signs and the results of stool culture. The technique is also comparatively effective in controlling fever, inflammation and pain.

From the viewpoint of modern medicine, the principal action of acupuncture (and of moxibustion) is to regulate the function of the human body and to increase its resistance by enhancing the immune system and the antiphlogistic, analgesic, antispasmodic, antishock and antiparalytic abilities of the body.

Acupuncture analgesia has been tried in over 100 different types of operations, and its effects have been found to be comparatively stable in 20 to 30 kinds of common operations. Generally, it is thought to be more effective in head, neck and chest surgery, but it has also been used with satisfactory results in subtotal gastrectomies, splenectomies, total laryngectomies, and open heart surgery under extracorporeal circulation.

With the extensive practice of family planning in China, large numbers of abdominal tubal ligations are done under acupuncture analgesia; more than 80 per cent were rated as excellent and good. Already more than two million surgical cases have been operated on in China under acupuncture analgesia.

Large numbers of animal experiments and clinical studies have been performed on the mechanisms of acupuncture analgesia. In the past two to three years, Chinese scientists have succeeded in developing techniques for the isolation, extraction and determination of endogenous morphine-like substances, as well as for artificially synthesizing the highly active encephalin and its derivatives.

The WHO Seminar felt that acupuncture analgesia was a valuable addition to the therapeutic armoury of the qualified anaesthetist.

It is clear that further exploration, application and research on acupuncture will be not only significant for the health and welfare of the people but also important for the progress of medical science. However, many problems concerning the mechanism of these techniques remain to be elucidated.

High standards of training

Since acupuncture may be considered part of the practice of medicine, it is necessary to define high standards for training, and this training must be addressed to the different needs of basic scientists, primary care physicians, medical specialists, and other health professionals including auxiliary health workers. Thus a Western-trained physician may require no more than three months’ training to learn the technique in theory and practice. Graduates from China’s three-month courses in acupuncture generally study the identification and use of the 300-old basic points. They also cover the treatment of common diseases both in theory and practice as well as traditional Chinese medical theory, including the theory of channels and vital energy.
China's medical educational system is under review by the Chinese authorities, but basically it follows a dual track system which ensures integration of traditional Chinese with Western medicine. Doctors trained in traditional medicine work throughout the health care system, in hospitals, clinics, specialty areas and in primary health care. Health workers, called "barefoot doctors" in rural areas and "red medics" in urban areas, are also taught acupuncture for the treatment of a limited number of disorders such as the common cold and influenza, common skin diseases, neuralgias and sciatica.

The WHO Seminar agreed that, during training, traditional Chinese techniques and theories must be combined with established Western approaches to the diagnosis and treatment of disease.

The development of acupuncture as a safe and clinically useful method depends very much on the international transfer and exchange of information. At present, numerous obstacles exist. For example, there are only limited means for the dissemination of information, and acupuncture literature is only sporadically represented in standard computerized medical information systems such as Medline. There is, as yet, no centre where information from international sources is stored and compiled for use by interested investigators.

Another significant problem concerns nomenclature. In most medical fields, terminology units have been standardized on an international basis. In acupuncture, numerous systems are used in different countries for designation of the points, and other technical terms are translated in various ways. Most research in this field has taken place in China, yet access to the literature is limited by its relative unavailability in languages other than Chinese. No concerted effort has yet been made to translate the bulk of this material into other major Western languages.

Another serious obstacle to the transfer of acupuncture is the antagonistic attitude of many medical colleagues and allied health professionals toward accepting this therapy as a valid practice. This scepticism is paralleled by a general ignorance on the part of the general public, which makes patients in search of treatment easy prey for unscrupulous or uninformed practitioners. The elimination of such quacks, so as to assure a high level of clinical ethics and practice, would do much to make acupuncture respectable and encourage its transfer to other countries.

The WHO Seminar concluded that educational programmes for collecting and disseminating available knowledge and research data will be of great importance. It recommended that special programmes might be organized to reverse the unfavourable attitudes of medical professionals and to educate the public about the safety of the procedure, its indications and its limitations. It also recorded the need in many parts of the world for more careful formulation of policies concerning the regulation of acupuncture, and suggested that the established international agencies could play an important consultative role in such efforts.
Poorly fed infants a blot on science and technology

Urgent action to promote the health and nutrition of infants and young children by governments, international agencies, NGOs and the infant-food industry was called for by a WHO/UNICEF meeting on infant and young child feeding held in Geneva in October last.

Concerned primarily with developing practical measures to improve infant and young child feeding practices, the meeting was attended by some 140 participants from a representative group of governments, UN and specialized agencies, non-governmental organizations, health scientists and the infant-food manufacturing industry.

These estimates appear in the report of a Task Force set up last year under the WHO Programme for the Prevention of Blindness. The report was endorsed this year by the WHO Programme Advisory Group on the Prevention of Blindness, and is being made available to governments and non-governmental organizations interested in the subject.

