

“Science across the borders:

History of transmission of scientific expertise in East and South-East Asia”:

(Panel proposal)

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When dealing with the phenomenon of transmission of scientific and technical knowledge from one socio-cultural context to another, it appears plausible to address the following questions: Was the “transmitted” tradition a product of a long-term “osmosis”, or resulted from a singular event (such as, for example, physical transmission of a scientific treatise or instrument)? In the case of transmission via scientific treatises, were there any attempts made by members of the professional community or by the authorities to select certain works as textbooks, or the books used for instruction were selected randomly? Were only professional trades, governmental educational institutions, or religious networks involved in the transmission, or the transmission took place at grass-root level, via private teachers and schools?

To address these and other, more specific, questions, the participants of the panel will explore the cases of transmission of Western science to China, of traditional Chinese medicine to Vietnam, of Chinese sericultural production techniques to Europe, and of traditional Chinese mathematics to Vietnam and Korea.

The papers to be read at the panel will include:

1. **Hsu Kuang-Tai** 徐光台 (National Tsing Hua University, Hsinchu, Taiwan).

**“Evidential Study on Fang Yizhi’s First Contact with Western Scientific Knowledge at the Age of Nine”.**

2. **Horng Wann-Sheng** 洪萬生 (National Taiwan Normal University, Taipei).

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**“Social Status of Korean Mathematicians: Choson Confucians vs. Chungin Experts of Computations”.**

The author will discuss the social status of the Korean mathematicians of the Choson (or Joseon, 1394-1910) era and compare their position with that of their Chinese counterparts.

3. **Ying Jia-Ming 英家銘** (National Taiwan Normal University, Taipei).

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**“*Gujang Sulhae* (九章術解): Nam Byeong-gil’s (南秉吉) explanations of mathematical methods of the *Jiuzhang Suanshu*.”**

The author will introduce the *Gujang Sulhae* (Explanations of the [*Computational Procedures of Nine Categories*]) written by the nineteenth-century Korean mathematician Nam Byeong-Gil and devoted to the interpretation and analysis of mathematical methods found in the Chinese mathematical classic *Jiu zhang suan shu* 九章算術 (Computational Procedures of Nine Categories also known as Mathematical Procedures in Nine Chapters) compiled by the beginning of the Common Era. The author will discuss the contents of Nam Byeong-gil’s treatise, the version(s) of the *Jiu zhang suan shu* he probably used, and the most interesting aspects of his “explanations”.

4. **Alexei Volkov** (National Tsing Hua University, Hsinchu, Taiwan).

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**“A Case of Transmission of Mathematical Expertise: Mathematics and Mathematics Education in Traditional Vietnam.”**

This paper is devoted to the transmission of mathematical expertise from China to Vietnam. Given that a number of mathematical treatises were written partly in the local Vietnamese script (Nôm), one may ask what was the function of the sections written in Chinese and in Nôm, and why both of those written languages, and not only one, were used? Another outstanding question is: What counting instruments were used in Vietnam,

were they different from their Chinese counterparts, and how did this difference, if any, influence the style of mathematical texts? In particular, did the counting instruments used in Vietnam differ from those used in China, and if it was so, how did the difference influence the form and the contents of the computational procedures? This paper will address these as well as other questions related to the process of transmission of mathematical expertise from China to Vietnam.

5. **Nguyen Thi Duong** (Institute of Hán-Nôm Studies, Hanoi, Vietnam).

**“Transmission of traditional medical expertise from China to Vietnam: the case of pediatrics”.**

It is generally believed that the traditional Vietnamese medicine was deeply influenced by its Chinese counterpart. This paper will focus on four Vietnamese medical texts in order to make this statement more specific and to investigate exactly how and when the transmission of medical expertise from China to Vietnam took place.

In my paper, I will focus on four Vietnamese medical treatises: the *Baoying liangfang* 保嬰良方 (Excellent prescriptions to protect young infants, 1445), by Nguyễn Trữc, the *Xiao'er ke* 小兒科 (Pediatrics, 1777), the *Hu'er fangfa zonglu* 護兒方法總錄 (The Complete Notes on the Procedures for Protection of Infants, 1813), both authored by Nguyễn Gia Phan, and the *Youyou xuzhi* 幼幼須知 (What One Should Know if One Loves the Child, 1770), by Lê Hữu Trác. I will not take into consideration other treatises such as, for instance, the *Xiao'er zhuzheng bingzhi* 小兒諸症病治 (Treatment of infantine diseases) despite its title supposedly related to pediatrics, since the author of the text devoted only first four pages to the topic.

I will briefly discuss the treatises on pediatrics preserved in the library of the Institute of Han-Nom studies in Hanoi (ca. 100 texts), arguable containing the largest collection of the medical Vietnamese texts in the world. I will justify my choice of the four above-mentioned treatises as the most representative books on the subject, and compare them with the Chinese texts devoted to the same subject matter. In conclusion, I will advance a number of hypotheses concerning the compilation of the Vietnamese treatises and the transmission of the medical expertise from China to Vietnam.

6. **Mau Chuan-Hui** 毛傳慧 (National Tsing-Hua University, Hsinchu, Taiwan).

**“The circulation of the sericultural know-how between France and China in the 17<sup>th</sup>- 19<sup>th</sup> centuries”.**

In my recent publications I mentioned the impact of the Chinese tradition of sericulture on the French sericultural production of the 18<sup>th</sup> and the early 19<sup>th</sup> century and argued that the Chinese sericultural expertise stimulated the development of European entomology. In this paper I will explore further the interaction between the Chinese and the European sericultural traditions; more specifically, I will show that the Chinese expertise brought to France by the end of the 17<sup>th</sup> century returned back to China with a certain “European touch” and entirely on French initiative. The first part of my paper will be devoted to the efforts made by the French in investigating the Chinese know-how which led to the establishing the “French School of Sericulture” (l’École française de sériciculture) in the first half of the 19<sup>th</sup> century. The sericulture thus was no longer considered a kind of craftsmanship, it rather became a particular applied science.

Weakening of China after the Opium Wars along with the spread of epidemics in silkworm farms in Europe marked the beginning of a new period. Western, and in particular French, businessmen attempted to introduce modern technology in Chinese sericulture. This initiative was, however, resisted in China while taking place in a complex context of the modern political Chinese history and, in particular, China’s complex relations with the Western powers and Japan in the end of the 19<sup>th</sup> century.