Chapter 1

Acupuncture as Medicine

The Therapeutic Range of Acupuncture

"Acupuncture" is actually an interpretive translation of the Chinese ideogram for "needles and fire." It refers to an ancient form of Chinese medicine that involves the insertion of needles into special points on the body located on imaginary lines called meridians. The needles may be replaced by, or used with, moxibustion or moxa burning, a technique where heat is applied to the acupuncture points.

Documentation of the efficacy of these treatments is increasing as a result of research and application by major medical universities. Acupuncture is widely acknowledged in the West as a means of surgical anesthesia, and as a treatment for specific pains such as neuralgia and rheumatism. Moxibustion also has been verified to be of benefit in the treatment of chronic rheumatism, anemia, and certain degenerative diseases. [1]

Acupuncture treatments given over a period of several sessions typically result in a gradual alleviation and cessation of the patient's discomfort. The mechanism underlying this relief is not merely symptomatic, but acts on the disease process itself. For example, a person suffering from arthrosis of the knee does not experience immediate relief after a single session of acupuncture

therapy. Several sessions are required for the relief of pain to occur, as well as for the liberation of articular stiffness. With successive treatments, however, the mobility of the joint gradually increases, a mobility that appears to oppose the underlying degenerative process.[2] Acupuncture therapy may thus be seen as a means of reversing the disease process. To confine the application of acupuncture to the alleviation of pain would unfairly limit the scope of its therapeutic potential. The effect of acupuncture therapy involves a reequilibration of the basic energetic functioning of the body, and as such can have profound effects on illness and health.

The application of acupuncture techniques is also beneficial in the treatment of certain psychological disorders, such as insomnia.[3] Alcohol, tobacco, and drug dependence is another arena of medical care where the application of acupuncture therapy demonstrates dramatic results.[4]

In the same way that doubts remain among certain medical practitioners concerning the effectiveness of acupuncture for viral infections and visceral afflictions, its effectiveness in treating mental states is viewed with reserve. It is difficult for a practitioner with little background in the study of acupuncture medicine to imagine how, with needles inserted into the skin, one can soothe anguish, ameliorate depression, or relieve insomnia. It has even been said that acupuncture is a simple act of autosuggestion. Yet why would autosuggestion play a role only with acupuncture treatments and not with Western medicaments?

To understand acupuncture and comprehend how it can work at the same time for the body and for the mind, it is helpful to have a precise idea of the general theories and precepts. Setting aside any preconceived notions that we may have regarding acupuncture, let us begin by viewing it as an electric model of the human body.

The Electric Model

The ancient Chinese discovered that the skin is covered with acupuncture points, themselves situated on meridians that are imaginary lines or channels. Energy, in the form of a bioelectric current, was found to circulate along these specific channels, the

meridians. Though they did not define the energy in a "scientific" fashion, they did describe it as a flux polarized in yin and yang, negative and positive. This occurrence, suggesting an electric current, is possible to verify by holding a neutral electrode in one hand, while a charged electrode is applied to an acupuncture point, a specific site on the skin along a meridian. A microcurrent passed through the electrode creates a difference in electrical potential. A small amplifier connected to a branch circuit will make the electric signal audible.

In all, there are 133 meridians: 12 principal meridians, 8 extraordinary meridians, and others such as the channel sinews, channel divergences, and connecting vessels. On the surface of the body each principal meridian communicates with both the preceding meridian and the following one in an unending loop of the 12 meridians. On each of these networks there exist principal and secondary points, as well as principal and secondary points that connect each of these networks to the others. In short, each of the 12 meridians, besides the internal course that links the meridian to its organ, possesses 4 secondary meridians that establish relationships with bone, tendon and muscle, with the interior and the other viscera, as well as with those meridians in close proximity. In this it is rather like the collateral channels and capillaries between the arteries and veins.

Just as the heart serves as the physical pump of the arteriovenous system, the lung serves as the pump for the energetic system. Thanks to the dynamics of respiration, the energy of this circuit is in continual circulation. It is principally because of these dynamics that the acupuncturist sees the meridians and their interrelationships as responsive and mobile rather than uniform and static. To view the meridians as devoid of such dynamism is a serious error, something akin to observing a photograph of the large arteries without seeing either the movement of the blood or its rate. Illustrations of acupuncture meridians and points convey nothing of the real dynamism that exists within the system.

