

Deep Listening: Revealing the Pulse

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In ancient Persia, the Sultan's wife was ill and a physician was summoned. As it was forbidden for a Moslem woman to show her face or body, the Unani¹ doctor made his diagnosis by feeling the pulse of the wrist that was extended to him through a slit in a curtain. Skilled in sphygmology, the science and art of pulse reading, he made the diagnosis with ease and successfully treated the Sultan's wife. The Sultan complimented the physician on his skill, to which the physician replied that his fingers were so sensitive he could feel the pulse through a string around a patient's wrist and make the correct diagnosis.

The Sultan decided to test his skill – and to teach him a lesson. “An individual will be hidden behind the curtain, with a string connected around their wrist. You may only touch the string and if you are successful in your diagnosis, you will be rewarded richly. However, if you are wrong, you will be banished and all your possessions confiscated.” The physician agreed and it was arranged. Behind the blind a string was tied around the tibial pulse of a cow and the string was laid out through an opening in the curtain. The physician placed his fingers on the string, paused for a moment, listening intently, and then announced, “All this client needs is grass.”

To glean so much from simply feeling a pulse seems incredible, almost magical. In Western medicine, ‘taking the pulse’ is a part of the battery of diagnostic procedures but its role is very minor. To the Western doctor, the pulse is of concern only for diseases of the heart and the circulatory system. Even then, more importance is placed on measurements by sphygmotonometer, the familiar pneumatic cuff used for testing blood pressure, or sphygmotonomograph, which records the pulse and blood pressure electrically. The ability of the human physician to correctly sense and interpret the delicate throbbings of the pulse is considered suspect – far too fallible². Yet to the Ayurvedic physicians of India and Tibet, the Unani doctors of Persia, and the Oriental Medical Doctors of China, the reading of the pulse is of paramount importance and all other diagnostic procedures are ancillary to it. To these practitioners of traditional medicine, the pulse is the method supreme to reveal the physical, emotional, and spiritual condition of the body, both in health and in disharmony. Pulse-reading is an invaluable tool in preventive medicine, allowing the physician to diagnose imbalances before they settle into the body as full-blown disease.

Surgeon Richard Selzer, in his book, *Mortal Lessons*,³ relates the story of Tibetan physician Yeshi Dhonden on hospital rounds one morning. Tibetan Medicine is a unique infusion of Ayurvedic Medicine, Traditional Chinese Medicine (TCM), and Buddhist Dharma Medicine, and Ven. Dr. Dhonden is one of its most gifted practitioners. That morning Dr. Dhonden was to examine a patient that had been selected by members of the hospital staff. Neither Dr. Dhonden nor the accompanying physicians on rounds were told the medical condition of the patient. After purifying himself through bathing, fasting, and prayer, Dr. Dhonden appeared at the patient's room and stood by her bedside, silently gazing at her for many minutes.

“At last he takes her hand, raising it in both of his own. Now he bends over the bed in a kind of crouching stance, his head drawn down into the collar of his robe. His eyes are closed as he feels for her pulse. In a moment he has found the spot, and for the next half hour he remains thus, suspended above the patient like some exotic golden bird with folded wings, holding the pulse of the woman beneath his fingers, cradling her hand in his. All the power of the man seems to have been drawn down into this one purpose. It is palpation of the pulse raised to the state of ritual. From the foot of the bed where I stand, it is as though he and the patient have entered a very special place of isolation, of apartness about which a vacancy hovers, and across which no violation is possible. After a moment the woman rests back upon

her pillow. From time to time, she raises her head to look at the strange figure above her, then sinks back once more. I cannot see their hands joined in a correspondence that is exclusive, intimate, his fingertips receiving the voice of her sick body through the rhythm and throb she offers at her wrist. All at once I am envious – not of him, not of Yeshe Dhonden for his gift of beauty and holiness, but of her. I want to be held like that, touched so, received. And I know that I, who have palpated a hundred thousand pulses have not felt a single one.”⁴

