Knowing an Empire Imperial Science in the Chinese and Spanish Empires, 1500-1800

Mackenzie COOLEY and WU Huiyi

Max Planck Institute for the History of Science November 21-22, 2019

Vast empires, whether in Asia or the Americas, faced similar challenges when it came to scale and diversity. To control sweeping expanses of varied geography, human and natural alike, early modern administrators aimed to collect and organize knowledge. While localities within imperial boundaries might revel in their specific customs, natural histories, resources, and geographies, central administrators envisioned a means to transcend those specificities. Although emperors and kings attempted inspection tours, these only fleetingly showcased small tracts of the empire. Faced by a territory so expansive that knowledge of its particularities eluded any individual, administrators devised a bureaucratic solution to their problem.

Despite their geographic and cultural distance, both the Spanish and Chinese imperial administrations developed a system of geographic knowledge collection based on remote observation. The two imperial geographical genres evolved in parallel: the *difangzhi* (local gazetteers) of imperial China, and the *relaciones geográficas* of the Spanish Empire. The *relaciones* questionnaires developed from a sixteenth-century census precedent and continued to shape reports on indigenous geography until the early eighteenth century. Rooted in earlier traditions of geography treatises and map guides, Chinese *difangzhi* matured and steadily spread by the turn of the sixteenth century, with the overwhelming majority of extant gazetteers dating from this period onward. Both of these sources are being fruitfully studied by historians and historians of science in their respective regional contexts, but their comparability has never been explored. This workshop brings the two perspectives into dialogue for the first time.

There are striking similarities between these two genres in terms of their *raison d'être*, structure, and format. Both stem from and respond to an imperial desire to know a vast territory that a monarch could not physically access and see. Both are underpinned, explicitly or implicitly, by a set of questions according to which information deemed relevant to the imperial administration was to be collected, selected, and ordered. Both emphasized commodity extraction, political order, and natural and human diversity, and assumed existing landscape and infrastructure to be fixed. Likewise, these texts relied on respondents to voice locals' vision of their own identity and how they understood their position in the imperial order. In so doing, compilers of these texts use a variety of means of communication, combining written words, images, and maps. Finally, the Chinese local gazetteers were compiled by administrators and local literati while the *relaciones* were penned, in part, by burgeoning *mestizo* intellectuals: both expressed local elite participation in a larger civilization.

Yet dissimilarities between the two genres are also clear. The *relaciones* took shape in a context fraught with conflicts and fractures. They stemmed from an imperial effort to consolidate the colonial conquest of the Americas, which had led to sharp cultural and political change. The indigenous elite's identity *vis-à-vis* the new imperial order imposed upon them was uneasily negotiated through these societal transformations; so was their collaboration with scribes and administrators during the knowledge-collection process. By contrast, the history of Chinese local gazetteers knew no such sharp cultural and political rupture between the imperial authority and the local society it sought to know. The gazetteer

tradition on the whole was rooted in China's core cultural strongholds, expressing a local desire to affirm their belonging to the civilized world, although compilation of gazetteers of non-Han regions was often the result of imperial expansion.

The *relaciones* and the local gazetteers also differ in their extent of circulation. In the sixteenth and seventeenth century Spanish context, the legitimacy of public discussion of imperial matters of governance was subject to contestation. Knowledge-gathering was a reflexively secretive exercise organized in a top-down manner. During the reign of Philip II, the *relaciones* questionnaire was sent off by the royal cosmographer twice (1577 and 1583), and the wealth of data collected about the New World was kept secret in the archive. By contrast, most Chinese local gazetteers were printed and destined for public circulation. They were presented to the central authorities but also read locally, projecting the image the local elite had of themselves. Finally, the genre of *relaciones* perished with the collapse of the Spanish empire, whereas its Chinese counterpart survived the end of the imperial regime: gazetteers continue to be compiled today around China. Through the comparison of these two genres and the knowledge-production process underpinning them, we seek to raise novel questions on the functioning of the two early modern empires, as well as the interplay between knowledge and empire-building.

