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Hilde De Weerd, Chu Ming-Kin, Ho Hou-leong

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Chinese Empires in Comparative Perspective: A Digital Approach

WE EMBARKED ON A COLLABORATIVE PROJECT, titled “Communication and Empire: Chinese Empires in Comparative Perspective,” to examine how political communication and, in particular, elite communication networks impacted the formation, maintenance, or fragmentation of empires and other kinds of polities.¹ We proposed to do this through the quantitative and qualitative analysis of textual corpora, including notebooks and correspondence, that best convey individuals’ engagement with politics but that have never been examined in the aggregate and for their relevance to Chinese political culture. Here we briefly introduce the historiographical background and goals of the project and the digital methods we developed and used.² We end with two case studies illustrating how digital methods can facilitate research on communication networks on the micro- and the macroscale. We hereby also aim to suggest that the combination of digital text analysis, biographical databases, historical geographic information systems (GIS), and social network analysis (SNA) can also be applied to a wide range of other questions in the historical study of empires and other kinds of polities.

Chronologically, the project focuses on a crisis moment (the twelfth and thirteenth centuries) in Chinese political history. In 1126–27, the Jurchen army occupied the Song Dynasty (960–1279) capital of Kaifeng, one of the largest cities in the medieval world; took the reigning emperor captive; and set out to occupy the northern half of the Song Empire. The Song court retreated to the south and settled for a peace treaty that effectively divided rule over the Chinese territories between two competing states for the next 150 years: the Jurchen Jin Dynasty (1115–1234) in the north and the Song Dynasty in the south. Many literati experienced this

period as a territorial crisis. Because the geopolitical crisis of 1127 marked the last time that the Chinese heartland became an object of lasting contention among multiple states, it provides an ideal case study for the broader examination of the factors that were critical in the revival and maintenance of empire. The project originated from a long-term interest to test and elaborate the hypothesis that the political institutions and political culture of provincial elites that developed during this period played a crucial role in consolidating elite preferences for unified imperial rule.

Within the comparative literature on pre-twentieth-century empires, ideological factors in the form of public legitimacy, an imperial mission, or “cultural programmes” have long been considered fundamental in the formation and consolidation of pre-twentieth-century empires (Doyle 1986; Münkler 2007; Eisenstadt 1963). In this literature, ideological or cultural factors are reduced to broad transhistorical cultural orientations. In his seminal macrosociological study, *The Political Systems of Empires*, Shmuel N. Eisenstadt (1963) identifies the cultural visions of imperial elites as the primary reason for successive Chinese regimes’ ability to accommodate change within preestablished political frameworks. Herfried Münkler (2007) has argued that the formation of an imperial mission and its embedding in elite self-conceptions were decisive factors in the history of lasting premodern empires. Key questions that are left unanswered in this work are how and to what extent provincial elites had access to political information concerning the larger polity and how the structure of elite sociopolitical networks affected the history of polities and politics.

Chinese historians have previously shown that the viability of empire in the last centuries BCE and again later in the sixth century depended on the inscription of empire as an imaginary realm in a classical canon and historical, administrative, philosophical, literary, and encyclopedic texts (Lewis 1999; McMullen 1988). This work shifted attention from the detection of the formal characteristics of empire (the military conquest of wide territories and many peoples; the exploitation of the conquered through taxation, tribute, or conscription; imperial projects; imperial symbols and institutions; imperial elites and collaborating classes) to the historically and culturally specific conceptualization of empire as a crucial factor in its formation. Besides the ethical orientation and universal and legitimating rhetoric highlighted in the earlier mentioned comparative work, Chinese historians have also pointed to the administrative and geographic dimensions of imagined empire. Even though many of the classical, literary, and historical texts that expressed and shaped earlier political imaginaries became canonical and thus continued to exert influence over the imaginations of Chinese elites, by the beginning of

the second millennium, different kinds of information contributed to the conceptualization of empire. The imperial vision of the cultural elite was no longer solely informed by the coherent and durable knowledge of the classical canon and the large administrative, historical, literary, or medical compendia sponsored by successive dynasties' founding emperors; it was continually reinforced by current information about the polity in the form of court gazettes, compilations of state documents, military and geographic maps, and so on, all of which had for the first time become available to provincial elites across the empire from the late eleventh century onward. In this project, we are investigating how individuals shared and commented on current affairs and how political networks and social boundaries were constructed through the sharing of political information.

