Elites' Social Networks and Politics in the Han Empire (202 B.C.E.–220 C.E.)

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ABSTRACT

Social networks were heavily intertwined with elites' social status and political power throughout the Han dynasty. This article introduces the Han Elites' Social Network Dataset, an open-access dataset that the author collected primarily through manual labor. It contains data on Han elites' marriage, kinship, patron-client, teacher-disciple, friendship, and recommender-nominee relationships. The article then visualizes and analyzes these social networks in relation to Han politics. It argues that social networks provided individuals with channels for upward social mobility and access to political careers, and that the reliance on different types of networks contributed to the formation of political cliques as well as the growing conflict between the inner court and the outer court.

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(1) INTRODUCTION

During China's transition from the Zhou dynasty's blood-based regime to the early imperial period, certain reformers and intellectuals advocated for meritocracy and challenged the heredity of privileges. A renowned example is Shang Yang's reform in the state of Qin, which regulated the distribution of noble titles based on military merit (Sima, 1982). The intellectual traditions attributed to Confucius, Mencius, and Mozi all advise rulers to appoint the virtuous and capable as officials.[1] During the Han dynasty (202 B.C.E.–220 C.E.), such texts were cited by the bureaucrats and literati who desired social mobility and a meritocratic political system. These writings may lead us to assume that the Qin and Han empires promoted meritocracy overall. However, this view runs the risk of confusing the rhetoric of particular groups with the social and political realities of the whole empire.

In fact, the rise of literati in Han government and politics can be largely attributed to networking.[2] In the early Western Han, when the military founding elites and the imperial affines dominated the court, the classicists had not become a significant political force.[3] After the mid-Western Han, with the reshuffling of the central government resulting from a witchcraft scandal in Emperor Wu's late years, the classicists began to exert more political influence through traveling, studying classics, and serving in the central government.[4] The expansion of their social networks partly explains their rise to a major political force and their growing tension with the inner court in the Eastern Han. Networking played increasingly significant roles at all levels of society and government. In local governments, bureaucrats and clerks also developed their social networks, as evinced by Eastern Han funerary inscriptions dedicated to the deceased by their former subordinates and friends (Brown, 2007). From the Western Han (202 B.C.E.–9 C.E.) to the Eastern Han (25–220 C.E.), increasing numbers of classicists and bureaucrats were members of the great local families who relied on networking to accumulate resources. With the Eastern Han court giving up its efforts of restricting land consolidation, landlords monopolized large amounts of land, had thousands of tenants, wielded great influence in local society, and often educated their children in the classics.

Government positions, along with the ranks of honor, largely determined a man's social standing in the Han dynasty. In the Western Han and Eastern Han, one could enter government service through various channels, but the key step in acquiring an official post was to come to the emperor's or the regent's attention. All these channels were essentially ways of establishing contact with the throne. Men from privileged family backgrounds, including those from the imperial lineage, consort families, and high officials' families, could easily approach the emperor and obtain official posts. The *Han shu* and *Hou han shu* frequently mention officials who started their official careers as Gentlemen-attendants (*lang* 郎) because of their fathers' service in the government. Another main channel was to start one's career as a clerk in the local government and gradually ascend the bureaucratic ladder through performance review and promotion. A third channel, which became increasingly significant after Emperor Wu's reign, was recommendation (*cha ju* 察舉), which required exceptional ability, literary talent, virtue, or reputation on the part of the nominee. A fourth channel was to serve in the army and be promoted through military achievements.

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1   "Zi lu," Liu, 1990, p. 516. "Gongsun chou I," Jiao, 1987, p. 226. "Li yun," Sun, 1989, p. 582. "Shang xian I," "Shang xian II," "Shang xian III" (Exaltation of the Virtuous), Sun, 2001, pp. 43–72.

2   The term "literati" refers to the Chinese scholar-officials (*shi da fu* 士大夫) who both studied the Chinese classics and served in the government at some point in their lives or aspired to serve in the government.

3   In this article, I use the term "classicists" to refer to people who specialized in classical texts which were later called the five or the thirteen "Confucian classics". They typically participated in scholarly networks, cited classical texts in their writings, and upheld classical moral and political ideals. I have avoided referring to these classics as "Confucian" because their content did not all derive from Confucius or his disciples and because their beliefs were quite different from the intellectual schools of Confucianism after the Song. Yet, it is true that most of the classicists or the *ru* scholars claimed to be Confucius' intellectual descendants. This issue is partly a translation problem; "classicists", "*ru* scholars", and "Confucians" all correspond to *ru* 儒 in Chinese, but the English terms are loaded with different implications. I still use the word "Confucianization" to refer to the growing trend of classical studies and ethical norms based on classical rituals. For previous discussion of *ru*, classicists, and Confucians, see Cai, 2015; Cheng, 2001; Nylan, 1999, 2001; Zufferey, 2003.

4   For the witchcraft scandal and the reshuffling of power during Emperor Wu and Emperor Xuan's reigns, see Cai, 2014. For the classicists' travel and social networks, see Zhao, 2019.

Apart from these major channels, however, there were other less common ways of attracting the emperor's attention. Anyone could directly submit a memorial to the emperor at the gate tower of the imperial palace. If the emperor read a memorial and liked it, the writer would be summoned by the emperor to answer more questions and possibly obtain an official appointment. Nevertheless, it was not guaranteed that the emperor would read all these memorials. In some cases, the writers waited for months in the capital for the emperor's response and suffered from economic difficulties. A memorial would come to the emperor's attention much more easily if the writer managed to forge social connections with officials in the capital.[5]

Social connections were helpful not only in this scenario but also on regular channels. For example, a clerk could bypass the bureaucratic hierarchy and directly reach a much higher position through the recognition of a superior. In the case of recommendation, a nominee would more likely be recommended if he had prior social connections with the recommender. While the recommendation system was conceived as a way of recruiting officials based on the nominees' credentials, in practice it often hinged on social networks. For instance, when the renowned bureaucrat Li Gu served as the Grand Commandant (*tai wei* 太尉), former officials who had been dismissed by Li accused him, saying that all the officials whom he had recommended and all the subordinates whom he had summoned were his students and acquaintances (Fan, 1965). Although this accusation was likely exaggerated, it was credible to some degree given that officials in the Han usually recommended candidates in their existing networks.

This article introduces the Han Elites' Social Network Dataset and examines the increasing importance of networking among Han elites as well as its implications for Han politics. Using biographical data from the dynastic histories and the Gephi software for social network analysis, I argue that the Han elites relied heavily on networks and that their networking brought significant political consequences, including the formation of cliques and the growing conflicts between the inner court (those who acquired political power through their personal closeness to the ruler) and the outer court (technical bureaucrats and literati).[6] Several opinion leaders of the outer court, who advocated most avidly for meritocracy and opposed most strongly to the inner court's nepotism, were in fact the most well-connected individuals in elite networks. Thus, the key difference between the inner court and the outer court was not one between nepotism and meritocracy, but rather their reliance on different types of networks. I will also integrate different types of networks to reveal the shifting composition of the inner court and the changing relations among different political groups throughout the Han.

