

EPISTEMOLOGICAL EVALUATION OF CHINESE MEDICINE AND ACUPUNCTURE - PART I

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The article gives an explanation of the paradoxical circumstances connected with the German GERAC study (they are similar in other Western countries) in order to halt further misconception and careless spending. For almost six decades the European acupuncture scene has been dominated by Souliè de Morant's energy and meridian humbug, something that was even praised by such an eminent scholar as Joseph Needham. It is still reflected in conservative academic publications and in teaching seminars world-wide.

Chinese medicine, when it is correctly applied and properly understood, starts from a paradigm different from that used by orthodox Western medicine, whereas orthodox medical researchers and politicians try to force Chinese medicine into a straight-jacket which involves the concept of double-blind studies, average values, mathematical estimates and statistics as employed by Evidence Based Medicine (EBM). Diagnosis and therapy in Chinese medicine commence from the horizon of *Shen* 神 and *Yin-Yang* 陰陽 (Gr. ἡ ἀρχή), they involve the concept of the Whole of the Universe (Gr. τὸ ὅλον) as well as the flow of time, something which allows the induction (Gr. ἐπαγωγή) of further data, diagrams, diagnostics, techniques and therapies. In the classical textbook *Huangdi Neijing Lingshu* the imperial physician Qi Bo explains that *Shen* 神 is the substantial phenomenon to be understood by acupuncture doctors, and from where all further phenomena of Chinese medicine are deduced. This is what makes deductive Chinese medicine, in association with clinical induction, so effective and safe and reduces risks and side-effects to a minimum

Deduction is not only an important procedure in Chinese tradition, but also a keystone of Occidental logic. In his *Lecture on Nature* (ΦΥΣΙΚΗΣ ΑΚΡΟΑΣΕΩΣ) Aristotle maintains that reliable proof can only be attained by deducing this from what he calls 'substance' (ὁποκείμενον). He labels the aspects that are attributed to the substance as 'accident' (συμβεβηκός), and he declares that an accidental attribute has no being at all. In his *Metaphysics* he states that by induction using accident, no valid scientific proof can be attained at all. Orthodox Western medicine and, above all, Evidence Based Medicine (EBM) deal for the most part with accident.

The solution to this apparent dilemma is: Deduction and induction should be applied in combination. This has been carried out in China since ancient times by anatomical studies, by testing the effects of medicinal herbs, by tongue and pulse diagnosis and by specific acupuncture procedures.

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All the achievements of modern Western medicine can be integrated and properly applied within Chinese medicine, but not vice versa, since the deductive method will always keep its key role because it grasps *Autiasis* which works as a ‘substance’ (*ὑποκείμενον*) comprehending the main Principle, the Whole, *Yin-Yang* 陰陽, *Dao* 道, *Shen* 神; that is what Aristotle named substance; the deduction and the analysis of parts from there (*ἐπαγωγή*) is the method he called science (*ἐπιστήμη*).

Key words: Beginnings of scientific reasoning in Chinese medicine and in the West, Basics of logic: deduction and induction, Evidence Based Medicine (EBM), Fallacies in modern Western medicine, German Acupuncture Trials: the GERAC studies

It is probably true quite generally that in the history of human thinking the most fruitful developments frequently take place at those points where two different lines of thought meet. These lines may have their roots in quite different parts of human culture, in different times or different cultural environments or different religious traditions; hence if they actually meet, that is, if they are at least so much related to each other that a real interaction can take place, then one may hope that new and interesting developments will follow.

*(Werner Heisenberg)*¹

Φύσις κρύπτεσται φιλεῖ, Nature likes to hide herself.

*(Heraclitus, 544-483 BC)*²

Chinese Medicine and Acupuncture in the West

Chinese medicine and acupuncture are considered not to be of high-class quality as their effect among orthodox Western type medical doctors is supposed to be nothing more than a good placebo. So for this reason Western scientists and health politicians demand that both should be submitted to

rigorous evidence based on trials covering all sorts of medical diagnoses, something which, for them, might turn out to be tiresome, time-consuming and expensive into the bargain. On the other hand, Chinese medicine and acupuncture enjoy enormous popularity among patients and give evidence of unusual success in the Western (and the Eastern) world of healing. Compared with Western therapeutic procedures, both methods exhibit only few side-effects, especially when contrasted with Western, pharmaceutical medication, and both can in fact heal numerous diseases, which Western medicine cannot. In 2009, a referendum in Switzerland showed that 67% of the voters wanted complementary treatment, of which Chinese medicine is a part, for their regular health care.³ But some Western politicians still argue that the general public is too brainless to sensibly judge the scientific problems involved, despite the fact that the same electorate was not too stupid to vote for the very same politicians who now maintain it!

A large acupuncture analysis was performed some eight years ago in Germany: the so-called German acupuncture trials GERAC and ART.⁴ They were welcomed as the world’s biggest scientific tests ever done on the subject. Some 100,000 (hundred thousand) patients suffering from two common

illnesses, low back pain and osteoarthritis of the knee, were treated with genuine acupuncture, placebo acupuncture and orthodox medicine. A so-called 'Real' and a 'Sham' acupuncture group were set up, their results were compared, and a third group with patients suffering from the same two problems were treated with standard medicinal procedure. Surprisingly, the real acupuncture group showed a success rate of about 47.6%, the 'sham' group had a success rate of 44.2%, but the orthodox medicine group achieved only 27.4%.⁵ Thus the study produced confusing results. These results have motivated some analysts to conclude that everyone should be allowed (and be paid for) pricking needles into random points on the human body, no matter where they are located, and have so prompted the criticism that theories of acupuncture were completely unnecessary.⁶⁻⁸

This has initiated controversial debate among experts as well as among the public. However, the upshot has been that health insurers in Germany were now set to pay approximately 50 euros for each such charade. Since this happens thousandfold in Germany every day, the results are appalling, and the minute number of knowledgeable German acupuncturists gets smaller and smaller. In short, quackery with acupuncture is a widely proclaimed domain, and, incidentally, the overall costs for the GERAC study have since amounted to roughly 10.000.000 (ten million) Euros. The money was paid from the assets of health insured people in Germany who were not informed in the slightest beforehand about the squandering of so much money.

