

# **The Nature of Qi**

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## **HEALING OCCURS THROUGH RELATIONSHIP, NOT ACTION**

*Acupuncture is not a dominant process. It is supportive and integrative. Acupuncture is like raising a child. The patient comes to us for help, but the treatment only makes sense if the patient's Qi—the patient's becoming—is more vital than ours. Healing occurs through relationship not action.*

*To develop our relationship with the patient's Qi we must be comfortable with the vast and complex character of bodily Qi. It is indeed a "higher power". We need to accept our subordinate role in this relationship.*

*Qi relieves blockage in conventional physiology. Qi replenishes the deficient gene theory. Qi provides safety within ourselves and a linkage beyond us.*

Michael O. Smith

## THE NATURE OF QI

"How does acupuncture work?" This is not just a foolish question for control freaks. Our relationship to this problem can show us the basic nature of acupuncture and related professions. This paper attempts to increase our understanding of both Eastern and Western medicine. As a person with only clinical experience in acupuncture and psychiatry, I cannot claim to have done critical new medical research or literature reviews. But ours is a psychological and spiritual quest. As a specialist in addiction treatment, I may be well suited to cope with the excessive denial that undermines progress in both Western and Eastern medicine. The problem lies in the public awareness of bodily function. We cling to simplistic mechanical explanations rather than face unknown and indeterminate causality. In doing so we undermine medical learning and treatment development.

### ROUND UP THE USUAL SUSPECTS

Saying that acupuncture works by releasing a chemical has a satisfying effect on most contemporary people. Endorphin has been the popular choice. Acupuncture is thereby attached to the dominant viewpoint. What could be more real than a body chemical that seemingly relieves pain and is analogous to morphine and heroin? Sometimes the explanation is extended to include an isolated sub-cortical center such as the amygdala or that favorite resort of pop psychology, the pleasure center. The actual research community has extended beyond these simple assumptions, showing that multiple chemicals and multiple receptor sites are involved, even in the most basic version of acupuncture. Nevertheless, the temptation of a simple chemical mechanism continues to have a powerful effect on the modern mind. Sometimes the analysis is extended to include pain control and stress relief. Many acupuncture brochures make it sound like metallic Valium is being administered. Acupuncture will dispel the perception of pain and stress. Little is said about resolving underlying problems. Both the therapist and the patient seek a spa-like arrangement. Ongoing stress leads to ongoing treatments.

### ACUPUNCTURE IS PART OF A CONTINUUM OF QI FLOW THERAPY

First of all, we must note that acupuncture is part of a continuum of treatments that includes acupressure, therapeutic touch, polarity therapy and many non-contact modalities such as toyohari, reiki, Qi gong, and yoga. All of these Qi-flow therapies were developed in a similar context, using similar descriptive concepts, and with similar treatment goals, but yet are viewed separately. One method, therapeutic touch, was

defined in a distinct manner in order to be accepted in conventional medicine. Another, acupuncture, has been legally isolated because it uses a special treatment device. This isolation encourages the elitist position of most acupuncture textbooks, which never refer to other Qi-flow treatments. The unspoken assumption is that acupuncture, being the more concrete technique, is superior to the other Qi related treatments. Acupuncture is, indeed, quite practical and can be rapidly applied. Using acupuncture is less draining to the practitioner. Nevertheless, few experienced practitioners would claim that acupuncture is more profound in its effect on the body than the other Qi-flow therapies. By ignoring Qi gong, for instance, modern acupuncture texts, detract from the richness of their field.

### CIRCULATION OF VITAL FLUID IS LARGELY UNKNOWN

Students of Western medical science are taught to rely on specific, often mechanical explanations of bodily functions. A medical colleague told me, "I can only work if I know the mechanism behind every action." Indeed the majority of us, even those people in alternative medicine, feel that there are clear physical-chemical explanations for most body functions. In spite of the numerous discoveries in Western medicine, these assumptions are quite misleading.

Consider the process of gravity. It is a seemingly reliable process, which is denoted in countless physical equations, yet the mechanism of action remains unknown. This lack of knowledge has not led to inappropriate speculation or mystical analysis. Gravitational force is simply part of our environment. Many processes in nature are poorly understood.

We are taught that the heart pumps blood around the body. This is a misleading approach to the problem of circulation. Precise measurements can be made of fluid pressure gradients in the heart. Blood pressure can be measured in peripheral arteries. At first glance this seems to be a completely documented system. However, Western medical theory has never given any significant explanation of the mechanism for blood to return to the heart. References to "capillary action" or muscular pressure on the veins are not adequate explanations.

Blood must return to the heart with the same volume and speed that it leaves the heart; otherwise the entire system would collapse. From the point of view of Western medicine, an undescribed and essentially unknown force is responsible for "pumping" the blood from the limbs back to the heart. Using the laws of physics we can measure the amount of physical work required, but we cannot determine the nature of this force.

Furthermore, it is often stated that changes in vascular resistance related to the autonomic nervous system cause arterial blood to flow into different parts of the body as part of an adjustment to flight or fight. From the point of view of fluid mechanics, this arrangement is not tenable. Another interesting example is the textbook statement that there is a 20% increase of blood flow to the liver and kidney during pregnancy. Again, no physical mechanism is described.

Let us suggest a unified and more coherent system: (1) the pumping and valvular action of the

heart cause blood to be distributed in the lungs and great vessels so that oxygen is taken into the blood cells and that a rhythmic pulse of blood is established, (2) an undescribed mechanism determines the priorities of arterial blood flow, and is the primary mechanism responsible for circulation in small vessels and venous return.

### WATER MOVEMENT IN PLANTS

How does water flow upward in a tree? Six tons of water evaporates from an average maple during the summer. Explanations of capillary action and molecular adhesion again are clearly not sufficient. If the restrictions of gravity were important, trees would tend to grow wider not taller. Some species might absorb water in the top of the plants so that water could flow with the force of gravity not against it. Clearly there is some energy process in living trees that can readily move water upward against the force of gravity.