(2) METHOD: SOCIAL NETWORK ANALYSIS

Network theory is widely used in the natural sciences as a web-based view of nature, society, and technology, but it also has a long history in the social sciences.[7] As Scott (2000) points out, contemporary social network analysis was forged in the 1960s and 70s by Harvard sociologists from several traditions, including sociometric analysis and graph theory, Harvard researchers in the 1930s who explored patterns of interpersonal relations and the formation of "cliques", and the Manchester anthropologists who investigated the structure of community relations in tribal and village societies. With the rapid growth of Digital Humanities in recent decades, historians and archaeologists have employed the methodology of digital network analysis to study the past. While network analysis is not limited to the study of interpersonal relationships, social network analysis (SNA) has been an important approach in historical network research and has generated exciting findings.

With its focus on structural characteristics, SNA rests on a series of technical terms and statistical methods. Two basic concepts in a social network analysis are "nodes" and "edges",

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5   The case of Zhu Maichen 朱買臣 is an example. See Ban, 1962.

6   I differentiate the technical bureaucrats, who were trained in legal and administrative matters rather than classical texts, from the literati. The technical bureaucrats identified themselves as *li* 吏 (clerks) and often approached politics in a more pragmatic way than the literati, many of whom were idealists.

7   For a history of network theory, see Barabási, 2002. For an introduction to network analysis, see Emirbayer, 1997; Newman, 2010; Scott, 2000.

or points and lines. In this study, each node represents an individual and each edge stands for a social connection. Several measures are used to evaluate the importance of nodes in a social network, such as eigenvector centrality, closeness centrality, and betweenness centrality. Eigenvector centrality measures the influence of a node in a network by assigning relative scores to all nodes in the network based on the principle that connections to high-scoring nodes contribute more to the score of the node in question than connections to low-scoring nodes. Closeness centrality involves calculating the aggregate distances from each point to all others. Betweenness centrality measures the extent to which a particular point is able to serve as an intermediate point of contact between any two other points (Newman, 2010; Scott, 2012). There are also measures that characterize the structure of a network including inclusiveness, cohesion, and centralization (Scott, 2012).[8] I used the software application Gephi to visualize and run statistical analyses of social networks (Bastian, Heymann, & Jacomy, 2009).

In the past few years, the method of social network analysis has been successfully applied to the study of Chinese history. It proves useful for illuminating the structures and changes of historical communities, especially the social and spatial connections among elites. To name just a few, Tackett built a database of Tang elites and analyzed their networks, demonstrating that "the geographic concentration of the dominant political elite in the two imperial capitals both reinforced and was reinforced by a tightly knit and highly circumscribed marriage network" (Tackett, 2014, pp. 25–26).[9] De Weerdt used both SNA and GIS mapping to show that Song literati communication networks expanded in the twelfth century, which helped consolidate literati identities and resulted in a lasting literati preference for a unified rule (De Weerdt, 2016a).[10] Song Chen has also applied SNA to demonstrate that, between the 1040s and the 1210s, local elites in South China formed their regional networks that were independent of the imperial center but could still achieve political prominence due to growing resources in the South (Chen, 2016). Henriot and his team's Digital Humanities project "Elites, Networks, and Power in Modern China" has led to several research projects related to the urban, social, political, and intellectual histories of modern China.[11] While I cannot name all the scholars and research projects here, SNA has undoubtedly become a burgeoning and promising approach in China Studies.[12]

An advantage of SNA in historical research is that it disrupts traditional categories defined by historical actors' certain attributes such as class, education, hometown, or membership in a political clique. Therefore, it prevents essentialism and could help us notice unexpected social relationships or indirect social connections. As Emirbayer and Goodwin put it, SNA prioritizes relations over categories: "The point of departure for network analysis is what we shall call the *anticategorical imperative*" (Emirbayer & Goodwin, 1994, p. 1414). While I frequently refer to the identities of historical actors such as "palace women", "eunuchs", and "imperial affines", these terms by no means suggest the homogeneity of any group, as their complex social networks indicate.

On the other hand, Emirbayer and Goodwin also offer a critique of SNA, stressing its inadequate conceptualizations of human agency and suggesting a synthesis of SNA and cultural analysis as the way going forward (Emirbayer & Goodwin, 1994). Considering these potential problems, this article pays attention to how network structures and historical actors shaped each other. It also combines close reading of historical sources with SNA to analyze how the cultural, intellectual, social, and political contexts of the Han dynasty shaped the historical networks.

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8   For a list of technical terms in network analysis, see the glossary at the end of this article (Collar et al., 2015).

9   Also see Tackett (2020). For Tackett's Prosopographic and Social Network Database of the Tang and Five Dynasties, see the links on https://history.berkeley.edu/nicolas-tackett (last accessed 05 July 2023).

10   For more explanation of the network methodologies used in this book, see De Weerdt, 2016b.

11   Christian Henriot et.al. The ENP Project, https://www.enpchina.eu/our-team/ (last accessed 05 July 2023).

12   Many scholars of China Studies who have adopted the SNA method presented their research at the "Historical Network Research in Chinese Studies" conference, held at Harvard's Fairbank Center of Chinese Studies in July 2021. See the conference website for more details: https://fccsdigitalchina.github.io/hnrcs2021/#/ (last accessed 05 July 2023). For an overall discussion of how SNA has been applied to the study of Chinese history, see Chen and Rudolph (2022). This article is the introduction to a special issue, which contains other articles on Chinese historical networks: *Journal of Historical Network Research* Vol. 5 No. 1 (2021): Beyond Guanxi: Chinese Historical Networks, https://jhnr.uni.lu/index.php/jhnr/issue/view/9.

I have chosen to focus on several individuals when analyzing Han elites' social networks due to their statistical prominence in the networks and their representativeness of particular phenomena.

The visualizations of historical networks can be both illuminating and deceptive. Although visualization provides a straightforward way of conceptualizing historical actors' social relationships, it does not promise to capture actual social interactions or represent the whole picture. As Chen and Rudolph (2022) have pointed out, a network is a mental construct and is a totality of aggregated relationships, not social relationships *per se*. Both my dataset and my visualizations are highly dependent on how I define those social relationships and how the historical sources represent those relationships. Therefore, the network graphs in this article must be read with an awareness of the Han sources, the SNA methodology, and the historical context.

(3) DATASET AND REUSE POTENTIAL

All the data used in this article have been published on Harvard Dataverse as the "Han Elites' Social Network Dataset" (https://doi.org/10.7910/DVN/V9CIJ5), with a "Nodes" and an "Edges" CSV file for each type of network (Li, 2023). The "Nodes" sheets contain the names of historical figures and some biographical information about them, such as gender, hometown, and time period. The "Edges" sheets record relationships between two individuals ("source" and "target") and the "type" of their relationship – a "directed" relationship means that it only goes in one direction, whereas an "undirected" relationship is mutual. Although the edges can be weighted, I did not weigh them as I assumed that the different kinds of social relationships had a roughly equal influence on an individual. For data-gathering purposes, I relied on the digitized versions of the original sources on the website of the Chinese Text Project (ctext.org) but checked them with the punctuated and collated versions of dynastic histories published by Zhonghua shuju.[13] All person's names, families' surnames, names of Chinese classics and scholarly traditions, and quotes from the original sources are in Chinese. Other types of information are in English. The overall statistics of the dataset (V4.0) are summarized in Table 1.