We found that such questions can be best answered by a combination of traditional philological and historical research methods with the use of digital text analysis, biographical databases, historical GIS, and SNA. In the first instance, we manually tagged content of interest (authors, oral informants, letter recipients, document titles, topics and events discussed, time references) in a select number of Song Dynasty notebooks. By interlinking our own data with existing databases such as China Biographical Database (CBDB) or China Historical GIS (CHGIS), we were able to examine the structure, geographical distribution, and social makeup of the social networks embedded in these records (Bol et al. 2004; Bol et al. 2001). Hilde De Weerdts found, for example, that the networks embedded in twelfth- and thirteenth-century notebooks were cross-regional in scope and tended to include a large number of mostly contemporaries who increasingly shared a lower literati background (without office or examination degree) (De Weerdts 2015b). After a dedicated programmer, Brent/Hou-Ieong Ho, joined the project, we translated this methodology into an open access semiautomated tagging platform named MARKUS (Figure 1), allowing any researcher to automatically detect and manually correct personal names, place-names, time references, official titles, and other kinds of user-supplied named entities and to export the results with links to geographic and biographical databases for further analysis (Ho and De Weerdts 2014).³

Tagging content is useful in a variety of ways. First, by tagging names, all references to a particular person are standardized. This implies that when searching for persons either individually (by clicking on it in any module) or collectively (in the filter passage module), all relevant passages will appear regardless of the particular way in which the person is referred to. Tagging is therefore usually preferable over natural keyword searching.

MARKUS

With MARKUS you can upload a file in classical Chinese (and perhaps in the future other languages) and tag **personal names**, **place names**, **temporal references**, and **bureaucratic offices** automatically. You can also upload your own list of key terms for automated tagging. You can then read a document while checking a range of reference works at the same time, or compare passages in which the same names or keywords appear. Or, you can extract the information you have tagged and use it for further analysis in our visualization platform and other tools.

STEP 2 :Select from one of the following options

2.a Automated markup

Tag personal names (full, forenames, and alternate names), bureaucratic titles, and/or temporal references based on **China Biographical Database (CBDB)**.

Tag place names based on **China Historical GIS (CHGIS)**

One can select one or more types of markup.
(Traditional Chinese only)

Ready

2.c Keyword markup (Beta)

You can upload a list of names or create your own list of keywords. You can then read or extract only the relevant information from your text.

Ready

2.b Manual markup

Normally you will select this option after you have been through step 2A. You can then use the manual markup to modify the automated markup by adding additional markup, selecting the correct option if multiple options are available for a particular name, or correcting mistakes. You can, however, directly go to manual markup if you prefer.

Ready

Passage filter (Alpha)

Select relevant passages from files that contain markup.

Ready

MARKUS was developed as part of the project "Communication and Empire: Chinese Empires in Comparative Perspective," funded by the European Research Council. All Rights Reserved.

Figure 1. Overview of markup options in MARKUS.

Second, when tagging names, MARKUS automatically supplies the unique ID attached to it in the default databases. Through this means, users can also link the data obtained from the analyzed texts to any data of interest in CBDB or CHGIS. These resources can be accessed in real time by clicking on tagged content, which will call up all relevant information about the term in the reference section on the right of the screen. When exporting tagged content in MARKUS to one of the supplied formats (CSV, Excel, or XML), a user will have access to the following information for further analysis: the tagged term, the location of the occurrence (paragraph), the entity ID, and the entity type. The ID will allow a user to import data from CBDB and CHGIS, including dates, family relations, offices held, places of origin and residence, other kinds of social relationships, works authored, geographic coordinates for places mentioned, and so on.

In the following, we provide two examples of how this kind of tagging can be used to analyze both smaller and larger textual corpora. These

examples relate to the focus on correspondence networks and political networking in the Communication and Empire project. The methodology can, however, be applied in research on all sorts of questions in social, economic, medical, religious, literary, or intellectual history. One researcher has, for example, used the platform to map the spread of knowledge about medicinal plants by tagging places, time references, and plants based on an externally obtained list of thousands of plants. Similarly, socioeconomic terms can be combined with places, persons, or time references to discover, organize, and analyze appropriate content from the extensive digital archives that already exist for most periods of Chinese history.

■ LETTER COLLECTIONS AND COURT POLITICS

In less than half a century, the Mongols established an empire across Eurasia. How did they administer the empire's vast territories? Historians have attributed the success of the Mongols in maintaining the empire to their effective mobilization of resources and flexible adoption of various indigenous traditions of governing in different conquered territories (Morgan 1986; Allsen 1987; Biran 2004). In what is now north China, the Mongol ruling elites, with the help of Han literati, adopted the so-called Han ruling methods to govern (Rossabi 1987; Franke 1994). On the basis of a digital analysis of a rare collection of letters, Chu Ming-kin has revisited the following questions: How did the Mongols recruit Han literati? How did the latter manage to assume influential positions in the Mongol administration and persuade the Mongol rulers to adopt Han measures to govern? To what extent can an analysis of Han literati networks help solve these questions?⁴

We reconstructed the epistolary network of Han literati who resided in the northern territories during the Jin-Yuan transition in the thirteenth century on the basis of two hundred letters collected in *Zhongzhou qizha* (Epistolary writings of the Central Plain) (Wu 1988). After manually transcribing the corpus of two hundred letters into digital format, we imported it into MARKUS and tagged the names of the authors and recipients of all letters, all place-names, and official titles.