After listening to the pulse, Dr. Dhonden inspects a urine sample and then he and the other doctors depart to discuss his findings. “He speaks of winds coursing through the body of the woman, currents that break against barriers, eddying. These vortices are in her blood, he says. The last spendings of an imperfect heart. Between the chambers of her heart, long, long before she was born, a wind had come and blown open a deep gate that must never be opened. Through it charge the full waters of her river, as the mountain stream cascades in the springtime, battering, knocking loose the land, and flooding her breath.” The host of the rounds then revealed the woman’s medical diagnosis as congenital heart disease – interventricular septal defect, with resultant heart failure. Selzer muses, “A gateway in the heart, I think, that must never be opened. Through it charge the full waters that flood her breath. So! Here is the doctor listening to the sounds of the body to which the rest of us are deaf.”⁵

This deep listening through touch is not magic. It is not something rare and unattainable. We all can remember when we first began our massage training, how the instructor would be talking about qualities of the muscle, or organs, or energy, as if they were so obvious and then we’d put our hands on the body and feel nothing but a vague mass of flesh. Through practice, through application, we developed our tactile sensitivity and our palpatory skills. Discerning the richness of the pulse, and the language of the body, is but another skill to be cultivated. It is a skill that has been nurtured and refined for centuries, not by some exalted few but by medical practitioners in Egypt, Greece, Persia, Iraq, Tibet, India, and China.

A Brief History of Pulse Diagnosis

Reliance on invasive (and expensive) testing and medical technology is a relatively recent trend. For centuries, traditional medical systems around the world have relied on the human senses as diagnostic tools. Of the two diagnostic methods common to most traditional medicines – sphygmology (pulse analysis) and urology (urinalysis) – pulse diagnosis is the oldest and the most universal.

Early Egyptians were aware of the significance of the pulse as early as the 30th to 26th Centuries B.C. The Ebers Papyrus, which is said to date from 1550 B.C., proclaims “...when any physician, any surgeon (literally, Sachmet or priest) or any exorcist applies the hand or his fingers to the head, to the back of the head, to the hands, to the place of the stomach, to the arms or to the feet, then he examines the heart, because all his limbs possess its vessels, that is: it (the heart) speaks out of every limb.”⁶

In China, we find extensive discussions of the pulse in the *Neijing Suwen*, the classic of Traditional Chinese Medicine attributed to Huang Di, the Yellow Emperor, who reigned during the middle of the third millennium BCE, as well as in the *Nan Ching (Classic of Difficulties)* by Pien Ch’iao (5th century B.C.), *The Synopsis of the Golden Chamber* by Chang Chung Ching (2nd century A.D.), *The Classic of the Pulse* by Wang Shu Ho (265-317 A.D.), and the *Pen Tshar Kang Mu* by Li Shih-chen (1518-1593). According to the *Neijing*, “Nothing surpasses the examination of the pulse,” and Chinese Medicine has developed the science of the pulse to a high art.

In the Ayurvedic tradition, many of the seminal medical teachings have been lost and are only known through secondary reference in later medical writings. Two Ayurvedic texts deal exclusively with the intricacies of pulse analysis: the *Nâdî Vijñânam* by Maharishi Kanada (circa 7th century B.C.) and *Nâdî Prakasham* by Shankar Sen (19th-20th century A.D.)

Persian physicians continued and elaborated upon the sphygmological traditions established by the Greeks, the Ayurvedists, and the Chinese. Physician and scholar Rashid al Din al Hamdan, in 1313, prepared an encyclopedia of Chinese Medicine, and the great Arab physicians Razes, Al Majusi, and Avicenna all wrote on pulse diagnosis. Avicenna is known to have used the pulse as a lie detector. The Unani physicians were also familiar with, and seemed to favor, the Ayurvedic teachings. Although they borrowed from Greek, Indian and Chinese medicine, the doctors and scholars of Unani Medicine infused these theories and practices with their own insightful observations.

Reference to the pulse does not appear in Greek texts until the time of Democritus (460-370 B.C.) and his contemporary, Hippocrates. Galen (129-195 A.D.) was very familiar with sphygmology and wrote eighteen essays on the pulse. By the 9th century, Greek sphygmological writings were available to the Arabic, Latin, and Hebrew reader.