In relation to prevalence of blindness, the report groups countries or areas of the world into three broad categories. The worst-affected are developing countries in Asia and Africa where blindness is a heavy burden on society, and its causes include trachoma, onchocerciasis, xerophthalmia, cataract and accidents. It is in these areas that 21 million of the world’s 28 million blind people live.

In areas of severe endemicity, uncontrolled trachoma can increase blindness rates up to 1 per cent or even 3 per cent. The worst sufferers are some areas or countries in the Middle East, Africa and South-East Asia. In areas where onchocerciasis is widely prevalent, it is the dominant cause of blindness and is likely to produce blindness rates from 3 to 7 per cent. Xerophthalmia, caused by deficiency of vitamin A, is a serious cause of blindness among children where malnutrition is a chronic condition. In India alone, it is estimated that at least 250,000 people are blind from xerophthalmia. The country provides another piece of grim statistics: some 3.5 million cases of blindness caused by cataract. It has been estimated that about half the blindness in the Indian sub-continent, particularly in the underserved rural areas, is caused by untreated cataract.

In the second category are countries in an interim stage of development where the diseases already mentioned do not lead to a massive blindness rate, but where blinding infections are only partly controlled and people can remain blind from curable conditions in the absence of timely surgical treatment. The blindness rate ranges around 0.40–0.65 per cent. In this group, a critical factor is untreated cataract and undetected glaucoma. In the Caribbean, for instance, untreated cataract alone is estimated to contribute at least 0.2 per cent to the blindness prevalence rate. Industrial accidents are an increasing hazard in countries in this group.

Countries with advanced medical services constitute the third category. Here blinding infections are controlled, most curable blindness is treated, and the main causes of blindness are age-related, for example, glaucoma, diabetes, and macular degeneration (corneal opacity). The blindness prevalence rates range around 0.15–0.25 per cent. The critical factor in this group is the proportion of old people in the population. In the UK, for instance, the blindness rate for the country as a whole is 0.20 per cent but in the over 75 age group the rate rises to 2.3 per cent.

The Task Force acknowledges that the data compiled and analysed in the report differ... widely in reliability and comprehensiveness. An effort has therefore been made to concentrate on statistics that have been reliably ascertained and to construct a statistical pattern likely to apply over broad areas with comparable conditions.

Despite the limitations, it has been decided to maintain at WHO headquarters a summary file of available national data on blindness. This data bank is being set up as an open-ended file so that additional information can be fed into it as it becomes available. All relevant data would be gratefully received by the Programme for the Prevention of Blindness. WHO, 1211 Geneva 27, Switzerland.
Infection traced to chicken farms

A major outbreak of infection with Salmonella muenchen involving more than 200 bacteriologically-confirmed cases between mid-January and end February of this year has been reported from Perth, Western Australia, and published under WHO's salmonella surveillance programme.

Most of the victims were shown to have consumed food products containing chicken and suffered gastro-enteritis 12 to 48 hours later. Secondary cases in families and other contacts were recorded. Some 60 patients, mostly infants and young children, required hospital consultation or were admitted for treatment.

The identification of the causative agent began on 24 January when S. muenchen was isolated from nine patients who had attended or were directly associated with a wedding party on 20 January. There were 90 guests at the wedding party, 30 of whom reported symptoms of food poisoning. S. muenchen was also isolated from cooked chicken left over from the main course. People affected included food handlers at the retail centre which supplied the chickens, and handlers at the processing plant implicated in the outbreak. The processing plant environment was also found contaminated with the organism.

The epidemic was eventually traced to ten poultry farms supplying the processing factory in a suburb of Perth. Very heavy infection rates in the farms, exceeding 50 per cent among adult birds ready for slaughter, appeared to overwhelm the sanitary arrangements at the factory.

An intensive surveillance that followed yielded 743 human isolates of S. muenchen in March and 672 in the first three weeks of April. This escalation of isolates arose from surveillance of food handlers, rather than clinical cases. The excretion rate among food handlers was found to be very high.

Subsequent investigations resulted in the detection of widespread S. muenchen in Perth and Western Australia. The predominant animal source appears to be native fauna species, particularly marsupials and reptiles. The organism has been found widely distributed in birds, abattoir effluents, natural waters and sewage in Perth, and is the major serotype isolated from raw pet meats containing kangaroo meat.

Only 11 cases of S. muenchen infection were diagnosed in Perth during 1977 and 11 also in 1978.

In the next issue

The January 1980 issue of World Health will include articles on blindness prevention, conveying the message of health in Sudan, and some contrasting approaches to primary health care in the Philippines, the South Pacific and Hong Kong.
A Chinese "barefoot doctor" uses her needles to treat a production brigade worker. (Photo WHO/D. Henriod)