In fact, the movement of vital fluids (water and nutrients) is one of the basic properties of living organisms. Even a tiny organism must move vital fluid against gravity to maintain balance within its body. By focusing on the obvious mechanical process of the beating heart, we have neglected to observe the process of circulation as a whole. In particular, we have neglected to observe that most vital circulation moves in the opposite direction of gravity and cannot be explained by any currently identified mechanical process.

Whether we are referring to the movement of water from the roots in plants or venous return in animals, we have to accept that

there is a force (or forces) in nature, which moves vital fluid against gravity in a consistently effective manner. The Chinese term *Qi* is used to describe indeterminate life-related force. Such a fluid moving force may be "unknown", but it can be measured as accurately as gravity. This force is turned on and off, as life itself is created and destroyed. The existence of a vital fluid moving force is just as demonstrable as gravity. To claim otherwise is to disregard the basic concepts of physics.

We have said that *Qi* seems to be able to counteract the force of gravity in terms of the movement of vital fluid. Life on earth developed in the context of the earth's gravity. The relationship between life and earth—*Qi* and gravity—has been ever-present. Somehow our life force interacts with gravity in a manner that promotes the movement of vital fluid. Understanding this process of relationship might open up many biological opportunities. Understanding the movement of vital fluid seems more productive than searching for an anti-gravity machine.

### MODERN ACUPUNCTURE ALSO DISTORTS THE ROLE OF BLOOD

Modern translations of traditional Chinese Medicine make one unfortunate error: they translate *xue* as "Blood". Everyone agrees that *xue* is a term that refers to all vital fluid in the body. It does not just describe the plasma with hemoglobin cells which we in the west call blood. Nevertheless, *xue* is translated as "Blood" with a capital "B" to distinguish it from the conventional term, blood. This faulty translation hides the traditional Chinese insight that all vital fluid is essentially similar. Hence it is not sur

prising that an indeterminate vital force, Qi, moves all fluid in the body. Chemistry tells us that blood plasma and other vital fluids are structurally very similar. Now we can see that the same force perhaps moves all of these fluids as well. Obsessive concern about red blood has blinded both Western and Eastern medicine. Neither side has been able to accept that fluid movement is not controlled by a known mechanism and that focusing almost exclusively on blood as "the" vital fluid is significantly misleading.

Traditional Chinese medicine says that "the Blood follows the Qi". This claim seems frivolous to the average physician. But when we realize that Western medicine has utterly no explanation for blood flow outside of the thorax, the statement about Qi becomes more interesting.

Occasionally acupuncture treatments cause vasovagal hypotension, that is, the patient becomes dizzy and may faint due to a sudden re-distribution of blood from the heart to the lower body. According to the rules of acupuncture, it is possible to predict when this reaction may occur and insert needles in such a way as to make it more-or-less likely to occur. If the patient has eaten that day, hypotension is less likely to occur. If well known distal acupuncture points are used, it is more likely to occur. So one sees that the direction and priorities of blood flow can be altered by acupuncture in a predictable fashion.

### DNA IS NOT ALL OF THE STORY

The discovery of DNA as the chemical basis of heredity is one of the highlights of modern research. However, the possibility of using this promising new information as a dogma of total control has been too tempting to resist. We are told that DNA and the gene theory control the whole process of heredity. This concept seems so obviously correct, how could anyone doubt it.

More than 90% of DNA is not involved in protein synthesis. Science currently describes this DNA as "junk DNA" because it does not have the designated purpose of protein synthesis. Would it not be better (more scientific, in fact) to say that we do not know the functions of this DNA rather than presuming that it is "junk."

The basic assumptions of gene theory are twofold. The first criteria is that DNA (actually less than 10% of all DNA) contains enough information to make a human being. Secondly, the mechanism of action of DNA, that is, protein synthesis, has to be appropriate to the task at hand. The answer to the first assumption is in the hands of computer engineers. The second assumption does not hold up to scrutiny. It is easy to say that protein synthesis is a suitable mechanism for enzyme production; however, it is absurd to claim that the mechanism of protein synthesis

might account for the creation of the retina, inner ear, or many other precisely designed body structures. The gene theory sounds great, but is only a partial answer.

The real problem is that Western science cannot suggest an additional mechanism for heredity. The completeness of gene theory is its most satisfying feature. For many it is also comforting that genetics claims that the male and female contribute equally to the new offspring.

Heredity is about the transfer of information. What source of information, other than DNA, might be useful in this context? Many of us have seen pictures of electromagnetic radiation that surrounds living objects such as a leaf. Our immediate assumption is that the chemical and physical activities within the leaf create the surrounding radiation as a secondary effect. However, if you cut the leaf in half, the radiation remains in its former shape. Perhaps the radiation is the primary phenomenon and the structure of the leaf is a secondary outcome.

A similar situation occurs when a frog regenerates a limb. The radiation cover expands first and then the structural leg develops afterward. It appears that the radiation contains information that helps the shape and substance of body grow. Later in this paper, I will describe Qi-flow in greater detail. For

### WORLD IS BORN NOT MADE

The Eastern view is that the world is born. That is, relationship of an indeterminate nature leads to new beginnings as part of an endless cycle. The Western view is that the world is built. That is, there was a specific beginning to the world and it continues to operate according to mechanisms that can be discovered.

now let us say that a Qi-related information system may be critical to life.

For a growing embryo, the obvious source of Qi-related information is the mother. Our modern society clearly identifies mistakes that the mother can make which endanger the embryo. The mother's role is limited to being a container and feeding station. It is very different to say that the mother may be the exclusive biologic role model. The mother's Qi may be the blueprint for body growth.