The present article tries to give an explanation for these paradoxical circumstances (they are similar in other Western countries) in order to halt further

misconception and careless spending.

My reasoning starts with the beginning of Chinese medicine and acupuncture and at the same time with documents dated from the beginnings of Occidental, scientific thought in order to shed light on the present situation. The author hopes to be able to demonstrate that the original concept of acupuncture and the initial stages of Western scientific reasoning show distinct similarities and that they still manifest enough substance to allow access to new, logical insight.

In addition to 3 typical case histories (sections 2, 5, 10) - hundreds more could be presented - this paper deals with the following main paragraphs:

1. Chinese Medicine and Acupuncture in the West
2. Case History 1,
3. The Roots of Chinese Acupuncture,
4. The Beginnings of Scientific Thought in the West,
5. Case History 2,
6. The Logic of Scientific Discovery
7. On the Theory of Chinese Medicine,
8. Evidence Based Medicine (EBM) and Medical Science,
9. Fallacies in Western type Medicine,
10. Case history 3,
11. Fallacious Understanding of Chinese Medicine in the West,
12. 'Shen', Nature, Autiasis, and the Way Out.

Case History 1

In 1988 I had to treat a patient suffering from cirrhosis of the liver after a Non-A non-B hepatitis.

When he came for his first consultation he was deeply depressed and frightened because some distinguished professors at the university clinic had told him that he would die within a few weeks time since there was no therapy available for him, except perhaps a liver transplantation, but currently no donor was at hand.

I looked at the man who was in his mid-fifties. The whites of his eyes had a deep yellow tint; his face was completely yellow, even his lips and tongue were yellow. His cheek-bones protruded from his hollow cheeks; he felt extremely miserable. He said he had lost some 20 kilos as his appetite had completely vanished. He could not sleep and suffered from headache, giddiness, low back pain and stomach pain. His G.P. had referred him to me because he knew that I had successfully treated hepatitis patients with acupuncture in the past. The man showed me his laboratory values: The bilirubin was 23.7, GPT and GOT were both about 600, and the Gamma-GT was 230.

The first thing I told him was that I couldn't understand why the clinicians had predicted his impending death, and went on to say that I could give him a series of acupuncture treatments to improve his condition.

"Do you think I have a chance?" he asked fearfully.

"I do", was my answer. "Your clever professor might die earlier than you!" The man gathered fresh hope.

I looked at his tongue, took his pulse, asked him to undress and examined him from head to heel. I palpated the tender spots on his body and the acupuncture points into which I had to insert my needles. These were: *Jimen* 期門 (Liver 14), *Riyue*

日月 (Gallbladder 24), *Zhongwan* 中脘 (Renmai 12), *Sanyinjiao* 三陰交 (Spleen 6), *Ganyan* 肝炎 (extra point on the lower leg), *Taichong* 太冲 (Liver 3), *Yanglingquan* 陽陵泉 (Gallbladder 34), *Neiguan* 內關 (Pericardium 6), *Baihui* 百會 (Dumai 20) on his anterior side; and *Xinshu* 心膈 (Bladder 15), *Shenshu* 腎膈 (Bladder 23), *Pishu* 脾膈 (Bladder 20), *Weizhong* 委中 (Bladder 40) on his back. I entered his *Bian-Zheng* diagnosis into the file: *Damp and Heat in Liver and Gallbladder* 肝膽濕熱 and started with acupuncture treatment. After the treatment he felt slightly better, but still very tired.

In the following days he came to see me twice a week. After two weeks the bilirubin had dropped from 23.7 to 12; GOT and GPT had fallen to 200; the Gamma-GT was 80. He looked less yellow. A month later, the bilirubin was 7.5; GOT and GPT were about 60; Gamma-GT was 45. The patient's appetite had returned, he slept better and his dizziness had disappeared. He marvelled that he was still alive and his confidence grew from day to day. After a second month all his laboratory tests were more or less normal. He had gained weight and felt much better. Six months later he took up work again. His health insurances didn't pay him a penny in refunding his acupuncture bills. He sued them because they maintained my cure had been an "unscientific" treatment and his healing just an 'unspecific' effect. But in the end he won his lawsuit against his health insurance after he had told the judge that he preferred to be 'unscientifically alive' rather than be 'scientifically' dead!

A year later he had a minor relapse which I again treated successfully. He was happy; he married his long-term lady-friend. For Christmas he sent me a card saying that the most important aid for

him had been my statement that he had a chance to survive and that he had believed me. He lived on for some fifteen years and occasionally came in for refresher treatments. One of the professors who had doomed his inevitable death had passed away in the meantime so that my client thought that I had prophetic skill. How could all this happen, and how can it be explained? I will try to exemplify this in the following pages.