While each medical tradition recognized and valued the pulse as a diagnostic tool, each developed and refined it in unique and distinctive ways.

The Pulse in Chinese Medicine

Chinese Medicine looks to the pulse to discern the equilibrium of yin and yang, the flow of Qi and Blood, and the relationship of organs to each other. Ayurveda and Unani Medicine look to determine the state of the elemental constitutions or *doshas* and their derangements, while Western medicine considers the pulse largely in terms of circulatory disorders. Ayurvedic and Unani teachings on the pulse have more in common than not with Traditional Chinese Medicine, but here I will focus on the TCM viewpoint, mainly for reasons of space and familiarity.

The pulse from a Western point of view is a rhythmic throbbing or pulsation caused by the regular contraction and expansion of an artery, in time with the heartbeat. Due to the elasticity and distensibility of the arterial wall, the rhythmic rise of pressure creates a wave within the vessel which can be felt relatively easily at any exposed artery. Blood pressure diminishes from heart to periphery and similarly the amplitude of the pulse decreases the further the pulse point from the heart.

Up until the Han Dynasty, pulses were felt in nine locations – three on the head, three on the hands, and three on the legs. These Nine Regions are said to reflect the state of the Three Burners. The head pulses correlate to ‘Heaven’ and the Upper *Jiao* or Burner; the Upper *Jiao* reflects diseases from the chest to the head. The Middle *Jiao* corresponds to ‘Person’ and reflects diseases between the diaphragm and umbilicus. The Lower *Jiao* corresponds to ‘Earth’ and reflects diseases from below the umbilicus to the feet.

The *Nan Ching (Classic of Difficulties)* simplified pulse-reading by focusing palpation of the pulse at the radial artery in three finger positions at the wrist⁷, felt at three depths (superficial, middle, and deep). Traditionally, the three segments, or finger positions, of the radial pulse were called inch (*ts’un*), barrier (*kuan*), and cubit (*ch’ih*).⁸ Since the pulse is taken at both wrists, these six points are known as the six pulses. The six pulses felt at superficial and deep levels comprise the twelve classic pulses.

Chinese Medicine, unlike Ayurveda and Unani Medicine, sees a relationship between the six pulses and the twelve organs/channels. The system most common in China correlates the right hand distal (inch) position to the Lungs; the right hand middle (barrier) position to the Spleen; the right hand proximal (cubit) position to the Kidney Yang; the left hand inch position to the Heart; the left hand barrier position to Liver; and the left hand cubit position to Kidney Yin. In some approaches, the superficial level pulses are attributed to the yang organs which are paired with the yin organs associated at the deeper level (in

this system, the Triple Burner is linked with Kidney Yang for pulse-reading purposes). Discrepancies between systems may be understood, according to Chinese Medicine scholar and physician Giovanni Maciocia⁹, as differences in therapeutic emphasis between acupuncturist and herbalist.

In TCM and in Tibetan Medicine, a male client’s left pulse is taken first, while taking the right pulse first with a female client. In Ayurvedic and Unani Medicine, it is the opposite. According to the *Bin Hu Mai Xue (The Pulse Studies of Bin Hu)*,¹⁰ the slight yin-yang differential between men and women will be reflected as a minor difference between left and right pulses. Left is yang and right is yin. Since men have more yang qi, their left hand pulse will be stronger than their right – provided their qi is well regulated. Similarly, women have more yin blood, so, provided their qi is well regulated, the right hand pulse will be slightly stronger. Likewise, when comparing inch and cubit positions, the inch is more yang and the cubit more yin. Consequently, the inch pulse of a male client should be stronger than their cubit pulse and a woman client’s cubit pulse should be stronger than her inch pulse.