#### ACUPUNCTURE IS TAUGHT AS AN INCOMPLETE SUBJECT

We have reviewed deficiencies in Western medical textbooks. Now I will discuss weaknesses in modern acupuncture textbooks. Acupuncture schools, textbooks, and examinations have blossomed in the last 20 years. They have contributed greatly to the expansion of complementary medicine in the West. They have increased the presence of traditional Eastern medicine throughout the world. Nevertheless, acupuncture and "traditional Chinese medicine" are taught in an incomplete and counterproductive manner. Many individual practitioners and teachers are well aware of this situation, but they are unable to overcome the momentum of interlocking and cautious schools, texts, and exams. The modern acupuncture texts validate their information primarily by quotations from ancient acupuncture texts. There is a fundamentalist, biblical quality to the field.

Given the Daoist nature of the early acupuncture field, these ancient texts were not intended to be precise sources of detailed infor-

mation. Rather, the early acupuncture texts were intended to stimulate curiosity and a broader world vision. The term *Jing* which is used to define Qi pathways, suggests a degree of complexity that cannot be perceived. The right side of the character for *Jing* <<< is an underground river; therefore, it is nourishing, accessible from the surface, but impossible for us to observe in any accurate detail. The left side of the character *Jing* contains the "silk" radical, suggesting uncountable strands of life which function in a smooth, valuable manner.

Contemporary acupuncture textbooks simply avoid troublesome topics. Acupuncturists and practitioners of other similar forms of therapy know that Qi is also a vital perceptible process. Active bodily treatment locations often feel warm and tingly. One can feel warmth exude into the air above a correctly placed acupuncture needle. In the treatment of an acute asthmatic, acupressure therapists can feel considerable heat and soreness develop in their own arms after placing their fingers on feishu (B-13) for several minutes. In my experience point location, and often even point selection, is primarily a matter of tactile intuition rather than cognitive planning.

These phenomena are not dependent on actually touching a person, but are also perceptible when placing a hand immediately above the surface of the body. Many of these phenomena are probably not measurable by ordinary instrumentation; rather they must be detected by an instrument that is specifically designed to receive these messages, i.e., the living organism.

It is remarkable that acupuncture textbooks mention "de qi" sensations of tingling and warmth that are felt by the patient, but they virtually never describe similar perceptions that are made by the practitioner. Science is based on careful observation. We build precise measuring devices, because other less rigorous perceptions suggest certain measurements might be possible. If acupuncture texts do not describe these possibilities, how can we expect physicists and physiologists to examine these phenomena? In my experience the practitioner's Qi sensations are very effective means of point location and selection. Certainly these phenomena were important in the development of acupuncture (i.e., before the charts were written). Likewise, Qi gong and other forms of energy medicine are fully dependent on this source and quality of information.

#### SO MANY DIFFERENT THEORIES

Why are so many separate and divergent theories used by successful acupuncturists? Theories of acupuncture are devices for focusing and organizing treatment efforts. These theories were never intended to be explicit concrete descriptions of life. Using metaphoric language is very appropriate for this kind of theory.

Sometimes the Chinese metaphors point toward scientific realities, as we know them in the 21<sup>st</sup> century. The terms Yin and Yang suggest the critical importance of binary interactive processes such as the autonomic nervous system and many hormonal and neurochemical systems. Chinese metaphors can also be misleading for the eager modern mind. Terms such as "liver", "kid

ney", and "spleen" are used frequently in Chinese medicine as images that represent various types of living functions. The *Nei Jing* the oldest available acupuncture text uses the term "spring" interchangeably with the term "liver". The seasons and the vegetative cycles they represent are important concepts in ancient Chinese medicine. Their significance is avoided and trivialized in modern acupuncture. In seeking to understand the rhythm of life, we should not ignore the rhythm of life.

It is our relationship to acupuncture theory that is important. If we look at acupuncture theories as competing versions of reality, then a textbook will typically describe one theory prominently and refer to other theories dismissively, if at all. On the other hand, if we view these theories as different schools of painting, for example, then a textbook will describe the diversity and creativity of various theories. A theory will be admired based on the quality of its adherents, not on its relations to dogmatic disputes. As each therapist becomes more experienced, he or she will tend to develop an individualized style of treatment.

When you ask a therapist what acupuncture theory they use, a conventional textbook recital is usually given. Therapists do not know how to describe their own individualized approach in proper terminology, and, furthermore, they are not sure that the listener would approve of the changes they have made in the conventional theory. This difficulty is often apparent in school clinics. Expert instructors are reduced to following a textbook approach to treatment rather than using their own approach. Many well known acupuncturists are very hesitant to have col-

leagues observe their treatment sessions because they are concerned that their unorthodox habits will be exposed. These circumstances indicate a dysfunctional relationship between the acupuncture practitioners and the treatment styles and theories that they use.

The frequent lack of integration between acupuncture and other Qi-flow therapies only worsens this situation. Students are rarely exposed to top quality, creative treatment. They focus on rote, linear approaches in a field that is decidedly non-linear and multi-faceted. Historically, all Qi-flow therapies have been taught by apprenticeship. They have been taught in settings that were highly sensitive to values of relationship and individuality. As we will see, returning to these values is much more scientific and effective than our present falsely standardized approach.

Acupuncture points are well

known to have certain biophysical properties, decreased electrical resistance, for example. Such "points" can be found in consistent locations on many species, including human beings. Veterinary acupuncture is regularly reported in mainstream veterinary literature. It is more respected than human acupuncture by comparable professional organizations. Acupuncture points and whatever underlying mechanism accounts for their effectiveness are clearly part of the general biological reality of animal life.

Elements of Qi-flow balance are actually built into ordinary body functioning. All of us know that human touch – outside of a therapeutic context – can have a profound effect on life. Touch is shared by humans and other mammals and clearly has a balancing and stimulating effect on all species. Qi-flow therapy seems to be merely an extension of this reality.

