Chapter 9
Qi and the Frequencies of Bioelectricity

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Abstract

Comparing the concept of *Qi* as a 'life force' or 'energy' which flows in meridians with the writer's work on coherent frequencies in living systems, this Chapter will attempt a synthesis to provide *Qi* with a basis in physics. Frequency effects have already been observed in the activity of healers. The sine qua non for this Chapter will be whether *Qi* can be related to endogenous frequencies and changes associated with healing activity of a *Qi* expert and the manipulation of body *Qi*.

Chinese Medicine includes many ways of manipulating *Qi* which may be viewed in terms of a pair of complementary opposites (*Yang* and *Yin*) involved in life processes and which if unbalanced lead to disease conditions. The writer has found that each acupuncture meridian has a very precise endogenous frequency. If a target organ or meridian is stressed, its frequency appears in the whole body field. The frequency may be hyper- or hypo-active in its biological effects. The relevant frequency information is contained in the magnetic vector potential component of a field. Measurements of frequencies imprinted into water by a Qi-Expert are presented and discussed.

1.0   Introduction

To avoid having to find metaphors or even definitions for something which has been recognised in Chinese Medicine for millennia, the present starting point will be a concept of 'Qi' as some part of the 'being alive' experience of human existence. Frequencies are measures along the time span of this existence and physics is the science of measurement. Figure 1 illustrates the concept of frequency and associated quantities

Over the past 30 years, my research has taken me into the ways that living systems make use of frequencies and fields. Frequencies are a part of bioelectricity and are time variations of electric fields, magnetic fields and radiation but also of mechanical vibrations through piezo-electricity. The lowest frequency that can be of significance to a living system must be that corresponding to its lifetime. Above this, frequencies relevant to living systems span from circadian rhythms through heart and brain waves, muscle activity, acoustic frequencies and onwards to the frequencies of heat and light (visible and ultraviolet) characterising chemical reactions (e.g. fire) and luminescence. Frequency is fundamentally linked to chemical structure, if this were not so chemical analysis by spectroscopy would be impossible.

2.0   Frequencies and Physics

This section covers the physics of how living systems make use of frequencies and introduces the frequencies of fields, quantum effects and the memory of water for

frequencies. If this is not of interest, the reader can go straight to Section 3 which introduces   acupuncture meridians and endogenous frequencies and leads to the measurement and interpretation of frequencies associated with Qi.

2.1   Coherence and Long-Range Order

The importance of frequency in biological systems was recognised by Fröhlich who in the 1930's when told that the cell membrane potential was a fraction of a volt and existed across an extremely thin cell wall, realised it represented an enormous electric field which should resonate ~100 GHz. A field strong enough to align molecules over distances needed to assemble biomolecules. By 1967, he had applied the theory of coherent modes of oscillation in non-linear systems and long-range phase correlations to biological order and showed that the excitation of organs to their correct frequency could be achieved by energy from metabolic sources. The subsequent development of his ideas and the work of his world-wide circle of collaborators he edited into his two *"Green Books"*: "Coherent Excitations in Biological Systems (Fröhlich 1983) and "Biological Coherence and Response to External Stimuli (Fröhlich 1986).

I was privileged to cooperate with him from 1973 until his death in January 1991. During this period, I and my students provided experimental support for his theoretical work (Smith 2008a). From 1982, my involvement began in the diagnosis and treatment of patients suffering from electrical hypersensitivity (Smith, Best 1989) extending the Miller Technique of provocation-neutralisation for this purpose. Frequencies which neutralise a patient's symptoms can be imprinted into water and used for therapy.

2.2   Coherence Domains in Water

In 1995, Preparata with Del Giudice and co-workers showed through quantum electrodynamics (QED) theory that water had phase coherence as a fundamental property arising from the exchange of radiation at the natural resonances of the water molecule (Arani et al 1995). This coherence is in the unexcited (ground) energy state of water so, unlike the coherence of a laser it needs no energy supply. Fröhlich's theory needed metabolic energy to get the coherence.

2.3   Coherence and Fractality of Frequency

The distance over which the order persists within a coherent system is termed the coherence length and this becomes constant making the velocity with which the coherence propagates proportional to the frequency being propagated. This in turn makes frequency a fractal quantity with no absolute scale of magnitude since, any velocity that the system can support will have a corresponding and proportionate frequency and each fractal can interact. It is this which interlinks chemical, technological and biological frequency effects.

2.4   Frequencies and Fields

In mathematics, a field is a region of space containing mathematical objects, rather

like the 'field of view' seen with a camera or binoculars. In physics, a *field* is a region in which a mechanical force acts, for example the gravitational field.