Beyond comparison, studying Chinese local gazetteers and Spanish *relaciones* may also shed new light on the longstanding debate about early modern connections between China and Spanish America. While the contribution of American silver and American crops to the transformation of the Chinese economy since the sixteenth century is well-known, it is worth asking to what extent these processes are reflected in Chinese local gazetteers. Conversely, data from the Spanish *relaciones* reflect the participation of this Spanish American silver production in the nascent global economy. Furthermore, in an age when both the Chinese and Spanish empires were entering into direct contact and starting to build knowledge of one another through trade, migration, and overseas missions, it is valuable to investigate how these eminently local genres reflect these long-distance connections between empires.

This workshop will compare, contrast, and search for connections between these two distinct cultural contexts and two bodies of language-based expertise, which have so far developed their questions and methods independently. Through this, we aim to pinpoint essential features of imperial knowledge creation, and to make an original contribution to ongoing debates concerning science and empire. Local gazetteers and *relaciones geográficas* required new techniques of big data collection, elicited detailed attention to specific environments, and preserved geographic particularity.

This mixed-format conference will bring together scholars of China and the Spanish Empire, in addition to experts on the Ottoman, Mongol, and Safavid empires in the capacity of commentators to provide comparative insights. Topics include:

• **Parallel Tactics, Epistemologies of Empire.** How can historians of science today approach the knowledge these sources contain? How do imperial genres introduce new dimensions and critical insights into broader narratives of early modern science? Why did large early modern empires employ similar tactics when it came to extracting knowledge from their territories? Did shared imperial epistemologies encourage the collection of information about environment, flora, fauna, medicine, and geography? How did the Chinese and Spanish empires aim to construct political, spatial, and intellectual order by understanding specific localities within their boundaries?

• **Bureaucracy of Knowing.** How did early modern empires scale data? Beyond standardizing and abbreviating information, how did they record, synthesize, and analyze "big data" about their localities, including information about natural resources (minerals, plants, and animals), use of infrastructure, and the customs of the people that inhabited remote areas? Given shared interests and material necessities

(overcoming distance, time constraints), how can we explain differences and similarities of information and strategies?

• Scale. How did scales of operation impact knowledge generation? How did maritime empire and continental empire necessitate different forms of knowledge acquisition? Are similar practices in China and the Spanish Empire the result of scale, similar material conditions of long-distance communication, impediments, or ideals? How did geographic or time scale affect local and global knowledge gathering?

• Local Voices, Imperial Knowledge. How did the visions of central administration and local actors clash and coalesce in the production of corpuses like the gazetteers and *relaciones*? How did imperial knowledge-collection projects balance individual administrators' voices with a desire for empiricism? Did they intentionally mediate the variable reliability of their contributors, who surely had their own motivations and interests in shaping the narrative? What knowledge was politically sensitive, and what role did secrecy play in the circulation of geographic knowledge?

• **Connection, Transmission, Exchange.** How do these locally-generated sources reveal connections between Asia and the Americas? What commodities, medicines, markets, and materials can we trace through these sources? To what extent did authors and administrators evince awareness of the growing global ties?

Abstracts

Politics of Local Knowledge in the Documentation of Medicinal Plants in Ming-Qing Gazetteers *BIAN He (Princeton University)*

What does it mean to name a plant grown locally, and to spell out its utility in a textual genre that was open to trans-local perusal? The question of inclusion and exclusion turns out to be not so simple. This chapter traces the shifting tension in the documentation of flora and fauna as "local products (wuchan)" in late imperial Chinese local gazetteers, with a focus on medicinal plants. Starting from the sixteenth century, gazetteer compilers were caught between their expressed desire to enhance local utility of those healing herbs on the one hand, and to avoid trans-local exploitation of the same resources, on the other hand. Throughout the Ming-Qing transition, as institutionalized means of governmental extraction gradually shifted to monetary transactions mediated by merchants, I suggest that political opinions expressed in local gazetteers also shifted to the pursuit of equitable profit between local and trans-local actors. Moreover, there was a trend among cosmopolitan readers toward the consultation of local gazetteers as primary source for the sake of curiosity, and later compilers consciously catered to that need. As a result, eager consumers often picked up first-hand knowledge of local products way earlier than when information finally trickled back to the imperial center.

