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An analysis of Chinese Conceptualization in respect to the difference between Chinese and Western Science

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Aims of this talk

- Examine the range of explanations that scholars in China have offered for the disparity of development of natural science in China and the West
- Attempt to justify a few presuppositions in comparative studies of Chinese and Western science

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Discovery and Justification

Context:

- ★ The focus on comparison of science in China and the West has resulted in quite a lot of research. However, not enough reflections on the works before have been done .
- ★ Comparative studies tend to have some premises that were taken without enough justification and reflection.

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Overview of questions

1. What kind of presumes were taken as granted in comparative studies of history of science in different civilizations?
2. Possibility (methodological) to make comparative study of science and culture in China and the West?

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question 1

What kind of presumes were taken as granted in comparative studies of history of science in different civilizations?

- The notion of the "West"
- The notion of "Science"

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Question 1: The West

- Geographical division
- Linguistic difference
- Cultural identity

.... historical and geographical meanings

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Question 1: The notion of Science

- ★ Dictionary definition: explanations, predictions & scientific method
- ★ Historical period
- ★ Natural science/Social science

"we have no choice but to accept a diverse set of meaning as legitimate and do our best to determine from the context of usage what the term "science" means on any specific occasion."

(Lindberg, 2010, p. 2)

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Question 1: Views of Science

- Practical empiricism
- Mathematical-experimental knowledge system
- Cultural phenomenon.

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- Practical empiricism

Scientific knowledge consists in classification and macroscopic description of nature in terms of ideas and practical techniques.

“Ancient China’s leading position was limited to practical technology, without any theoretical support of scientific knowledge.”

(Wen. 2006, p. 511)

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- Mathematical-experimental knowledge system

Science is a type of theoretical knowledge based on mathematical tools and an emphasis on experimental data.

The reason for China’s dropping behind is that they felt to shift from an experience-based technological innovation pattern to a new innovation pattern based on mathematical tools and controlled experiment

(Justin Yifu, 1995)

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- Cultural phenomenon.

Confucian tradition to attach importance to what to do, with an ignorance of what to know

Ren Hong juan (任鸿隽, 1983)

The natural world has never been taken as an object in traditional Chinese culture. Most of the achievements in ancient China are technological innovations, which are different from scientific creations

Mou Zongsan (牟宗三, 1992)

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- Cultural phenomenon.

Cultural evolutionism: science is coherent and universal.

Cultural relativism: science is just one element of culture, and there is little compatibility between different cultures.

The western cultural achievement of modern science is not universal. So it is not necessary, and impossible to make a comparison between Chinese and Western science.

Hao Shu cui (郝书翠, 2008, & 2010)

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Question 2 Methodology of Comparison

“Strangification” Strategy : Linguistic strangification

1. Communication tool
2. Way of thinking
3. Value system

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Conclusions

1. A reflection of the notion of science is essential for any comparative studies of the history of Eastern-Western science. Scholars holding to the first dimension (practical empiricism) would think that ancient China had science, unlike Needham.
2. Three views of science to explain various conceptualizations of the difference between Chinese and Western science. Each leads scholars to a different point of view on the comparison between Chinese and Western science.
3. In order to make linguistic strangification, so as to go beyond the cultural boundary to fully understand the knowledge in different civilizations, there are at least three steps one need to take.

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