The "Classical Electromagnetic Field" is the basis of electronics and radio; it describes physical states of the system for which the phase is well defined but the large number of particles (quanta) involved is undefined. In contrast, a "Quantum Field" has a fundamental uncertainty determined mathematically by the Heisenberg Uncertainty Relation:

$$\Delta \Phi \, . \, \Delta N \geq \hbar / 2$$

in which the uncertainty in the phase is $\Delta \Phi$, the uncertainty in number of coherent particles involved is ΔN and $\hbar$ is Planck's Constant (6.63×10^{-34} joule.sec) divided by 2π. Within a water coherence domain, the more the uncertainty is taken up by fluctuation in the number of particles the more perfect is the coherence of the field (Smith 2008a).

Electric charge is associated with matter: electrons, atoms and molecules – like charges attract, unlike ones repel. A moving charge generates a magnetic **B**-field (a bold underline indicates a vector or directed quantity). An accelerated charge radiates energy as an electromagnetic wave at the frequency of its acceleration. A magnetic field (**B**-field) can exist only in closed loops. A mathematical consequence is that there must be a further field called the magnetic vector potential (**A**-field). If an **A**-field oscillates, it generates an alternating electric field in space of magnitude proportional to frequency (Smith 2009a).

All this is going on in three-dimensions. To visualise, think of a current of water flowing down a bath waste. There is a closed loop of vortex around it (analogous to the **B**-field), the vortex is sucked into the waste pipe (analogous to the vector potential along the current path).

These electric and magnetic fields and energies are not continuously variable but come in quanta just as matter comes in atoms. One quantum of electromagnetic radiation equals Planck's Constant h multiplied by the frequency ν. One quantum of magnetic flux is $h/2e = 2.07 \times 10^{-15}$ Wb where e is the charge of the electron. If a pair of coherence domains are weakly coupled together, this constant can describe voltage/frequency relations between them   through the Josephson effect (Milani et al 1991).
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If living systems have phase coherence extending over the distances of biological structures they can behave as large-scale quantum systems in which a domain of coherence behaves like an enormous single atom. Mathematically, any system can be described by a wave equation having the amplitude, phase and frequency. The **A**-field affects the phase of a wave function and it is in the **A**-field that frequency information in biological systems resides (Smith 1994). Marcer, Schemp 1998) have made a mathematical model representing the brain and consciousness in terms of a holographic image coded in the phase of a coherent quantum field. Since an **A**-field can affect the phase of a wave function it must alter the body's holographic image of itself.

2.5   Water Memory for Frequencies

Samuel Hahnemann, the founder of homoeopathy, prepared his remedies (*potencies*) by *potentisation* which involved taking a vial containing a dilution of the original material ("Mother Tincture") and banging it on the cover of a leather bound book – *succussion*. The combination of serial dilutions and succussions changes the pattern of frequencies imprinted and these remain in the water even after all the original chemicals have been diluted away (Smith 2008b).

Not only can a frequency be imprinted into water by succussion, it can be imprinted by a strong **B**-field. The **B**-field component merely has a potentising or formatting role, its frequency does not matter so long as it is below that of the **A**-field (Smith 1994). Also by a train of 7-unidirectional voltage pulses or, by certain frequencies (e.g. 7.8 Hz also available from the heart chakra) or, chemically. An **A**-field is produced in the space around a toroidal coil.

A frequency imprint is ***erased*** if the geomagnetic field is shielded from it by a steel box. Erasure occurs when the **B**-field is reduced to less than 380 nT. Then, the magnetic energy in the volume of a coherence domain becomes less than the thermal energy (kT) which breaks it up. For this to occur, the domain diameter must be exactly 53 μm.

In addition to the North-South magnetic **B**-field of the Earth, there is an **A**-field component in an East-West direction which biases the alternating field from the toroid. If an imprint is made on the North side of the toroid it is stimulatory of biological activity; if the imprint is made on the South side it is depressive of biological activity, presumably generating Yang and Yin phases respectively..

In 1983, we showed (Jafary-Asl et al. 1983; Aarholt et al. 1990) that living systems can respond to magnetic resonance conditions at geomagnetic field strengths. This allowed later speculation that a frequency might be retained in a water coherence domain if the magnetic resonance of its protons could be synchronised to an applied frequency and then generate an internal magnetic field which exactly satisfied proton resonance conditions (Smith 2008a). This condition can become independent of frequency if a very specific number of protons are coherent. This memory should be stable unless the domain is broken up by removing the geomagnetic field as happens at *erasure*.

The measured bandwidth of a water imprint is of the order of parts per million. This is consistent with statistical fluctuations in the number of protons involved and is confirmed by an observed increase in pH on imprinting frequencies into water which returns to its original value on *erasure*. An increase in pH implies less protons are available (Smith 2007). Although it is sufficient for most purposes to make frequency measurements to four significant figures, it is necessary to emphasise the precision with which nature uses frequency. The resonance 7.802 Hz in Table 5.2 for Tube 1, when measured with a more precise oscillator (Agilent 33250A) was between 7.800,024 Hz to 7.801,172 Hz.

