

# On the nature of channels

By Professor Wang Ju-yi (王居易)  
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Understanding, regulating and protecting the channels is at the heart of Chinese medicine.

**D**RAWN FROM CAREFUL observation and clinical research, the concept of a channel system represents one of the great discoveries in the life sciences. The core importance of the channels is summarised by the *Inner Classic* when it says that, “the channels and vessels are the determiners of life and death. [They] manage the 100 types of disease, regulate excess and deficiency—they must not be blocked!”<sup>1</sup> The ideas embodied in this short phrase continue to be foundational for the practice of Chinese medicine.

## I – Understanding the channels

Firstly we must ask, “Where are the channels?” This question is discussed with



remarkable precision in the early medical texts.

For example, the *Inner Classic* says that the channels are “subsumed in the spaces around the flesh – deep and not visible.”<sup>2</sup> It then points out that the structures we can actually see are not the channels (經 *jīng*) but are instead collaterals (絡 *luò*). One might then wonder if this is an assertion that the deeper aspects of the channels cannot be directly perceived. The text seems to take this up later in the same chapter. In a section where it says that “the height of heaven cannot be quantified [and] the width of earth cannot be measured” it states in contrast that, “if you take an eight *chi* tall man, the skin and flesh are here. Externally one can measure [the length] by pressing and palpating; once they are dead it can be seen by cutting them open.”<sup>3</sup> While the nature of Heaven and Earth is beyond the scope of measurement, an understanding of the human body and the channels is within our grasp.

Chapters such as this say that the first step when looking for the channels involves the rather prosaic process of becoming oriented with the surface anatomy. This is then followed by more careful

differentiation through manual techniques such as pressing and palpating along channel pathways. By doing this, we can begin to get an idea of where exactly the channels are located. Many of us who study Chinese medicine may spend quite a bit of time studying channel theory but less time with our hands looking for the palpable evidence of their existence. It is important for us to get out of our heads and more into our hands.

The *Inner Classic* of course further points out that more might be seen upon dissection. This invites a further question as to whether or not classical Chinese medicine is based upon a firm anatomical foundation. In order to answer this, we might begin by looking a bit outside the corpus of Chinese medical texts. For example, a very early example of Chinese anatomical knowledge comes from *The Records of the Grand Historian*. This text from the 1st century BCE contains a short discussion of the channel-based treatment style of an early physician named *Yú Fū* (俞跗).<sup>4</sup> Here he is described as “cutting the skin, separating the muscles, adjusting the vessels, linking the tendons, grasping the marrow and brain, folding the fatty linings and ‘clawing’ the thin linings” of his patients.<sup>5</sup> Most modern commentators assert that this is a description of surgery and then dismiss the possibility given a complete lack of aseptic technique at the time. However, it has less-often been asked what else Yu Fu might have been doing. In other words, few modern commentators have stopped to consider that the various adjustments mentioned may have been carried out without actually opening deep into the skin but instead involved precise surface manipulations. The concept of technique will be further discussed below.

Other examples of early anatomy abound. Most famously within the classical medical texts, we see quite detailed descriptions of the size, shapes, weights and internal compositions of the organs in the *Classic of Difficulties*.<sup>6</sup> In fact, these measurements are often remarkably similar to those described by modern anatomy.

A less-known and rather gruesome source for basic anatomical knowledge in classical China resulted from the penal code. In

early China, notorious criminals were sometimes subjected to a very precise type of dismemberment.<sup>7</sup> The process involved an exacting knowledge of vasculature in order to ensure that the unfortunate prisoner did not quickly bleed to death during the often lengthy demise. The 1st century CE text *The Book of Han* describes the vivisection of more than 30 criminals.<sup>8</sup> The text describes how each vivisection was observed and carefully recorded by a kind of technician, a doctor and a court painter. The information was recorded and used by physicians at the time.

In the Song dynasty, both the *Five Organ Atlas of Ou Xi-Fan* and the *Atlas of Preserving Reality* are clearly drawn from anatomical observation.<sup>9</sup> Ou Xi-Fan is reportedly the prisoner whose organs are pictured in the eponymous atlas (see facing page)! With examples such as this, the question arises as to why extant images of 12-channel anatomy include only rudimentary pathways that fail to precisely describe the morphology and structure of the tissues through which the channels pass? If the ancients were in possession of a detailed knowledge of vasculature and organ size and shape, then why were the channels not described with anatomical precision? In fact, this very dilemma is often seized upon in the modern era by those denying the existence of the acupuncture channels. It is certainly one of the great difficulties for those who simply want to understand. Fundamentally, the problem arises from a lack of innovative thinking about the subject which has led to chronic misunderstanding.

