

Special Library Development Considerations for Traditional Chinese Medicine (TCM) Knowledge Transfer, It's Community Building

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This abstract centers around data support in the science and literacy of TCM, Oriental, and East Asian medicine. And proposes that collaborative and embedded librarianship can aid areas of clinical research, basic science and research. We intend to draft a framework using the Han Protocols (Prof. Ji Sheng Han) for neuroscience research as a specific example, with macroscale and microscale explanations of library engagement in TCM. We are looking to design a theoretical scope of work for librarianship in TCM, including clinical, basic research, data support, and data sharing that will advance knowledge transfer for TCM efficacy. This is going to be our first draft version that we will continue to develop towards effective librarianship for TCM research and engagement.

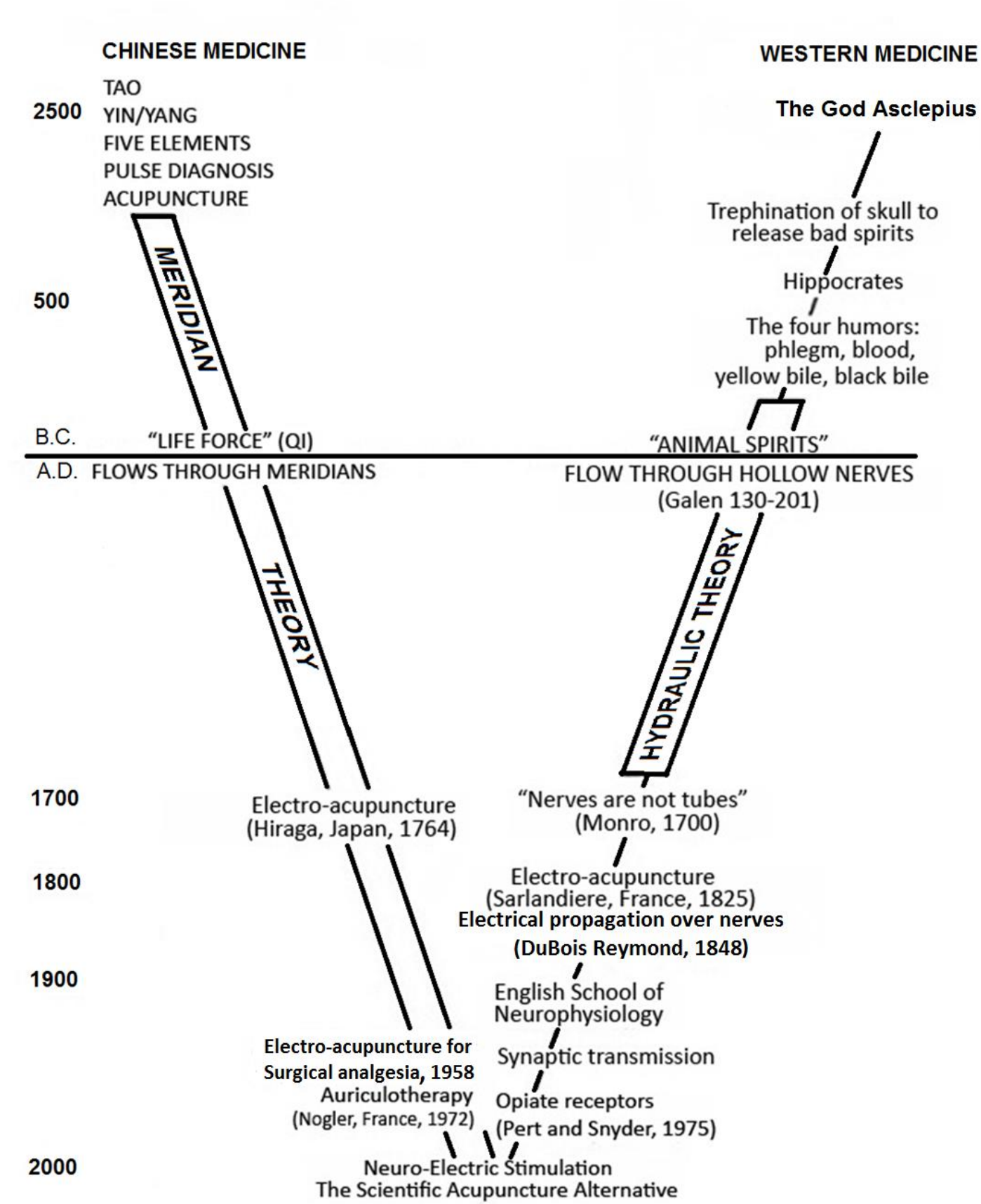
Phase one effort works to build a set of rationale constructs for each concept and seeks feedback towards its validity. In the United States, some TCM modalities have and are being presently clinically investigated by Western Medical practice. This phase moves towards the best possible means of justification for TCM knowledge transfer via embedded librarianship. This will be an initial effort to establish such research repository or TCM think tank, where libraries can play an essential role in global research health.

