

« Parts and Pieces: an Exploration of the Textuality of Scientific Writings »

3rd and 4th July 2013

**SPHERE, UMR 7219, CNRS & Université Paris Diderot
Paris, Bâtiment Condorcet
Salle 483A - Malevitch**

Organizers: Florence Bretelle-Establet and Stéphane Schmitt

This two-day workshop will bring together a series of papers on the issue of parts and pieces of texts in scientific writings, produced in several parts of the world and at different times. This workshop is a preliminary step before the edition of the second volume of *Textology via Scientific Writings*. By scrutinizing ways of writing, thanks to several tools provided, notably, linguistic ones, the volume aims at identifying specificities or, on the contrary, commonalities in ways of writing texts related to scientific activities; it aims at analyzing whether these writing practices are linked to social milieus, to professional groups, whether they correspond to particular ways of doing science, or meet particular functions. In this collective attempt to describe the textuality of texts, and focusing on the general issue of parts of texts, several themes that are by no way exclusive, have been retained: parts of texts and the issue of citation and compilation; parts of texts and paratext; architectural disposition of the segmentation in texts

Practical information: we remind you that each speaker is allotted 15 minutes to present the main points of his/her contribution. The respondent has 10-15 minutes to discuss the paper. Another 30 minutes will be left for the general discussion

3th July
9h30-18h00

1st session: Parts of Texts in Ancient Writings Linked to Scientific Activities

9h30 : Introduction

9h45-10h45

Micheline Decorps (Université Blaise Pascal, Clermont-Ferrand & SPHERE) : “Parties de textes : le témoignage de la tradition des textes mathématiques grecs »

Abstract. On montrera dans un premier temps en quel sens le concept de “parties de textes” peut s’entendre quand il s’agit des textes mathématiques conservés de l’Antiquité grecque. On montrera ensuite que cette notion peut s’appliquer à leur mode de transmission. Le traité original a évolué quand le milieu qui se l’est approprié en a fait un objet d’enseignement. Quand il a été soumis à des réécritures, il est devenu un ensemble, dans lequel on peut reconnaître des éléments venus de corpus et de traités antérieurs ou de commentaires. On proposera une réflexion sur la nature des moyens dont nous disposons pour déceler l’insertion de ces éléments étrangers, quand ils ne s’affirment pas comme tels.

Commentary by: Karine Chemla

10h45-11h45

Karine Chemla 林力娜 (SPHERE-CNRS, ERC Advanced research grant SAW) and

鄒大海 Zou Dahai (Institute for the history of natural sciences, CAS.中國科學院自然科學史研究所& invited professor ERC Advanced research grant SAW)

Abstract. The chapter aims at interpreting two statements of the 3rd century commentary by Liu Hui’s preface to his commentary on *The Nine Chapters on Mathematical Procedures*, the first century BCE or CE classical text. In his preface, one reads:

“周公制禮而有九數，九數之流，則《九章》是矣。往者暴秦焚書，經術散壞。自時厥後，漢北平侯張蒼、大司農中丞耿壽昌皆以善算命世。蒼等因舊文之遺殘，各稱刪補。故校其目則與古或異，而所論者多近語也。

It is only when the Duke of Zhou established the Rites that [we know that] the **nine ‘parts of mathematics’** (*jiu shu*) existed. The **development** (*liu*) of these nine parts, **this is precisely what *The Nine Chapters* is**. Formerly, the cruel Qin burnt the books. The Canons and procedures (**OR** the procedures of the Canons **OR** the procedures of the Canon) got scattered and damaged. After that time, the Bei Ping Marquis Zhang Cang and the Assistant of the Grand Minister of Agriculture, Geng Shouchang, both acquired a universal reputation for their excellence in mathematics. On the basis of **scraps** of the old text (*wen*) that were handed down, Zhang Cang and the other (**OR** the others) made both excisions and completions. This is why, when one examines its sections (*mu*), in places they differ from the ancient ones and what is discussed is much in modern terms.”