The channels are anatomical. They are to be found within the scope of normal physiological processes and, when there is abnormal function, they are also intimately involved in pathology. However, the mistake has been to think of the channels as a single anatomical entity that we might show in a medical atlas. Instead the channels might be better conceived as a system involving the regular movement of what we might broadly term “fluids” and the functional importance of these fluids in the human body.<sup>10</sup> All of the organs of course have an intimate relationship with the watery milieu within which they function. Thus, if we consider the channels as describing the



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circulation and function of fluids, then the concept of channels moves to the very core of the “holistic” vision that characterises Chinese medical thought. In other words, the unique vision of a separate fluid system with its own defined circulatory properties and physiological functions is the great discovery of ancient Chinese medical science.

In this light, certain classical statements take on remarkable clarity. For example the *Divine Pivot*, in chapter 33, aptly titled “Treatise of the Seas”, states that “The 12 channels belong to the *zang-fu* on the interior and collateralise with the articulations on the exterior”.<sup>11</sup> Here the text is describing a system that unifies from the depth of organs out to the joints. While some might think of this as a description of blood circulation, a careful reading of other sections seems to point to other possibilities.<sup>12</sup> Most importantly, it should be remembered that the *Inner Classic* is very precise in its assertion that the channels are concealed in the “spaces between the flesh”. While many of these spaces are vascularised, the idea is necessarily broader than that of blood vessels. In another chapter, we see that “the channels move blood and qi and thus nutrify yin-yang, moisten the tendons and bones and benefit the joints”.<sup>13</sup> Thus the channels describe both the functions of blood and also the motive force within the circulatory system. Modern research provides some interesting insight here. It is helpful to remember that the fluids around the vessels have a direct effect on vascularisation through complex chemical feedback systems.

In modern medical science, there is quite a bit of research into the complexity, periodicity and metabolic pathways of what might be broadly termed “fluids” (the extracellular matrix) in the human body. In particular, research has been looking at the role fluid systems play in immunity, stress response, compensation and aging.<sup>14</sup> Channel theory and the clinical lessons gained from thinking of the human body via the lens of the channel paradigm can serve to both inspire new lanes of inquiry and provide entirely new concepts for this kind of research.

In order to understand the functions of

the channels as outlined above one must first consider the following:

### **The channels exist only in the presence of life**

It is crucial to remember that the concept of “channels” includes not only those spaces between the flesh where the pathways might be found but also the role assigned above by the *Inner Classic* of “moving blood and qi to nutrify yin-yang, moisten the tendons and bones and benefit the joints”. Thus the presence of a channel in the body is defined by function and movement. When life stops, the channels no longer exist. Although we might still see spaces in the flesh, tendons and bones, these structures are no longer “alive” in any sense of the word and are no longer channels in the Chinese medical sense. Thus the *Divine Pivot* assigns the channels the rather lofty role of “determiners of life and death” as their very existence implies life.<sup>15</sup>

### **The channels are woven into disease**

All kinds of illness, including those caused by external factors, internally generated disease or unexpected injury affects the channels. This is to say that whenever there is some factor that affects the skin, flesh, tendons and bones or the organs of the body, its orifices or even its limbs, then the channel system is somehow also affected or injured. Specifically, both the movement and function of the channels lose their regularity. This is what the *Divine Pivot* refers to when it says that the channels are involved in “the 100 [types of] disease”.

### **Each part of the channel system plays a role**

What might be termed the “channel system” includes the regular channels, the divergent channels, the collateral vessels, the channel-sinews and the cutaneous regions. In the most basic sense, we might say that the system consists of the 12 regular channels and the extraordinary vessels. These are the categories of fluid circulation. Each category plays a relatively greater or lesser role depending on the physiological process or disease at hand. These roles are broadly summarised in the following table of the six levels (each level, of course, comprises

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Tai Yin (Lung, Spleen)	Supports the transport of dampness while regulating the qi mechanism <sup>17</sup>
Shao Yin (Heart, Kidney)	Supports the transport of constructive-blood while consolidating source qi
Jue Yin (Liver, Pericardium)	Supports the storage and proper distribution of yin-blood
Tai Yang (Bladder, Small Intestine)	Responsible for the transformation and resolution of cold qi while warming skin and muscle
Shao Yang (San Jiao, Gallbladder)	Responsible for the dissipation, cooling and resolution of wind-heat
Yang Ming (Stomach, Intestine)	Responsible for the digestion and discharge of food and drink

two organs).<sup>16</sup> Within the broad functions for each channel described (above) one should also carefully differentiate the specific functions of each of the two organs woven by that channel. Each organ has specific roles of its own while some aspects of channel function arise from the synergy (or balance) of the two.