#### LEARNING TO RIDE OUR BICYCLE

In school we are taught to begin a new subject on the cognitive level and verify those cognitive findings by observations of behavior after we have mastered the subject on a cognitive level. This method is appropriate in many situations. However, it is a misleading approach in complex, irregular situations where no cognitive paradigm can be stated. Take the example of learning to ride a bicycle. A cognitive approach to this problem is indeterminate and might actually be counterproductive by producing performance anxiety. The only way to ride the bicycle is start learning on the behavioral level. The balancing capability of our body is much more effective than our conscious mind can imagine. Qi-flow therapy is one of many subjects that must be approached from an observational and behavioral level rather than a cognitive one. We need to use metaphors, analogies, and experiential terms because there is no linear or rational basis for a cognitive point of view.

In the 20<sup>th</sup> century physicists have discovered that they know much less about sub-atomic physics than they thought they did. It is increasingly difficult for them to find any cognitive way of describing what they observe. However, achieving this level of ignorance has led to many valuable discoveries. None of these discoveries would have occurred if scientists had not doubted the apparent logic of 19<sup>th</sup> century physics. Science begins with "I don't know."

A well known acupressure system, reflexology, uses pressure points only on the bottom of the foot. Walking, of course, stimulates these same points in a rhythmic manner. Many therapies advocate abdominal breathing. Using the diaphragm in this way also massages the transverse colon, thus reducing intestinal stagnation. Yawning and sneezing also stretch the neck, which opens Qi-flow channels that are often blocked. Flexible proper spinal alignment is considered a valuable component of homeostasis and renewal in yoga and other therapies. Sleep is a profound process of biological renewal scarcely evaluated by any health care system. For all our biological ancestors and cousins without insurance coverage, walking, breathing, flexible movement, and sleeping have been the best bargain in town.

Having pleasant relations with other people has a significant positive effect on human moods and vitality. Biophysical changes in animals and even plants can be noted in response to human emotion. Social relationships seem to function on a biophysical or Qi level as well as on a psychological level.

I will mention several more speculative Qi-related mechanisms in order to stimulate insightful exploration of self-healing possibilities. In selecting the names of acupuncture points and in other contexts, Chinese medicine frequently compares the surface of the body to the surface of the earth. Let us see if this comparison might have useful implications. The electric potential of circulating fluid can be measured as its pH of 7.4. The surface of the skin, called the acid mantle, has a pH of 5. Consider-

able physiological energy is used to maintain the electric gradient between the circulation and the skin. A similar gradient exists between the surface of the earth and the more acidic ionosphere. The latter electric gradient brings water from the surface of the earth into the sky. Perhaps the gradient between the circulation and the surface of the skin helps move vital fluid from the circulatory system to the surface and excretes fluid as sweat. Ancient Chinese medicine describes the sweat function as an important part of bodily defense against illness. Treatments are designed to open or close the sweat system. Sweat is viewed as an important means of excreting waste and toxins. Fever is also part of this protective system. Modern medicine trivializes this process by focusing on sweat glands and ignoring the problem of fluid movement.

Applied kinesiology is a modern technique, which purports to identify health-giving substances by observing whether holding a given sample correlates with increased or decreased muscle tone. Applied kinesiology seems like a bizarre coincidence until an evolutionary point of view is considered. How does a simple animal know what to avoid eating? It might use an information system, which identifies harmful food and then causes a sudden drop in muscle tone so that the process of eating is suppressed. My purpose is not to make claims that have not been properly tested. My purpose is to help all of us be more inclusive and open minded about the body's ability to heal itself.

The Qi-flow system has been a product of evolutionary development as much as any other

biological system. Biological systems are developed and retained because they are useful to the organisms. The Qi-flow system evolved because it was valuable to animal organisms long before anyone thought of using needles or pressure to stimulate "acupuncture" points. Indeed, we should always describe it as a Qi-flow system rather than an acupuncture system in order to avoid the implication that we are ignorant of this evolutionary process.

### QI-FLOW SYSTEM

Let us consider the characteristics of such a Qi-flow system. First of all, the organisms must be able to activate and utilize the Qi-flow system without the presence of an extrinsic stimulus. The organism must be able to "acupuncture" itself. There must be mechanism (s) for the organism to select and stimulate particular Qi-flow points in a way that is productive. Our perceptions of "de qi" and relaxation following acupuncture are examples of reinforcing biological feedback to the organism. Similar feedback sensations accompany eating and sexual activities.

We often perceive pain related to internal organs in unusual locations, so called "referred pain". Gall bladder pain may be perceived near the right shoulder, for example. The locations of referred pain may be puzzling to anatomists but they are accurate indications of points of Qi-flow blockage known to acupuncturists. Pain is a message for the organism "to pay attention to" a certain body location. Pain is consciously perceived. There also may be other comparable messages to activate Qi-flow points that are not consciously perceived by us.



Previously I described Qi as a force which moves biologically active fluids both in plants and animals. Qi is then part of a circulatory system that is presumably much older than the cardiovascular system that is so prominent in mammals. Typically, a new, more specific physiological system evolves in an organism so that the new system co-exists with the older more general physiological components. For example, the cerebral cortex has evolved in recent millennia and now co-exists with the older, more general "sub cortex".

Qi also relates to such phenomena as embryological patterning and wound healing which are information related activities that are clearly governed by systems that are more primitive on the evolutionary scale than the central nervous system. Qi defines an organism's existence. Electromagnetic radiation on the surface of the body and circulating Qi within are part of a pulsating blueprint, which measures and guides the living organism. Our bodies also have a micro-acupuncture system on the ear. Ear acupuncture points relating to all parts of the body are arranged in the shape of a fetus. Perhaps this is a back-up blueprint. The embryo's Qi models on the mother's Qi during pregnancy. Furthermore, babies have a critical need to be held during the first months of life. In this case another person's Qi functions just as well as the mother's. Close appropriate human contact is necessary for growth and development.