Knowledge Connections of the Early Modern World

Timothy BROOK (University of British Columbia)

Suddenly, it seems, history has become a study of the world as much as of any one place in the world. This trend acknowledges the profound impact that the maritime expansion all over the globe through the 15th and 16th, and not just in Europe, had on the formation of knowledge and norms, as well as on the creation of the real-world contexts shaping individual experience. Broad geographical knowledge has

always tended to seek influences from the wider world, but the pressure of those influences intensified as more of the world became knowable, and in certain ways. As the organizers of this conference propose, even local knowledge became inflected by knowing what lay elsewhere.

This influx of external knowledge was not always transformational. Additionally, its effects could never be predicted. It is that unpredictability that I propose to explore by tracking changes in Chinese cartographic representations of the world around the turn of the 17th century. The European models did not overthrow existing Chinese models so much as enter into a dialogue with them, with outcomes that could be surprising.

Measured Maps: Representations of Imperial Space in 'General Gazetteers'

Mario CAMS (University of Macau)

In contrast to the sometimes striking representations of China-in-the-world on large wall maps produced in late Ming and early Qing China, the maps included in so-called "general gazetteers" or *zonghi* 總志 may appear as more modest representations of imperial space. Such maps, as cartographic images attached to text, in the first place visualize the spatial logic and hierarchy of imperial administration and its relationship to areas beyond its immediate control. As a result, such maps exuded authority and enjoyed a wide spread within Ming-Qing book culture. During the late 17th century, maps in general gazetteers underwent an important transformation as part of wider efforts to standardize cartographic representations of Qing space, yet the impact of these changes is visually hardly discernable. This paper aims to present a typology of maps from the official and commercial general gazetteers of late imperial China, bolstering our understanding of how imperial authority manifested itself on and through these maps over time.

Hydraulic Works and Environmental Transformation of the Dongting Lake in the Ming-Qing Period

CHE Qun (Shanghai Jiaotong University, Shanghai)

The process of environmental transformation of the Jingjiang River and Dongting Lake has been addressed in the previous large-scale studies, however, the micro-level temporal and spatial contexts have been ignored. Once we know that environmental changes can lead to the transformation of an entire ecosystem, then we must look beyond "the transformation" itself, and explore the animals, plants, cultivars, agriculture of the locality, as well as the profound effects on human well-being.

This project starts from the fact that large-scale river-lake transformations profoundly influenced local micro-environments and the ways in which people built the local infrastructures, especially water conservancy works. It uses local gazetteers and memorials to track water conservancy construction and takes these projects as indicators of the environmental transformation in the middle reaches of the Yangtze River. This project establishes the historical flood-water level of the Jingjiang River and the hydraulic works of the Dongting Lake Region across the distinct sub-regions and periods. Data Extraction Tools of the LoGaRT are used to collect hydraulic works construction data by time, place, scale, type, etc. A plurality of collections allows to trace the flooding and deposition process of the lake and understand how the lake has been shaped from the past to today.

Furthermore, this project explores how did the existing local knowledge of environment impact the construction of the hydraulic works? What factors contributed to the making of importance? How did the local elites acquire the hydraulic knowledge and what did they think about the environmental transformation? How did the local government balance all sides of stakeholders? What was the role of the central government, and so on so forth. These inquiries will be fostered by examining several cases of petitions to the central government regarding the specific local hydraulic works construction.