NETWORK TYPE	NUMBER OF NODES	NUMBER OF EDGES
Marriage Network	348	203
Elite Families Marriage Network	107	198
Friendship Network	227	172
Superior-Subordinate Network	203	155
Teacher-Disciple Network	409	329
Recommendation Network	231	198
Integrated Networks	1,187	1,441

Table 1 Statistical Summary of the Han Elites' Social Network Dataset (V4.0).

This dataset includes data on several types of Han elites' social networks. The data on marriages in the files named "Marriage Network-Nodes" and "Marriage Network-Edges" are drawn from the relevant tables in Liu Zenggui's book *Han dai hun yin zhi du* 漢代婚姻制度 ("The Marriage System of the Han Dynasty"), which are quite comprehensive vis-à-vis extant records (Liu, 1980). Since Han dynastic histories center on the imperial family and capital elites, the marriage data focus on marriages between the imperial family and consort families or marriages among the great families. Of course, the data are heavily biased against the local elites and thus cannot represent elite marriage networks across the Han empire.

Based on Liu's tables, I produced data on the marriage networks among Han elite families, naming them "Elite Family Marriage Networks-Nodes" and "Elite Family Marriage Networks-Edges". While the "Marriage Network" sheets are about relationships between two individuals,

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13   Donald Sturgeon (ed.), Chinese Text Project (Chinese: 中國哲學書電子化計劃), https://ctext.org (last accessed 05 July 2023).

these two sheets are about marriage relationships between two patrilineal families. Given that certain elite families had the same surnames but were from different places of origin or different time periods, I have differentiated them by adding English letters (A, B, etc.) after common surnames.

I gathered the data on teacher-disciple networks from the "Biographies of Scholars" (*ru lin lie zhuan* 儒林列傳/*ru lin zhuan* 儒林傳) of *Shi ji* 史記, *Han shu* 漢書, *Hou han shu* 後漢書, the "Preface" (*xu lu* 敘錄) of *Jing dian shi wen* 經典釋文, and the "Treatise of Literature" (*jing ji zhi* 經籍志) in *Sui shu* 隋書 (Ban, 1962; Fan, 1965; Sima, 1982; Lu & Wu, 1984; Wei et al., 1973). These include almost all the known teacher-disciple transmissions of Chinese classics in the Western Han and Eastern Han, although there may be a few other teacher-disciple relationships scattered in the biographies of the Han dynastic histories or personal writings. At times when two sources contradict each other on people's names or academic genealogies, I have made my own judgments. To help users verify the teacher-disciple relationships, I have also published my raw data as "Teacher-Disciple Transmission of Classics in the Han" (in Chinese) in the dataset, which contains annotations explaining the different records in different sources. There are replicate nodes in the "Teacher-Disciple Network-Nodes" sheet because some scholars studied more than one classic. Each scholar is counted as many times as the number of classics he studied.

I collected data on the "Friendship Network", "Superior-Subordinate Network", and "Recommendation Network" primarily by reading the biographies in *Shi ji*, *Han shu*, and *Hou Han shu* but also searched for keywords as a supplementary method. I have attempted to address certain biases in the transmitted texts when collecting data. For instance, due to the historians' empathy with the bureaucrats and scholars, *Han shu* and *Hou Han shu* often describe social relations between classical scholars as righteous friendship but those between imperial affines or eunuchs as corrupt collusion (*xiang jie* 相結/*jiao tong* 交通). However, I have collected their data as value-neutral social connections. When my sources mention that a person "was friends with" (*wei you* 為友/*yu…jiao* 與…交/*jie* 結), "was on good terms with" (*shan* 善/*hou* 厚/*qin* 親), "wandered with" (*yu…you* 與…游), or "colluded with" (*jiao tong* 交通/*dang* 黨) another person at certain stages of their lives, I count them as friends.[14]

The superior-subordinate relationships are based on my own understanding of the sources. A relationship is interpreted as a superior-subordinate one usually when the sources mention that someone was summoned (*pi* 辟, *zhao* 召, *qi* 起) by a high official as a subordinate, "appointed as" (*bai wei* 拜為 or *yi wei* 以為) a subordinate, "worked for" (*ji shi* 給事) a high official, or when the title of a person's position was clearly a subordinate role, such as *yuan* 掾, *zhang shi* 長史, and *gong cao* 功曹. The original text is quoted in the "Superior-Subordinate Network-Edges" sheet for the user's verification.

Likewise, the "Recommendation Network" data are based on my reading of the sources. The usual keywords for recommendation are "recommend" (*jin* 進, *tui* 推, *jian* 薦, or *ju* 舉) and "memorialize to the emperor to appoint" (*zou chu* 奏除). There are also times when these keywords do not appear, but the context indicates a recommendation, such as when an official submitted a memorial or spoke to the emperor positively about another person, who then received a post. The original sources are quoted in the "Han Official Recommendation Network-Edges" file.

Finally, the "Integrated Networks-Nodes" sheet combines all the names of individuals in the previous "Nodes" sheets, with duplicate names being removed. The "Integrated Networks-Edges" sheet combines all the social relationships in the previous "Edges" sheets, but I added 386 pairs of kinship relations into this sheet. These kinship relations are based on the "Marriage Network Data" as well as my knowledge of the social relationships among individuals, and they are focused on kinship relations in the imperial family and great families. The kinship data is certainly far from comprehensive because they are highly dependent on what types of kinship

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14   There are, of course, subtle differences among these terms in classical Chinese. The words related to "collusion" are often used to describe the relationships among eunuchs or potential rebels with an emphasis on their common political interests. Words such as *you*, *jiao*, *shan*, *hou*, and *qin* emphasize personal relationships, yet these relationships are usually carried into the political realm. The word choices are largely due to the biases of contemporary observers. It is impossible and unnecessary to distinguish these relationships from one another based on the historical actors' "real" relationships.

relations are being collected. Due to my interest in the imperial family and consort families, I have paid special attention to mother-son, mother-daughter, father-son, father-daughter, and siblings or other close kin (cousins and aunt-niece, for example) from the same great families.

With 1,187 individuals and 1,441 pairs of social relationships in the current version (V4.0), this dataset covers most of the available Han individuals and relationships involved in the designated types of social networks, except for the ones that I have missed when reading too fast or when my keywords do not exhaust all the possibilities. Of course, due to my current research interests, this dataset does not cover all the types of social relationships in the Han dynasty, for instance, colleagues, fellow townsmen, or enemies. Since I only collected the names of individuals involved in the designated types of networks, the "Nodes" sheets only include part of the individuals recorded in my sources. While this dataset may not cover 100% of the social relationships I have chosen to study, I believe that its accuracy far exceeds that of the results produced through the current technology of automated extraction. This manual labor was possible because of the relatively small amount of extant Han dynasty sources compared with that of later periods in Chinese history.