The first part of the chapter puts forward a hypothesis to explain the following puzzle, that is, although Liu Hui seems to believe that the organization of mathematical knowledge into nine parts and of the classic into “nine chapters” dates to as early as before the unification

of the Empire, none of the recently discovered manuscripts, which date to the Qin time period and early Han dynasty, is structured in chapters, let alone chapters comparable to those of *The Nine Chapters*. The hypothesis we put forward suggests that there may have been at least two types of mathematical documents in early China: documents attached to the Confucian classics and others. We argue that the concept of “nine ‘parts of mathematics’” and *The Nine Chapters* both relate to the first type while the mathematical books so far unearthed belonged to the second type.

The second part of the chapter presents evidence on the basis of which we can establish that the chapters of *The Nine Chapters* each had a mathematical meaning. The relation between the chapters of the book and the “nine ‘parts of mathematics’” is discussed, and in particular the meaning that Liu Hui could attribute to the idea that the former derived from a “development” of the latter. In addition, we show that the meaning of the chapters brought to light can help us account for the meaning of, and variations between, the various lists of “nine ‘parts of mathematics’” that were discussed by several actors between the first century and the seventh century of the Common Era.

Commentary by: Florence Bretelle-Establet

11h45-12h00 Break

12h00-13h00

Christine Proust (SPHERE, UMR 7219, CNRS & U Paris Diderot): "Segmentation des textes et opérations sur les textes : quelques exemples puisés dans les mathématiques cunéiformes »

Abstract. Je me propose d’examiner la segmentation des textes dans des listes de problèmes mathématiques écrites sur des tablettes d’argile d’époque paléo-babylonienne (début du deuxième millénaire avant notre ère). Deux aspects sont à considérer : les segmentations matérielles (tablettes, sections, lignes, colonnes...), et les segmentations textuelles (énoncé / solution, groupes de problèmes, ruptures linguistiques, mots clé, colophons...), ainsi que les relations entre ces deux aspects. Cet examen, ainsi que l’analyse du vocabulaire ancien qui décrit ces différentes segmentations, devrait permettre d’apporter des réponses à des questions concernant la façon dont certains textes mathématiques cunéiformes ont été composés (compilation, extraction, concaténation, génération...). Un éclairage nouveau sur les pratiques en matière de classification et de transmission du savoir mathématique qu’ont développé des milieux savants liés aux écoles de scribes de Mésopotamie peut émerger d’une telle analyse.

Commentary by: Karin Preisendanz

Lunch

2nd session: material segmentation of texts

14h30-15h30

Karin Preisendanz (University of Vienna Faculty of Philological and Cultural Studies Department of South Asian, Tibetan and Buddhist Studies), "Text Segmentation, Chapter Naming and the Transmission of Embedded Texts in the Indian Medical and Philosophical Traditions: The Cases of the *Carakasamhitā* and the *Nyāyasūtra* in Context"

Abstract. In the introduction to this contribution, the topic of segmentation of texts in general in the Sanskritic culture of South Asia will be placed within the wider issue of the pronounced orality of South Asian cultures and their attitude towards writing, once writing had become established on the subcontinent. Examples for text segmentation and chapter naming in the earliest monument of South Asian literature, the *Ṛgveda*, and an early work belonging to the genre of ritual science and specifically concerned with orthodox socio-religious norms, the *Āpastambadharmasūtra*, will be provided. After this, the focus will shift to the great Sanskrit epic, the *Mahābhārata*. Next, the topic of text segmentation in writing, in the earliest inscriptions and especially in manuscripts, will be treated at various levels of a text, with a focus on the text internal (lexical, stylistic, compositional, etc.) and external (layout, etc.) practices observed in manuscripts of the two scientific works belonging to the medical and philosophical traditions respectively mentioned in the title, the *Carakasamhitā* and the *Nyāyasūtra*. Both works provide interesting perspectives on chapter naming; the latter moreover presents a case of the transmission of a text embedded in the text of the earliest preserved commentary on it, and also extant and transmitted in independent form. Finally, text historical and text critical observations connected with the segmentation of the text of the two works will be made.