Young children rapidly gain an ability to identify which people make them comfortable and which people make them uncomfortable. Babies are usually quite consistent

in these reactions. Babies seek out living contacts which are compatible with their own development. This process of sharing Qi between people should be evident on the basis of many intimate, nurturing experiences in our lives.

My hypothesis is that the Qi-flow system is part of the most basic biological processes in our body. Qi is a balancing activating component of the most primitive, but also the most pervasive process of circulation and information in living bodies. The specific charac-

teristics of the Qi-flow system are immensely more complex than we can describe at this present time. The Qi system is a summation of many layers of evolutionary mechanisms promoting homeostasis and self-healing. There is a saying that those who do not study history are doomed to repeat it. The Qi system is a library of history literally at our fingertips.

Topics such as embryological patterning, autonomic balance, and microcirculation of lymph are described by today's scientists only

#### WE MUST CHANGE THE DOMINANT PARADIGM

Western medical science functions under a dominant paradigm with the following characteristics:

1. The body is seen primarily as a source of defect and risk rather than as a homeostatic, self-healing entity.
2. Biological processes are only acknowledged if they can be verified in a linear causative manner.
3. Chemical mechanisms are virtually the exclusive focus of research.

Acupuncture does not exist in this paradigm. Indeed, it will never exist. This medical paradigm may be comforting to pharmaceutical advertisers and those who patent genes, but this paradigm separates medicine from physical and evolutionary science and alienates a significant part of the general populace.

Revision of this dominant paradigm will bring medicine in line with other changing scientific fields, as well as common sense. The new paradigm would include:

1. The homeostatic and self-healing capability of our bodies will be acknowledged and studied as a primary part of medicine.
2. Uncertain, broadly interactive and multi-variant models of reality will be used in medicine as they are in ecology, modern physics and information theory.
3. Biophysical mechanism will be considered prominently. Evident biological phenomena will not be systematically ignored because their mechanism cannot be determined.

Finding a place for Qi-flow therapy in Western medicine will help rebuild a legitimate relationship between modern medicine and biologic reality.

in rather general, observational terms. Chinese medicine provides more concepts and principles for us to attempt to understand these basic biological processes. Nevertheless, we all have to accept the fact that the Qi-flow system and our basic life processes are much more sophisticated and capable of self-regulation than our current wisdom can appreciate.

External stimulation of Qi-flow points improves the functioning of an already active biological system. Stimulation such as acupuncture triggers an increase in effectiveness of Qi-flow. For the most part the response of the Qi-flow system is much more complex than the choice of the stimulus (the location of acupuncture points chosen).

Needling even one location can trigger a cascade of varied physiological responses in many parts of the body. The complex diversity of the response can rarely be predicted by the acupuncturist. Indeed this is one of the most valuable characteristics of acupuncture. A safe and relatively simple stimulus (or series of stimuli) may produce profound, multi-faceted, and often long lasting effects. As therapists, we should appreciate our easy access to this subtle programmed system. We should avoid the temptation to give the body precise instructions based on the illusion that we have an adequate understanding of these basic life process. We are nursing assistants to the primary healing force: Qi.

#### WHAT RESEARCH IS NEEDED

What kind of research and experimentation would be appropriate to evaluate my hypothesis? First of all, we should look for evidence

of Qi and Qi-flow points throughout the animal and plant kingdoms. My colleague in Budapest, Dr. Ajankok Eory, has already begun by stimulating Qi-flow points on the stems of plants and noting consistent increases in the temperature in the leaves. Stimulating locations on the stem which do not have decreased electrical resistance produces no change in leaf temperature. Studying more simple organisms will generally produce more clear-cut results. In this regard we should remember that many different types of stimuli can trigger Qi-flow points. For example, pressure, light touch, electro magnetism, even Qi emanating from a hand held beyond the body can all be as effective as acupuncture needling. Using these techniques can make work with a simple organism much more convenient.

Secondly, we should not expect to find any one to one correlations between acupuncture stimulation and specific activities associated with organs that developed later in the evolutionary process. Hence Qi-flow phenomena should not be exclusively correlated with a specific peripheral nerve, endocrine gland or cerebral cortical process. Naturally there will be general correlations since more recently evolved body processes are well integrated with other layers of development. Acupuncture treatment for asthma, for example, will not merely follow a specific neuroendocrine pattern. Researchers should expect a variable pattern of interim responses that fluctuate according to many internal and external factors. In one French study acupuncture that was intended to increase liver excretion of alcohol actually stimulated a more primitive response instead - excretion by exhalation and sweat.

Thirdly, conventional controlled studies are not indicated in a situation where the primary action of change (the response of patient's own body) cannot be reliably predicted by the therapist. Needling the same point may often produce different effects at different times. Needling different points can produce the same homeostatic bodily reaction. There are exceptional circumstances where acupuncture needling is predictable in a linear Newtonian manner, but the overwhelming amount of significant acupuncture treatment involves a range of responses that cannot be precisely specified. Conventional controlled studies eliminate or control variables in order to be consistent. Acupuncture, on the other hand, can produce a consistent homeostatic response even in the presence of confounding variables. Since the clinical world is usually full of confounding variables, acupuncture is quite suitable to practical outcome studies.

#### ORGANIC INTEGRITY

People who receive Qi-flow therapy typically report that they feel more centered, calmer and more comfortable with their own thoughts. They are reminded of more peaceful times in their life, or perhaps they experience a peaceful consciousness for the first time. These experiences are comparable to perceptions related to meditation, yoga, and other types of spiritual training. Qi-flow therapy can be a key that opens the door to a more centered and effective consciousness. Successful treatment can show a distraught patient that they have a much greater capability for a peaceful consciousness than seemed possible in their chronically nervous state.

