

# 中醫健康評估的理論、技術與發展

## Theory, Technology and Development of

## Traditional Chinese Medicine Health Assessment

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賴正國

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### 中醫診斷的定位應以健康評估為重點

#### Health Assessment is the Key to Traditional Chinese Medicine Diagnosis

由西醫主導的現代醫學，二百年來普遍運用現代科技的方法讓患者能夠得知自己身體內部的影像或數據，近年來更導入服務業的經營模式，重視患者的感受並注重患者的尊嚴，讓民眾習慣運用數據與醫者對談，這是醫學發展的必然趨勢，提高患者的對痊癒的信心以及對醫者的信任感，必然有助於治療的成效。相較之下，傳統醫學採用的主觀判斷方法卻讓患者逐漸失去信心，自說自話的診斷方法勢必遭到時代的淘汰。然而，即使受到現代科技與潮流的嚴重衝擊，中醫仍是受到患者信任的第二選擇，除了效果顯著、副作用低等因素之外，中醫不可否認的是一套照顧了全球最大的民族達五千年之久的一套經驗法則，因此雖然受到現代科學的威脅，仍能存續至今。

Over the past 200 years, the modern medicine (dominated by western medicine) reveals the medical imaging and data inside human body with modern technology. The imaging and data help mutual communication and trust. In comparison, the traditional medicine diagnoses subjectively and loses the confidence of the patients. Facing the severe impact of modern technology, traditional Chinese medicine (TCM) remains the second best option to be trusted. In addition to the obvious curative effects and the least side effects, TCM takes care of the most people in the world for 5,000 years and survive under the threat of the modern science.

西醫對於外科手術、急救、以及公共衛生（包含細菌與病毒）等領域擁有不可抹滅的貢獻，但對於疾病的預防、慢性疾病的治療、增強體質、提昇自癒能力等方面的成效卻遠遠不如中醫。究其原因，主要是西方醫學以解剖學為理論的核心，認為人體的疾病來自於人體物質層面的損傷或微生物的侵襲；然而，解剖

學以沒有生命的物質為研究的核心，無法看到生命的本質，若單純以物質來看，一個人在失去生命的前後，物質方面並沒有什麼差異。而中醫則認為生命應該重視的是無形的生命能量，因此所有的診斷與治療方法都是以能量為核心，並藉由大自然賦予人類的能量來協助患者提昇自癒能力，進而改善健康。簡單的說，中醫重視健康，西醫重視疾病；中醫重視生命，西醫重視物質。這兩者並非孰優孰劣的問題，而是應該正確的評估患者屬於疾病過程中的病機類型，包含病因、病位、病性、病勢等診斷範疇，採用正確的醫療方式，達到減少疾病、療癒康復的目標。因此，中醫的診斷必須找到合適的定位，即應以健康評估為核心，並採用科技的手段取得數據與圖表，並以實證醫學的態度進行臨床統計與學術研究，藉以逐漸得到患者的信任，既可避免遭到時代的淘汰，更可進一步將這套標準化的健康評估方法推展到全世界。

Western medicine excels in surgery, emergency treatment and public sanitation (killing bacteria and viruses), while its effects are far behind TCM regarding preventing illness, curing chronic diseases, promoting health and enhancing self-healing power. In short, TCM emphasizes on health and life energy, western medicine focus on diseases and physical materials. Both have its pros and cons, we should evaluate patients in all aspects of the diseases, such as the causes, positions, characters and trends; then adopt the right medical treatment to achieve illness prevention, healing and rehabilitation. Therefore, TCM diagnosis must find its suitable positioning, which should be based on health assessment, use scientific methods to acquire data and charts, conduct clinical statistics and academic research by evidence-based medicine approach to gradually win the trust of patients, avoid being eliminated, and promote the standardized health assessment approach around the world.

## 中醫科學化所遭遇到的問題

### Problems that “Scientization of Traditional Chinese Medicine” Faces

傳統中醫的健康評估方法為望、聞、問、切等四種主要的方法，這些方法都是採用主觀的判斷，沒有任何依據可以證實這個判斷的正確與否。近代有許多科學家致力於將這些方法科學化，以望診而言，包括虹膜、顏面視診、舌診儀、耳穴反應儀、量子分析儀等；聞診則有電子鼻、音頻分析等設備；問診則以體質分析問卷等軟體進行分析；而切診則有很多單位進行脈診儀的研究。然而，這些診斷的方法在科學化、儀器化之後，科學家們發現理想與現實有一段不小的差距，由於檢測的主客觀變數太多，穩定度也嚴重不足，經過了多年的研究之後發現可供參考的價值相當有限，最終還是需要人工主觀的判斷，因此上述的所有設備最終都沒有成為正式的醫療檢驗設備，醫界的使用率近乎於零，研究報告與論文也並非正統學界公認的結論。而經絡檢測設備囊括了四診的精華，主客觀的變數最