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3. Acupuncture Meridians, Endogenous Frequencies and Measurements

It was in 1982 that the problems experienced by chemically sensitive patients who had become hypersensitive to their electromagnetic environment came to find me (Smith, Best 1989). The symptoms provoked in them by the chemicals to which they had acquired a hypersensitivity were identical to those triggered by specific frequencies in their environment. It quickly became clear that it was frequency that mattered and that frequency was patient specific. When we had extremely electrically sensitive patients who could not even tolerate an oscillator switched-on when they were anywhere in the building, I had them imprint their body frequencies into water and measured it after they had left.

I developed a dowsing technique (Smith 2004) which can cover frequencies necessary for clinical purposes. The dowsing response involves a phase comparison between the left and right side heart and pericardium meridians. If either are joined by a wire, dowsing is lost. I have worked on instrumentation for this measurement and could confirm that the frequency measured by dowsing was the same as that measured electronically but, it has taken me 25 years to understand the physics involved (Smith, 2009a).

These patients were sensitive to the **A**-field produced by an alternating current in a toroidal coil. The frequencies to which these patients were sensitive ranged from milliHertz to GigaHertz. It took some time to realise that we were seeing reactions to the endogenous frequencies of the acupuncture meridians and chakra points.

When an acupuncture point is needled, acupressure is applied or, a target organ is stressed, the endogenous frequency spreads throughout the body. This can be measured by imprinting it into a vial of water held in the fist and succussed on wood. These frequency imprints identify stressed meridians and a therapeutic frequency imprint (potency) can be made but, the therapy will not be permanent if frequency signatures from chemical toxicity remain.

The autonomic nervous system (ANS) is usually the first to become compromised. Between stable states of health and disease, there may exist a region in which a patient is in a state of mathematical chaos (Smith 2009b). The various complementary and alternative medicines can operate within chaos and restore a patient to a state of stable health. The nature of chaos means that it is not possible to do repeatable ('double-blinded') trials since, a chaotic system starting from the same initial conditions never reaches the same end-point.

4. Qi and the Acupuncture Meridians

Qi is related to the 'energy' flow in acupuncture meridians. These probably originate at the pre-somite stage of the embryo where layers of cells, ectoderm, endoderm and mesoderm are in close contact. It only needs adjoining cells to develop phase coherence and for this coherence to be retained as the organism develops to provide channels of coherent frequencies linking target organs to the locations on the skin regarded as acupuncture points (Smith 1990).

4.1   Table of Frequencies

Table 4.1
Acupuncture Points with Nominal Values for Endogenous Frequencies

Acupuncture Points - Hands	Target Organs	Point Measured	Low Band Frequency	High Band Frequency
Thumb			Hz	MHz
Outside	Lymphatic tissue, Lungs	Ly1	0.06	2.95
Inside	Lungs	Lu1	0.48	24
Index Finger				
Outside	Large intestine	LI1	0.055	2.7
Inside	Nerve degeneration	ND1	0.00055	0.027
3rd. Finger				
Outside	Circulation/ Pericardium	Ci9	0.05	2.46
Inside	Allergy	AD1	2.0	98.4
4th. Finger				
Inside	Organ degeneration	Or1	0.078	3.85
Outside	Triple Warmer, Sanjiao	TW1	6,000	300,000
Little Finger				
Inside	Heart	He9	7.8	384
Outside	Small intestine	SI1	0.025	1.2
Acupuncture Points - Feet				
Big Toe				
Inside	Spleen/Pancreas	Sp1	0.055	2.7
Outside	Liver	Liv1	4.8	240
2nd. Toe				
Inside	Joint degeneration	JD1	0.3	148
Outside	Stomach	St45/left	0.44	2.2
	Stomach	St45/right	0.044	22
3rd. Toe				
Inside	Fibroid degeneration	FibD1	800	39,400
Outside	Skin degeneration	Sk1	0.0035	0.172
4th. Toe				
Inside	Fatty degeneration	FatD1	0.74	36
Outside	Gall bladder	GB44	0.05	2.46
Little toe				
Inside	Kidney	Ki1	0.00095	0.047
Outside	Bladder (urinary)	BL67	5.5	270
Further Points				
Posterior	Du Mai (GV)	GV14	4.3	149
Anterior	Ren Mai (CV)	Ren24	14	730
Middle finger	Pericardium	Pe9	0.25	13
	Anmian I & II		3,000	

Once it was realised that there were precise endogenous frequencies on the acupuncture meridians and chakras, it was easy to map them out. Table 4.1 lists nominal values for endogenous frequencies on the acupuncture meridians.