The Roots of Chinese Acupuncture

In chapter 1 of the book *Huangdi Neijing Lingshu* 黃帝內經靈樞 (*Lingshujing* 靈樞經), entitled *The Nine Needles and Twelve Yuan* 九針十二原, the imperial physician, Qi Bo 岐伯 in discussion with the Yellow Emperor emphasizes that the main phenomenon to be understood in practising acupuncture is *Shen* 神.⁹

The character, *Shen* 神, is composed from 示 *shi* and 申 *shen*. *Shi* 示 is made up from 二, an ancient form for ‘above’ or heaven (which in modern Chinese is written as 上) and from 川, which means ‘river’, something which is ‘flowing’. Thus, *Shi* 示 means that which is ‘flowing down from heaven’, namely the sun, the moon and the stars. In other words, *Shi* 示 symbolizes the order of the cosmos. The second part of the character *Shen* 神, the phonetic 申 *shen*, signifies ‘to instruct’, to ‘provide information’. Accordingly, *Shen* 神 means “to provide information about what is ‘flowing down from heaven’, namely, the sun, moon and stars, in other words, about the “order of the universe”.¹⁰ The common reading of *Shen* 神 as “spirit” or “mind” is a reduced modern rendering reflecting the original meaning only in part.



Fig. 1. According to legend, Huang-Di lived in the 27th century B.C.

九針十二原第一
 黃帝問於岐伯曰余子萬民養百姓而收其租稅余哀其不給而屬有疾病余欲勿使被毒
 藥無用砭石欲以微鍼通其經脈調其血氣營其逆順出入之會令可傳於後世必明爲
 之法令終而不滅久而不絕易用難忘爲之經紀異其章別其表裏爲之終始令各有形
 先立鍼經願聞其情岐伯答曰臣請推而次之令有綱紀始於一終於九焉請言其道小
 鍼之要易陳而難入粗守形上守神神乎神客在門未視其疾惡知其原則之微在速遲
 粗守關上守機機之動不離其空中之機清靜而微其來不可逢其往不可追知機之
 道者不可掛以髮不知機道叩之不發知其往來要與之期粗之闕乎妙哉工獨有之往
 者爲逆來者爲順明知逆順正行無間逆而奪之惡得無虛追而濟之惡得無實迎之隨
 之以意和之鍼道畢矣凡用鍼者虛則實之滿則泄之宛陳則除之邪勝則虛之大要曰
 徐而疾則實疾而徐則虛言實與虛若有若無察後與先若存若亡爲虛與實若得若失

Fig. 2. Initial page of chapter 1 *Lingshujing* 靈樞經: *The Nine Needles and Twelve Yuan* (*Jiu Zhen Shi Er Yuan* 九針十二原) explaining the significance of *Shen* 神 for the practice of acupuncture.⁹

本神篇第八

黃帝問於岐伯曰凡刺之法必先本於神血脈營氣精神此五藏之所藏也至於淫泆離藏則精失魂飛揚志氣恍惚智慮去身者何因而然乎天之罪與人之過乎何謂德氣生精神魂魄心意思慮請問其故岐伯答曰天之生我者德也地之在我者氣也德流氣薄而生者也故生之來謂之精兩精相搏謂之神隨神往來者謂之魂並精而出入者謂之魄所以任物者謂之心心有所憶謂之意意之所存謂之志志因志而存變謂之思因思而遠慕謂之慮慮而處物謂之智故智者之養生也必順四時而適寒暑和喜怒而安居處節陰陽而調剛柔如是則僻邪不至長生久視是故怵惕思慮者則傷精神傷則恐懼流淫而不止因哀悲動中者竭絕而失生喜樂者神憚散而不藏愁憂者氣閉塞而不行盛怒者迷惑而不治恐懼者神蕩而不收心怵惕思慮則傷精神傷則恐懼自失破腦脫肉毛悴色夭死於冬脾憂愁而不解則傷意傷則悞四支不舉毛悴色夭死于

三

Fig. 3. Initial page of chapter 8 *Lingshujing*: The Origin *Shen* (*Ben Shen* 本神). Heaven (*Tian* 天), Virtue (*De* 德), Earth (*Di* 地), *Qi* (氣), *Jing* (精) and further subgroups such as *Hun* 魂, *Po* 魄, *Xin* 心, *Zhi* 志, and *Si* 思 are inferred from *Shen* 神.¹¹

If we follow Dr. Leon Wiegner's interpretation of *Shen* 神¹⁰, we find that it refers to a basic view of the *Whole*, which is communicated in this ancient text, and from where the entire human being has to be deduced before acupuncture can be carried out properly. *Shen* 神 is the order of the cosmos. Humankind and the individual human being are parts of this ordered cosmos as integrated elements. This sets the rule for acupuncture and for Chinese medicine in general.

The logical method of deduction or inference is deeply rooted in the tradition of Chinese thought. It is, for example, used by Lao Zi 老子 in chapter 42 四十二

萬物負陰而抱陽，沖氣以為和。
道生一，一生二，二生三，三生萬物。

Truth (*Dao*) gives birth to One (一), One gives birth to Two (二), Two give birth to Three (三), Three generate All Things (the Ten Thousand Beings 萬物). All Things have *Yin* (陰) at their back and match up with *Yang* (陽), and the hidden *Qi* (氣) gives them harmony.¹³

章 of his *Dao De Jing* 道德經. *Dao* not only means 'Way' but also Truth, a doctrine, a principle, reason*.¹² Lao Zi's verse can thus be interpreted as follows:

Here, the 'One, the Two, the Three' and, finally, 'all Things in the universe' are the outcome of Truth, of the Principle, reason, the *Dao* 道.

The numerals One, Two, Three of the Chinese tradition, in addition to their significance as figures, also encompass phenomena. One, 一 *Yi*, stands for the Whole of the world, the unity of the cosmos; Two, 二 *Er*, represents *Yang* and *Yin*, Heaven and Earth; Three, 三 *San*, symbolizes humankind. The ancient arrangement of *Tian-Ren-Di* 天人地 signifies Man, Humankind, positioned between Heaven and Earth.