Many people suffer from illnesses that are described as psychosomatic or autoimmune, because conflicts within their body are expressed as chronic destructive symptoms. I would describe such people as excessively controlled by the recently evolved central nervous system and endocrine systems. They have lost contact with the older, more homeostatic functions that we have identified with Qi. Older homeostatic functions of the body provide physical and emotional stability and resilience that are necessary to life. Western civilization has adopted Descartes' definition of existence "I think therefore I am". For these patients a more appropriate version might be: "I fear, therefore I am." Their own fears and insecurities become so pervasive that they cannot imagine being alive without them. The concept of finding a soothing, balancing process within themselves seem preposterous.

After all, their will power, intelligence, and numerous pharmaceutical efforts have not been effective. "How can there be anything valuable within me?" they say. "I have tried as hard as I can." Some people may even feel insulted by the suggestion that there is some part of them that has not been used in this struggle. Efforts to find these older homeostatic layers may be labeled as irrational. In one sense, this is true. The older homeostatic parts of our body developed long before there was any rationality, that is, before the evolution of the cerebral cortex.

This treatment provides a simple, easy path to a vast healing capacity within ourselves. Once we become re-acquainted with the source of our life, we will be smart

enough to take it easy and let the Qi-flow.

### HELP THE BODY HELP ITSELF

Qi-flow therapy helps the body help itself. It provides input to an already functioning homeostatic system. Our bodies make constant adjustments on many levels. The aspects of life that are affected by this treatment are quite complex: microcirculation, autonomic balance, immune function, etc. It can also affect functions such as sleep and menstruation, which occur a significant amount of time after the actual treatment. None of us, modern or traditional, can explain these bodily functions in a clear cut way.

Saying that we are merely "helping the body help itself" is readily understood by many diverse cultures. People appreciate the humility and lack of presumptive theory. No one is saying "I know how your body works". We are only offering to help your own efforts.

American medical culture, on the other hand, makes the concept of a "body healing itself" hard to accept. Our language betrays us: 'you catch a cold, then the cold goes away; 'you get a headache, then the headache goes away'. Body weakness is well defined. However, we have no way of directly saying that our body's own capability has resolved a particular problem. When I was in medical school, we were told that "spontaneous remission" occurs sometimes in cancer. The professor was willing to say that a totally unknown mechanism cures cancer rather than suggest that the body's own immune physiology might have this effect. The intermittent character of most chronic illnesses clearly suggests

that our bodies can both be imbalanced and, later rebalanced. Qi-flow therapy helps these corrective efforts become more effective and long lasting. This is a very obvious 'mechanism' of health care that we have overlooked.

Western medicine takes a 'welfare' approach to the management of chronic illness. The patient is encouraged to be passive and compliant. All health care is provided for the patient. Self-help procedures are not stressed. Patients often become frustrated and resentful in such a process. Most chronic regimens are life-long commitments. Needless to say, this 'welfare' approach is very expensive. Costs seem unavoidable. Regimens usually increase in complexity over time.

Qi-flow therapy is based on 'self-reliance'. The therapist makes a relatively small and relatively infrequent intervention to help the body help itself. Since we are stimulating very complex balancing and restorative mechanism, a simple stimulus can produce a complex, long-lasting response. Frequently, illnesses cease to require chronic daily treatment. This kind of medicine interacts very well with the body and with other treatments.

Western medicine only refers to physiological restorative mechanisms when those mechanisms can be precisely described. Otherwise, structures in the body are assumed to be passive entities that can be acted upon by external forces. In many ways our body is considered an "alternative" medicine. Western practitioners are often perplexed by claims that Qi-flow therapy affects the emotions and spirit of a person as well as a par-

ticular symptom. Since we are an integrated organism, any treatment that helps the organism to help itself would naturally affect all aspects of life.

Modern acupuncture textbooks also have a hard time with the concept of self-help. Acupuncture is presented outside of any context of development or relativity. The end result is remarkably similar to conventional modern medicine. Both of these textbook-based training programs give scarcely adequate preparation for new health care providers. Many of the teachers are certainly aware of these defects and may have transcended them in their individual professional development. However, they preside over medical systems, which take the living patient out of the equation and therefore have a significantly impaired perspective regarding chronic disease and prevention.

#### **WHAT WE DON'T KNOW WILL HELP US**

Health care treatment can be divided into two categories based on its relationship to the unknown. Conventional modern medicine focuses entirely on phenomena which can be measured and photographed. It studies what has already happened. As we have seen, modern medicine tends to fill in gaps to form a consistent worldview. It is a very good system for dealing with familiar processes which are currently happening or which have already occurred. Simple external objects and substances can be studied more completely than the human body, so diagnosis and treatment usually focus on external causes and remedies. As such, modern medicine is quite appropriate for physical trauma, surgery, and the

evaluation of known harmful processes. Treatment is harm reduction or risk management. There is no place for the unknown in conventional medicine.

Qi-flow therapy uses unknown processes in treatment. On the surface this statement seems ridiculous. How can a person use what they don't understand? The reality is that Qi-flow therapy is valuable precisely because we do not know how it works. The less we know, the more valuable it is. The long historical development of Qi-flow therapy has taught us how to connect with processes beyond our knowledge. When acupressure is used to relieve a headache, it is a useful but medically trivial event.

When a few acupuncture treatments are used to relieve and prevent further allergy attacks for six month period, the treatment is more significant because we don't know of any mechanism that will prevent allergy attacks in this manner. A series of Qi gong treatments that improve long term vitality in a person with immune deficiency would be considered a much more significant treatment because the mechanism would be wholly unknown.

Qi-flow therapy may be unknown in the mechanical sense, but it is very familiar in the human sense. These treatments feel comfortable and safe. They reflect our own capability for balance and renewal.