Commentary by: Micheline Decorps

15h30-16h30

Bahram DJENAB (), “Laboratory notes of Michael Faraday: the use of text in the research process”

Abstract. The objective of this paper is to study the formal structure of Michael Faraday’s laboratory notes and their links with his other publications. They are written in a specific form, with numbered paragraphs in six volumes and a system of relations with specific references to other texts of Faraday. The Editor of Royal Society published them in London between 1932 and 1936. These notes represent forty years of research in the laboratory of the Royal Institution. Faraday filed this notes to the secretarial office of the Royal Society at the end of his career. By its peculiar shape that resembles neither a draft nor a text for publication, this text deserves the attention of the linguist and historian of science.

Commentary by: Julie Lefebvre

16h30-16h45 Break

16h45-17h45

Discussion of Ossendrijver Matthieu’s paper (not present)

Abstract. Babylonian astronomical procedure texts exhibit various types of segmentation and, for some of these types, multiple levels of segmentation. In this contribution the different types of segmentation are addressed, and the relation between them is explored. Four main levels of segmentation are distinguished: 1) physical segmentation as determined by the division of texts over different tablets, 2) various types of clustering of different but related procedures on a single tablet, 3) segmentation of procedures and 4) substructures within procedures.

Commentary by: Christine Proust

4th July
9h30-17h30

3rd session: parts of text and citations

9h30-10h30

Dimitri Drettas : « Compilation & Encyclopédies de la vie quotidienne en Chine»

Abstract. Mon article sera centré sur les critères de sélection et les modes de classification du matériau compilé dans les "encyclopédies pour l'usage quotidien" de la Chine des XIV^e-XVII^e siècles (dynasties Yuan et Ming), livres imprimés qui visent à rendre accessible au plus grand nombre l'ensemble du savoir indispensable à la vie domestique. Je mettrai l'accent sur la notion d'"environnement textuel" en analysant, à travers le traitement de la divination et de la magie dans ce corpus et la comparaison avec les sources manuscrites, la façon dont les variations de mise en texte et l'interaction entre écrit et illustrations entraînent des lectures et des usages différents de contenus pourtant identiques, en apparence.

Commentary by: Fabien Simon

10h30-11h30

Florence Bretelle-Establet (SPHERE, UMR 7219, CNRS & U Paris Diderot): "How and why do Chinese medical texts report the discourse of others?"

Abstract. My contribution to this book aims to analyze the question of part of texts through an analysis of the citation praxis (" Le discours rapporté dans tous ses états" 2004, p.10) in Chinese medical texts, written during late imperial times (18th-19th centuries). As many scholars have shown, the act of citing, in Chinese texts, is far from uncommon. For Charles Hartman, in *The Indiana Companion to Traditional Chinese Literature*, vol 2, p.96 (1998), citing is the only feature of Chinese literature that holds for the long run: "The traditional compositional process of crafting previously digested bits of language into new works virtually guaranteed that all new texts were to some extent and in some sens intertextual". For F. Martin, "la culture chinoise est par excellence une culture de la citation et de l'allusion" while for Jean Lévi, "la culture chinoise se caractérise par l'hypertrophie de la citation d'autorité". The analysis of a corpus of 23 medical texts shows that the practice of citing was not restricted to literature or historical works, but was also very common in the medical texts. However, a first comparison of all these texts shows that the practice of citation was not uniformly shared by all the authors. While some authors resorted to citations everywhere they could, others used this process, very rarely, while some others never used it. Moreover, while some authors systematically introduced citations at the beginning of a sentence and by using a verbal verb (such as X "tells", "says"), some mentioned the paternity of a discourse at the end of the sentence, and still others introduced citations, in the middle of a sentence, in a more interpretative mode (for x,). It is thus this diversity in the citation praxis that I want to explore, by relying on the tools elaborated by researchers in discourse analysis and linguistic. I will try to give a description of the different ways authors have chosen to introduce parts of other texts into their own texts and try to answer the following questions: Can the different ways of citing help us to characterize different genres of texts? And, in return, are there some constraints related to a particular genre of texts that a text should respect in order to be considered as belonging to it? Are the different ways of citing related to different functions?