Microscale approach of embedded collaborative librarians framework **Featuring: Han protocols in neuroscience and electro-acupuncture**

Embedded Collaborative Librarian Framework

TCM librarians duties

- 1) Identify Medical condition and historical context
- 2) Identify patient demographics from a scrubbed data
- 3) Identify clinical research effort per medical condition
- 4) link other scholar ideas to medical condition research
- 5) Develop digital and virtual library for global knowledge data sharing



Western Librarians duties

- 1) Identify Medical condition and historical context
- 2) Identify patient demographics from a scrubbed data
- 3) Identify clinical research effort per medical condition
- 4) link other scholar ideas to medical condition research
- 5) Develop digital and virtual library for global knowledge data sharing

Figure 1. Developing Concepts in Neurophysiology and Perpetuation of the Meridian Theory *NeuroChemical Mechanisms of Acupuncture 2015*

Application of Han Protocols

Optimal conditions for eliciting maximal electro-acupuncture analgesia.

According to thousands of years of experience in acupuncture practice, it is known that different manners of needle manipulation may produce different therapeutic effects. However, the scientific mechanisms had been unknown. Our study demonstrated that analgesia produced by EA of different frequency (2 Hz) EA analgesia is mediated by metenkephalin via mu and delta receptors, and high frequency (100 Hz) EA analgesia by dynorphin via kappa receptors in the spinal cord (Figure 20).