Using Local Gazetteers with a Collective Lens

CHEN Shih-Pei (MPIWG)

This paper introduces LoGaRT, a suite of research tools that are built specifically for research on Chinese local gazetteers. LoGaRT treats full-text digitized local gazetteers collectively as a conceptual database for research inquiries. With LoGaRT's search function and its visual analytics, one can quickly discover and identify phenomena from all the digital gazetteers without being limited by the physical titles, regions, and time periods. By helping historians to tag information from textual lists, LoGaRT allows historians to quickly collect data across gazetteers and obtain datasets with much wider geographical and temporal ranges that could shape our understanding of the Chinese empire.

Animals and the Making of Natural History in the Relaciones Geográficas

Mackenzie COOLEY (Hamilton College)

In 1578, King Philip II's officials eagerly awaited an update on the domestication of their overseas empire. Foreign animals, they knew, had the capacity to transform an exotic landscape into one familiar to Europeans and were thus a key tool of colonization. This paper analyzes the responses to Question 27 of the *Relaciones geográficas* survey, which requested a report on "the animals and the birds, wild and domestic, from the land and those that were brought from Spain, and how they breed and multiply on the land." The report captured practical natural history in the colonial context, highlighting the continued alienation of knowledge between indigenous and European communities. While Spanish respondents focused on Old World animals, indigenous Mesoamericans shared snippets of their secret knowledge about the medical utility and natural history of the region. Seeing nature was subject to imperial negotiations.

Global knowledge, science and miscegenation in the Portuguese empire (16th-18th centuries) Dejanirah COUTO (École Pratique des Hautes Études)

The aim of this paper is to shed light on the collection and production of knowledge in the Portuguese Empire - the first global empire in the early modern age – and the Crown policies with regard to them. The Ottoman Empire also spread to Europe, Africa and Asia, but the discontinuity of the imperial spaces was much more significant in the case of the Portuguese realms. In the sixteenth century, the later was shaped as a maritime network covering large areas in South and Southeast Asia, Africa and South America; in the seventeenth and eighteenth centuries, large continental sections on the African continent and South America succeeded the maritime network.

Including during its period of incorporation in the Iberian monarchy, the Portuguese developed very different strategies in relation to collection and production of intellectual and scientific knowledge, according to geographical and cultural areas of settlement, the established patterns of domination and the political entities they met. Consequently, those strategies will be featured by a few key words: "decentralization" "informality", "improvisation", "pragmatism", and the most important of all, "miscegenation".

Demographically a minority in relation to the indigenous populations of the regions they dominated politically and / or economically, the Portuguese did not establish (at least in the sixteenth century), a classical empire, i.e. a territorially homogeneous empire, governed by an all-powerful central administration. On the contrary, as a seaborne empire (according to the formula of Charles Boxer), and ruled by a two-headed power, it was decentralized from its foundation in 1505. Goa, the capital of the

Estado da India, had full jurisdiction over the territories of the Western Indian Ocean, East Africa and Asia with powers identical to those of Lisbon, which controlled the Atlantic dominions of the empire.

Decentralization undeniably favored informality, improvisation and pragmatism - the Portuguese empire was also named "empire of outsiders" - its subjects having great autonomy from the authorities. Because of their limited numbers, they had to deal with pre-existing socio-political, economic and religious structures. They had to recycle and reformulate vernacular knowledge and practices, and reinvent them in the most varied fields, from land rights and political economy to medicine, military technology, architecture and decorative arts, nautical science and cartography.

The application of a tax system and concession of land inherited from the Muslim *iktā* ' used in medieval northern India, the development of natural sciences by assimilation of Ayurveda medicine, or traditional African medicine (see José Pinto de Azeredo, 1799), gives concrete evidence of miscegenation in the process of accumulation and appropriation of knowledge. The incorporation of trading techniques, the adoption of systems of weights and measures, or monetary units of the Asian trading world (see the *Summa Oriental* of Tomé Pires, 1515) are also a part of this process. The mapping of the new spaces remains a particularly illuminating example in the imperial polycentric context. In the Indian Ocean, the Portuguese, who systematically employed Arab, Persian or Javanese pilots, recorded the navigation techniques of Asian logbooks, used the *isba*' technics and the *kamal* device to determine latitudes, transposed elements of the Asian decorative arts into the iconography of nautical charts.

