

INTRODUCTION

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The Needham question refers to the quite broad question as to *why modern science*, which is characterized by a combination of mathematization and experimental investigation of the empirical world, *did not develop in China*. The answer which Joseph Needham himself formulated to this macro-question consisted in an occasionally speculative conglomerate of (1) socio-economical elements and (2) beliefs related to the dominant world view. With respect to (1), Needham claimed that the presence of “bureaucratic feudalism”, the absence of a bourgeoisie class, and the averse attitude of Confucianism towards economical trade obstructed the rise of modern science in China. With respect to (2), he claimed that the dominant Confucian philosophy, in contrast to Taoism, had little interest in the study of natural phenomena. Moreover, the notions of “law of nature” and “linear time” were absent in Chinese thought and it was typified by “correlative thinking”, i.e. the empirical world was conceived as a changing whole of correlated natural phenomena without the ideas of uniform causality or stable phenomena.

In light of recent research on the matter, both of Needham’s answers have been correctly challenged and criticized (see e.g. Perdue 2006 and the essays in Low 1998). For these reasons, scholars no longer work at the macro-level of the Needham question but are now focussing on *specific sub-questions related to the original macro-question* (see Cohen 2001). It is at this concrete level of sub-questions that the contributions in this volume are situated.

In *Towards a Fruitful Formulation of Needham's Grand Question*, Steffen Ducheyne argues that Needham's Grand Question can only be fruitfully pursued, (1) on the condition that one explicates the assumptions and conceptions involved in an informative and motivated way, and (2) on the condition that the question is concretized and fine-tuned by means and in terms of a series of specific questions. He attempt to reformulate Needham's Grand Question on the basis of a minimal conception of modern science and splits up the Grand Question into a series of more specific, controllable and arguably more fruitful questions.

In "*Since Heaven has not yet Destroyed this Culture, what Can the Men of Kuang Do to me?*": *Cosmological Confucianism and the Development of Science*, Bart Dessein addresses the issue how, in traditional Chinese society in which Confucianism held a dominant position, philosophy was organized in 'schools of thought,' how these schools remained relatively stable 'transmitters of wisdom,' and how they dealt with 'science'.

In *The Imperial Examinations and Epistemological Obstacles*, David De Saeger attempts to give a partial answer to Needham's Grand Question, by arguing that the imperial examinations were 'epistemological obstacles' which hindered the development of modern science. He further argues that these obstacles were present in the European universities as well, and elucidates the role of competitive patronage in overcoming these obstacles.

In *Regiomontanus and Chinese Mathematics*, Albrecht Heffer critically assesses the claim by Gavin Menzies that Regiomontanus knew about the Chinese Remainder Theorem (CRT) through the *Shù shū Jiǔ zhāng* (SSJZ). Heffer refutes the claim that Regiomontanus used the method from the SSJZ. Then he provides evidence that remainder problems were treated within the European abbaco tradition independently of the CRT method. Finally, he discusses the role of recreational mathematics for the oral dissemination of sub-scientific knowledge.

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