### II – Regulating the channels

The concept of “regulating the channels” refers to a clinical process. Namely, a practitioner will first examine the channels to determine which channels exhibit

abnormality. Next, having determined the presence of irregular channels, one must integrate the patient’s presenting symptom-pattern into a diagnosis. Based on a unification of channel examination (经络诊断 *jīng luò zhěn duàn*) with pattern differentiation (症候分析 *zhèng hòu fēn xī*), one then chooses a channel (or channels) for treatment then finally points for needling. Remember, proper channel treatment involves first determining the affected channel and only then choosing points. By using points to regulate abnormal channels, one’s goal is to help them return to normal movement. Normal physiology then follows.



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### 1 – Examining the channels

Given the importance of channel examination to proper channel regulation, more should be said about the classical approach for determining affected channels in the presence of disease. In one short section, the *Divine Pivot* summarises basic technique: “Before using needles one must first scrutinise the channels to determine excess or deficiency. One must separate [the pulse – 切 *qiè*] and palpate [循 *xún*]. One must press and pluck. Observe how the channel responds and moves before continuing.”<sup>18</sup>

Here and in other sections, the *Inner Classic* describes techniques for examining the channels. Based on readings of this and other texts combined with clinical experience, channel examination might be divided into the five categories of observation, pulse palpation, channel palpation, pressing, and feeling. Each will be briefly described below:

#### A – Observation (審 *shěn*)

This simply involves careful observation

of the body surface for irregularities. Irregularities usually manifest as discolourations in the skin or discolourations of surface vasculature. For example, most are familiar with the fact that sudden pain in the low back is often accompanied by protruding capillaries on the Bladder channel in the back of the knee. Similar changes along the pathways of other channels are diagnostically significant. In particular, pay attention to changes in colour.

#### B – Palpation of Pulse (切 *qiè*)

This is the process of looking for pulses along the courses of the 12 channels to determine the relative amount of excess and deficiency in a given channel. By checking the pulses, one can determine whether or not a given channel is functioning normally.<sup>19</sup>

#### C – Channel Palpation (循 *xún*)

This technique involves a gliding and pressing movement with the side of the



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thumb along the pathways of the channels below the elbows and knees. One is looking for a variety of palpable change including:

- Softness along channel, indicating generalised deficiency
- Tightness/hypertonicity, indicating generalised excess in the channel or organ
- Small nodules, indicating stasis (often qi)
- Roughness, indicating stasis (often heat or qi)
- Slipperiness, indicating dampness or deficiency
- “Stick-like” nodules, indicating inflammation
- Larger (soft) nodules, often indicating phlegm
- Larger (hard) nodules, often indicating blood stasis
- Adhesions, often indicating stasis in the channel

- Separations/weak spots, often indicating deficiency in the channel. Locations of weakness can be helpful for diagnosis based on the function of the channels and points where separations are found.

Patients may also exhibit unusual hyper or hypo-sensitivity or even swelling along particular channels when using this palpatory technique. This can also be helpful for determining affected channels.

#### D – **Pressing and plucking** (按彈 àn tán)

This technique involves using the tip of the index finger in a pressing and/or plucking movement so as to check the tone and texture of the vasculature, tendons, ligaments and even periosteum at a relatively deep level. By paying attention to the relative hardness, flaccidity or increased tension in these structures, one can make judgments as to affected channels.



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## E – Feeling-stroking (捫 *mén*)

This involves holding the palm on or near the patient's forehead, chest, upper back, abdomen and other areas with relatively more flesh. One is looking largely for relative differences in moisture and temperature between the channels, which can be indicative of cold or heat.