Notes on Table 4.1

1. The 'Ting' Acupuncture Points (Kenyon 1983) are located on at either corner of a nail bed. Voll (Bechtloff 1991), has listed the connections between specific acupuncture points and the ANS. The ND1a point is the summation point for the entire ANS; the St10a point is the summation point for the parasympathetic branch and GB20 is the summation point for the sympathetic branch.
2. There are additional frequencies at points which link with the autonomic nervous system - sympathetic ~0.003 Hz and parasympathetic ~0.3Hz.
3. At a Luo point, frequencies of both connecting meridians are found.
4. For the Sanjiao ('triple-warmer') meridian a total of 31 frequencies from imprints made by 22 patients had a mean equal to 6.018 kHz (SD ± 0.20%). For the Heart meridian and a total of 53 frequencies from imprints made by 38 patients had a mean equal to 7.788 Hz (SD ± 0.92%).
5. If the stomach meridians are balanced, their common nominal frequencies are 0.21 Hz and 8.1 MHz.
6. The two frequency bands are in the ratio $49.19 \pm 0.08 \times 10^{+6}$ (S.D. ±0.15%)

4.2 Frequency Synchronisation of Acupuncture Meridians.

If Qi activity results in the emission of frequencies, these could synchronise acupuncture meridians. An extreme example is the Du Mai (GV) meridian which can synchronise itself to almost any environmental frequency, selecting only the strongest signal. In a case where the endogenous frequencies measured at GV14 were 4.301 Hz and 148.5 MHz, the high frequency band remained synchronised from 140 MHz to 10 Hz forcing the lower band frequency from 4.080 Hz to 0.1760 mHz. Synchronisation persisted to at least to 4.2 GHz when the low band frequency had moved to 10.65 Hz.

There is a band of frequencies within which any meridian will depart from its endogenous value and become synchronised to that frequency. This may be ± 30% before the meridian frequency jumps back to its endogenous value. To demonstrate this, a subject was exposed to the high band frequency of the heart meridian sitting in front of a microwave oscillator for 3 minutes where the microwave power density was estimated to be of the order of mW/m^2. After this, the frequencies at He9 were immediately imprinted into water and measured. The frequency measurements took about 5 minutes following the exposure. By this time the acupuncture point frequency had reverted to the unexposed value. At 260 MHz and at 500 MHz there was no synchronisation. From 270 MHz to 480 MHz the endogenous frequency at He9 had become synchronised. The corresponding low band frequencies had shifted in proportion to 5.245 Hz and 9.657 Hz respectively.

4.3 Frequency Changing by Intention

Some consider their 'energy' is emitted from the middle finger where the acupuncture point Pe9 is located. Experiment showed it was possible to change the frequency on the Pe9 acupuncture point by intention from 0.2012 Hz to 7.575 Hz. A healer might do this in response to what is sensed as a need for the patient. The endogenous frequency of the heart meridian is generally regarded as a therapeutic frequency and it covers not only the function of the heart and circulation but also consciousness, the function of the brain and mental activity. It can also effect potentisation.

4.4 Frequencies and Qi

In Chinese and some other medicines, Qi is considered as a the 'vital force' or 'energy' which flows in the meridians, freely in health but becoming disturbed in illness. It is possible to change the frequency of a meridian and what is imprinted into water by intention thereby linking frequencies and Qi. The present investigation did not cover consciousness and intention effects in general (Tiller 2007, Jahn, Dunne 2004).

However, frequency itself is unlikely to be a complete description of Qi, but at least a measurable correlate. Sometimes when tracing the endogenous frequency along a meridian one arrives at a blockage. It may be that the proximal side of an operation scar has the normal frequency of the target organ but, the distal side, has no frequency at all or, some entirely different frequency. Imprinting the correct frequency may restore normality.

Classical Chinese Acupuncture considers 12 meridians and groups these into 3 sets of paths along which the Qi is supposed to flow namely: Lu-LI-St-Pn; He-SI-BL-Ki; Pe-SJ-GB-Liv. In each path, the Yin and Yang organ frequencies can be combined for calculation purposes according to their geometric means. When tubes of water are imprinted with 2-Yin and 2-Yang frequencies respectively (e.g. Lu+LI & St+Pn) and then placed close together: all four frequencies disappear. If one attempts to imprint all 4 frequencies into a single tube of water, 3 frequencies will imprint alright but at succussion to imprint the fourth. frequency there is erasure of all frequencies (Smith 2002). This may be an example of 'nilpotency' (Rowlands 2007). So long as the four meridians indicate a healthy condition, these combinations of frequencies will be zero giving living systems an error detection mechanism.

5. Qi in Action

This section describes measurements made in cooperation with Qigong Expert - Birinder Tember. It includes measurements made during his Qi demonstrations. Glass tubes of water were imprinted either by succussion with the tube held in the fist or, imprinted by intention from a distance of about 1 metre using the Baduan Jiin routine which Birinder describes as follows:

> "The history of Baduan Jiin dates back to somewhere between 1000 and 1200 AD. There are several variations although they mostly have the same benefits and are fundamental to most martial arts and general health training. The

Northern style (which is what I practice) is more difficult than the Southern forms. Its history can be traced back to Yue Fei, a famous general of the Sung Dynasty. The Northern style was then further developed around 1200 AD by Lingqiushan, a Shaolin monk who died at the age of 109. There is a reasonably consistent written history since Monk Lingqiushan's developments of the form. The form I practice was further enhanced by Grandmaster Peng Qing (my teachers grandfather) who was acknowledged as one of China's greatest Shaolin grandmasters. This Qigong is said to improve the constitution and resistance to illness. It is also said to enhance longevity – as evident from Lingqiushan's long life".