This conception is involved in Lao Zi's stanza

* According to Mathews' Chinese-English Dictionary, Harvard University Press, Cambridge, Mass., 12th printing, 1972, p. 882.¹²

and in the philosophy and structure of the *Huangdi Neijing Lingshu* as well. Accordingly, acupuncture is a medical procedure based on the logic of deduction or inference.*) All diagnostic and therapeutic methods in Chinese medicine are arrived at by deduction from *Yin-Yang*. The vessels of the human organism, the 12 *Jingmai* 經脈 (blood vessels) are arranged according to the *Yin-Yang* dichotomy as are the internal organs *Zang-Fu* 臟腑, the six climatic adversaries *Liu Yin* 六淫, plus the Eight Guiding Principles *Ba Gang* 八綱 and *Bian-Zheng* 辨證, the key to a Chinese diagnosis, whereby *Zheng* 證 means ‘evidence’, something which is dealt with in what follows when Evidence Based Medicine (EBM) is discussed.

In passing we can also note that most of the full characters of classical Chinese writing are constructed deductively. They show their origin, the radical (root) (*Bushou* 部首), which is clearly visible, whereas Western words and languages consist of the 26 letters of the Occidental alphabet and are more or less to be decoded inductively. For this reason they are sometimes ambiguous and can lead to fallacies in written language as Aristotle pointed out in his *Sophistical Refutations* (*Sophisticōn elenchōn σοφιστικῶν ἐλέγχων*)⁴⁷ [See PART 2(II) of this paper in *J Chin Med.*, Volume 22 Number 3,4 2011.], something which can rarely happen with classical Chinese characters.

The Beginnings of Scientific Logic in the West

Deduction, in addition to induction, is not only an important procedure in Chinese tradition, but also

*) Almost all Western authors dealing with Chinese medicine or acupuncture have so far overlooked this simple, fundamental fact.

a keystone of Occidental logic. In his *Lecture on Nature* (*Physikēs Akroaseōs ΦΥΣΙΚΗΣ ΑΚΡΟΑΣΕΩΣ*), Aristotle maintains that reliable proof can only be attained by inferring this from what he calls the ‘substance’ (*hypokeimenon ὑποκείμενον*) via deduction (*syllogismos συλλογισμός*). He labels the parts that are deduced from the substance as accidents (*symbebēkos συμβεβηκός*)¹⁴, and he goes so far as to declare that an accidental attribute has no being at all. In his *Metaphysics* he states that, by induction using accidents, no valid scientific proof can be achieved¹⁵. This is something which has later been doubted since by other Western philosophers like Francis Bacon and John Stuart Mill. However, in order to elucidate the epistemological ground on which Chinese medicine rests, it is worth mentioning here, because the position of both lines of thought appears to be similar.

Modern scientific research, on the other hand, relies mainly on inductive assumptions and this is something that can lead as such to new inventions, but is finally not very dependable where the risks and side-effects of modern pharmaceuticals occur. On the other hand, the deductive procedure is crucial for the main procedures in Chinese medicine such as diagnostics, acupuncture, moxibustion and herbal prescription.*)

Science (Gr. *epistēmē ἐπιστήμη*) was first articulated by the ancient Greeks. After the pre-Socratic philosophers Alkmaion, Kratylos, Demokritos, and the Pythagoreans had coined the term¹⁶,

*) I maintain that deduction and induction must be used in close association, whereby deduction plays the key role, in order to logically reach justified and scientifically acceptable results, whereas induction alone merely provides the technically suitable parts (cf. paragraph 12: *Shen*, Nature, Autiasis and the Way Out).

Aristotle repeatedly uses the word ‘epistēmē’ in the lecture referred to above, in the *Posterior Analytics* (Analyticōn husterōn *ΑΝΑΛΥΤΙΚΩΝ ΥΣΤΕΡΩΝ*) and in his *Topics* (Topikōn *ΤΟΠΙΚΩΝ*).^{17-18,52} The meaning of ‘episteme’ has remained valid ever since. I say this in spite of Popper’s remark that “The old scientific ideal of *epistēmē* - of absolute, certain, demonstrable knowledge – has proved to be an idol.”¹⁹

It is amazing that in the first chapter of this Lecture on Nature, Aristotle emphasizes something which is virtually equivalent to the first chapter of the *Ling-Shu-Jing*:

In all sciences that are concerned with principles or causes or elements, it is acquaintance with these that constitutes knowledge or understanding. For we conceive ourselves to know about a thing when we are acquainted with its ultimate causes and first principles and have got down to its elements. Obviously, then, in the study of Nature, too, our first object must be to establish principles.

Now the path of investigation must lie from what is more immediately cognizable and clear to us, to what is clearer and more intimately cognizable in its own nature; for it is not the same thing to be directly accessible to our cognition and to be intrinsically intelligible. Hence, in advancing to that which is intrinsically more luminous and by its nature accessible to deeper knowledge, we must needs start from what is more immediately within our cognition, though in its own nature less fully accessible to understanding.

Now the things most obvious and immediately cognizable by us are concrete and particular, rather than abstract and general; whereas elements and principles are only accessible to us afterwards, as derived from the concrete data when we have analyzed them. So we must advance from the concrete whole to the several constituents which it embraces; for it is the concrete whole that is the more readily cognizable by the senses. And by calling the concrete a ‘Whole’ I mean that it embraces in a single complex a diversity of constituent elements, factors and properties.²⁰

Aristotle’s statement has been trivialized in the slogan *The Whole is more than the sum of its parts*.

As expressed by a distinguished classical

Occidental philosopher, this important text plainly covers the same problem and suggests an identical approach as Qi Bo’s statement in the 1st chapter of the *Lingshu-jing*:

- Qi Bo demands that an acupuncturist first has to understand the order of the cosmos, *Shen* 神, which is as well an encompassing entirety, a Whole, from where all essential parts of Chinese medicine are deduced.