A so-called ‘normal’ pulse is said to have Stomach-Qi, Spirit, and Root¹¹. Stomach-Qi is the quality of moderation. The pulse is clearly felt at the middle level, neither superficial nor submerged. It is gentle, calm, and leisurely slow (about four beats to each respiratory cycle¹² or 60-72 heartbeats per minute). Spirit refers to a quality of moderation in the shape and quality of the pulse. A weak pulse with Spirit has a core of strength, whereas a strong pulse with Spirit has a sense of elasticity. When the deep level and the cubit position can be felt distinctly, the pulse is said to have Root. Having Root means the Kidneys, associated with the basal energy of the body, are strong and healthy. A pulse with Spirit, Stomach-Qi, and Root reflects a sound state of Mind, Qi, and Essence, respectively. Some variation is normal. Athletes often have a slower pulse (40-54 beats per minute). Children typically have faster pulses. Women’s pulses commonly are softer and slightly quicker than men’s. A corpulent person often will have a slow and deep pulse, whereas a thin person’s pulse tends to be more superficial and large. The pulses of laborers will typically be stronger than the pulses of those engaged in mental work.

To feel the pulse, both practitioner and client ideally are relaxed and breathing fully. Morning, when the day and night energy rhythms of the body are in balance and the body is least subject to external influences, is the ideal time for taking pulses.¹³ The client may be sitting upright or lying supine and the forearm should be in a horizontal position level with (not higher than) the heart, palm up. The client’s wrist should rest in the practitioner’s palm, with the practitioners index, middle, and ring fingers locating the radial artery. The middle finger rests on the styloid process of the radius. The index finger will naturally come to rest near the wrist crease and the ring finger proximal to the middle finger. The fingers should not be touching but they should not be far apart; according to Dr. Dhonden, the distance between them should be that of the width of a grain.¹⁴ Some authorities specify that the fingers should be further apart for tall clients and closer for shorter clients¹⁵. The fingertips are usually more sensitive than the pads and are capable of greater discernment as to the subtleties of the pulse. Maintain a uniform pressure with all three fingers. When the pulsation is distinctly felt, the practitioner is said to have ‘found’ the pulse.

In listening to the pulse¹⁶, there are five stages. First, notice the pulse as a whole. Ted Kaptchuk, O.M.D., writes that when a Chinese physician takes a pulse, there is a sense of openness – of endless possibility – about what will be found¹⁷. Second, feel whether the pulse has Spirit, Stomach-Qi and Root. Thirdly, uniform pressure is applied to all three fingers, first at the superficial (skin) level, then with medium pressure, and finally with deep (bone) pressure, almost to the point of extinguishing the pulse. The three depths give an immediate sense of the level of Qi in the pulse. The superficial level discloses the state of Qi and the Yang Organs. The middle level reflects the state of Blood (*Xue*). The deep level reveals the state of Yin and the Yin organs. Sensing the pulse at these three levels thus gives an impression of imbalances or pathologies of Qi, Blood, or Yin, as well as the relative state of Yin and Yang. After focusing on the levels, the practitioner may check each finger position individually to identify the 12

classic pulses. Fourth, feel the strength of the pulse. Finally, feel the quality of the pulse, noticing its characteristic patterns.

The practitioner begins to learn to identify distinctive patterns within the pulses, by being attentive to the depth, pace, length, width, strength, rhythm, and overall shape and quality of the pulse. Different systems characterize seventeen, twenty-eight, or thirty-two individual pulse types¹⁸. According to Ayurvedic and Unani medicines, there may be as many as 600 different pulses, each with its own individual story to tell. Pulses are variable according to many factors: age, gender, season, time of day, diet, and the peculiar character of the disease. The pulse of a diseased individual will thus feel entirely different from that of a healthy individual, even though their pulse count may be identical. Rarely does an individual purely exhibit one pulse pattern; it is far more typical for pulses to display composite patterns, such as floating, slippery and rapid, or deep, wiry and thin.

Dr. Maciocia stresses the importance of interpreting the pulse dynamically rather than mechanically. It is this subjective art of interpretation that is most challenging, more than developing the sensitivity to discern the myriad subtle differences in the pulse. He further suggests that rather than placing undue importance to the organ (or channel) positions on the pulse, the more valuable concern is to appraise how Qi is flowing, the relationship of Yin and Yang, at what level Qi is flowing, whether the body's Qi is deficient, and whether there is an attack by an external pathogenic factor.