5.1   Frequency Measurements of Qi Imprints into Water

The following Tables and Comments list properties of Qi which can be measured. They are expressed in terms of frequencies related to acupuncture meridians and . Table 4.1 can be used to interpret the following Tables 5.

Table 5.1a
Initial Trial Measurements of Qi Frequencies
Imprinted by Birinder Tember: 27 June 2009.
↑ = stimulatory (hyperactive); ↓ = depressive or stressful (hypoactive).

Imprint	#	Hz	Hz	Hz	Hz	Hz
		↑	↓	↑	↓	↑
After 5 min standard relaxation	1	1.012×10^{-3}	5.422×10^{-2}	7.515×10^{0}	$6.002 \times 10^{+3}$	$1.23 \times 10^{+6}$
Note: all are stimulatory		↑	↑	↑	↑	
Spiralling energy	2			7.522×10^{0}		
Meditative imprint	3		5.003×10^{-2}			
MUDRA hand positions	4			7.802×10^{0}		
MANTRA based imprint	5	1.413×10^{-3}	3.312×10^{-1}	7.213×10^{0}	$6.002 \times 10^{+3}$	
Balancing spleen & stomach (a self-treatment)	6			7.213×10^{0}		

Comments on Table 5.1a

Tube 1 This tube was imprinted by succussion, held in the hand after a 5 minute period of relaxation exercises. It shows Birinder's initial condition and his meridians then under stress: Kidney, Large Intestine and/or Spleen-Pancreas, Heart and Sanjiao. These frequencies follow the usual pattern - alternately stimulatory (Yang) and depressive (Yin) of biological activity.

Tubes 2 to 6 were imprinted by 'directed Qi'; there was no physical contact with the tubes. These imprints differ from Tube 1 showing that the exercises and mental concentration of the Qi routine can overcome personal characteristics. These frequencies were **all stimulatory** which is a feature of imprints made by healers.

Tube 2 had a frequency 7.522×10^{0} which is nearer to the 7.515×10^{0} Hz of Tube 1 than to the nominal heart meridian frequency 7.8 Hz. This may be due to incomplete relaxation.

Tube 3 had the frequency 5.003×10^{-2} Hz, this would stimulate the Gall Bladder and the Circulation/Pericardium meridians.

Tube 4 had the frequency 7.802×10^{0} Hz which is precisely the Heart meridian value.

Tube 5 had frequencies which would have stimulated the Kidney, Joint Degeneration meridian and parasympathetic ANS, Heart and Sanjiao meridians.

Tube 6 was imprinted after Birinder had used self-treatment Qi to balance his Spleen and Stomach meridians which he knew were stressed. Only the Heart meridian frequency remained, still off the normal endogenous value.

Table 5.1b
Trial Measurement of Qi Therapy applied to a 'Fire Type' Subject
by Birinder Tember: 27 June 2009

	Tube	Hz ↑	Hz ↓	Hz ↑
Subject "Fire Type" (control)	7	2.131×10^{-3}	3.114×10^{-1}	7.803×10^{0}
Subject after CF treatment	8			7.803×10^{0}

Tube 7 was a control imprint made by succussion. It shows stress on the sympathetic and parasympathetic ANS. The Heart meridian appears as wanting stimulation which is usual.

Tube 8 was imprinted by succussion after 'Causative Factor' (CF) treatment and shows only the Heart meridian. 'Causative Factor' is a principle used within a branch of 5- element acupuncture developed by J.R. Worseley which categorises individuals into 5 constitutional or 'CF' Types according to the five 'Elements' of antiquity - 'Fire - Earth – Metal – Water – Wood. These can be related to the endogenous frequencies of the Classical acupuncture meridians (Smith, 2002).

Table 5.2
'Healing Sounds Qigong' imprinted by Birinder Tember 22 July 2009 at 14.30

Healing Sounds Qigong	#	Hz ↑	Hz ↓	Hz ↑	Hz ↓	Hz ↑
Initial test – no sound	1	1.001×10^{-2}	4.313×10^{1}	7.802×10^{0}		
'He' Sound Corresponds to Heart	2	7.802×10^{0}				
'Ho' Sound Corresponds to heart	3	$6.005 \times 10^{+3}$				
'Hu' Sound Corresponds to Spleen	4	$6.005 \times 10^{+3}$				
'Fu' Sound Corresponds to Spleen	5	7.805×10^{0}				
'Xu' Sound Corresponds to Liver	6	2.004×10^{1}	7.802×10^{0}	$6.005 \times 10^{+3}$		

'Xu' Sound Corresponds to Liver	7	3.003×10^1	7.801×10^0	$6.001 \times 10^{+3}$	
'Hey' Sound corresponds to Triple Burner (San Jiao)	8	2.005×10^2	3.002×10^1	7.803×10^0	$8.001 \times 10^{+2}$	$6.001 \times 10^{+3}$
'Chui' Sound Corresponds to Kidneys	9	7.801×10^0			
'Aum' For stimulating/awakening the Kundalani	10	1.002×10^2	7.802×10^0	$6.002 \times 10^{+3}$	