Using both the data in CBDB and the letters themselves, we mapped the native place and trajectories of all letter writers and recipients. The geographical distribution of the native place of the authors and recipients shows that the epistolary network was not confined to a single region but spread across different regions in what is now north China. This network was also dynamic as the authors and recipients of the letters frequently traveled and seldom stayed in their native places. The movements of Han

literati were due in part to their pursuit of a career in the civil service. Because many of them lacked the opportunity to assume senior positions in the Mongol administration prior to 1260, they also went in search of clerical positions that scholar-officials traditionally despised.

A comparison of the official titles mentioned in the letters written before and after 1260 shows a 30 percent increase in senior positions in central and regional administration after 1260. This phenomenon owes much to the ascendance of Han literati after Qubilai's (1215–94, r. 1260–94) accession in 1260. Among the twenty-seven authors and recipients whose careers before and after 1260 can be traced, seventeen had only held junior official and subbureaucratic positions before 1260 and became senior officials in central and regional administration after 1260.

How did those mentioned in the letters establish ties between the Mongol rulers and Han literati and subsequently facilitate the latter's rise in officialdom? An analysis of those mentioned in the letters sheds light on the relationship between Han literati and the Mongols as well as between Han and Central Asians (*semu ren*). After excluding all authors and recipients, nearly three hundred names (including full name, partial name, and abbreviated name) appear in the main text of the two hundred letters, referring to approximately two hundred people. Almost all of these referred to Han people. Those mentioned most frequently were Zhou Hui 周惠 (?–circa 1261) (eight times), Lian Xixian 廉希憲 (1231–80) (four times), and Kuokuo 闊闊 (1223–62) (three times); the latter two were Central Asian and Mongol, respectively. A closer examination of the lives of Lian Xixian and Kuokuo reveals that they were familiar with Han cultural traditions despite their non-Han ethnic background (Su 1996; Song 1976). Serving as a bridge between the Han literati and the Mongol ruling elites, they facilitated the initial recruitment and subsequent promotion of Han literati under Qubilai.

We can further examine how the Mongols recruited Han literati by analyzing the epistolary network in *Zhongzhou qizha*. In Figure 2, we show the relationships between authors and receivers. We identify the core agents as those who sent and/or received the highest numbers of letters. Despite the lack of direct correspondence between them, the six core agents who sent and/or received fifteen or more letters were connected to each other through three intermediary brokers. Most Han literati in the epistolary network joined Qubilai because of their direct or indirect ties to these brokers. When these Han literati assumed key positions in the Mongol government after Qubilai's accession, they were transformed into an indigenous network of political elites. These political elites managed to persuade the Mongol rulers to adopt Han measures to govern

Figure 2. Epistolary network of Han literati during the Jin-Yuan transition. Diamond nodes represent authors, square nodes are receivers, and circle nodes are those who acted as both authors and receivers. The size of the nodes and the thickness of the edges represent the number of letters sent and/or received. Brokers are circled by dotted lines.

and, in turn, contributed to Mongol governance and administration in the northern territories.

■ REEXAMINING COLLECTIVE ACTION AND FACTIONALISM

As shown in the preceding cases of the communication networks of Song provincial scholars or of Han advisors at the Yuan (1271–1368) court, tagging and linking data can help us gain new insight into the sociopolitical networks that sustained polities and into the sources we use to reconstruct the politics of empires at a microlevel. We can also use these same methods to explore the structure and dynamics of empires at a macroscale. Our recent work on the history of parties or factionalism provides a good example of how digital methods can be employed to formulate and tackle new questions across large corpora of texts.⁵

A seventeenth-century historian, Wang Fuzhi 王夫之 (1619–92), pointed out that factionalism was not an exceptional thing in Chinese history; he noted that from the Song Dynasty onward, it became part of being a literatus (Wang 1985, 10.201). Networking was intertwined with

the career of literati at various stages. It was essential when preparing and sitting examinations, when seeking appointment and reappointment, or when obtaining patronage for other types of employment. Networking involved literati in political coalitions. If it is the case that networking of this kind was necessary for careers and therefore pervasive, it follows that historians need to understand how factional politics worked not only at the top but also in the provinces. Our inquiry builds on earlier work that stresses the continuity of factional politics in imperial politics past the 1104 debacle that in the eyes of many brought down the Northern Song government but also asks how factional alliances were transformed in the context of the broader social and cultural changes of the twelfth century.