少，因此是中醫與自然醫學界最有發展性、最能國際化的儀器。經絡檢測設備與西醫的取得患者信任的方法（運用現代科技的方法得知體內狀態的數據）類似，將來應有機會列為四診之首，以實際檢測的生理數據與患者進行對談，讓患者更容易接受醫者的診斷結果以及治療方案。

Four TCM diagnosis methods are: observation, auscultation, inquiry, and pulse feeling. All these methods are subjective; there is no objective basis to confirm whether the judgment is right. Meridian testing equipment contains the essence of four diagnosis methods, avoids the most subjective and objective variables, and has the potentials to be developed as the most international equipment for TCM and natural medicine. Meridian testing equipment is similar to the western medicine equipments, which win the patients' trust by applying modern technology to detect the data inside the body. Meridian testing equipment should be listed as the top of four TCM diagnosis methods in the future, provide the physiological data to communicate with the patients and make patients more likely to accept the diagnosis and treatment plans.

### 經絡檢測技術的危機與突破

#### Crisis and Breakthrough of Meridian Testing Technology

經絡檢測技術早在 1950 年代普遍運用於全球的醫界與學界，此技術歷經了近七十年的時光，頗受醫、學界的認同。然而，這段時間是科技高速成長的黃金時期，科學技術的發展可說是日新月異、突飛猛進，而經絡檢測技術卻沒有絲毫的成長；長期以來，由於技術的停滯、穩定度屢遭質疑、劣質商品的橫行、市場秩序的混亂、業者的專業知識不足以及誇大的商業術語，讓經絡檢測設備一度瀕臨淘汰的邊緣。直到 2011 年，台灣的上醫健康事業推出以電磁感應技術為核心的 PHCS 『經絡道』，才使得中醫健康評估的科學化有了發展的重要契機。

As early as 1950, meridian testing technology is commonly applied in the global medical community and academia, which is recognized for nearly 70 years. However, during the rapid growth period of technology, meridian testing technology does not improve at all. Due to technology stagnation, unstable test results, prevailing fake equipments, market chaos, insufficient industry expertise and exaggerated commercial terminology; meridian testing equipment is on the edge of elimination. Until 2011, Sane Health Enterprise in Taiwan launched the "Meridian Dou" (PHCS) based on the electromagnetic induction technology, which makes the important progress for the scientization of TCM health assessment

傳統經絡檢測技術普遍採用皮膚電阻的檢測方法，這種方法需要輸入一股電流到人體特定的穴道中，並與手上的另一端電極形成迴路，藉此判斷經絡的電

流導通程度、繼而計算出皮膚電阻值，電阻越高則代表經絡運行的過程中受到較多的阻礙，反之則經絡越通暢。這種方法受到早期科學技術的侷限，屬於草創時期的權宜方法，由於每次檢測都需要輸入電流到人體穴道中，穴道受到刺激後會產生應激反應，因而改變了經絡的原始狀態，所以連續檢測中會得到相當不穩定的數據，無法通過醫學檢驗設備最基本的穩定性要求；再加上握棒電極、生理食鹽水、棉球等變數，導致檢測的結果令人質疑。電磁感應技術則可摒除上述的所有問題，而達到穩定度與靈敏度的最佳平衡，因此普一推出即受到醫界、學界的普遍認同與採用。

Traditional meridian testing technology adopts the skin resistance method, this approach needs to electrify the specific acupuncture points to form the electric circuit with the hand electrode at the other end, so as to measure the electric current and calculate the skin resistance. The higher resistance, the more obstacles of the meridian. This method was limited by the technology and served as the expediency method in the earlier years. The skin resistance method needs to conduct electric current onto human acupuncture points, those points are stimulated and the original meridian status is changed. The data of successive testing are very unstable and cannot meet the basic stability requirements of the medical testing equipment. What is more, electrode rod grip, saline water, and cotton balls, all these variables lead to questionable results. Electromagnetic induction technology can exclude all above questions and achieve optimal balance of stability and sensitivity. Thus, when electromagnetic induction technology was released, it was generally accepted and adopted by the medical profession and academic sector immediately.