Comments by Birinder and Writer on Table 5.2

Tube 1 - Initial test, no sound. Tube succussed on wood 6 times. The frequency 1.001×10^{-2} Hz is not near any meridian. The frequency 4.313×10^{-1} Hz is the left-side Stomach meridian. The 7.802×10^0 is the Heart meridian.
Tube 2 - The 'He' sound corresponds to Heart; and gives the Heart meridian frequency 7.802×10^0 Hz.
Tubes 3 & 4 – These sounds have imprinted $6.005 \times 10^{+3}$ Hz the Sanjiao frequency rather than Heart or Spleen.
Tube 5 - This sound has imprinted 7.805×10^0 Hz, Heart rather than Spleen.
Tube 6 - The 2.004×10^{-1} Hz is the frequency of balanced Stomach meridians. The other frequencies are those of the Heart and Sanjiao respectively. The Liver frequency is not present.
Tube 7 - The 3.003×10^{-1} Hz is the frequency of Joint Degeneration and the parasympathetic ANS. The other frequencies are those of the Heart and Sanjiao respectively. The Liver frequency is not present.
Tube 8 - These sounds have correctly imprinted Sanjiao frequency $6.001 \times 10^{+3}$ Hz. Of the other frequencies 2.005×10^{-2} Hz is near Small Intestine, 3.002×10^{-1} Hz is the frequency of the Joint Degeneration and the parasympathetic ANS. The frequency 7.803×10^0 Hz is Heart and $8.001 \times 10^{+2}$ Hz is Fibroid Degeneration which is uncommon.
Tube 9 - This sound has imprinted 7.801×10^0 Hz, Heart not Kidney.
Tube 10 - This sound has imprinted 1.002×10^{-2} Hz also present in the initial test, also Heart 7.802×10^0 Hz and Sanjiao $6.002 \times 10^{+3}$ Hz.

Table 5.3
Birinder Tember: Qi Imprints 25 July 2009 at 20.00

BA DUAN JIIN **"8 pieces of silken brocade"**	Hz ↑	Hz ↓	Hz ↑
Posture 1 (pressing the sky)	5.001×10^{-1}	7.801×10^0	$6.001 \times 10^{+3}$
Posture 2 (shoot eagle with bow)	3.336×10^{-2}	3.336×10^{-1}	3.336×10^0
Posture 3 (pressing heaven & earth)	3.617×10^{-1}	7.801×10^0	$6.001 \times 10^{+3}$
Posture 4 (looking backwards)	7.804×10^0		
Posture 5 (shake head, wag tail)	2.232×10^{-2}	3.126×10^{-1}	7.801×10^0
Posture 6 (tapping heaven & earth)	2.413×10^{-2}	3.034×10^{-1}	7.801×10^0
Posture 7 (punching with angry eyes)	5.747×10^{-3}	3.133×10^{-2}	7.801×10^0
Posture 8 (swimming dragon)	2.013×10^{-1}	7.801×10^0	$6.001 \times 10^{+3}$
BT Relax (3 breaths, hold 2 breaths)	7.801×10^0		

BT Relax (3 breaths, hold 2 breaths) 7.801×10^{0}

Comments from Birinder and the Writer on Table 5.3

Tubes for Postures1-8 were imprinted by Birinder from a distance of about one metre according to the postures of Baduan Jiin, also known as Pa Tuan Chin and Pa Kwa Jinn. It is translated as the" Eight Pieces of Silken Brocade". The name is derived from the Chinese Character for silken brocade 'Jiin'. Two names are listed below for each posture with the basic benefits of each.

1. **'**Pressing the Sky' or 'Holding the Gates of Heaven':-This relates to the triple-burner (san jiao) meridian and aids fluid transportation of blood and Qi within the living body. The 5.001×10^{-1} Hz stimulates the Lung meridian. The 7.801×10^{0} depresses the Heart meridian, the $6.001 \times 10^{+3}$ stimulates the Sanjiao meridian.

2. 'Bending the Bow' or 'Shoot the Eagle with the Bow':- The emphasis is in the upper jiao (chest region). The contraction and expansion of the chest cavity and muscles of the arms help facilitate intake of oxygen and the flow of blood and chi which quickens the process of regeneration of body cells and muscles fibres. A feeling of tiredness will give way to a feeling of liveliness. This is unusual in that the three frequencies are exactly decades apart. The 3.336×10^{-1} Hz is depressing the activity of the parasympathetic ANS. The other two frequencies do not correspond closely with any meridian. This decade pattern is occasionally seen in patient imprints and occurs in the signatures of chemicals such as somatropin. The 3.336×10^{0} Hz may stimulate the Du Mai meridian.

