

Joint CSMC & SAW Workshop

**“What Can the History of Science Contribute to Manuscript Studies
or
What Can Manuscript Studies Contribute to the History of Science?”**

08-10 May 2014

Abstracts

Karine Chemla & Daniel Morgan (SPHere, SAW ERC project)

Math Lessons: Towards an Interdisciplinary Approach to an Early Chinese Manuscript Culture.

Discovered in 1983 in Zhangjiashan tomb 247 (sealed ca. 186 BC), the Math book (Suan shu shu) was until 2007 the earliest book of mathematics extant from China. In this talk, we will discuss what lessons may be learned about early book culture and mathematics through careful analysis of this particular source as manuscript. The manuscript is a “bookmat” of bamboo slips bound by silk and is comprised of 69 titled sections containing procedures, problems, and tables for dealing with matters of county-level economic administration. Unlike the books of today, we understand the texts of this period to have frequently been modular, composed of small independently circulating textual units. We would like to break the idea of a “book” down further, by exploring textual layering and dialogue between participants in the text. It is our hope that future work of type will help bridge the gap that exists between cultural historians and historians of science in producing an integrative vision of ancient Chinese book culture.

Cécile Michel (SPHere, SAW ERC project)

When manuscripts take the shape of the object under study: The case of clay liver models

Abstract

A hundred of the clay cuneiform sources excavated in the Near East are shaped in the form of a sheep liver. They were produced by the diviners of the IInd millennium BCE specialized in extispicy, a discipline which consisted in the inspection of the entrails – especially the liver (hepatoscopy) – of sacrificed animals. After a short presentation of divination, considered a science by ancient Mesopotamians, and the various study objects of the diviners, the lecture will give a detailed analysis of the clay liver model corpus: date and place of discovery, external shapes, marks and drawings, texts, etc. Their orientation and reading, as well as a

comparison with other texts of extispicy will help to understand the motivation of the diviners to produce such objects, and their use.

Christine Proust (SPHere, SAW ERC project)

Colophons in mathematical cuneiform texts as indicators of the pragmatic status of texts

Abstract

In the first millennium BCE in Mesopotamia, scribes used to inscribe colophons at the end of their works, for example on medicine, mathematics or astral sciences. These colophons provided information relative to the scribe who copied the text, the place where he composed it, the content of the composition, the original document copied, the owner of the tablet and his genealogy. These practices reflected a very specific context of that time: that of the creation, enrichment, management and maintenance of large libraries. In the Old Babylonian period (circa 2000–1600), colophons were not widespread. However, they are attested in some specific mathematical texts, and their content is limited to very terse information on the content of the texts. In this presentation, I analyze such colophons in order to understand the context in which the documents were created. How colophons inform us on the purpose of the texts? Do they reflect teaching activities, or the management of libraries, or other type of classification project? In addressing such questions, this presentation intends to link the content of colophons to the pragmatic status of the texts.

Agathe Keller (SPHere, SAW ERC project)

Sanskrit mathematical texts and practices from the point of view of manuscripts: diagrams, numerical tables and the organization of mathematical chapters in early medieval commentaries.

Mathematical practice involves dealing with non-discursive objects, whether it is geometrical figures or noted numbers, amongst others. If Sanskrit treatises (śāstra) only deal with words, commentaries figure working surfaces in which such objects were to be laid out and manipulated. In this presentation, the manuscript practices of diagrams in Bhāskara's 629 commentary on the Āryabhaṭīya (499) and the use of place value in multiplications in Pṛthūdhaka's commentary on the Brahmasphuṭasiddhānta will be an opportunity to reflect both on what these practices reveal for the history of mathematics and a reflection on the epigraphy of such objects in manuscripts. Questions related also to the inner subdivisions of mathematical commentaries and the organisation of mathematical chapters will be raised.

Sho Hirose (SPHere, SAW ERC project)

Astronomy preserved in Trivandrum, India: Some examples of manuscripts in libraries and private houses with reference to its practice.

The Kerala University Oriental Institute and Manuscripts Library owns a large collection of manuscripts, mostly Malayalam scripts written on palm-leaves. It includes large number of astronomical texts, and I shall talk about a few aspects of this collection which I found through the investigation of manuscripts on the "Āryabhaṭīya (499 CE)" and on the "Goladīpikā (1433 CE)". Meanwhile, a considerable number of manuscripts still remain in private houses, where important discoveries are latent but hard to access. I shall also give comments on the traditions that remain today (i.e. astrology) and its relation to manuscripts.

Robert Middeke-Conlin (SPHere, SAW ERC project)

Estimation and Observation: A study of two Old Babylonian tabular administrative documents

NBC 11509 and NBC 06763 are two unprovenanced documents which, on outward appearance are very similar: they are both tabular administrative texts which seem to estimate volume for canal excavations. Though vocabulary differs slightly, both are divided into five columns: a column for a length, width, depth, volume, and a label for each canal section. Both have a total excavation as well as a statement of who is in charge of these excavations. However, NBC 11509 and NBC 06763 are very different. NBC 11509 clearly derives volume from a multiplication of length by width and then height while NBC 06763 offers values for volume that are not related to this simple calculation. Nor does the total volume in NBC 06763 appear to be derived from these values. Indeed, while the tabular layout in NBC 11509 seems to organize data in a way reflecting the manipulation of data, length, width, and then depth produces volume, this organization, on first inspection, seems secondary to NBC 06763.

This workshop will examine these two texts and the tablets they were written on, emphasizing the tabular format exhibited by these documents. Through this we will see that both texts were produced in the same kingdom around the same time but by different, expert scribes in different environments. It will suggest that NBC 11509 was an estimation of volume before an excavation while NBC 06763 records excavated volume from a completed canal maintenance project.

Matthieu Husson (SPHere, SAW ERC project)

Confessions of an historian of science at work with manuscripts

There are some simple answers to the general question raised in this workshop: historians of science are acquainted with the intellectual habits of the scientific milieus in which many

manuscripts were produced; they may also have some technical skills which allow them to date and locate particular texts or documents. However I will not try to exhibit “answers” that historians of science may have to questions raised by the specialists of manuscripts but rather concentrate on the issues and questions which we may share. I will expose some of the way in which, in my practice as an historian of mathematical sciences in the late medieval Europe, I worked with manuscripts. In addition, I will present how my practices are linked to those of my colleagues and predecessors. I will conclude by pointing to two aspects which could be fruitful for both fields.