In the production of knowledge and in the management of collecting and storing data, the patronage of the imperial creolized elites matched the initiatives of the imperial administration. However, despite its chronic financial deficit, which made it difficult to assist in the production or management of scientific knowledge, the higher administration also undertook to collect and archive data (through captains of fortresses, envoys of diplomatic and commercial missions, missionaries, interpreters, pilots, topographers and military engineers). The process involved an intrusive and increasingly structured bureaucracy, which produced tons of documents, to legitimize the power of the Crown, certainly, and also to supplement, through the compulsive proliferation of the written word, the shortage of land bases and the asymmetry of political and social relations.

In 1595, following the reunification of the two Iberian crowns in 1581, the *Torre do Tombo* (the national archives) was settled in Goa. Administrative and military reports, financial registers (*Tombos*), field surveys or villages cadastral data were stored, as well as historical, political or ethnographic information, sometimes in the form of monographs. Those texts adress the traditions of the political entities with which Portugal was in contact (e.g. the empires of Kongo and Mwana Mutapa, the Vijayanāgar, the kingdoms of Ceylon, the sultanates of Gujarat and Aceh, the Môn monarchies, Ming or Qing China or the Tokugawa dynasty). The only evidence to date the early Muzaffarid dynasty of Gujarat or the governance of Vijayanāgar in the early sixteenth century is based on Portuguese information. These materials, used during diplomatic negotiations, circulated freely throughout the empire. Only one area of scientific knowledge, connected to political control and international relations, was closely monitored by the State: that of cartography.

To carry out this work, the Crown gradually benefited from the vital assistance of the Religious Orders and the Society of Jesus (i.e. the "Catholic Orientalists") in particular. From the 1540s to the eighteenth century, the missionaries led an enormous work of storing information and preserving Asian literatures and oral traditions. Their movable type printers contributed to the dissemination of bilingual or trilingual grammars, glossaries and lexicons in vernacular languages as well as the translation of classical works from Indian or Persian literature. Jesuits were also closely involved in the cultural miscegenation of the production of scientific knowledge (mathematics, cosmography, agronomy, botany, medicine). In their own way, they worked to build imperial knowledge, overcoming the shortcomings of the Crown, from Brazil to China.

"Defining the Local Gazetteer Genre in Ming China: Gazetteer Content and Compilation as Seen through Principles of Compilation *fanli* 凡例."

Joseph DENNIS (University of Wisconsin)

The content and compilation procedures for Chinese local gazetteers varied by time, place and edition, and were generally described in a book's front matter section titled "*fanli* 凡何." *Fanli* were occasionally issued by central and provincial governments and applied to all gazetteers produced by subordinate administrative units, but compilers themselves drafted and implemented most. In this paper, I will analyze the development and variations in gazetteer *fanli* and discuss what they show about the gazetteer genre.

Eleven roads from Turfan: The *Xizhou tujing* and the development of geographical knowledge in Tang China

Alexis LYCAS (Postdoctoral Fellow, Max Planck Institute for the History of Science)

My paper examines the *Illustrated Itineraries of the Western Prefecture (Xizhou tujing)*, an 8th century manuscript copy from Dunhuang. The layout of the manuscript displays the spatial progression of the author (and of the intended reader) along eleven itineraries for transportation, and their various temples and monasteries. Although this text is fragmentary and contains no maps, one can still follow how local knowledge is shaped through empirical practices as well as contextual selections of existing textual material (here, a sutra). It provides new information about the structure of geographical texts produced locally and the historical value of local knowledge. I suggest that geographers did not only transmit raw information. Rather, they used the spatial patterns of the localities and they selected and rearranged texts to emphasize their points. This manuscript thus records what Chinese literati considered mandatory knowledge about a locality, before local writings became a standardized genre.