The bioelectric model permits us to see that a flux of energy circulates, and that this flux is comparable to a natural electromagnetism. It is electric in the sense that it can be registered

and measured at the acupuncture points, and it is most likely magnetic as well. At the moment such a description is only hypothetical? An upper and lower polarity of the body also exists, described thus in Chinese texts: "Man is between the sky and the earth; the sky is yang, the earth is yin. Likewise the top of the body, the head, is yang, the lowest part, the feet, is yin."

Polarization also is reflected in the left and right halves of the body, the left being yang and the right yin, as well as in the back and front of the body, the back being yang and the front yin.

To illustrate by analogy the function of this electronic system, one can compare the physiology of the body to a transistor radio. The organs can be viewed as the station detectors, the volume and tonality controls, the selectors of short, medium or long wavelengths, the semiconductors and the amplifier. All organs are linked by a complex network of wires, transistors, condensers, and resistors. Let us say for ease of comparison that all the electric circuits are on the surface of the apparatus and spread over all its faces. When the radio is in good operating condition, that is, when the antennae are properly oriented, the reception is normal and the proper conversion of signals occurs; transmission is perfect. This state is analogous to the body in good health. If, however, a problem occurs in any of the circuits, the unit as a whole is disturbed. Function is no longer harmonious; there is, as it were, a functional illness. For service, a technician is called.

The action taken by an electronics technician in repairing the circuitry of a radio is analogous to that taken by the acupuncturist when pricking certain points in the acupuncture network of the body. Having examined the system and determined, through an analysis of the symptoms, the source of the disruption, action is taken to tonify or disperse, accelerate or decelerate, unblock or divert the energy in those parts of the meridian system where the energy flow has been disrupted?

When a breakdown is not repaired in time, the circuit continues to suffer and the organs remain in disharmony. This disharmony ultimately results in a real breakdown, creating an irreversible alteration of the organ. In Western medicine this is the state called organic illness.

The Cosmic Model

The ancient Chinese conceptualization of humanity, nature, and illnesses is not as simplistic as it may appear at first sight. The Chinese view of human physiology is based on a concept of energy fields, a view comparable to the modern concept of an energetic field that has arisen in contemporary physics (8). According to this idea, space and matter are inseparable. Matter is viewed as being constituted of regions in space where the field is extremely intense. The field represents the sole reality.

The influence of Taoist philosophy has doubtless contributed to the elaboration of this model, for, in Taoism, it is held that the material world rises out of an "initial emptiness" or a "great void." This description also brings to mind the concept of a physical void underlying modern field theory. The void spoken of by the Chinese is composed of qi, a term difficult to translate but perhaps adequately rendered by the word "breath" or "energy." According to an explanation offered by the philosopher Tchang Tsai, "The qi has but to condense to form all things, and these things have only to be dispersed to form once again the great void." (9)

This ancient point of view is similar to that of contemporary scholars. As is the universe, the Taoists felt, so is humankind. We are made up of matter, thus of void and of qi, which bring form and substance. As a form, man represents a specific field that is distinct from the rest of the universe. The qi flows through this field within the network of meridians. During circulation the qi gives rise to the primary metabolisms. As we are a part of the void, however, we are linked to the integral field of the universe, and our relationships with the environment and with the rest of the world are thus inseparable.

This concept of Taoist philosophy is reminiscent of the modern notion of synchronicity. The astrophysicist Hoyle writes:

> Recent developments in cosmology have come to suggest that everyday situations do not go on independent of the far reaches of the universe, and all our ideas of

> space and geometry would be totally invalidated if these far reaches were excluded. Our everyday experience, to the tiniest detail, seems to be so closely linked to the scale of the universe that it is nearly impossible to consider that the two exist separately (8).

This inseparability is what the ancient Chinese held to be true in physiology. It was of course impossible at that time to attempt a more specific approach, but the Chinese intuitively perceived the similarity between the structure of humans and that of the universe. With the spirit of analogy that is inherent in their way of thinking, they related the warp and weave of the universe to the smallest of objects. The Taoist concept of intimate bonds and synchronicity between all objects in the universe, and particularly of humankind with the rest of the cosmos, was without doubt at the origin of their cosmological approach to physiology.

In acupuncture this approach is elaborated in what we call the precursor model, and is described in contemporary terms as modern chronobiology. Humanity depends on the environment for biological rhythms. We submit and must adapt to climatic conditions, the lunar rhythm, the rhythm of the seasons and various heavenly influences.