## 2 – Methods for regulating the channels

*When there is an overabundance, sedate.*

*When deficient, tonify. When there is heat there is disease. When there is cold, make [yang] stay. When there is a sinking [area] then moxa. When neither overabundance nor deficiency [is obvious] then one can use the channels [to regulate].*

– *Divine Pivot*, chapter 10<sup>20</sup>

*Those who want to rid [the body] of staleness [need to] remove the bad blood.*

– *Basic Questions*, chapter 54<sup>21</sup>

These two phrases summarise the core principles of channel regulation. In the most basic sense, all of our treatments are either regulating excess or deficiency in the channels or striving to remove blood stasis. By doing so, we return the fluid pathways to normal circulation and improved function follows. In practice, there are quite a few methods for achieving this goal. In most cases, the channels are regulated through the points with the techniques of needling, moxa, massage or external application of herbs.

However, in the modern clinic, other techniques are regularly used. By considering these various practices together, we can see that even today much of what we do approximates the techniques of Yú Fū in “cutting the skin, separating the muscles, adjusting the vessels, linking the tendons, grasping the marrow and brain, folding the fatty linings and ‘clawing’ the thin linings”.

Common non-acupuncture techniques in the modern clinic include:

### A – Scraping techniques (刮痧 *guā shā*):

This is commonly done with a coin, thimble or scraping tool which is coated in water or oil. The scraping tool is then moved along a channel pathway with some force so as to create a mild exudation of blood beneath

the skin. In folk medicine this reaction is often attributed to the removal of “toxins” (痧 *shā*). The most common areas treated include the *Du* vessel and Bladder channel on the back. However, scraping techniques are also used on the lower border of the clavicle, around the LU-5 (*Chǐzé*) point, at the area around UB-40 (*Wěizhōng*) and around the LI-10 (*Shǒusānlǐ*) and ST-36 (*Zǔ sānlǐ*) points together. The technique is most applicable for external wind-cold patterns involving both fever and body aches and cough. The LI-10–ST-36 combination can be scraped for acute inflammations in the digestive system as well.

### B – Cupping (吸法 *xī fǎ*)

This familiar technique involves the use of a flame to create a vacuum in pottery, glass or bamboo cups. The cups are then placed along the pathways of the channels for 10-15 minutes often causing mild bruising or small blisters. Areas often treated include the shoulder, back and legs along the *Taiyang* Bladder and Small Intestine channels. Cupping is sometimes done along the *Yangming* Large Intestine and Stomach channels as well. This technique is most appropriate for muscle pain but is also used for chronic fatigue patterns and insomnia.

### C – Incision techniques (割法 *gē fǎ*)

This less-known technique involves the use of small ceramic chips or sharp pieces of (supposed) meteorite to make small incisions at specific points on the body. Once opened up, a few drops of clear fluid or pus is often removed. The removal of fluids or even a few drops of blood might be facilitated by the use of a cupping technique over the incised area. The best-known areas for this technique are the *Sifeng* (M-UE-9) points in cases of childhood malnutrition. Points are also located in and around the ears or on reactive areas in the back [for example at UB-43 (*Gāohuāngshū*), the UB-31–34 area, UB-53 (*Bāohuāng*), DU-14 (*Dàzhū*), DU-12 (*Shēnzhù*) or DU-6 (*Jǐzhōng*). This technique is used in chronic digestive insufficiency, childhood malnutrition, malabsorption, arthritis or rheumatism.

### D – Pulling techniques (揪法 *jiū fǎ*)

This is a kind of plucking method that



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*Plucking is done on the deep tendons or even across pathways of major arteries. This technique is effective for treating paralysis, pain, weakness, numbness or swelling in the distal appendages.*

involves pulling the skin upwards between the thumb and index finger so as to create a kind of popping sound. The technique is often facilitated by using warm water to increase smoothness on the skin. The technique is usually done 10-30 times on a point until the area becomes very red. It is appropriate for wind-heat external patterns, acute sore throat, some types of conditions involving inflammation of the internal organs, neuralgias, arthritis and gout. Many areas of the body can be treated with this technique including:

**Head:** *Taiyang* (M-HN-9), *Yintang* (M-HN-3) and UB-2 (*Zānzhú*). **Chest:** LU-1 (*Zhōngfǔ*) and LU-2 (*Yūnmén*). **Arms:** LU-5 (*Chǐzé*) and LI-11 (*Qūchí*). **Back:** Reactive points such as DU-4 (*Míngmén*), DU-6 (*Jǐzhōng*), DU-12 (*Shēnzhù*), UB-12 (*Fēngmén*), UB-13 (*Fèishū*), UB-23 (*Shènshū*), UB-43 (*Gāohuāngshū*) and SI-11 (*Tiānzōng*). **Legs:** UB-40 (*Wěizhōng*) and UB-57 (*Chéngshān*).