- Aristotle argues that we have to go back to a Whole, that is the universe (Gr. *το ὅλον*) for the study of Nature and deduce its parts from there.²¹

Qi Bo’s *Shen* 神 is identical with Aristotle’s Physics when he talks about the Whole (Gr. *ὅλον*) of Nature (Gr. *φύσις*). Both provide an absolute foundation, an unquestionable background, an axiom for all subsequent inferences and consequences.

ΦΥΣΙΚΗΣ ΑΚΡΟΑΣΕΩΣ Α

184^a Ἐπειδὴ τὸ εἰδέναι καὶ τὸ ἐπίστασθαι συμβαίνει περὶ πά-
 σας τὰς μεθόδους, ὧν εἰσὶν ἀρχαὶ ἢ αἷτια ἢ στοιχεῖα, ἐκ
 τοῦ ταῦτα γνωρίζειν (τότε γὰρ οἰόμεθα γινώσκειν ἕκαστον,
 ὅταν τὰ αἷτια γνωρίσωμεν τὰ πρῶτα καὶ τὰς ἀρχὰς τὰς
 πρώτας καὶ μέχρι τῶν στοιχείων), ὄλον δὲ καὶ τῆς περὶ
 15 φύσεως ἐπιστήμης πειρατέον διορίσασθαι πρῶτον τὰ περὶ
 τὰς ἀρχὰς. πέφυκε δὲ ἐκ τῶν γνωριμωτέρων ἡμῖν ἡ ὁδὸς
 καὶ σαφεστέρων ἐπὶ τὰ σαφέστερα τῆ φύσει καὶ γνωριμώ-
 20 τερα· οὐ γὰρ ταῦτ’ ἡμῖν τε γνῶριμα καὶ ἀπλῶς, διόπερ
 ἀνάγκη τὸν τρόπον τοῦτον προάγειν ἐκ τῶν ἀσαφεστέρων μὲν
 τῆ φύσει ἡμῖν δὲ σαφεστέρων ἐπὶ τὰ σαφέστερα τῆ φύσει
 καὶ γνωριμώτερα. ἔστι δ’ ἡμῖν τὸ πρῶτον ὄλον καὶ σαφὴ τὰ
 συγκεχυμένα μᾶλλον ὕστερον δ’ ἐκ τούτων γίγνεται γνῶριμα
 τὰ στοιχεῖα καὶ αἱ ἀρχαὶ διαιρούσι ταῦτα. διὸ ἐκ τῶν κα-
 25 θόλου ἐπὶ τὰ καθ’ ἕκαστα δεῖ προϊέναι· τὸ γὰρ ὅλον κατὰ
 τὴν αἰσθησιν γνωριμώτερον, τὸ δὲ καθόλου ὄλον τί ἐστι·
 πολλὰ γὰρ περιλαμβάνει ὡς μέρη τὸ καθόλου. πέπονθε δὲ
 184^b ταῦτ’ οὗτον τρόπον τινὰ καὶ τὰ ὀνόματα πρὸς τὸν λόγον·
 ὄλον γὰρ τι καὶ ἀδιορίστως σημαίνει, οἷον ὁ κύκλος, ὁ δὲ
 ὀρισμὸς αὐτοῦ διαίρει εἰς τὰ καθ’ ἕκαστα. καὶ τὰ παιδία τὸ
 μὲν πρῶτον προσαγορεύει πάντας τοὺς ἄνδρας πατέρας καὶ
 μητέρας τὰς γυναῖκας, ὕστερον δὲ διορίζει τούτων ἑκάτερον.
 15 Ἄνάγκη δ’ ἦτοι μίαν εἶναι τὴν ἀρχὴν ἢ πλείους, καὶ εἰ 2
 μίαν, ἦτοι ἀκίνητον, ὡς φησι Παρμενίδης καὶ Μέλισσος, ἢ κιν-
 οῦμένην, ὥσπερ οἱ φυσικοὶ, οἱ μὲν ἀέρα φάσκοντες εἶναι οἱ δ’

Fig. 4. Initial page from Aristotle’s Lecture on Nature (Physics) ΦΥΣΙΚΗΣ ΑΚΡΟΑΣΕΩΣ, Book I, chapter 1.²⁰

Case History 2

A country woman accompanied by her three-year-old daughter came to see me in my clinic in 1978. She looked pale and puffy, exuded a strong smell of urine and groaned: “It was predicted by the university clinic that I’ll have to die pretty soon because I’ve got massive stones in both my kidneys. They can’t help me there as they can’t operate on one kidney, because the other doesn’t work normally either.” I realized that she was suffering from severe uremia.

She showed me x-ray pictures, which, to my surprise, the clinic had handed to her with the information that she could try her luck somewhere else. Her right kidney was completely blocked with one large stone filling the complete renal pelvis, a so-called stag horn calculus, and the left kidney was half filled with all sorts of additional concretions. She said: “I know that you can help me with acupuncture, doctor. I have prayed to God all the time to let me live for a while because my four little ones need me. I found an article about you in the newspaper.”

I hesitated to treat her because I had never been confronted with such a case before. I said to her that I would like to hear the opinion of a friend and colleague beforehand, an urologist, before starting acupuncture treatment on her. The little girl had begun crying and fretfully embraced her mother’s knees. I took the woman’s pulse, looked at her tongue and wrote the *Bian-Zheng* into her file: ‘Emptiness of the *Yin* of the Kidney (*Shen Yin Xu* 腎陰虛)’.

“Don’t waste your time, doctor”, the woman insisted, “go ahead with your treatment; I know you can do it!”

Reluctantly, I asked her to undress and to lie on a bed. I saw her swollen lower legs and feet. Her

belly was swollen and filled with water; it was an ascites resulting from her defunct kidneys. I thought I should at least show her that in her case acupuncture was not the right thing.