Of course, my dataset carries with it certain biases in the original sources. Biographies in *Han shu* and *Hou Han shu* are centered on political figures who served as central government officials and who had connections at the court. Thus, local elites are underrepresented, not to mention commoners. Another limitation of this dataset is the lack of temporal data. The Han sources do not provide accurate birth and death years for most individuals in this dataset. But it is possible to speculate the rough dates because the sources usually indicate under which emperor's rule each person lived or the living years of a person's social contacts. Future users may find it useful to calculate the rough dates following these two methods. For scholars who are familiar with Han history, collecting the dates may not be a necessity. Social network analysis could function even without a timeline, for individuals who lived at the same time and had social interactions with one another will be naturally connected by lines in network visualizations. Therefore, individuals who are in the same cluster were usually active during the same period. Nor does the current version of the dataset contain enough data on individuals' places of origin or other geographic information, which requires future data collection and research.

This dataset has a high potential for reuse. It can be easily used to study certain Han individuals' social relationships, especially those of individuals who were close to the center of imperial power. Users can start by searching for individuals' names in the "Integrated Network-Edges" and looking for more biographical information in the "Nodes" sheets for different types of networks. This serves as a first step of case studies of certain individuals or certain groups' social relationships, which might have impacted their careers, their chances of social mobility, as well as their intellectual and political views. This dataset can also be used for quantitative analysis of Han society and politics. For example, users could conduct a simple statistical analysis to find out how many consort families each emperor was married to and whether it had to do with the political support that he received, or how many masters who transmitted each classic were recorded in extant sources and whether it reflects the popularity of different classics in different periods. Users can also adopt various statistical methods for social network analysis, such as measuring the cohesiveness of certain social groups and their distance from other social groups.

(4) HAN ELITES' SOCIAL NETWORKS: VISUALIZATION AND ANALYSIS

This section visualizes and analyzes five types of social networks among Han elites, which all played significant roles in advancing a person's political career and social status. These are marriage, patron-client (including superior-subordinate), teacher-disciple, friendship, and recommender-nominee. Full information can be found in the Appendix. Below is a brief summary of the major findings.

(4.1) MARRIAGE NETWORK

Many Western Han empresses and imperial concubines came from humble backgrounds, whereas the Eastern Han imperial lineage repeatedly intermarried with a few consort families,

most of whom were also the dynasty's founding elites. A visualization of the Han upper elites' marriage network confirms this phenomenon and pinpoints the families who intermarried the most with the imperial lineage, the Liu 劉 lineage (Figure 1). Moreover, a comparison between the Western Han and the Eastern Han marriage networks shows that the Western Han consort families were highly dependent on the imperial lineage, whereas the Eastern Han consort families also intermarried among themselves and formed their own circles (Figures 2 and 3).
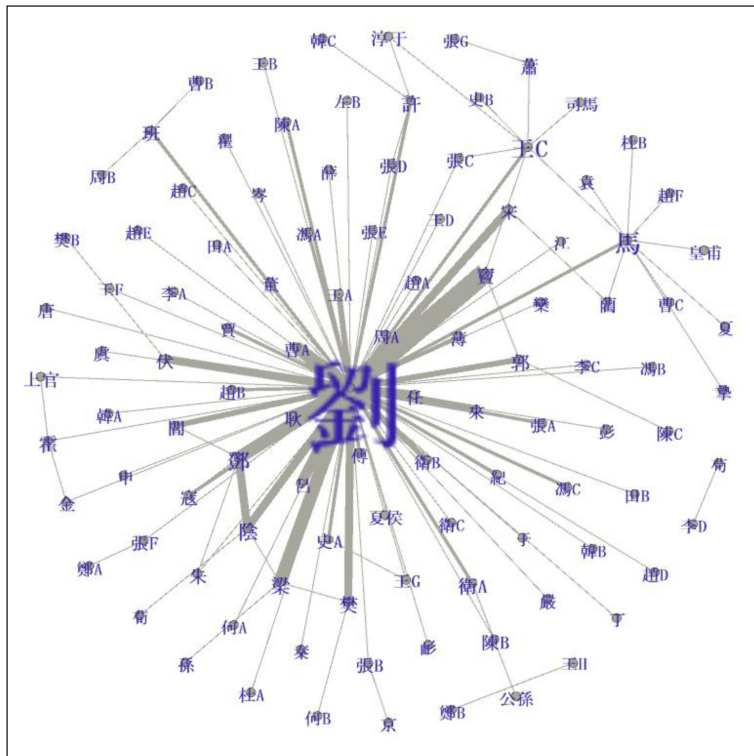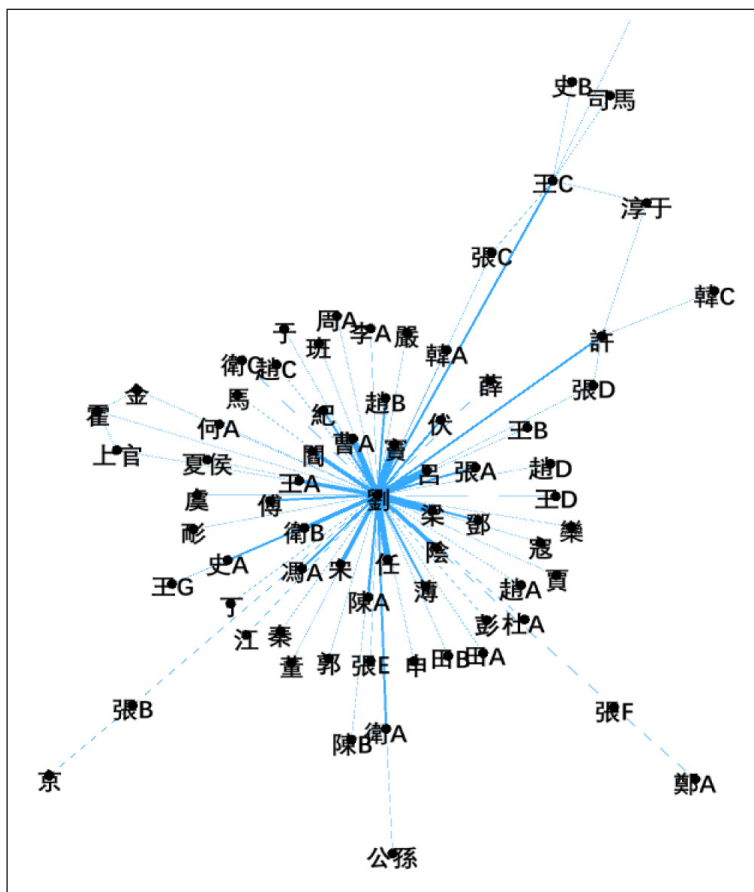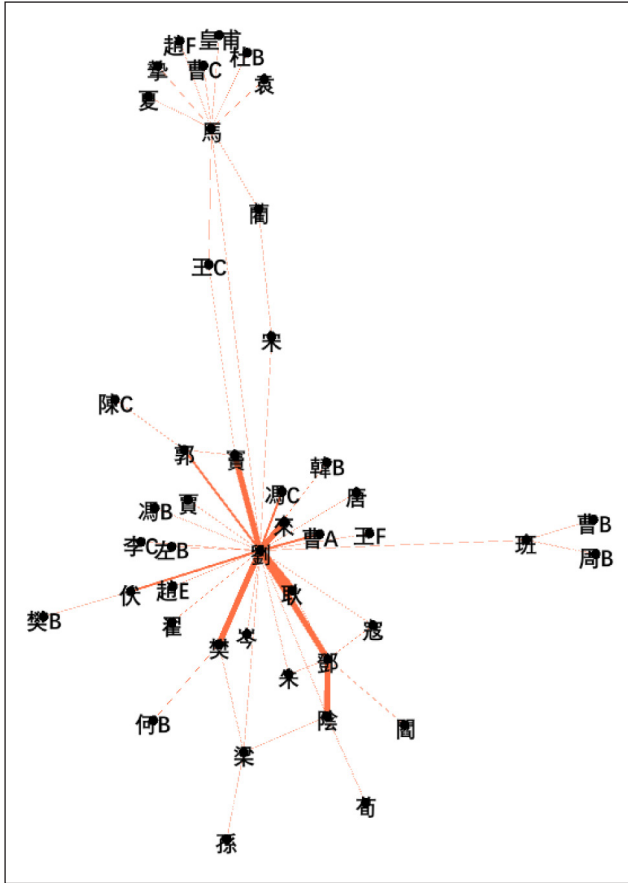
(4.2) PATRON-CLIENT NETWORK