Commentary by: Dimitri Drettas

11h30-11h45, break

11h45-12h45

Fabien SIMON (ICT, Université Paris Diderot-Paris 7), “Collecting languages, alphabets and texts: the universal language plans of the 16th and 17th centuries, linguistic cabinets of curiosities?”

Abstract. During the Early Modern Age, Europe was the field of a protean quest for the universal language: researches on Adam’s language were carried out, languages were created (Athanasius Kircher (1663), John Wilkins (1668))... Among those plans, one way of attaining the universal language was to build encyclopedias of all the idioms spoken on earth. It was the path followed, for example, in Conrad Gessner’s *Mithridates* (1555) and Claude Duret’s *Thresor de l’histoire des langues de cest univers* (1613).

In this paper, we are going to look at the universal language plans as working as linguistic cabinets of curiosities, in different ways. First, how do they compile texts, being sort of humanistic libraries, patchworks of quotations of texts on languages written by humanists or missionaries? Which texts are they mobilizing and what differences can we perceive in the quotation networks and the way of quoting of Gessner and Duret?

Secondly, those works are exposing alphabets of foreign languages, as if they were objects in a museum. What kind of interactions can we see between those “paper museums” and actual cabinets of curiosities of that time?

Finally, how do those texts and alphabets circulate in between those universal language plans? In this view, we are going to concentrate, for example, on the connexions between Duret’s book and Blaise de Vigenère’s *Traité des chiffres ou secrètes manières d’écrire* (1586) and François Colletet’s *Traitez des langues estrangeres, de leurs alphabets et des chiffres* (1660).

Commentary by: Stéphane Schmitt

Lunch

4th session: parts of text and citations

14h15-15h15

Julie Lefebvre (Université de Lorraine, CREM (EA 3476)) “« STRETCHES OF TEXT » AND « PARTS OF TEXT »”

Abstract. This paper aims to examine, from a linguistic point of view, two different ways of referring to a place in a text. In this verbal activity, a distinction can be made between :

- the use of adverbial elements like *ci-dessous* (below), *ci-dessus* (above) or *infra* and *supra* that are designating *stretches of text*,
- the use of noun groups like *chapitre 3* (chapter 3), *page 164* (page 164) or *paragraphe 5* (paragraph 5) that are designating *parts of text*.

We will explain that the so called « stretches of text » are strictly connected with the enunciation of the text and its linearity, whereas « parts of text » appear to be linked with practices of text’s division, historically located and depending on the text’s genre.

We will then comment some discursive’s uses of these two possibilities and show what part they can play in texts’ interpretation.

Commentary by: Karine Chemla, Jacques Virbel ?

15h15-16h15

Stéphane Schmitt (SPHERE, UMR 7219, CNRS & U Paris Diderot), “The Significance of Epigraphs in Science Books in the 18th Century”

Abstract. This paper investigates the practice of epigraphs in eighteenth-century scientific books. It examines quantitatively and qualitatively the significance of these paratextual elements, in order to understand their origins, their uses and functions, and the differences observed between books in several European languages. We argue that, although they are often considered conventional and pedantic and neglected by historians, they often have an important role, in connection with the contents of the book, with other elements of its paratext (title, front illustrations...), and with its context. Accordingly, they make sense and throw light, for example, on the aims of authors, the patronage networks and the audience of scientific works, and deserve a special attention, even in non-fiction.

Commentary by: Bahram Djenab

16h15-16h30 Break

16h30-17h30 Collective Discussion