How do we get a grip on the question of how factional politics operated in the vast collections of private writings? One could opt for a case study approach focusing on known individuals, but we believe that the larger question of how far factional politics filtered through to the provinces can be better answered by devising methods to explore the entirety of the existing record. With a group of postdoctoral and doctoral students, we have begun to analyze how the names of the men who appeared on factional lists can be used to explore such questions: When and how did their names begin to cluster in the record? Did the lists reflect real political coalitions in the sense that they were reflected in textual exchanges between those listed or in the perception of contemporaries, were these random listings by paranoid leaders, or were they the invention of later historians (Hartman 2000)? Around what issues did coalitions form?

In a preliminary experiment, we ran the names (including alternate names) of all those mentioned on the Yuanyou list (1100s), those persecuted by Councilor Qin Gui 秦檜 (1090–1155) (1140s), and those on the Qingyuan roster (1190s) through three collections of texts.⁶ Each collection consisted of all prose texts gathered in the collected writings of authors who were active during the time the lists were compiled. We included the collected writings of all Song authors whose CBDB index year (normally sixty years of year of death) fell within a sixty-year range (–30 to +30) of the date established as the publication date of the list of names: 1104, 1142, and 1196. The 1104 corpus consisted of 56,969 documents in 23,701,759 characters by 2,231 authors; the 1142 corpus of 47,040 documents in 18,780,575 characters by 1,139 authors; and the 1196 corpus of 52,593 documents in 23,446,605 characters by 2,598 authors. Given the limitations of automated detection at this point, the data need to be curated carefully before we can formally present our findings, work that will not be completed until December 2015. The preliminary test runs of the clustering of names suggest, however, that the structure of the

presumed twelfth-century factions varied considerably, with the Yuanyou list forming loosely connected subgroups and the Qingyuan list a tightly connected core, whereas no clear connections appear in the record for those persecuted by Qin Gui—demonstrating that historical network analysis can also be used to demonstrate the absence of relationships and network effects. We are currently also advancing current practice in historical network analysis and taking advantage of the large-scale prosopographical and textual databases for Chinese history by developing sampling methods, comparing the networks resulting from cooccurrence and other types of relationship data to those of random samples of contemporaries.

■ IN CONCLUSION

The formation and maintenance of empires have depended on the collaboration of provincial elites of different kinds. We designed the Communication and Empire project to inquire into the channels through which those in the core and those in the periphery communicated and to map the development of communication networks among provincial elites. Research of this kind is conceivable now due to the existence of large digital corpora in classical Chinese and prosopographical and geographic databases, which facilitate both markup and data analysis (this is far less the case for other places and languages). The project demonstrates that historians are not reliant on these databases to conduct research; they can explore and analyze their preferred text collections in new ways by linking them to the rich data gathered from many reference sources in biographical and geospatial databases, modifying the latter if need be. In designing MARKUS, we learned that historians in all fields stand to gain much by critically engaging and participating in the design of digital methods and tools for historical research.

Hilde De Weerdt is professor of Chinese history at Leiden University. She is the author of *Competition over Content: Negotiating Standards for the Civil Service Examinations in Imperial China (1127–1276)* (2007) and *Information, Territory, and Networks: The Crisis and Maintenance of Empire in Song China* (2015).

Chu Ming-kin is a research associate in the project “Communication and Empire: Chinese Empires in Comparative Perspective” at Leiden University.

Ho Hou-leong is a research associate in the ERC project “Communication and Empire: Chinese Empires in Comparative Perspective” at Leiden University. He conducted his doctoral research at the Department of Computer Science of Information Science, National Taiwan University, with a focus on digital humanities and digital libraries.

■ NOTES

1. This project is funded by the European Research Council (project 283525).

2. We will not discuss the comparative aspect of the project here. For more information about individual and collective contributions and plans in this respect, see the workshop, seminar, and bibliography section of the project site (De Weerd et al. 2012).

3. For short video introductions on functionality and limitations, see De Weerd, Ho, and Feng (2014). For a longer introduction in Chinese, see De Weerd (2015a). The further improvement of MARKUS has been funded by the Arts and Humanities Research Council and the National Endowment for the Humanities. See Bol, De Weerd, and Ho (2014–16). For a critical reflection on the reception of digital history, see De Weerd (2014a, 2014b).

4. The following discussion is based on Chu (2014).

5. The following text is largely based on De Weerd (2014d).

6. The lists are based on the following titles: Li (1995, 2.5a–7a), Yong Rong (1983, 61.3b–4a), Cangzhou qiaosou (1984, 1a–7b). I acknowledge the help of Chu Mingkin in compiling the lists. For an overview of the preliminary results, see De Weerd (2014c).

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