From the Macro to the Micro: Combining Text-Mining and a Close Reading of the *Relaciones Geográficas* (RGs) of Peru *Jeremy MIKECZ (USCS)*

This paper integrates a digital, corpus-based analysis and mapping of the *relaciones geográficas* (RGs) of Peru with a close reading of one RG and its contextualization within a larger set of archival documents. This iteration between the macro and the micro will demonstrate how the recording of Indigenous geographical knowledge varied across the RGs as well as between the RGs and other local documents, such as land titles, litigation, and administrative surveys (*visitas*) and tribute assessments (*tasas*). For the latter, I will examine and map a series of documents – including an RG - from Abancay (Peru), exploring what they reveal about not only Indigenous geographical knowledge, but also local events and processes and their impact on Indigenous geographies.

Previous scholarship on the *relaciones geográficas* (RGs) has provided important examples of how local respondents confounded imperial expectations. In this paper, I will demonstrate how the combination of new, digital, macro-analysis techniques with a traditional close reading of archival documents can contribute to this scholarship in new ways. First, I will show how a digital, corpus-based approach provides new insights into the ways locals answered the imperial survey in unexpected ways. For example, applying methods from computational and corpus linguistics, I will examine how responses to a

particular question varied across the corpus or how the language used in one RG reveals local informants going off script.

Second, in moving from macroanalysis to the micro, I will examine how local events and processes informed responses to the RGs. Focusing on the RG from Abancay (Peru), I will compare the local geographic knowledge recorded in this report with that found in early colonial land titles, litigation, and other documents I have collected from the archives of Sevilla, Lima, Cusco, and Abancay. This case study of records of Indigenous geographical knowledge about Abancay will answer the following questions: What hints did responses contain of Indigenous Andeans' ongoing struggle to preserve their lands from encroachment by Spanish settlers and livestock? How was the environment in Peru changing during the period? How did Inka imperial bureaucratic information-gathering practices inform local data collection for the Spanish Empire? What aspects of Peru's geography did these different genres of documents highlight, marginalize, or omit?

Histories of Science in an Imperial Context

Maria PORTUONDO (Johns Hopkins University)

This talk considers epistemic issues surrounding "doubt" and its role in collecting the type of information requested by the questionnaires, as suggested by the last phrase in the questionnaire's preamble: "afirmando por cierto lo que lo fuere, y lo que no, poniendolo por dudoso." I'll relate this to scientific knowledge production and offer some thoughts about how interrogating these type of documents for "doubt" serves as a basis for historical comparisons between Spain and China.

Health, the Body, and the Natural/Supernatural World in the 1577 Relaciones geográficas

Kelly S. MCDONOUGH (University of Texas at Austin)

The Relaciones geográficas are well-known to scholars and have been studied from a variety of angles. As of yet, however, limited attention has been paid to the presence of Indigenous knowledges and practices embedded within the corpus. The first part of the essay includes a brief introduction to the genre and discusses broader methodological concerns inherent to the study of Indigenous knowledges in the RGs. The second part analyzes 16th century Nahua understandings of health, the body, and the natural/supernatural world evident in the Archdiocese of Mexico corpus (31 RGs). Specific attention is paid to what kinds of foods and behaviors Indigenous peoples deemed healthy and unhealthy, and what types of illnesses and/or diseases the people suffered and how they were cured. The essay is meant to be suggestive of how new approaches to old sources can shed light on Indigenous knowledges and practices that have been previously overlooked.

Knowing Early Modern Slavery: Towards a Connected and Comparative History of Slavery in the Americas and China

Stuart MCMANUS (Chinese University of Hong Kong)

Spanish America and Ming/Qing China both featured various forms of unfree labor that might usefully be described under the rubric of "slavery." These are usually studied separately. However, this need not be the case. Taking as its starting point a number of roughly contemporary relaciones geográficas and difangzhi and applying the insights of "(dis)entangled history," this paper argues that the processes of

empire- and state-building on both sides of the Pacific created parallel and in some instances connected slave regimes that imperial states then sought to understand and regulate with varying degrees of success.