電磁感應技術是採用感應人體電磁場的強度的方法，沒有任何電壓、電流、紅外線等能量輸入到人體中，也不需要握棒、棉花與生理食鹽水，直接在人體外感應人體電磁場的強度，因此對人體沒有任何的影響。從 1990 年代起就有許多篇關於運用人體電磁場來檢測經絡的論文，雖然普遍受到專家們認為是最佳的檢測方案，但由於技術門檻與製造成本太高，因此遲至 2011 年才走出實驗室成為可量產的商品。

Electromagnetic induction technology inducts the strength of human electromagnetic field, there is no electric voltage, current, infrared energy conducted onto the human body, and does not require electrode rod grip, saline water and cotton balls. It directly induct outside the human body, therefore does not have any effect on the people. Since 1990, there have been many essays of applying human electromagnetic field to detect the meridians. Although the experts generally considered it as the best meridian testing method, the technical barriers and high costs delay its commercialization until 2011.

## 經絡是人體電磁場最佳的傳遞路徑

### Meridian is the Best Transmission Path of Human Electromagnetic Field

每個人從母體中孕育生命的初期，就已經擁有一個獨立的生物電磁場。人體最基本的組成單位為細胞，由受精卵細胞開始不斷的分裂，逐漸演變成不同類型與用途的細胞。從高等物理學的研究得知，每個細胞都是由許多原子所組成，因此擁有一定數量的電子，這些電子會依據各別細胞的電磁場頻率之不同而自行分類出各自不同的運作路徑，這條路徑即為中醫所說的經絡，經絡中含有豐富的導電物質與人體組織液；大量的電子循著經絡的路徑流動而形成電子流，帶領著細胞進行歸納、組織而成為各自不同的器官，逐步組成一個完整的人體；電子流運行時，會引起一個與經絡運行方向平行的「電流」、和一個與經絡運行方向垂直的「磁場」運行在這條經絡的周邊，二者合稱為「電磁場」，電子流的數量越多則電磁場越強，以電磁感應技術所檢測的數據就越高。

Everyone already has the independent bio-electromagnetic field since the very early life stage inside his mother's womb. The basic composition units of the human body are the cells, which are divided from the fertilized egg; gradually evolved into the different types and purposes. From the research of advanced physics, the cell is composed of many atoms and has many electrons; these electrons are classified into different paths according to the different electromagnetic field frequencies of individual cells. The paths are TCM so-called Meridians. Meridians are full of conductive materials and tissue fluid; large amount of electrons flow along the meridians and form the electrons flow, lead the cells to classify and organize as the specific organs, and finally compose as the whole human body. The electrons flow to form the "electronic current" parallel to the meridians and the "magnetic field" perpendicular to the meridians, which are collectively referred to as "electromagnetic fields". The more the electron flows, the stronger the electromagnetic field is. The stronger the electromagnetic field, the higher scale of data detected by electromagnetic induction technology.

## 電磁感應技術在經絡檢測中的實用價值

### Practical Value of Electromagnetic Induction Technology in Meridian Testing

人體擁有密布全身的大小經絡系統來傳導電流，造成了強而有力的生物電磁場，這種生物電磁場可說是生命的基本能量，被稱之為生命力，也就是中醫所說的「氣」，以電磁感應技術所探測到的是電磁場的強度，單位為 $\mu W$ ，將來的醫學研究者都應根據該生物電磁場的情況來判斷一個人的能量循環是否受到阻礙，一個人如果精力充沛，身體健康，他發出的電磁強度較強且平均，如果電磁強度較弱或不平衡，就是身體有堵塞的信號。而依據共振的原理，同一運作頻率

的細胞、器官與運行路徑，會產生相互的影響，因此臟腑的問題可以透過經絡來顯現，並可透過經絡來進行治療。

The electric currents are conducted by the meridian system spreading around the whole human body to form the strong bio-electromagnetic field. The bio-electromagnetic field is the basic life energy, life force and TCM so-called "Qi". The unit of electromagnetic field measured by electromagnetic induction technology is  $\mu W$ . In the future, medical researchers should judge the obstructive levels of life energy according to the bio-electromagnetic field. If someone is energetic and healthy, his electromagnetic field intensity is higher and balanced. When the electromagnetic field intensity is lower or imbalanced, it implies the life energy is blocked. According to the principle of resonance, cells, organs, and meridians of the same operating frequencies will have the reciprocal impact. Thus, visceral problems can be revealed and treated by means of the meridians.