 3. 'Pressing Upwards and Downwards' or 'Separate Heaven & Earth':- This helps in the function of the stomach and spleen which in Chinese medicine is said to have the role of transportation and transformation of digested food producing Gu Chi. It thereby helps improve digestion and absorption of nutrients by the body. The frequency 3.617×10^{-1} Hz might be a combination of stimulation for the parasympathetic ANS and the left-side Stomach meridian. The 7.801×10^{0} Hz is depressing the activity of the Heart meridian. The $6.001 \times 10^{+3}$ Hz is stimulating the Sanjiao meridian.

4. **'**Looking Backwards' or 'Looking Behind' :– This exercise is excellent for the spine, loosens the neck muscles and calms the nerves. It is also said to be an aide in overcoming exhaustion of the 5 internal paired organs and injuries caused by the 7 human emotions when out of balance in either an excess or deficient state. These include: Joy/sympathy/grief/fear/anger/hatred and desire. The only frequency is 7.804×10^{0} Hz, stimulating the Heart meridian.

5. 'Looking Around and Up' or 'Shake Head and Wag Tail' :– This settles the emotional state and is more related with the Heart meridian in Chinese Medicine (CM). It removes excess heat from the heart (a condition diagnosed in CM). The symptoms of heat in the heart may include 'feeling disturbed'- 'a constant uneasiness' – 'Insomnia' – 'Constant thirst' – 'a dry sensation on the tongue, especially on the tip and a redder than normal colour'. (This is not an exhaustive description). The 2.232×10^{-2} Hz is stimulating the stimulating the Small Intestine meridian. The 3.126×10^{-1}

Hz is depressing the activity of the parasympathetic ANS. The 7.801×10^{0} Hz is stimulating the Heart meridian.

6. 'Bouncing on the Toes' or 'Tapping the Earth with the Heels' :– This regulates the Chi throughout the body. It also helps relieve worry and anxiety to some extent. The 2.413×10^{-2} Hz is probably stimulating the stimulating the Small Intestine meridian but, is further from the nominal value than in Posture 5 so there may be something else involved. The 3.034×10^{-1} is depressing the activity of the parasympathetic ANS. The 7.801×10^{0} Hz is exactly the same Posture 5 and stimulates the Heart meridian.

7. 'Punching with Angry Eyes' or 'Punching with Glaring Eyes and Fist':- This exercise helps store the Qi in the dantien when in the horse stance. If done isometrically (not recommended if you suffer from hypertension), it increases both muscular strength and muscular stamina. The widening of the eyes whilst performing this exercise helps release stagnation of chi from within the channels and is especially good for the liver channel. This further helps release locked-in emotion and eases frustration and inappropriate anger. It is a great exercise for women with PMT. The 5.747×10^{-3} Hz is not close to any meridian but it may stimulate the sympathetic ANS. The 3.133×10^{-2} Hz may depress the activity of the Small Intestine and the right-side Stomach meridians. The 7.801×10^{0} Hz stimulates the Heart meridian.

8. 'Swimming Dragon' or 'Gathering Qi':- Harmonises the middle jiao and regulates the pancreas. It can also help reduce blood sugar. The 2.013×10^{-1} Hz stimulates balanced Stomach meridians, it also stimulates the Pericardium meridian and the crown chakra (Sahasrara). The 7.801×10^{0} Hz stimulates the Heart meridian and the $6.001 \times 10^{+3}$ stimulates the Sanjiao meridian.

Tubes 9 & 10 were imprinted successively after each of two relaxation periods following the above exercises. Both show the Heart meridian at its normal value.

Table 5.4

Birinder Tember energised these tubes of water using different Qigong patterns as stated, again in a standing posture facing South, 21st August 2009 at 16.30.

Qigong Patterns	#	Hz $\uparrow$	Hz $\downarrow$	Hz $\uparrow$
Initial test; tube tapped on wood 6 times.	1	7.801×10^{0}		
Baduan Jiin.	2	7.801×10^{0}		
'Collect the Moons Reflection from the Sea Bed'	3	7.801×10^{0}		
'Steel thumbs of Lohan'	4	6.313×10^{-2}	5.113×10^{-1}	7.801×10^{0}
Sound Qigong - 'Hu' Corresponding to the Spleen.	5	7.801×10^{0}		
Mantra	6	3.615×10^{-2}	4.123×10^{-1}	7.801×10^{0}
Bastrika	7	7.801×10^{0}		
Anom Viluom	8	7.801×10^{0}		
Kapalbhati	9	3.151×10^{-2}	6.413×10^{-1}	7.801×10^{0}
'Brimi'	10	6.227×10^{-2}	6.902×10^{-1}	7.801×10^{0}

Comments by Birinder and the Writer on Table 5.4

In Table 5.3 Tubes 1-8 each had 3-frequencies and all but one contained the Heart meridian. Here, all imprints contained precisely the 7.801 Hz   of the Heart meridian.