Mapping New Spain: Indigenous cartography and imperial knowledge

Barbara E. MUNDY (Fordham University)

Spain's great project to map its newly acquired American dominions through use of a questionnaire resulted in a set of responses and maps commonly called the "Relaciones geograficas." Usually framed as radically innovative, Spain's imperial project was, in fact, deeply dependent upon earlier indigenous imperial projects: the imperial cartography of Spain was the child of imperial cartographies of the Mexica and of the Mixtec. In this paper, I explore pre-Hispanic imperial cartographies and look at the implications of a new dependency theory for cartographic knowledge.

Local linguistic knowledge in Qing gazetteers

Mårten Söderblom SAARELA (Academia Sinica, Taipei)

Many Qing officials, thinkers, and even emperors agreed that the system of "commanderies and counties" (junxian) had a built-in problem. The empire's system of territorial administration was based on appointed, rotating officials with no personal bonds to the territories under their jurisdiction. Local officials, consequently, knew very little about the places where they were sent, and with just a few years to spend there, they had to learn fast, lest they be become pawns of the clerks and runners with their intimate knowledge of local affairs. Language was an area that presented one of the most striking degrees of local difference within the culture of the empire's Chinese provinces. To what degree did local gazetteers, often compiled by the gentry rather than the state's representative, inform incoming officials on the linguistic situation in the places where they came to serve? This question I will explore in my paper.

The local condition of global sciences: counting raindrops with Qin Jiushao in 1247

Dagmar SCHÄFER (MPIWG)

Focused on Yuan and Ming Local Gazetteers, this keynote lecture addresses the way in which historical actors have constructed the local in relation to approaches by historians of science to "locality." Why were certain topics chosen and how did such selective endeavour affect scientific and technological change?

Science of Empire: Registry, Secrecy, and Sanctity in Ottoman Imperial Knowing *Ali YAYCIOGLU (Stanford University)*

This paper is an attempt to rethink the formation of the Ottoman State's imperial knowledge project in the fifteenth and sixteenth centuries. The political consolidation around a ruling dynasty and various warrior, scribal, scholarly and spiritual elite networks coexisted with a massive surveying, recording, and archiving process. From the mid-15th century on, following each military conquest, the Ottoman center sent scribes to the conquered lands in the Balkans, Anatolia and later in the Arab provinces to register settlements, communities, and resources. They listed place names in different cartographic techniques and assessed the rural and urban assets and resources. These provincial surveys and codifications were carried out through negations with the collaborative notables - former fief-holders, ecclesiastical and monastic elites, scholars, urban gentry - of the conquered communities. As a result of these negotiations, Ottoman scribes collected pre-conquest toponyms, boundaries, as well as norms of land tenure, servitude and privileges; they rendered them according to imperial norms and codified provincial codes. In these codes, the taxable communities and settlements were classified and clustered as fiefs and prebends, to be granted

to members of the local military or central imperial elites. Some communities or households were granted privileges and exemptions.

Gradually, the Ottoman Empire built an archive of land surveys, codes, and a massive gazetteer of local toponyms of hundreds of provincial units. These archives systematically listed settlements, small villages, nomadic tribes and urban centers; they indicated historical borders and public and spiritual monuments as well as natural landmarks, such as springs, hills, woods, mountains, rivers, lakes, cliffs, swamps. All this information was intermingled some demographic figures, classified as households, as well as thousands of personal names, mainly of fief and prebend holders. Periodically, these registers were revised and updated, when another survey was carried out to indicate changes in demographics and agrarian formation or tax rates. In many ways, the imperial archive was also a knowledge project, with its classification and storage techniques. Assessing values, describing places with geographical and architectonic definitions, calculating demographics required learnt skills, methods and disciplines. Especially fiscal documents were prepared by a class of professionals, utilizing a science of accounting practice and a cryptographic system known as *ilm al-sivagat*. These documents, prepared with ciphers, were often illegible for those who were not trained in *ilm al-siyaqat*. The science of accounting thus provided the fiscal gradians of the empire with authority over knowledge concerning the values of the empire. As access to the fiscal realm was limited to the authorized and trained experts, the fiscal archives were an arcana imperii, which enabled the empire's claim to govern the lands with an inaccessible and esoteric knowledge.