#### E – Rubbing techniques

(捻搓法 *niǎn cuō fǎ*)

This technique involves using the tip or padding of the thumb to rub along tendon fibers. Rubbing goes along the tendon in a single direction multiple times beginning with light pressure and increasing slowly to a maximum intensity followed by gradual reduction. One might rub along a single tendon pathway 10-20 times. This technique is often used in areas where ligaments and tendons are attaching to bones or in nodules found within the tendons. It is occasionally also used in deep muscle tissue or into unusual deposits found between bones. The technique is indicated in cases where there are injuries to tendons, ligaments or bursa that have led to palpable changes in the area. It can also be used to put tendons back into their proper track, to move small joints into place or to relieve muscle sprains.

#### F – Cross-fibre plucking

(彈撥法 *tán bō fǎ*)

Here the tip of the index finger or thumb is used to press and pluck across muscles, tendons or bursa three to five times. Patients often report that areas distal to the plucking feel achey, numb or tingly. This technique should not be done with excessive force. A moderate plucking is most appropriate. It is

most commonly done in the axilla, cubital fossa, wrist, groin, back of the knees and ankles. Plucking is done on the deep tendons or even across pathways of major arteries. This technique is effective for treating paralysis, pain, weakness, numbness or swelling in the distal appendages.

#### G – Pressing technique (推按法 *tuī àn fǎ*)

This technique involves pressing along the channels from the distal aspect to the proximal (towards the Heart) with the pad of the thumb four or five times. Often the practitioner will stop and press the second, third and fourth points on each channel. When pressing individual points, the pressure should go from firm to light, five to eight times. This technique is often used on patients where one suspects sluggishness in channel circulation. Symptoms often include fatigue, a sensation of heaviness, swelling and muscle aches.

#### H – Moxa (灸法 *jiǔ fǎ*)

Moxa is one of the best means for regulating the channels and has been respected for its effectiveness in health care from the most ancient times. Its ability to treat disease is sometimes compromised however by inattention to precise location and appropriate length of treatment.

Most importantly, both channels and points should be chosen carefully to ensure best results. Also, one should pay attention to the differentiation between the mild effects of indirect moxa, the medium-strong effects of scarring moxa, and the strong effects of blistering moxa. Practitioners often forget the basic concept that careful diagnosis and analysis of the relative strength, depth and length of time a given disease has been present will all affect the channels, points and moxa technique chosen. It is important for patients to remember that moxa treatment requires an experienced practitioner to properly choose clinical strategies in order for the technique to realise its full potential.

The above mentioned are but a summary of the most common non-acupuncture techniques in the modern clinic. Within the folk traditions of China, there are quite a few other techniques that might be studied and developed on a larger scale. On the



other hand, further careful reading of the classics is likely to reveal a treasure trove of techniques that might be explored for regulating the channel system.

### III – Preserving and protecting our channels

After contemplating classical references while regulating the channels of patients for over 50 years, it seems that the role of the channels in the Chinese medical model might be summarised by the following two phrases:

*The five zang organs preserve essence and thus rule destiny* (五脏育精而主命, wǔ zàng yù jīng ér zhǔ mìng).

This phrase describes the basic fact that the organs are responsible for the processes of life. In Chinese medicine, these processes are thought of as a manifestation of essence. Growth, maturation and, eventually, decline and aging are all manifestations of the essence that comes to us in the womb from our ancestors. This is similar to the role of genetics in the modern model. The degree to which we fully express the potential of our genetics is the degree to which we realise our destiny. This is to say that our ability to live to the longest and most healthy possible life is defined by the health and proper function of the organs (in particular the five yin organs). This is our potential.

*The channels irrigate and thus rule life* (经络灌渗而主生 jīng luò guàn shèn ér zhǔ shēng).

This second phrase describes the key prerequisite for realising the potential of the first. In order for one to realise what we are calling “destiny”, the organs must both preserve and manifest the essence (or genetic potential). In order for the organs to do this, circulation must be optimised.