While pulse diagnosis is a skill that can be learned and developed, it is a subtle skill requiring considerable patience and commitment. The way to learn the pulse is to examine as many pulses as you possibly can and to personally observe for yourself the unique characteristics of each one. Although there are many excellent texts that can serve as invaluable references, an experienced teacher is really essential. Theory, observation, and daily practice – these are the requisites for mastering the skill of deep listening, of hearing and understanding the language of the body.

Notes

¹ Unani Medicine has ancient Greek roots, but was largely developed in Persia until finding a permanent home in India where this approach is quite active today. The theoretical framework of Unani Medicine is based on the teachings of Hippocrates (460-377 BC) but has been deeply influenced by systems of traditional medicine in Egypt, Syria, Persia, Iraq, India, China and other Middle Eastern and Far Eastern countries. For more information, see: Hakim G.M. Chrishti, N.D., *The Traditional Healer: A Comprehensive Guide to the Principles & Practice of Unani Herbal Medicine* (Rochester VT: Healing Arts Press, 1988), or visit www.unani.com

² The accuracy of mechanical methods is not assured. Sphygmotonometer readers of the same client may vary when taken by different physicians due to differences in auditory acuity or individual reactions. Variance between sphygmotonometer and heartometer readings can be as great as 40 points. Medical technology cannot discern the 12 classical pulses of Chinese Medicine, nor the *tridoshas* of Ayurveda. Mechanical measurement can record certain physiological measurements but it cannot make determinations of whether a pulse is slow or fast, hard or soft, deep or superficial, large or small, etc., which are vitally significant in TCM for determining pathological patterns. Reuben Amber & A.M. Babey-Brooke, *The Pulse in Occident and Orient: Its Philosophy and Practice in Holistic Diagnosis and Treatment*. (New York: Aurora Press, 1966, 1986), 101.

³ Richard Selzer, *Mortal Lessons: Notes on the Art of Surgery*. (Simon & Schuster, 1976), pp. 33-36.

⁴ Selzer, *ibid.*

⁵ Selzer, *ibid.*

⁶ Amber & Babey-Brooke, ii.

⁷ This pulse position at or near Lung-9, considered a meeting place of all blood vessels. Andrew Ellis, Nigel Wiseman, Ken Boss, *Fundamentals of Chinese Acupuncture*. (Brookline MA: Paradigm Publications, 1988), 85-86.

⁸ In the Ayurvedic tradition, the inch, barrier, and cubit positions correlate to the doshas: vata, pitta, and kapha, respectively.

⁹ Giovanni Maciocia, *The Foundations of Chinese Medicine*. (UK: Churchill Livingstone, 1989), 164.

¹⁰ Li Shi Zhen, *Pulse Diagnosis*. (Brookline MA: Paradigm Publications, 1981, 1985), 4.

¹¹ Shanghai College of Traditional Medicine, *Acupuncture: A Comprehensive Text*. Translated & edited by John O’Connor & Dan Bensky. (Chicago: Eastland Press, 1981), 28.

¹² A respiratory cycle is one full in-breath and one full out-breath.

¹³ The pulse should not be taken following a bath, sex, or exercise; after crying; or after a meal. The pulse should not be taken if one is hungry or thirsty, fatigued or overheated, or under the influence of alcohol or drugs.

¹⁴ Dr. Yeshi Donden, *Health Through Balance: An Introduction to Tibetan Medicine*. Edited & translated by Jeffrey Hopkins. (Ithaca: Snow Lion, 1986), 77.

¹⁵ *Fundamentals of Chinese Medicine*. Translated & amended by Nigel Wiseman and Andrew Ellis. (Brookline MA: Paradigm Publications, 1985), 143.

¹⁶ Part of the curricula for Persian physicians was the study of music, so they might better appreciate the subtleties of various tones of the pulse beats.

¹⁷ Ted Kaptchuk, *The Web That Has No Weaver* (New York: Congdon & Weed, 1983), 301.

¹⁸ Some good references for the different pulse patterns are Kaptchuk’s *The Web That Has No Weaver* and Li Shi Zhen’s *Pulse Diagnosis. Qpuncture II* is a useful and well-organized reference on CD-ROM (see www.qpuncture.com).

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