Although the archives were secret and sacred, the Ottoman state produced documents for people to be used in public and private life. For appointments, dispute settlements, state contracts and privilege grants, the bureaucrats needed to consult documents, extracting an entry from a code or fiscal inventory to be transcribed on the marginalia or interpolated in the main text of another document. While the empire transformed into a document producing machine, through these intertextual transactions, a web of registers connected to each other through apostles and interpolations came into being. This document production gave birth to certain aesthetic forms through calligraphy and the organization of text on glazed paper. An imperial document was often illegible to those who were not trained or educated, yet had a strong visual effect and materiality through its formal qualities. For many, therefore, the Ottoman Empire was a calligraphic empire.

Early modern globalisation in Chinese local gazetteers (16th-18th centuries)

WU Huiyi (Needham Research Institute/ EHESS)

The period between the 16th to the 18th century marked the first direct contact between China, Europe and the Americas, and this paper analyses how Chinese local gazetteers reflect such nascent global connections. I will discuss three kinds of records: 1, evidence concerning the diffusion of American crops in China; 2, records about the presence of European missionaries, merchants and Catholic churches in a locality; 3, references to the Jesuit-mediated knowledge about European science and religion (the so-called "Western learning (*xixue* 西學)"), including explicit citation of book titles and implicit use of Western knowledge, particularly the use of Western astronomical and geographical knowledge in the field allocation (*fenye* 分野) chapters. Assessing the uneven reliability of these records, I will discuss both the potentials and limits of local gazetteers for understanding early modern globalisation in the Chinese context.

The Boxer Codex and Translingual Data-Collection

YAN Niping (University of British Columbia)

The Boxer Codex, a Spanish project of collecting ethnographical and geographical information of Southeastern and Eastern Asian communities before the 1590s, could be viewed as a similar production of Relaciones Geográficas conducted in the Philippines. This paper focuses mainly on how the Chinese data—texts and illustrations—were collected, selected, and interpreted in the Codex, including the sections of Martin de Rada's memoir of his Fujian visit (1575), Chinese Deities, and Chinese Bestiary. Since Martin de Rada bought Chinese books in Fujian and Chinese also brought books to the Spanish Philippines, it was possible that the Spanish, cooperated with the Chinese translators and artists, compiled the Chinese sections with the help of Chinese books. I will try to find out the sources that compilers used, and analyze the Chinese sources with the Spanish texts in the Codex, to understand the process of translingual data-collection during the early modern period.

Telling the story of religion: Local Gazetteer (*difangzhi*), native discourse and traditional Chinese religion world

ZHANG Xianqing (Xiamen University)

As an important and official recording of local society, Local Gazetteer(地方志) play a unique role in mapping traditional Chinese social and political life. The compilation of Local Gazetteer is not only a cultural or academic pursuit but also a political activity. The choice of the compiler, the formulation of editorial style, the collection of written materials as well as their usage are usually all subject to careful consideration and examination: they represent a kind of "politics of writing". This is particularly evident in some controversial issues such as religion. Through a systematic study of nearly 3000 local gazetteers of the Ming and Qing Dynasties, this paper aims to analyze the local knowledge and discourses regarding religious issues in the compilation of local gazetteers in China. It also explores local gazetteers as a genre of imperial text, asking how their compiler dealt with the tension between the state and local society through the production of knowledge.