During the Han, it was common for regional kings, powerful families, and wandering bravos (*you xia* 遊俠) to host clients (*ke* 客). This type of patronage network is difficult to visualize because neither the number of clients nor the clients' names are recorded in extant sources. Another type of patronage was the superior-subordinate relationship between a high official and his assistants. A visualization of this patron-client network shows that the most influential patrons in the Han were the powerful imperial affines, who often served as regents and Grand-Generals (Figure 4).
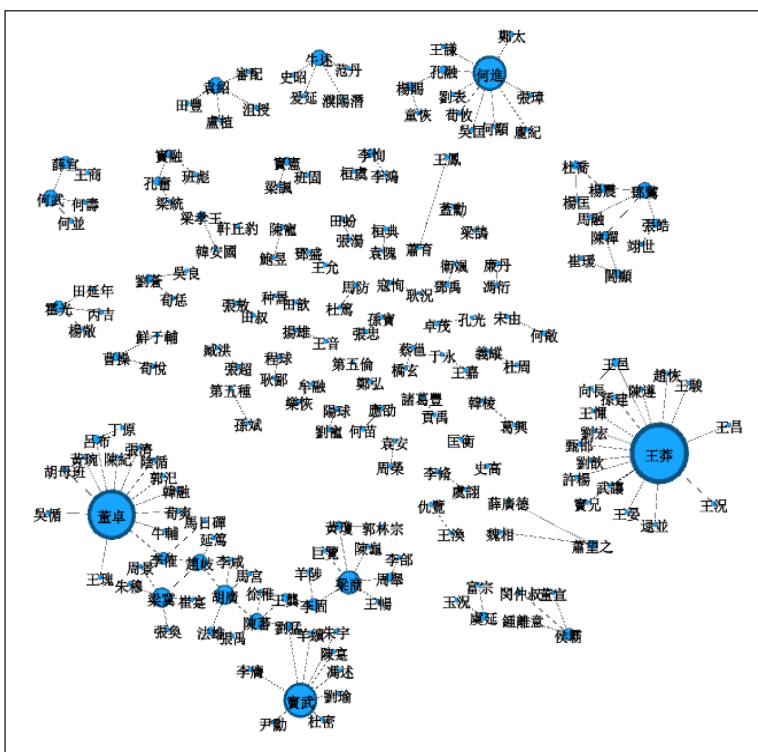
(4.3) TEACHER-DISCIPLE NETWORK

Classical scholars formed connections based on teacher-disciple relationships and the classics they specialized in (Figure 5). Scholars with high betweenness centrality scores were heavily involved in the transmission of more than one classic or tradition. Because the Western Han scholarly lineages are more completely recorded in the sources and Western Han scholars mostly specialized in only one classic, the schools of the Western Han are much better represented in the graph than those of the Eastern Han (Figure 6). Thus, the visualization does not suggest that these classics were less studied in the Eastern Han, for the actual case was the opposite.
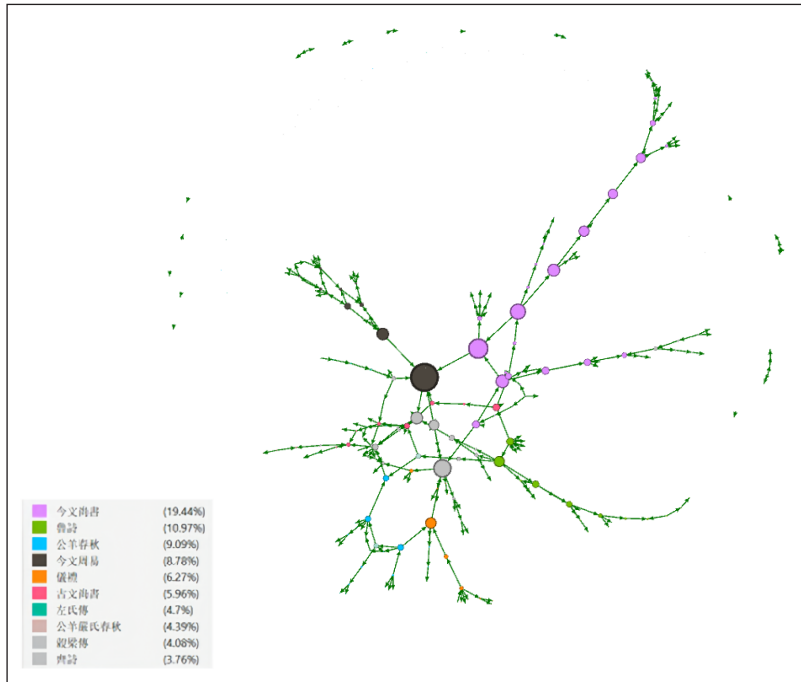
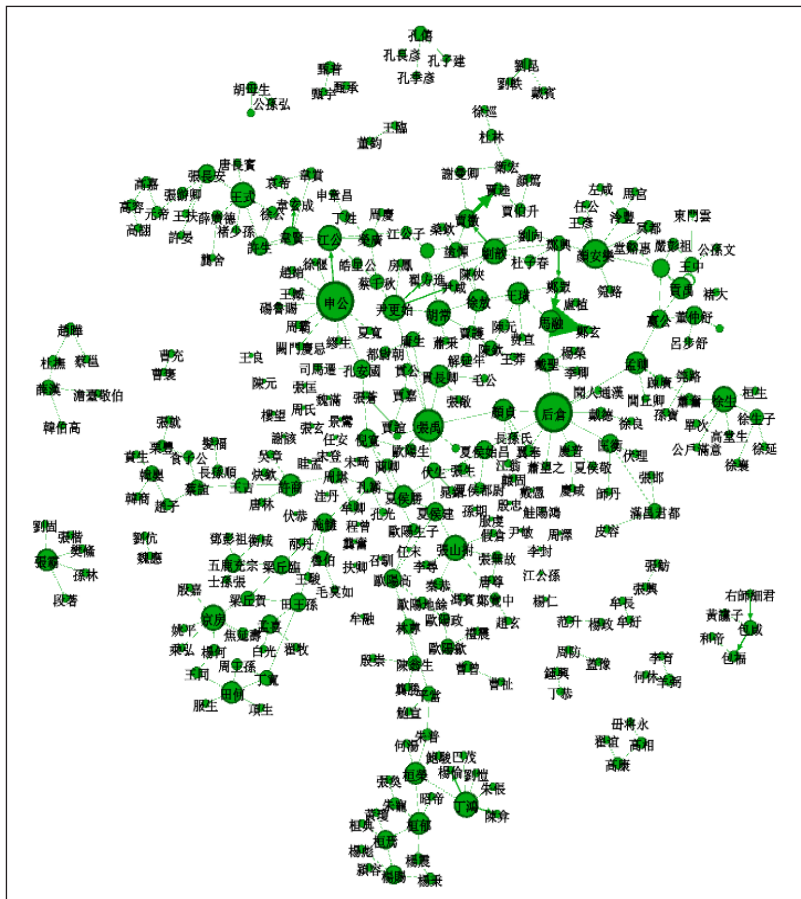**Figure 5** Han Teacher-Disciple Network Colored by Classics.