This is the role of the channels as irrigators of all the living tissues of the body. It should be emphasised that not only are the organs nourished by what Chinese medicine terms “channels” but also that inter-organ balance is maintained by their irrigation. It is important to take note of the choice of terms here. “Irrigation” (灌渗

guàn shèn) describes a slow, gradual process in the body not unlike the measured provision of water to roots that insures healthy plant growth. In a modern sense we might say that the circulation of fluids in the extracellular matrix is the very medium through which homeostasis is maintained. In a more mundane sense, proper irrigation of the internal fields keeps the muscles strong, the joints moistened and the brain clear – all obvious prerequisites for a life lived to its utmost potential.

Of course not only nourishment comes to the structures of the body but also waste is removed via the matrix of spaces that make up our channel system. Thus Chinese medicine speaks of excess (實 *shí*) and deficiency (虛 *xū*). When the channel system is open and irrigating at the proper rhythm, then nourishment is provided without deficiency and waste is removed without excess. In all cases of disease, the ultimate physical location of both excess and deficiency is in the channels. This is likely what the *Inner Classic* is asserting when it says that the channels are “determiners of life and death [who] manage the 100 types of disease while regulating excess and deficiency”.

The relationship of the channels to the functioning of the organs and thus the realisation of our full potential (as destiny) represents the process of expansion and growth in our lives. Nevertheless, with the inexorable process of aging, this potential is slowly used up. Largely, it is through the six excesses of the external environment coupled with internal damage by the seven emotions that we gradually pollute and obstruct our channel system. Therefore, if we take the system of Chinese medicine seriously, we must all carefully preserve our channels. Only then can we ensure that they continue to have that crucial function that the *Inner Classic* describes as, “moving blood and qi to nutrify yin-yang, moisten the tendons and bones and benefit the joints”. How can this be done?

#### 1 – Keep the channels open and regulate the emotions

This involves maintaining the ability of the channels to circulate by engaging in moderate exercise and qi circulation

### Endnotes

1. 灵枢 • 经脉篇
2. “经脉十二者，伏行分肉之间，深而不见；其常见者，……皆络脉也。”灵枢 • 经脉篇
3. “天至高不可度，地至广不可量... 若夫八尺之士，皮肉在此，外可度量切循而得之，其死可解剖而视之”灵枢 • 经脉篇
4. Written by Sima Qian (司馬遷) in the first century BCE. This discussion comes from a section of biographies of eminent personages from early Chinese history. In this case, from *The Biographies of Bian Que and Prince Cang* (扁鹊仓公列传 *Biǎn què cāng gōng liè zhuàn*).
5. “一拨见病之应，因五藏之输，乃割皮解肌，诀脉结筋，搦 (nuo) 髓脑，揲 (she) 荒爪幕，滌浣肠胃公澹海五藏，练精易形。”史记 •
6. 难经 • 四十二难
7. The Chinese term for this technique is 凌遲 *líng chí*.
8. 汉书 • 王莽传
9. 欧希范五脏图 (*Ōu xī fān wǔ zàng tú*) written in the 11th century by Wú Jiǎn (简). 存真图 (*Cún zhēn tú*) written in the 12th century by Yáng Jiè 杨介
10. The term for “fluids” Dr Wang often uses is 组织液 (*zǔ zhī yè*)
11. “夫十二经脉者，内属于藏府，外络于支节。”灵枢 • 海论篇
12. For a fascinating refutation of the concept that the channel system describes blood circulation, please see: Nie, Jing-Bao (2001). “Refutation of the claim that the ancient Chinese described the circulation of blood: A critique of scientism in the historiography of Chinese medicine”. *New Zealand Journal of Asian Studies* 3 (2), 119-135. This article makes an excellent case that the ancient Chinese anatomists were not describing a circuit of blood like that of William Harvey but fails to suggest other possible interpretations for the detailed circuits mentioned throughout the *Nei Jing*.
13. “经脉者，所以行血气而营阴阳，濡筋骨，利关节者也。”灵枢 • 本脏篇
14. See, for example: Vaday, GG, and O Lider: Extracellular Matrix Moieties, Cytokines, and Enzymes: Dynamic Effects on Immune Cell Behavior and Inflammation, *Journal of Leukocyte Biology* 67.2 (2000) : 149-159.
15. “经脉者决死生、处百病、调虚实、不可不通。”灵枢 • 本脏

■ Continued next page

practice. Within the traditions of China there are a wide variety of movement therapies often known in the West as “qigong”. Besides these, each culture has its own traditions for gently exercising the muscles and joints while maintaining flexibility. Each should choose their own but not neglect the principle.