#### **WE HAVE A PARTNER SMARTER THAN WE ARE**

Acupuncture and other Qi-related therapies give the practitioner a unique privilege. We are able to work with a partner (the living

human body) that has much more capability than we do. Most health methods focus on substances or activities, which act on the body. Practitioners of these methods must rely only on their own knowledge to determine the appropriateness and limitations of the treatments being provided. Hence an obsessive need for control dominates most health care. Acupuncture and other Qi-related therapies transcend these limitations.

#### **THE PATH TO SPIRIT**

The name of two separate important acupuncture points is "shen men". This name is usually translated as spirit for "shen" and gate for "men". One of these points is located on the wrist; it calms the mind. The other is located on the ear; it focuses on the abdomen as yoga does. The Chinese character "men" is not a gate in the western sense of the word. Rather it is a ceremonial designation indicating the appropriate path to approach the spirit. Qi lies within. It is a "higher" power that is found inside our ancient biological development. Qi is characteristic of simple organisms as well as ourselves. It provides new vitality by linking us with the oldest levels of existence. Qi is a process of natural connection, a rich vegetative realm where faith in continued existence is easy to maintain. Qi is a nest for the soul.

## Appendix A

### Illusion Of Consciousness

Most of the content of our conscious mind is sensory in origin and quite useful for survival. Raw sensory input has to be edited and combined with pertinent cognitive material so that we perceive a coherent picture of our environment and not just a jumble of data. We perceive that our vision is immediate, but studies show that there is a 0.5 second editing delay. This type of sensory consciousness is probably widely present among animals since many animals move as though they perceive an integrated view of their environment.

A warning "no" is often associated with certain sensory patterns in the conscious mind. It is part of the cognitive support system that the conscious mind associates with certain sensory patterns. Planning, worry, judgment, analysis, and criticism are all similar intellectual constructs related to the conscious mind. Consciousness is an excellent way to set limits.

Consciousness uses the self as a point of reference for observation, action, and propriety. However, the thoughts and perceptions that relate to a particular person are much more extensive than those which are edited and monitored by the person's conscious mind. Writers and speakers, among others, know that their words come from a part of the mind that is complex and highly personal. This part of the mind is not determined or controlled by the conscious mind. Words and thoughts "pop" into the conscious mind as they are spoken so that the effect is spontaneous and free flowing rather than edited and pre-planned. This part of the mind is labeled pre-conscious, sub-conscious, or unconscious in various psychology theories. For our purposes, the contrast between the well-defined conscious mind and the extensive and variable non-conscious mind is the critical issue.

These two versions of the mind obviously interact constantly as part of the same person. Nevertheless, they act as virtually separate entities in many respects. Consciousness is valued as the home of reason, order, and propriety—all functions of editing and warning. The conscious mind contains only explicitly edited and well thought out material, therefore it contains much less information than the non-conscious mind. The non-conscious mind is often described as merely a collection of unorganized thoughts, dreams,

memories and fantasies. We are not explicitly aware of how the non-conscious mind is organized, even though the existence of sophisticated artistic compositions is certainly evidence that there is a potential for subtle comprehensive organization. Beethoven's composition of his *Ninth Symphony* while totally deaf is a clear-cut example. The non-conscious mind is a place of countless interactions between perceptions and memories. It is a place of immense variety: of feelings, of body movement of rhythm and music, of mood, of imagination, of color and fantasy, of relationship, and of solitude. It is also safe harbor where Qi resides.

Almost every suggestion for attaining mental or spiritual well being involves avoidance of the conscious mind. Watching action movies or romantic dramas help us leave our self-conscious limits and identify with the movements and feelings of others. Physical activity can be relaxing if it is free flowing, rhythmic, and spontaneous. The jogger "high" comes when runners are lost within their complex rhythmic movements and have separated from their critical consciousness. Yoga, meditation and spiritual training explicitly teach methods to "let go" of the conscious mind. Peace and renewal are non-conscious activities.

When trying to determine if someone is telling the truth, the accepted wisdom is to observe whether the person's speech is spontaneous and free flowing and whether body language and eye contact are well integrated with the person's words. We are more likely to trust someone who speaks "from the heart," that is, from the non-conscious mind.

#### CHOOSING THE SMALL VERSION OF SELF

Many people identify their personality primarily with the conscious mind. In doing so they are choosing a limited, edited version of the self. This choice is a tragic error. The conscious mind is an excellent device for structuring observations setting limits, and maintaining propriety. But consciousness cannot represent an effective personality unless it is subordinate to the more extensive and creative non-conscious mind. People who identify with the conscious mind make the mistake of extending their controlled efforts to all aspects of life. They try to control their mood by an endless series of actions and external adjustments.

Sometimes these efforts lead to obsessive and addictive disorders.

When a person who is pre-occupied with conscious behavior becomes depressed, they put evermore controls and limitations in their mind. The depression fixates and deepens. Such an overly conscious person has lost access to the part of their mind which can provide homeostasis and renewal. Focusing on the conscious mind usually has the goal of seeking control and harmony. Tragically this choice has the opposite effect of separating a person from their only source of self-healing. As we have seen throughout this paper, health improvement is a product of relationship not action. We must let go of unnecessary conscious activities and allow ourselves to be "controlled" by a part of our mind, which we will never clearly understand. Like the Qi system, the non-conscious mind is a summation of many layers of evolutionary mechanisms promoting homeostasis and self-healing. It would not be surprising to find that some of these layers involve communication between living beings and focus on the similarities within life rather than on individualizing differences. A peaceful mind seems to bring us in closer harmony with others as well as within ourselves.