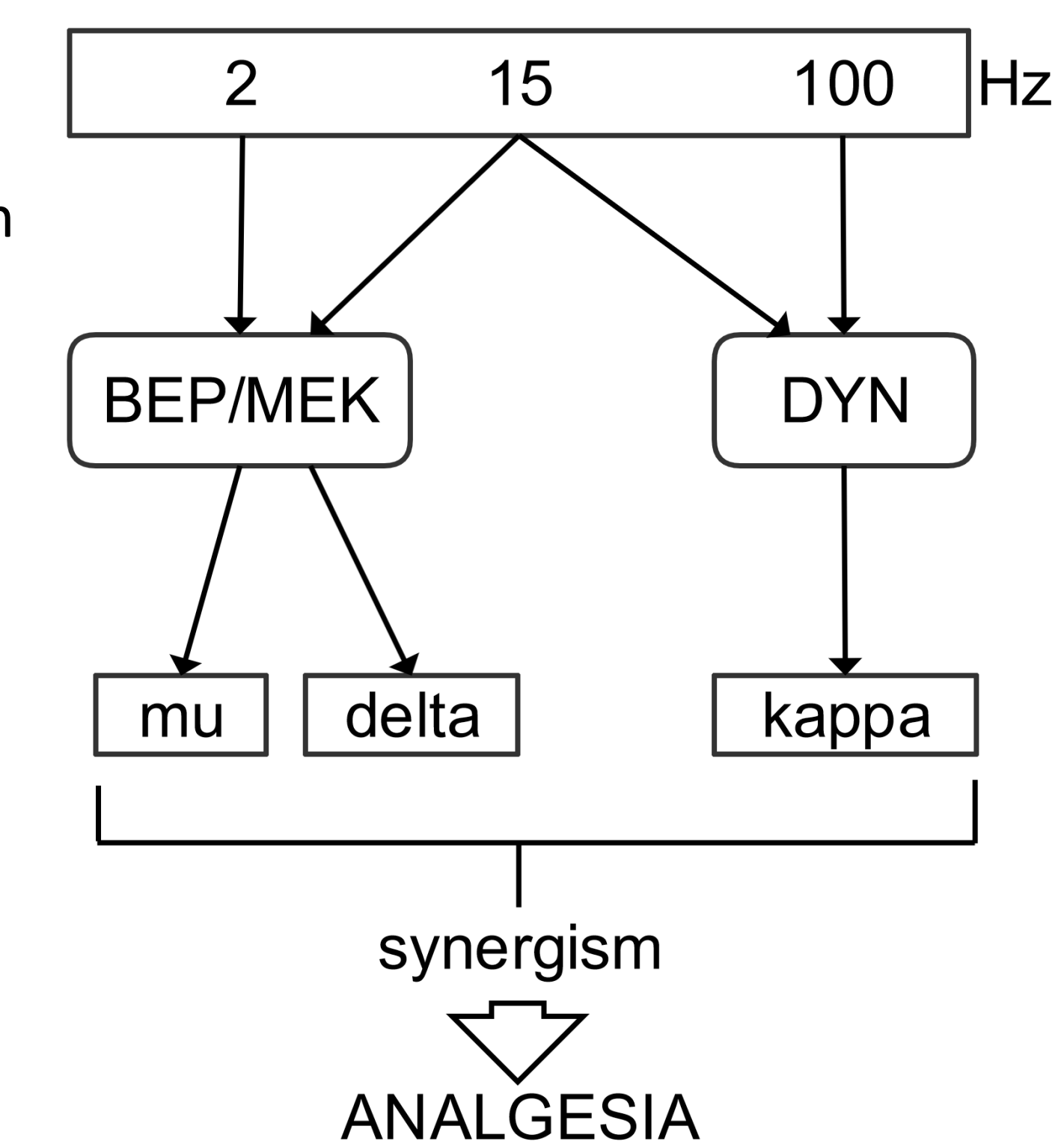


Figure 20. Electro-acupuncture or TENS at different frequencies may release different kinds of opioid peptides in CNS, acting on different types of opioid receptors to produce analgesia.

Knowledge librarians need to know for TCM knowledge transfer for Western medicine

- Neuroscience concepts of TCM and Western medicine
- Ability to translate (language, culture)
- Ability to approach clinical results
- Ability to help researchers test new theories depending on chosen modalities
- Ability to provide translation of research to data curation
- Ability to help researchers seek international collaboration from library infrastructure
- Understand gaps globally in medical informatics and data sharing policy
- Use of Computer-Supported Cooperative Work and Social Computing

Macroscale approach of embedded collaborative Librarians framework

In Figure 1 we see roles librarians can play to advance TCM. From Table II we can see the World Health Organization establishing rationale for Han Protocols expertise for many medical conditions. In Figure 20 we give one example of Han Protocols applied to analgesia.

The Macroscale scale collaborate library task frames the microscale tasks where formal training can begin to make global TCM knowledge transfer sustainable.

Micro-scale sub task considerations for library science

- Allows libraries to enter global collaboration agreements per divisions of labor for TCM knowledge transfer
- Training for TCM per library task can now be built to sustain clinical collaboration, research and discovery

- 1) Identify Medical condition in historical context
- 2) Identify patient demographics from a scrubbed data
- 3) Identify clinical research effort per medical condition
- 4) Link other scholar ideas to clinical research
- 5) Develop digital and virtual library for global knowledge data sharing

- 1)
 - Priority of population risk of condition
 - Treatment of conditions over time
- 2)
 - Cleaning of patient data to anonymized statistically listings for data sharing with geotagged indicators
 - Provide maps and temporal attributes of possible environmental disease data.
- 3)
 - Link research domestically and globally that overlaps between TCM and western clinical research
 - Look for advances that lower global health delivery costs
- 4)
 - Provide data translations
 - Provide global social economic and environmental factors
- 5)
 - Develop standards for TCM data sharing
 - Share TCM research and clinical support to existing regional and global conferences

Rationale for electro-acupuncture for Medical conditions (Chapter 6)

From: Bannerman, R.H.: The World Health Organization's Viewpoint on Acupuncture. *Amer. J. Acupuncture*. 8:231-236, 1980

Table II – MEDICAL CONDITIONS FOR WHICH ACUPUNCTURE IS COMMONLY USED

Bronchitis and asthma	Conjunctivitis
Coronary heart disease	Acute and chronic rhinitis
Hypertension	Acute tonsillitis
Peptic ulcer	Arthritis
Disease of biliary tract	Shoulder pain
Acute and chronic gastritis	Neck strain
Dysmenorrhea	Tenosynovitis
Morning sickness	Headache
Acute simple appendicitis	Acute and chronic lumbago
Urticaria	Sciatica
Neurasthenia	Facial nerve paralysis
Enuresis	Toothache
Intercostal neuralgia and Herpes Zoster	Acute sprains
Sequelae of Cerebrovascular accidents	Vertigo

Table II lists the many medical conditions which the World Health Organization has found treated by acupuncture in countries around the world.



Han Stimulator for electro-acupuncture application



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- Pros of our approach
 - Use rationale from World Health Organization to advance TCM clinical research
- Cons of our approach
 - Require collaboration among nations, a rare human activity without monetary incentives
- Barriers that remain
 - Global Librarian or informatics teams may not be in place for TCM knowledge transfer
 - Global Librarianship may not formally have collaborative teams of engaged librarians towards health care concerns
- What we need from TCM community
 - Advocates to reach out to libraries as strategic partners.
- How you can build TCM library advocacy and global library collaborations toward clinical research.
 - Please contact us at the Han Institute (www.Han-Institute.com) for collaboration in this research development
- References
 - *Neurochemical Mechanisms of Acupuncture*, Ji Sheng Han, Songping Han 2015, Angelica Kokkalis editor (Kindle eBook locations 1050-1051). The Han Institute, Inc..