Another less-appreciated aspect of keeping channel qi moving in the proper direction involves the regulation of emotions. When regulating the emotions, the key is balance. One should neither over-indulge in strong emotion nor stifle expression. When encountering a situation that evokes strong emotion, one should resolve in a timely manner. Express one's thoughts so as not to lead to stagnation of qi while also not losing control and draining oneself outwards.

## Endnotes

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16. The original text for this chart is “手足太阴经主要承受湿的运行和气机的调节; 手足少阴经承受营血的运行和原气的固摄; 手足厥阴经承受阴血的蓄藏与分配; 手足太阳经主要承担寒气的化解和温煦肌肤; 手足少阴经主要承担风热的消散和清解; 手足阳明经主要承担饮食的消化和排出。”

17. The function of qi mechanism (气机 qi ji) is primarily one of the *taiyin* Lung. For example, the rhythms of breath might be said to set the rhythms for the function of all other organs. This of course must be built upon the firm foundation of post-natal nutritive supplied by the functions of the Spleen.

18. 灵枢·刺节真邪论

19. For a thorough discussion of the “nine pulses” found around the body, please see Appendix IV in: Wang, Ju-yi; Robertson, Jason D. (2008): *Applied Channel Theory in Chinese Medicine*. Seattle: Eastland Press.

20. “盛者泻之，虚者补之，热者疾之，寒者留之，陷下灸之，不盛不虚，以经取之。” 灵枢·经脉篇

21. “宛陈则除之者，出恶血也。” 素问·针解篇

22. 虚邪贼风 These terms, according to the *Lei Jing* chapter 1 & 27, refer to winds blowing from the opposite direction to normal, and adds the comment: “This [avoidance] treats the outside.”

23. The *Lei Jing* adds the comment: “This [quiet emptiness] treats the inside.”

## 2 – Protect the channels by maintaining regularity of intake and daily activity

The channels move qi and blood to supply the entire body but the channel system itself requires nourishment and periodicity. One might even think of this as “irrigating” oneself. This means striving to balance intake of food and fluids at levels between excess and scarcity while also maintaining an even rhythm in the timing of meals. Similarly, the rhythms of daily life should be regular so as not to damage the channels.

## Conclusion

In summary, this concept developed by centuries of careful observation and clinical practice which we have come to call “the channels” describes the place where anatomy and physiology meet. It represents an early appreciation of the fact that only through healthy transmission of fluids through a matrix of connective tissue can optimal organ function be achieved. Water system metaphors run throughout the classical texts in descriptions of channel movement and even in the names of individual acupuncture points.

Less often remembered today in discussions of classical texts, however, is the interrelationship of function and form. This is because most of the texts in the history of Chinese medicine describe function and process but not the anatomical structures

within which these processes might be taking place. Nevertheless, by looking at the early history of Chinese anatomical studies we might infer that structure, even at the level of fibrous connective tissue, was likely well known and highly influential in the development of channel theory.

Since the concept of a channel system was discovered, people have striven to optimise channel function so as to achieve health and long life. The techniques of meditation, qigong, martial arts, acupuncture, moxibustion and even herbal medicine all have this at their very core. However, we should remember that over-stimulation and pollution of the channels with improper use of even these laudable techniques is not only unsuitable, it can actually damage the system. This seems to be the great issue in the modern era. Clinical experience has shown that some patients arrive with channels that are fatigued or thrown into confusion by excessive or inappropriate medical interventions (including acupuncture). In the end, the very best means of preserving the channel system is described in the *Inner Classic*:

*One should take care to avoid strong unseasonable winds [which are called xu xie zei feng].<sup>22</sup> Be tranquil and unattached, true qi will follow, your essence and spirit will remain inside: how can disease come about?<sup>23</sup> Keep the will clear, have fewer wants and your Heart will be calm and unafraid. You will work without becoming fatigued. With qi moving in its proper direction [due to the absence of stirring emotions] then all wants are met. [By living this way] people find that food is now tasty and that their clothes will do. By finding pleasure in the basics, they are not enamoured by distinctions of high and low status and thus all the people are down to earth. Hence desires do not exhaust the eyes nor sensuality delude the Heart. The ignorant and the wise, the virtuous and the unworthy can all be in the world together without fear and in accord with the way. This is how to live to be 100 years old without becoming feeble. The virtue [of this kind of living] is the elimination of danger.*

(素问·上古天真论)