關於人體電磁場的科學研究相當廣泛，最著名的是在 1939 年，由前蘇聯科學家克里安夫婦（Semyon Davidovich Kirlian），他們在實驗中將人體置於一個由交流電儀器所產生的高電壓(15,000 到 100,000 伏特)與高頻率的電場中，發現人體周圍會發出白色的光環，稱之為「電暈放電」現象。這光環的分布並非完全均勻，某些部位發出的光芒比其他部位來得強烈，這些發出強光的部位與經絡理論中的循行路徑相當接近，因此這項發現在全球的物理學研究中受到相當的重視。通常一個健康、熱情、心情愉悅的人，會擁有較大的電磁場範圍。

The scientific researches of human electromagnetic fields are quite extensive. The most famous research was conducted in 1939 by former Soviet scientists Kirlian (Semyon Davidovich Kirlian) and his wife. Their experiment settled the human body within high voltage (from 15,000 to 100,000 volts) and high-frequency electric field to discover the human body will emit the white halo around, so-called "Electrical Corona Discharge" phenomenon. The corona is not evenly spread; some parts are brighter and are very similar to the paths of the meridians. This finding received considerable attention by the physics researchers globally. Generally, a healthy, warm-hearted and cheerful person will have a larger range of electromagnetic field.

生物電磁場從身體向外放射約 3~5 公分（1.5 到 2 英寸）左右，人類受到肉體感官的限制，在正常環境與條件下大部分人沒辦法看得到電磁場，古書中則記載有少部分名醫能夠感覺到或是看到人體的電磁場。如扁鵲見到齊桓侯的時候並沒有聞與問，也沒有幫他把脈，而是看一眼就知道其疾病的位置與深淺。另外，華佗也是一望而知曹操腦內有病，願為其開顱治療。在當時的年代並無 x 光、超音波、CT 斷層掃描與 MRI 核磁共振等技術，而扁鵲、華佗卻在一望之下就能明確的診斷，或許可以解釋為具備以肉眼或感官來觀察人體電磁場的特殊能力。

Bio-electromagnetic field emits from and outside the body for approximately 3~5 cm (1.5 to 2 inches). Most people, limited by the physical senses of mankind, cannot see the electromagnetic field under normal conditions. But few ancient famous doctors can feel or see the human's electromagnetic field. For example, Doctor Bian-Que did not use TCM diagnosis methods such as: auscultation, inquiry, and pulse feeling to diagnose Duke Qi-Huan. He only saw at a glance and know the correct location and depth of illness. In addition, Doctor Hua-Tuo also saw to know Emperor Cao-Cao was sick in the brain and would like to provide the craniotomy treatment. Without x-ray, ultrasound, CT scan and MRI magnetic resonance imaging technology, both ancient famous doctors can see to provide the clear diagnosis, which perhaps can be interpreted that they had the special talents to observe the human's electromagnetic fields.

### 經絡道檢測設備的價值

#### Value of "Meridian Dou" (PHCS) Testing Equipment

經絡道檢測設備的面市，讓一般人不需要具備特殊能力、也不需要暴露在危險的高頻高壓環境中拍攝氣場照片，就能夠輕易的探測人體電磁場的強弱訊號，並以數據化、圖表化的方式呈現在螢幕中，檢測結果融合傳統中醫學的理論基礎，發展出一套具有預警性質的健康評估方法，並以簡單的操作、容易學習的介面、極高的穩定度與靈敏度，讓醫學研究者得以快速學習並累積臨床資料庫，可以幫助現代醫學突破既有的瓶頸，讓『健康促進』的概念逐漸取代『疾病治療』，減少患者病痛、降低家庭與國家的負擔，這樣的醫學才是值得期待、值得鼓勵與推廣的健康醫學。

Neither do the people need to have the special talents, nor do they need to expose within the dangerous high-frequency high-electricity environment to take the "Electrical Corona Discharge" photo. The launch of "Meridian Dou" (PHCS) testing equipment can easily detect the human electromagnetic field; display the data and chart in the screen. Testing results are based on TCM theory and develop the early warning health assessment method. PHCS, which is equipped with the simple operation, easy-to-learn interface, the optimal balance of high stability and sensitivity, allows medical researchers to quickly learn and accumulate clinical database that can help modern medical breakthrough the bottleneck, gradually replaced the concept of "disease curing" with "health promotion"; reduce the personal pain, release the burden of family and country. Such ideal practices of health medicine are really worthwhile, deserve the encouragement and promotion.

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