Figure 6 Han Teacher-Disciple Network.

(4.4) FRIENDSHIP NETWORK

The most influential individuals in the friendship network had a common educational background in classical learning and participated in scholarly communities (Figure 7). A case study of a small friendship network of the late Western Han demonstrates the "triadic closure" phenomenon— a friend's friend is a friend (Figure 8). Friendship, scholarly networks, official careers, and political cliques all contributed to one another.
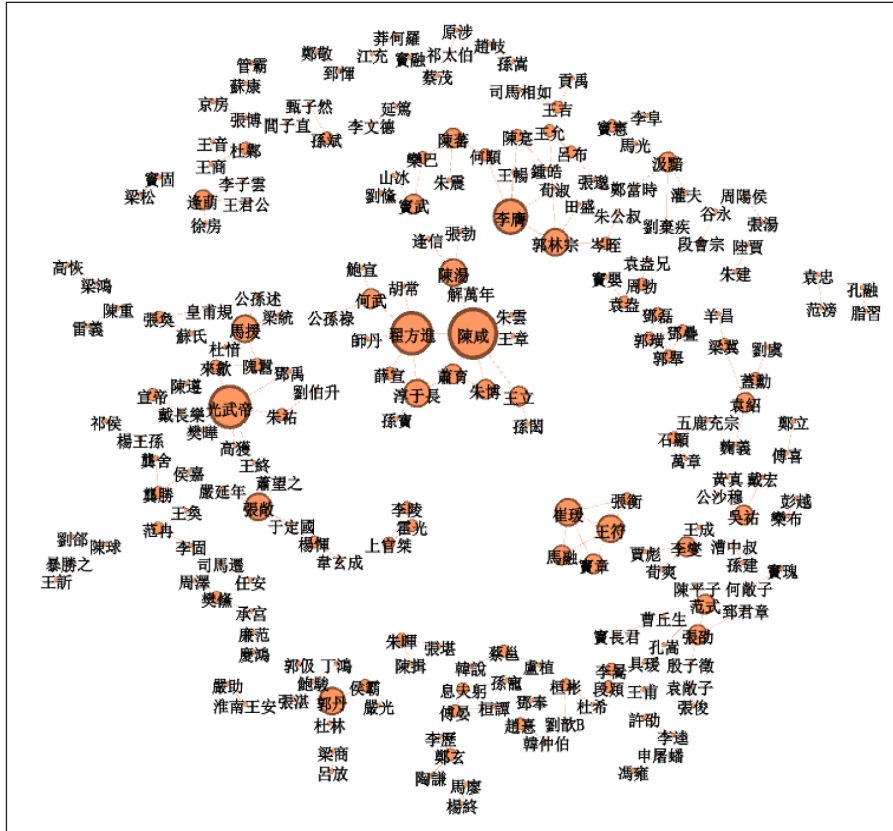

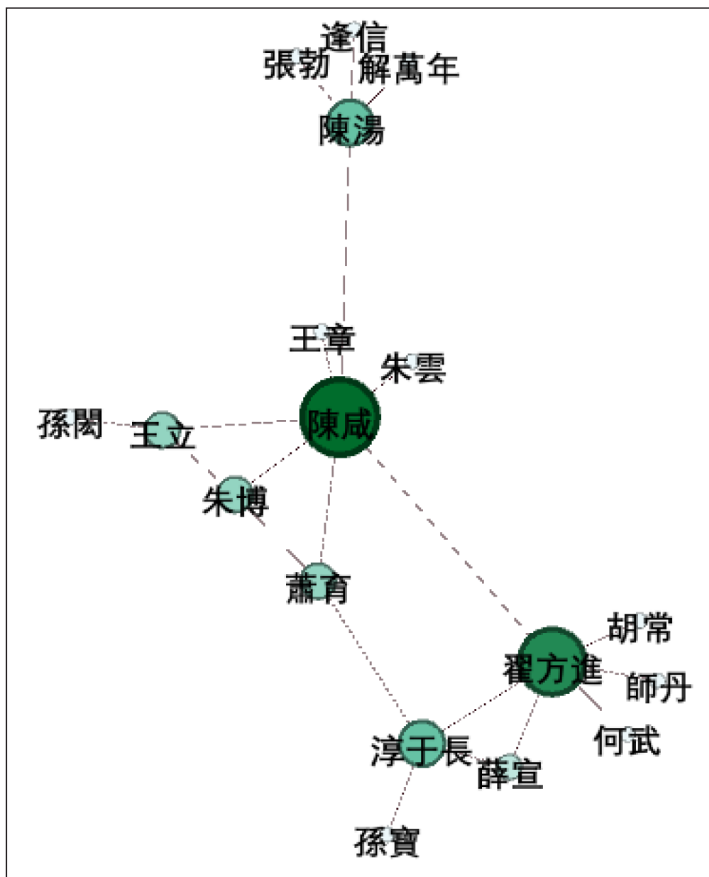**Figure 7** Han Elites' Friendship Network.

Figure 8 A Small Friendship Network in the Late Western Han.