Climatic Conditions

Chinese medicine recognizes five different climatic conditions: coldness and heat, humidity and dryness, and wind. These five climatic conditions act on the meridial network system of the body and, through these networks, on the bodily functions. These meridial networks are vulnerable to climatic conditions according to the particular affinities of the meridians and their respective organs. For example, the heart meridian and the heart are sensitive to heat, are more vulnerable at midday and in the heat of summer, to the sun at its solstice, etc. The meridians of the liver and gallbladder are sensitive to wind. The functions of the kidney and bladder meridians are disequilibrated by the cold, and during this time persons suffering from this perturbation feel, as but one example, an imperative need to urinate.

The Circadian Rhythm

The rhythm of day and night, the circadian rhythm, is manifested in the circulation of the energy in the meridians. One meridian and its respective functions are hyperactive at each hour of the Chinese day. (One hour in Chinese medicine is equal to two hours in the West. A day, therefore, is equal to 12 rather than 24 hours.)

The Chinese Clock	
Meridian	***Time***
Lung	3:00 a.m. to 5:00 a.m.
Large Intestine	5:00 a.m. to 7:00 a.m.
Stomach	7:00 a.m. to 9:00 a.m.
Spleen	9:00 a.m. to 11:00 a.m.
Heart	11:00 a.m. to 1:00 p.m.
Small Intestine	1:00 p.m. to 3:00 p.m.
Bladder	3:00 p.m. to 5:00 p.m.
Kidney	5:00 p.m. to 7:00 p.m.
Pericardium	7:00 p.m. to 9:00 p.m.
Triple Burner	9:00 p.m. to 11:00 p.m.
Gallbladder	11:00 p.m. to 1:00 a.m.
Liver	1:00 a.m. to 3:00 a.m.

At its hour of activity the meridian is a full reservoir of energy functioning at maximal level. The first meridian, that of the gallbladder, corresponds to the first Chinese hour, from 11 p.m. to 1 a.m.

Many empirical observations confirm a correspondence to the Chinese concept of biological rhythm. For example, persons suffering from hepatic distress, i.e., from gallbladder sensitivity, are insomniacs — or at least prefer to go to bed late. The time of the lung meridian coincides with the frequency of nocturnal attacks observed in asthmatics. The meridian of the large intestine is most active in the hours from 5 a.m. to 7 a.m., the period most frequently associated with bowel movement. Passage of stools at this time is easier than in the evening, because the colon is at a level of maximal activity. The stomach meridian hour, 7 a.m. to 9 a.m., is considered the most favorable for digestion; many

dieticians advise their patients to eat a large breakfast. This advice follows all the more logically because the meridian of the spleen and pancreas, organs vital to digestive process, are at maximal activity in the following hour, from 9 a.m. to **11** a.m. Persons who have breakfasted insufficiently find that they are most drained during this period. The lowered level of sugar metabolism cannot be properly regulated by the pancreas.

Recognition of these observable rhythms and their relationship to physiologic function is essential to acupuncture therapy. In serious or chronic illnesses it serves the practitioner to utilize the hours of maximal activity of the organ for correcting any disequilibrium.'

The ***Lunar Rhythm***

According to Chinese medicine the moon exerts an influence on the body fluids similar to the influence it exerts on the ocean tide. In acupuncture theory, this fluid tide is the play of equilibrium between two forces, the dynamism of the blood circulation, arterial and venous, and the global energy of the meridians. These forces work simultaneously in the organism in a balance both complementary and opposed. In the *Nei Jing,* the classic ancient text on acupuncture, this is noted emphatically:

> At the new moon the blood and the energy begin to be purified. At the full moon, the blood and energy are in abundance. During the wane of the moon the muscles relax, the meridians and extraordinary vessels empty themselves, the container no longer adapts to its contents. The occurrence of these bodily changes is why the ordering of the blood and energy by the techniques of acupuncture must include the study of celestial phenomena and their influence on the body. The acupuncturist thus should not disperse at the new moon, tonify at the full moon, or puncture at the waning of the moon.

In this regard it is interesting that modern statistical findings aptly corroborate the observations of the ancient Chinese doctors. In a study led by a U.S. surgeon, post-operative hemorrhages were found to be more frequent during periods of the full moon (37).