Tube 1 :- Initial test: Tube of water succussed on wood 6 times - Heart meridian imprinted.
Tube 2 :- Baduan Jiin. Here Birinder did the entire routine of 8 postures and then energised Tube 2. In Table 5.3 this was done posture-by-posture. Here only the Heart meridian was imprinted at a frequency identical to Tube 1.
Tube 3:- 'Collect the Moons reflection from the Sea Bed. This is identical to Tubes 1 & 2.
Tube 4 :- 'Steel Thumbs of Lohan'. A Buddhist meditation exercise holding a specific posture with thumbs embedded on the back-shu kidney point. The 6.313×10^{-2} Hz is nearest to the Liver and Urinary Bladder meridians.
Tube 5 :- 'Sound Qigong' - 'Hu' Corresponding to the Spleen. This imprinted the Heart meridian which Table 5.2 shows for the 'Fu' rather than the 'Hu' sound.
Tube 6 :– Mantra:-. This was a different Mantra to that used for the imprint in Table 5.1a hence the differing frequencies.

The following four patterns are from Indian Yogic breathing exercises.

Tube 7 :– Bastrika: Heart meridian imprinted.
Tube 8 :- Anom Viluom: Heart meridian imprinted.
Tube 9 :– Kapalbhati: The frequencies 3.151×10^{-2} Hz and 6.413×10^{-1} Hz are not close to any meridian, 7.801×10^{0} Hz is the Heart meridian.
Tube 10 :- 'Brimi':   The frequency 6.227×10^{-2} Hz is near the Lymphatic meridian and 6.902×10^{-1} Hz is near the Fatty Degeneration meridian, 7.801×10^{0} Hz is the Heart meridian.

Table 5.5

Comparison of Tubes 1 – 10 in Table 5.4 when Excited in Pairs

Tube	1	2	3	4	5	6	7	8	9	10
1	■	He	He	He	He	He	He	He	He	He
2	T	■	He	He	He	He	He	He	He	He
3	T	T	■	He	He	He	He	He	He	He
4	C	C	C	■	He	He	He	He	He	He
5	C	T	T	C	■	He	He	He	He	He
6	T	T	C	C	T	■	He	He	He	He
7	T	C	T	T	C	C	■	He	He	He
8	C	C	C	T	T	T	C	■	He	He
9	T	C	C	C	C	C	C	C	■	He
10	C	T	T	C	C	C	C	C	C	■

1.   All the imprints in Table 5.4 contain 7.801 Hz.

2. When these tubes were excited singly with 7.801 Hz using an oscillator and toroid, each gave a response to a toroid field.

3. When excited with 7.801 Hz in pairs, some gave a response to a toroid field configuration (T) others gave a response to a caduceus field configuration (C) as shown in Table 5.5.

4. When placed in pairs next to a tube imprinted from a heart chakra measured as 7.801 Hz, all gave a positive response (He).

5. Birinder intended Tube 5 to stimulate the spleen but a heart stimulating frequency was measured. This tube did not show any response to 5.500×10^{-2} Hz from the oscillator, the nominal frequency of the spleen meridian but it did show a response to an imprint copied from an actual spleen meridian at this frequency. The heart and pericardium form a functional unit corresponding to the 'Element' – Fire.

6. This implies that there something more than just oscillator frequencies on the acupuncture meridians.

5.2 The Environment and Qi

To effect a potentisation or imprinting there must be some boundary to the medium. It is not possible to potentise sea or air in general. However, a sealed plastic bag containing ambient air can be potentised but, this does require the air to be humid. If some silica gel is put into the bag, no potentisation is possible.

Accordingly, an experiment was carried out in which three tubes of water were set up in front of Birinder. The centre tube was inside a plastic bag containing sachets of silica gel as desiccant. Qi was towards them. The two outer tubes acquired an imprint of 7.801 Hz but, the tube in the dry atmosphere had no imprint. The conclusion must be that the projection of Qi requires air of normal humidity.

6. Conclusions

The results given in the above Tables show that frequency is something that can be measured in respect of Qi activity. Frequencies can be imprinted into water by Qi projection, succussion or self-Qi-treatment.

The stated intention of a particular Qi procedure does not always result in the imprinting of a measured frequency corresponding to the acupuncture meridian it was supposed to target. However, there is a clear difference between measurements using a frequency generated by an oscillator and the same frequency copied from an actual acupuncture point. The comparison by dowsing techniques of pairs of tubes imprinted by different Qi procedures with each other and against a set of tubes imprinted from acupuncture meridians should provide a useful measurement tool. The transmission of Qi and the potentisation of water vapour in a space in the needs further investigation.

Acknowledgments

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CAPTION:

Figure 1

For a regular variation in any quantity its frequency is the number of complete cycles completed in unit time. This is usually taken as one second and one cycle per second is termed one Hertz. Multiples and sub-multiples are often used e.g. MegaHertz = 10^6 Hz; milliHertz = 10^{-3} Hz.

Frequency = cycles/sec (Hertz , Hz)

Wavelength = distance/cycle (λ)

amplitude

COHERENT OSCILLATIONS

time
or space

1 cycle

phase difference
(same frequency)

velocity = frequency x wavelength