I used the appropriate areas according to the *Ling-Shu-Jing* for the insertion of my needles and first treated her front and then her back. When I had completed my acupuncture, her husband came in and later drove her and their daughter home. The couple lived in a village with their four children about 20 miles away from the city. He called me the following morning to say that his wife had had less pain during the night, but was extremely weak and unable to leave her bed. So I drove out in the evening to see her at home and gave her more acupuncture treatment. From that time onward I went every other day. Her appetite returned. She slept better, she could pass urine more often and without pain or bleeding, the objectionable stench of urine became less pungent and after two weeks I discovered a small dark-green stone on her bedclothes when she turned over. I asked her whether she had eaten something in bed.

“These little things appear again and again now; they come when I pass water and sometimes they come when I’m asleep in bed.”

I examined the stone and said: “Get a large glass jar, collect all those stones and keep them in there.”

After four weeks the glass was a quarter full of these black-greenish kidney-stones, each one about the size of a rice grain. Could it be that my acupuncture had changed her blood-chemistry and that she could dissolve the stones in her kidney by herself now? Back home I re-read the chapter on kidney diseases in my patho-physiology textbook. After a month she returned to my clinic and attended for a treatment twice a week. She was definitely on the

mend. She told me that her jar was now full of stones and that she would soon need a second one. Before I went on my summer vacation, her condition was more or less healthy. Her swollen legs had resumed their normal shape; she had lost more than 12 kilos mainly consisting of accumulated water, and she looked fresh with rosy cheeks.

One day, I took her to my urologist friend who had earlier confirmed the university diagnosis and declared that in this case no treatment was available. He took fresh x-rays of the woman's kidneys and was surprised to see that the renal pelvis of both kidneys looked almost normal. He was flabbergasted: "What have you done?" he asked.

"Acupuncture", was my reply, but he wouldn't believe me.

The woman did very well in the future. She came once a month for a top-up treatment. Occasionally she suffered one or two small relapses which could be easily reduced with a few needle sessions. Now, after more than 35 years, she is still in a good shape and a grandmother of six. As before, she is a very religious person and convinced that praying to God helped her to find me and secure the appropriate treatment for her to survive.

With a wink she assured me: "I always keep praying for you too, doctor. I might need you again the future!"

The Logic of Scientific Discovery

In his book "The Logic of Scientific discovery" Karl Popper is well aware of the problem involved in induction.²² He says quite frankly: "I reject inductive logic".²³ Popper briefly touches upon positivism

which goes back to Descartes' *res cogitans* and *res extensa*. He therefore proposes a modified version of deduction.

The nuclear physicist, Werner Heisenberg, writing in 1958, once declared:

"While the ancient Greek philosophy had tried to find order in the infinite variety of things and events by looking for some fundamental unifying principle, Descartes tried to establish the order through some fundamental division...the polarity between the 'res cogitans' and the 'res extensa' and natural science concentrated its interest on the 'res extensa'. The influence of the Cartesian division on human thought can hardly be overestimated, but it is just this division which we have to criticize later from the development of physics in our time. (...) One of the later consequences of this view of Descartes was that, if animals were simply considered as machines (as he presumed), it was difficult not to think the same about men. Since, on the other hand, the 'res cogitans' and the 'res extensa' were taken as completely different in their essence, it did not seem possible that they could act upon each other. Therefore, in order to preserve complete parallelism between the experiences of the mind and of the body, the mind was also in its activities completely determined by laws which corresponded to the laws of physics and chemistry. Here the question of the possibility of the 'free will' arose. Obviously this whole description is somewhat artificial and shows the grave defects of the Cartesian position."²⁴

Heisenberg continues

"We cannot disregard the fact that natural science is formed by men. Natural science does not simply describe and explain nature; it is a part of the

interplay between nature and ourselves; it describes nature as exposed to our method of questioning.”... “The Cartesian partition...has penetrated deeply into the human mind during the three centuries following Descartes and it will take a long time for it to be replaced by a really different attitude toward the problem of reality.”²⁴

Popper declares: “My business, as I see it, is not to bring about the overthrow of metaphysics.”²⁵

And further: “Besides being consistent, an empirical system should satisfy a further condition: it must be falsifiable...Statements which do not satisfy the condition of consistency fail to differentiate between any two statements within the totality of all possible statements.”²⁶

We will have to discuss this in connection with the results of the GERAC study. The fact that the Real acupuncture group and the Sham group did fail to show sufficient differences, demonstrates that the theories applied were not consistent. In brief, the theories of the GERAC study concerning the foundations of Chinese acupuncture were wrong.²⁷

On the Theory of Chinese Medicine

What, then, is Chinese medicine about? Its fundamental rules are

- The human organism is a unified Whole,
- Relations between man and Nature are completely integrated.²⁸

Based on my own experiences with Chinese medicine in Europe and the Far East, I would like to add that the Cartesian split between mind and matter, soul and body still dominating Western natural science, is unfamiliar to Chinese medicine *Zhong Yi*

中醫*).

Let us continue with what we have left from above (pp. 5-7). After Heaven (*Tian* 天), Virtue (*De* 德), Earth (*Di* 地), *Yin-Yang* 陰陽, *Qi* 氣, *Jing* 精, *Hun* 魂, *Po* 魄, *Xin* 心, *Zhi* 志, *Si* 思 have emerged out of *Shen* 神, the five *zang* (五臟) and six *fu* organs (六腑) develop from *Yin-Yang* 陰陽, and the blood vessels *Xue Mai* 血脈 (or *Jingmai* 經脈):

Taiyang 太陽, *Shaoyang* 少陽, *Yangming* 陽明, *Taiyin* 太陰, *Shaoyin* 少陰, *Jueyin* 厥陰 appear.