(4.5) RECOMMENDER-NOMINEE NETWORK

Recommendation networks flourished during the second halves of both the Western Han and the Eastern Han since the founding elites had occupied large numbers of government positions at the beginning of dynasties. The bureaucrats who were extolled as the most upright ones of the late Eastern Han, such as Li Gu and Chen Fan, recommended the highest numbers of people for official positions (Figure 9). It is therefore problematic to assume that the "pure stream" (*qing liu* 清流) officials did not rely on social connections.[15]
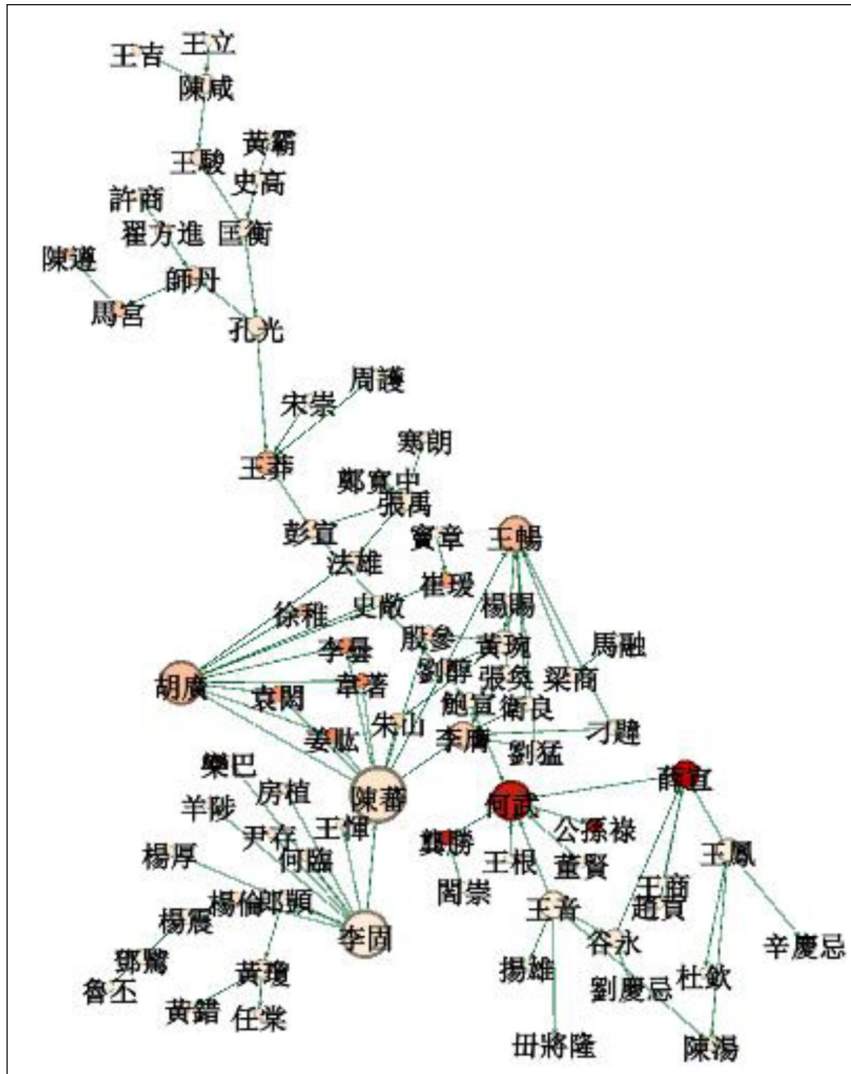
(5) THE AGGREGATED NETWORK: SOCIAL CIRCLES AND POLITICAL CLIQUES

While analyzing each type of network separately reveals the significance of these interpersonal relationships, integrating multiple types of networks provides an opportunity for distant reading and allows us to see the structures of historical communities. When we aggregate and visualize all the previous types of networks into one set of data, which consists of 1,187 nodes and 1,441 edges, we see a graph composed of four major clusters (Figure 10). Clusters 1 and 2 consist of Western Han individuals, while Clusters 3 and 4 comprise Eastern Han individuals. In terms of backgrounds, Clusters 1 and 3 mainly consist of emperors, empresses, imperial concubines, and imperial affines, whereas Clusters 2 and 4 are dominated by bureaucrats and classical scholars but also some imperial affines. In Clusters 1 and 3, the major networks are kinship and marriage relations. By contrast, teacher-student and recommender-nominee relationships figure prominently in Clusters 2 and 4. Generally speaking, Clusters 1 and 3 represent the inner

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15   The "pure stream" refers to a group of Eastern Han literati who are often portrayed as upright and righteous. In contrast to the "turbid stream" officials who cooperated with the eunuchs, the "pure stream" officials struggled against the eunuchs both by discussing politics in public and by executing the eunuchs' followers.
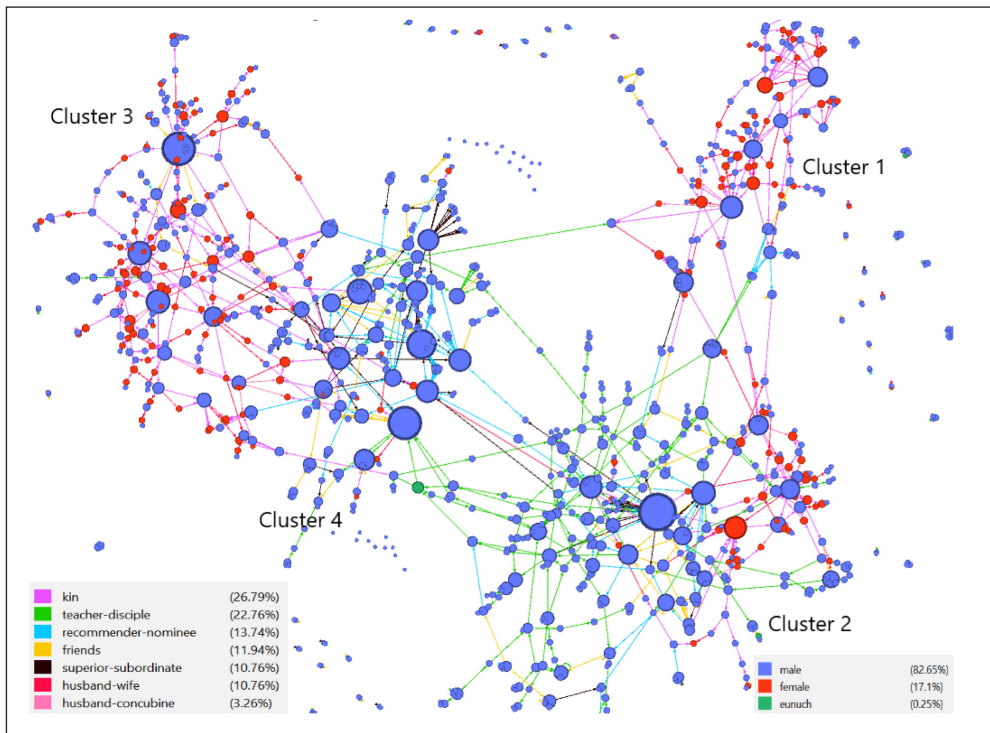
Figure 10 Aggregated Han Elites' Networks.

court, the members of which acquired political power through their personal connections to the ruler, whereas Clusters 2 and 4 mainly consist of the outer court bureaucrats and literati.