What kind of beneficial relationships between the conscious mind and the non-conscious mind are possible? Let us consider several examples:

What kind of beneficial relationships between the conscious mind and the non-conscious mind are possible? Let us consider several examples:

1. An experienced athlete suddenly perceives a leg cramp while running. The conscious perception of pain compels the runner to visualize the affected leg and to focus on the urgency of resolving the problem. The conscious mind would identify the onset of cramping pain in the leg as a warning that the whole leg might become injured. However, experienced athletes routinely "run through" cramps of this type. The non-conscious mind seemingly initiates a Qi flow response that alleviates the cramp while the person con-

tinues running, even though this response does not fit the conventional rules of physiology.

2. A person wants to stop snoring. He repeatedly makes a conscious request to his unconscious mind, "stop snoring". The snoring continues. Later on, this person presents the request differently, "be quiet during sleep". The snoring stops that very night. Many books on meditation make the point that the non-conscious mind does not respond to thoughts or words of negation. Success came when the conscious mind followed an easy, subordinate path. A gently affirmation was effective; whereas the critical demand was not useful.

3. An author needs to complete the final chapter of a novel. She knows that her editor has imposed a 2-week deadline. She has revised the plot outline and previous chapters according to the editor's suggestions. These are all issues for the conscious mind. They are important but subordinate to task at hand. The actual creative process is disarmingly simple. The author waits until the non-conscious mind starts producing useful material. A great deal of other distracting non-conscious material may come out first. Different moods and turmoil may have to be experienced. Eventually the novelist's clear voice may be heard.

It is also common for the conscious mind to have a fearful, critical reaction to ideas and feelings of non-conscious origin. We may be encouraged to suppress uncontrollable sub-conscious urges. Our own spontaneity becomes the enemy. It is easy to see how this process can become a counter productive, vicious cycle.

Our relationship to the non-conscious mind is the critical ingredient. As human beings, we will never know the precise content, organization, or priorities of our non-conscious mind. Our mind is valuable exactly because it helps us relate to the unknowable complexity in a useful way. We need to keep this relationship simple, use affirmation, and be open to new life.

## Appendix B

### Modern Science May Be Dumber Than A Fungus

Oxford biochemists Howard Florey and Ernest Chain wrote in 1940 that naturally occurring antimicrobials had been known to exist for a long time and that a "systematic evaluation" of these substances should be undertaken. Alexander Fleming had accidentally discovered that a soil fungus could stop the growth of staphylococcus eleven years previously. Within a year Florey obtained substantial U.S. funding, and the entire laboratory building at Oxford was turned over to the production of the penicillium fungus. Three years later each of these scientists received the Nobel prize.

In spite of this remarkable success, the systematic evaluation of natural antimicrobials has not yet begun.

#### THE END OF THE ANTIBIOTIC ERA?

Today there are repeated warnings in the responsible scientific press (*Science* Aug. 21, '94), that "the end of the antibiotic era may be approaching." Resistance to antibiotics in use has spread very rapidly. In many situations only one antibiotic shows activity against the infecting bacteria. It is widely predicted that resistance to the few remaining crucial antibiotics will spread quickly.

If effective antibiotic treatment is not available, surgery, obstetrics, invasive diagnostic procedures, and even intravenous lines will carry a substantially greater risk. Western medicine as we know it would be imperiled. This situation may not be as dangerous as these scientists have described it. The development of antibiotic resistance is usually attributed to widespread usage of antibiotics in the modern era. Usage of antibiotics has indeed been unnecessarily expansive, but let us look beyond the world of human activity.

The Oxford biochemists noted that an enzyme from *E. coli* destroyed penicillin in 1940 (*Nature*, Dec 28, 1940). William Kerby at Stanford noted that some strains of *Staphylococcus* were resistant to penicillin even though they had never been overtly exposed to the drug (*Science* June 2, 1944).

*Staphylococcus* and *E. coli* are very common bacteria that have existed together with soil fungi such as *Penicillium* for thousands, perhaps millions of

years. Penicillin presumably evolved as a result of this prolonged exposure. It is not surprising that certain bacteria evolved resistance during this period of exposure.

However, it is remarkable that this resistance did not become more widespread or effective during this time. Certainly the opportunity for evolutionary change has been greater during the millennia of contact between common bacteria and soil fungus than it has just from the use of antibiotic drugs in the past 50 years.

#### LEARNING FROM PLANTS

Perhaps the fungus had administered penicillin more effectively than the modern physician. The chemical, penicillin, does not exist or function in isolation within the fungal organism. Doubtless, an array of buffers, enzymes, and co-factors have evolved in the fungus which would enhance the effectiveness of penicillin and diminish the significance of bacterial resistance. To assume otherwise is to deny the general theory of evolution.

When modern scientists isolated penicillin as the only active antibiotic ingredient in the soil fungus penicillin, they proceeded backwards down the scale of evolutionary development. The information system (the "intelligence") of the soil fungus *Penicillium* seems to have produced a more effective product than the laboratory. Hence, "modern medicine may be dumber than a fungus".

When someone suggests the use of herbal antibiotics from plants which are more complex than fungi—garlic, for example, scientists respond that this is not possible because "the active ingredient" has not yet been isolated.

That is the point exactly. We need to use more subtle and complex biological products so that resistance may be less likely to be significant. No longer do we have the luxury to seek out pure, ultra-simple remedies to cope with the teeming biological world. Medical science is partially fixed at a sub-fungal level of development.

No wonder the risk of nosocomial infections threatens

to overwhelm the many marvelous advances of modern medicine.

As persons trained in traditional herbal medicine, we have a special responsibility to help our colleagues understand and select appropriate herbal antibiotics. Our whole society has become increasingly attached to fantasies of pure and precisely understood chemicals which will solve each of our major health

problems. Many people have trouble even considering the possibility that natural biological products could be beneficial in health care.

Chinese medicine offers clear and practical guideposts for the use of living energy and living substances.

The need for this wisdom has never been more desperate.