According to chapter 12 *Jingmai* 經脈 of the *Lingshu* 經 these *Jingmai* 經脈 are linked to the following 11 internal organs:

膀胱 *Pang Guang* (urinary bladder),
 膽 *Dan* (gall bladder),
 胃 *Wei* (stomach),
 脾 *Pi* (spleen),
 腎 *Shen* (kidney),
 肝 *Gan* (liver),
 小腸 *Xiao Chang* (small intestine),
 大腸 *Da Chang* (large intestine),
 肺 *Fei* (lung),
 心 *Xin* (heart),
 心包 *Xin Bao* (pericardium).

The 三焦 *San Jiao* (three burners) are the envelope of the 11 internal organs.

From there and from the six climatic adversaries *Liu Yin* 六淫 (wind 風 *feng*, cold 寒 *han*, summer heat 暑 *shu*, damp 濕 *shi*, dryness 燥 *zao*, fire 火 *huo*) in addition to phlegm 痰飲 *tanyin*, blood clotting 瘀血 *yuxue*, infections, insect and animal bites, mental exhaustion, wrong nutrition, injuries

*) Not ‘TCM’, as these 3 letters are the result of misunderstanding the original term!

and parasites follow which can be integrated into the universal order of the *Shen* 神 without exception. Chinese evidence differentiation starts by using the Eight Guiding Principles *Ba Gang* 八綱 which are arranged in contrasting pairs according to the Aristotelian Principle of Contradiction:

八綱 *Ba-Gang* – The Eight Guiding Principles

- 表裡 *Biao-Li* Surface-Interior
- 寒熱 *Han-Re* Cold-Heat
- 虛實 *Xu-Shi* Emptiness-Fullness
- 陰陽 *Yin-Yang* Yin-Yang

By an assessment of the condition of the tongue and by pulse diagnosis, all the different phenomena, the organs and parts are jointly analyzed in order to differentiate what is called evidence, something, which is often the truth, so to speak, and finally amalgamates into a *Bian-Zheng* 辨證 diagnosis; it is the differentiation of the truth, so to speak, giving diagnostic evidence here. Then the evident and suitable therapy using acupuncture, moxibustion, herbal prescriptions or massage can be deduced with the help of *Bian-Zheng* 辨證.²⁸ In every single diagnostic and therapeutic step, both *Yin* and *Yang* remain the substance (Gr. *ὑποκείμενον*) and are constantly present and palpable. Based on these prerequisites, if properly administered, Chinese medicine is clinically successful because it mainly relies on the logical method of deduction.²⁹

It is worth mentioning that the character *Zheng* 證 of *Bian-Zheng* 辨證 means „evidence“ or “proof”. The current English translation of *Bian-Zheng* 辨證 as ‘pattern’ is erroneous and reveals a certain misunderstanding of Chinese medicine.³⁰⁻³¹ *Zheng* 證 is the first character of the modern Chinese term

Zhengju 證據 (證據), meaning ‘evidence’, ‘proof’, or ‘testimony’.³² Thus, *Bian-Zheng* 辨證 is a diagnostic procedure based on deduction and providing **evidence** by contrasting symptoms according to the Aristotelian Principle of Contradiction. This demonstrates that *Bian-Zheng* 辨證 provides true evidence concerning the diagnosis (i.e. the recognition of the specific individual disease) of a patient and is also in line with the Aristotelian requirements for obtaining reliable proof as far as a logical description of the present disease is concerned; it is likewise in line with Karl Popper’s outlook toward scientific proof. The logical structure of such evidence is basically different from the structures of modern Western diagnoses. It is a different type of diagnostic evidence compared to what ‘Evidence Based Medicine (EBM)’ is geared to because it is deduced from the whole Nature of the patient, without falling prey to the Cartesian partition between mind and matter, soul and body. It does not start from single parts of the patient’s organism as the subspecialties of orthodox medicine, which create more or less disparate fragments, *accidents* (*συμβεβηκός*) in the Aristotelian terminology, often without a clearly recognizable logical connection, something I will outline more precisely on what follows.

Evidence Based Medicine and Medical Science

A definition of Evidence Based Medicine (EBM) is:

EBM has been defined as ‘the conscientious, explicit, and judicious use of the best evidence in making decisions about the care of individual patients’.³³

This seems to be a desirable goal and one that can only be wholeheartedly supported. The quotation is taken from “Essential Evidence Based Medicine” by Dan Mayer, Professor of Emergency Medicine, Albany Medical College, Albany, NY, USA. Mayer hails EBM as “a paradigm shift that represents both a breakdown of the traditional hierarchical system of medical practice and the acceptance of the scientific method as the governing force in advancing the field of medicine.” The problem is, however, that EBM, judged by Aristotelian standards, is neither conscientious nor explicit nor judicious, an aspect to be dealt with later. (Comp. PART II, in *J Chin Med.*, Volume 22 Number 3,4 2011.)

The British Professor of Primary Health Care, Trisha Greenhalgh, is missing “a very important feature of the subject – the use of mathematics” in the definition of EBM cited above. She therefore proposes an alternative description:

Evidence-based medicine is the use of mathematical estimates of the risk of benefit and harm, derived from high-quality research on population samples, to inform clinical decision-making in the diagnosis, investigation or management of individual patients.³⁴

The persistent question is: Of what kind is such a scientific method, and what is science in medicine generally about? Is it based on randomized, double-blind trials with statistical documentation which includes an accumulation of a multitude of more or less unproductive data? Or could there be a notion of the whole individual patient, as in Chinese medicine? The latter is recommended in order to understand the patient as a person by grasping his or her entire disposition and so comprehend the individual disease, including cognition of the patient’s specific nature.