The distance between Clusters 1 and 2 and that between Clusters 3 and 4 reveal significant changes over time regarding the relationship between the inner court and the outer court. The largest nodes in Cluster 1 represent the first few emperors of the Western Han—Emperor Gaozu, the de-facto ruler Empress Dowager Lü, and the Emperors Wen, Jing, and Wu. They had few connections with the outer court portrayed in Cluster 2. The node representing Huo Guang, who served as the regent after Emperor Wu, is in the middle between Clusters 1 and 2. The rulers of the late Western Han—Emperor Xuan, Emperor Yuan, and Empress Dowager Wang Zhengjun, are located on the right side of Cluster 2. The largest node in Cluster 2 represents Wang Mang, the regent who later overthrew the Western Han to establish his own dynasty. Thus, we see that the Western Han rulers gradually moved from Cluster 1 to Cluster 2, with the imperial affines building more and more connections with the outer court and taking control of the government.

The Eastern Han witnessed a similar trend, but the Eastern Han imperial affines established closer connections with the outer court within a shorter period compared with that of the Western Han. In Cluster 3, the largest nodes are the first few emperors of the Eastern Han— Emperors Guangwu, Ming, and Zhang. The most influential individuals in Cluster 4 came from diverse familial and educational backgrounds. There are leaders of technical bureaucrats and classical scholars—Li Ying, Chen Fan, Li Gu, Hu Guang, as well as powerful imperial affines such as Liang Shang, Dou Wu, and He Jin. The largest node in Cluster 4 represents Ma Rong, who was from a consort family but well connected with scholars and bureaucrats. The social relations of the largest nodes in Cluster 4 reflect the Confucianization of Eastern Han consort families as well as the imperial affines' domination of the government during the second century of the Eastern Han. As the imperial affines moved closer toward the outer court, and the young emperors had more conflicts with the empress dowagers to whom they had no blood ties, eunuchs became the emperors' closest and most reliable supporters in the second half of the Eastern Han.

The historical social relationships were more complex and fluid than what this graph shows us at first sight. For one thing, family background and intellectual identity could not completely determine one's social circles or political cliques. Some members of consort families, such as Wang Mang and Ma Rong, were well connected to both the inner court and the outer court. Moreover, neither the inner court nor the outer court constituted a cohesive group. Not only did the eunuchs, palace women, and imperial affines compete with one another for imperial favor,

but the dynamics among the three groups also changed significantly in the second half of the Eastern Han. Because of the growing influence of eunuchs at the court, imperial affines began to ally with bureaucrats and literati to struggle against the eunuchs. A well-known example is that the imperial affine, Dou Wu, allied with Chen Fan and Li Ying, who were the leaders of the "pure stream" officials and scholars. Although Dou, Chen, and Li failed and died in their attempt to kill the eunuchs, this conflict strengthened the ties among their followers and increased the isolation of the eunuchs. This being said, even within the eunuchs, there were a few who cooperated with the literati, such as Cao Teng 曹騰 and Lü Qiang 呂強 (Fan, 1965).

Since visualizations can be both illuminating and deceptive, it is important to interpret the graph with knowledge of the data and the context. Due to the limitations of dynastic histories, my data on kinship and marriage are focused on the imperial household and consort families. Needless to say, the other individuals in this dataset must have had spouses and family members whose names were not recorded. Thus, we cannot assume that the outer court did not rely on kinship and marriage networks. But we can conclude that the inner court generally relied less on teacher-disciple and recommender-nominee networks than the outer court did. Another limitation of the data is that certain individuals are underrepresented because the original sources inadequately recorded their involvement in the social relationships I chose to focus on— marriage, kinship, superior-subordinate, teacher-disciple, friendship, and recommender-nominee. For instance, eunuchs' social relationships were rarely documented except for their relationships with the emperor, the empress dowager, and other eunuchs. Therefore, if we added all the eunuchs to this visualization, they would be represented by nodes connecting to the emperors and empress dowagers, even though they may have had kin, clients, and other social connections in their own times.

(6) CONCLUSION

As this network analysis shows, familial and social connections largely influenced a person's chances of obtaining official posts and other privileges in the Han. Not only did the inner court rely on networks, but also the outer court bureaucrats and literati tended to recommend those in their own networks. In light of this political reality, the rulers' rhetoric of meritocracy was largely a political language to coopt local elites, whereas the literati's discourses on public-mindedness can be understood as their critique of the inner court's reliance on kinship and marriage networks. Despite the existence of certain meritocratic ideals, there was no mechanism to ensure that candidates recruited through certain types of networks were necessarily more suitable for government offices than those recommended through other networks, nor did the outer court propose alternative ways of selecting officials than the recommendation.

On the other hand, the prominence of networking in Han politics and society does not necessarily contradict the fact that meritocracy was desired and pursued by certain groups. Throughout the Han, there were literati and bureaucrats who cited the classical ideal of selecting officials based on merit and virtue and who criticized the power of imperial affines and eunuchs, notably those implicated in the "Partisan Prohibitions" in the Eastern Han. One could argue that their main motive was to advance their own political influence, but their discourses on meritocracy were still recorded and recognized by their own kind. Among the networks discussed in this article, the teacher-disciple and recommender-nominee networks could be compatible with meritocracy to some extent. Nevertheless, a close reading suggests that they were not exempt from the influence of personal relationships and that the literati and bureaucrats simply formed different networks than the inner court.

From a network perspective, the emperor and the inner court were highly dependent on each other. While the emperor could make final decisions on official appointments, the nominees often formed closer and more stable connections with their recommenders rather than with the emperor. Thus, the emperor could establish direct relationships only with his inner court and a few high ministers. The inner court could not exist independently from the emperor because their legitimacy and political influence derived from their relationships with the throne. By contrast, many outer court elites had already participated in various social networks before receiving official posts. Through traveling, studying classics, serving in local governments, and socializing with local elites, they accumulated social capital independent from the ruler, not to mention their other resources such as land, tenants, and knowledge.

This study also has implications for collecting and analyzing historical social network data. It shows that the data collection is highly subject to the curator's own definition of social relationships, the keywords being used for data collection, and the data available in historical sources. Digital social network analysis, on the one hand, reveals patterns and structures in history that are not always easily spotted through close reading. On the other hand, it is sometimes more revealing of historical sources than historical realities.

DATA ACCESSIBILITY STATEMENTS

The "Han Elites' Social Network Dataset" is fully open access through Harvard Dataverse at https://doi.org/10.7910/DVN/V9CIJ5. Future updates on this dataset will also be accessible for free.

ADDITIONAL FILE

The additional file for this article can be found as follows:

- **Appendix.** Analysis of Han Elites' Social Networks. DOI: https://doi.org/10.5334/johd.113.s1

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The author has no competing interests to declare.

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