If we take the second definition by Professor Greenhalgh and ask whether there is a notion of the

Whole included here in EBM we have, regrettably, to decline such a view. Mathematics has nothing to do with human development in Nature. Aristotle explicitly criticizes the use of mathematics in his *Metaphysics* Book I, chapter V, 3-10,³⁵ because numbers have no causation in respect to the first principles³⁶. Yet my main objection here is that EBM is based upon Cartesian partition, and as such for EBM the human being can never be a Whole, but only consists of parts, of so-called *accidents* according to the Aristotelian logic.

Unfortunately, the Whole is a term which is viewed with suspicion by modern orthodox physicians. Some Western physicians argue that “The Whole doesn’t exist because we cannot recognize it.” But this sounds primitive, since it suggests that only those things exist which humans can recognize and so involves a certain pseudo-scientific supposition. We will see that science cannot exist without the notion of a Whole, something which is sneered at as a metaphysical speculation by hard-core scientists. We have to learn from Aristotle that physics is necessarily based on metaphysics. His lecture on physics, entitled *Physikēs Akroaseōs ΦΥΣΙΚΗΣ ΑΚΡΟΑΣΕΩΣ*, establishes the rules and definitions for space and time as the starting (zero) points for all his later followers including Galileo.³⁷; we may also include Newton and Einstein here.

The German philosopher, Martin Heidegger has explained the term ‘science’ (German: *Wissenschaft*) as follows:

Science in general can be defined as the totality of fundamentally coherent propositions...within which the objectives of science are presented regarding their ground, and this means that they are understood.³⁸

What then is the ‘ground’ of clinical medicine?

Is it based on the use of mathematical estimates? No. It is indisputably based on the individual patient as a Whole. If that were the new paradigm for EBM, it could only be welcomed as an important scientific breakthrough, but it looks as if EBM is primarily concerned with percentages gained from statistical manipulations. The whole individual patient does not exist at all in the view of EBM, since he or she has previously been separately classified beforehand as ‘body and mind’ or into numerous parts, that is, into ‘accident’ (Gr. *συμβεβηκόσ*) in the Aristotelian wording. These parts are then erroneously assumed as substances (Gr. *ὑποκείμενον*) from where orthodox medical reasoning arises. Where has the whole patient gone to for EBM? Nowhere. In the eyes of EBM he has not only vanished, he has never ever existed! We see that this is a fallacy, a logical error.

The German nuclear physicist and philosopher, Carl Friedrich von Weizsäcker, notes in his book “The Unity of Nature” in 1971:

If I see things correctly, the accusation leveled against the common tendency in medicine to overlook the person or the mind, then this, finally, is not identical with the accusation that it is a natural science, but perhaps identical with the accusation that it is not yet scientific enough, in other words, not an adequately good enough science, in short, not sufficiently self-critical.”³⁹

Has EBM arrived at the necessary point of self-criticism yet? Or has EBM perhaps to be modified and improved in order to eventually reach that required rank?

Professor Dan Mayer lists three skills in his book “Essential Evidence Based Medicine” which practitioners ought to become aware of:

- Information Mastery (IM),
- Critical Appraisal (CA) and
- Knowledge Translation (KT).

The first is the skill of searching through medical literature; the second is the development of critical thinking with regard to the content of medical literature; and the third is the application of the information found and critically appraised and employed to the patient.⁴⁰ That is what I am trying to do in this paper by keeping the whole individual patient in mind.

I would like further to add a fourth skill to Dr. Mayer’s list, namely that

- Each EBM practitioner should become familiar with Chinese medicine and with what is called *Bian-Zheng* 辨證 in order to reach reliable and genuine evidence (via the *ὑποκείμενον*) first. This can later be easily allied to the isolated achievements and techniques of modern Western medicine (the *συμβεβηκόσ*), whereby it must be guaranteed that *Bian-Zheng* and Chinese medicine are fully understood and also remain the encompassing First Principle (Nature φύσις, *Shen* 神) in understanding the individual patient as a Whole without succumbing to the Cartesian dichotomy.⁴¹⁻⁴²

In addition, Professor Mayer briefly touches upon Chinese medicine, but he repeats the erroneous assumptions about an energy flow and energy channels to which the majority of Western acupuncturists still adhere. (This is the underlying cause for the confusion connected with the German GERAC studies). Moreover, he is not familiar with the commencement of Chinese anatomy around 16 C.E. under Emperor Wang Mang and its probable influence on the book *Huangdi Neijing*, something I have previously dealt with in this journal.⁴³

In 1931 Karl Jaspers, the renowned German philosopher, himself an MD and psychiatrist, wrote:

There is a distortion in understanding the meaning of science...today in the world. On one hand, science in our age enjoys tremendous respect. Since the regulation of masses is only possible by technology, and technology is only possible as a result of science, there is great belief in science. But since science is only accessible by methodical training, astonishment at its results cannot be seen as participating in its meaning and this belief is in fact superstition. Real science is knowledge and wisdom, and an awareness of the limits of knowledge. But if its results are believed in simply as such with no knowledge of the method implied in their attainment, this imaginary misunderstanding will become superstition and a substitute for true belief...Everyone, even scholars, may fall victim to this kind of superstition. Belief in science is easily converted to hostility to science, to a belief in the help of powers, which negate science...⁴⁴

EBM adherents should keep Jasper's statement in mind when they talk about science. Jaspers relies on Aristotle who wrote ΦΥΣΙΚΗ ΑΚΡΟΑΣΕΩΣ, the basic work of occidental science which has apparent parallels to early traditional Chinese texts like the *Huangdi Neijing Lingshu (Lingshujing)* and others as was pointed out above.

(to be continued in J Chin Med., Volume 22 Number 3,4 2011.)

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