Article

Patterns of Integration: A Network Perspective on Popular Religious Connections in China's Lower Yangzi, 1150–1350

Song Chen

Department of East Asian Studies, Bucknell University, Lewisburg, PA 17837, USA; song.chen@bucknell.edu

Abstract: The spread of cults from their original homelands in the Song dynasty (960–1279) created crisscrossing ties between local communities and fostered social and cultural integration in Chinese society that transcended class and geographic boundaries. Scholars have produced numerous case studies on these translocal cults and their implications, but the pattern of connections across space created by these cults is yet to be explored. Using the data collected from local gazetteers that have survived from the Southern Song and Yuan dynasties, this article takes a bird's-eye view of the spatial distribution of popular cults in China's Lower Yangzi region between 1150 and 1350 and employs the method of network analysis to study the pattern of connections formed through these religious ties. It reveals seven statistically significant subregional clusters of popular cults and three complementary mechanisms that tied these clusters together. It argues that integration across space was achieved not only through the spread of a cult and the attendant formation of a unified religious culture, but also through a multitude of less prominent cults which were each confined in their geographical scope of influence but collectively created a crisscrossing web of ties linking one subregional cluster to another. Host to a diversity of popular deities that were each associated with a different subregional cluster, the prefectural seats and the Southern Song capital Lin'an played a critical role in the social and cultural integration by providing a welcoming meeting ground for divergent communities of devotees.

Keywords: popular religion; local cults; cultural integration; spatial pattern; local gazetteers (*difangzhi*); network analysis; China; Lower Yangzi; Song dynasty; Yuan dynasty

1. Introduction

Even a cursory reading of local gazetteers, literary collections, or state documents will reveal the ubiquity of popular deities in Chinese society. These deities provided a "collective symbol that . . . transcend[ed] the divergence of economic interests, class status, and social background, so as to make it possible to coalesce a large multitude into a community," (Yang 1961) (p. 81) and the collective ritual practices of their devotees "constitute[d] an important arena of production of collective identities." (Sangren 2003) (p. 256); (Sangren 1987) (p. 91). The size and nature of these religious communities, however, varied widely. Some of them were territorial cult communities, each co-extensive with a single hamlet, village, or township, and their membership was ascriptive in nature (that is, all members of the hamlet, village, or township were automatically also members of the cult community, while all those from the outside were excluded). Others were more diffused, translocal, and voluntary, attracting devotees from a wide geographical area but usually not including the entire population of any given hamlet, village, or township.[1] Scholars argue that the growth of translocal cults, which cut cross the boundaries of local territorial-cult communities, became a notable phenomenon only during the Song dynasty (960–1279), when the increased mobility of merchants, literati, and officials caused a wider circulation of gods beyond their original homelands. (Hansen 1990) (pp. 128–59); (Pi 2008) (pp. 204–71), (Von Glahn 2004) (pp. 173–79). Richard von Glahn, for example, contends that a prominent change in the Chinese religious culture in Song times was the rise of regional cult cen-

ters, which stood apart from and often cut across "the nested hierarchy of sovereign and tutelary deities." He argues, "While the latter ruled distinct territories and thus required mandatory worship and sacrifice from the community defined by the god's jurisdiction, the regional cults were sustained by continual manifestations of the god's power (through miracle and revelation) and cycles of festival and pilgrimage that drew large numbers of worshipers to the god's temple. The communities of worship that gathered at pilgrimage sites were linked by common faith, in contrast to the ascriptive membership in the cult groups (*she* 社) of local gods. The shrines dedicated to these regional cults likewise stood apart from the territorially bounded temples of local gods." (Von Glahn 2004) (p. 178). Through pilgrimages, the division of incense (*fenxiang* 分香), and the elaborate hierarchy of temples from the founding temple (*benmiao* 本廟) to branch temples (*xingci* 行祠), these regional cults created crisscrossing connections linking together different territorial communities in a wide geographical area. (Dean 2022) (pp. 177–78).

How can we study these spatial connections that were brought to pass by the growth of translocal cults? What sources should we use, and what approaches should we take? Local gazetteers provide a treasure trove for exploring this topic. Gazetteers usually include extensive records on what temples stood where and were dedicated to which deity. Up till this day, however, these local records remain underutilized. Scholarly works on local cults in imperial and modern China often take an interpretive approach and feature case studies of a single locality or cult. Using extant gazetteers from the prefecture of Huzhou 湖州, Valerie Hansen, for example, has painstakingly reconstructed a list of ninety-two cult temples that were founded before or during the Song dynasty (960–1279). Based on this list, she studied the nature and origin of the deities in the local pantheon. (Hansen 1990) (pp. 179–95). More studies, however, are case studies of deities, as opposed to case studies of places. They draw on historical evidence from multiple localities and trace the evolution and spread of a particular cult, especially those cults of a national prominence. These works lend profound insight into many important questions, such as religious meanings, ritual practices, state–society relations, and local power dynamics, among others. James L. Watson, for example, contends that the spread of a cult deity, like Mazu 媽祖, provided a common religious symbol which was shared across ethnic, class, and regional lines. He argues that the standardization of religious symbols and practices held the key to understanding how imperial China achieved a "remarkably high level of cultural integration." (Watson 1985) (pp. 292–93). It promoted and perpetuated "a shared sense of cultural identity" in late imperial China, uniting men and women who occupied vastly different social positions in spite of their diametrically opposed religious representations of the object of their veneration (Watson 1993) (p. 81). In his study on Taiwan, Paul Steven Sangren likewise stresses the "culturally integrating effects" of pilgrimages, such as those associated with the Mazu cult. Pilgrimages, Sangren argues, "tend to draw from areas that share at least some cultural characteristics," as well as promote a "higher degree of cultural unity among local systems than would otherwise exist." (Sangren 1983) (p. 16).

Importantly, however, Sangren reminds us that religious affiliations and identities are plural and "frequently crosscutting." (Sangren 2003) (p. 256). The case-study approach, with its focus on an individual cult or locality, often falls short of revealing how different communities of worship intersected with one another. To uncover the pattern of these crisscrossing popular religious ties, it is therefore necessary to step back, for a while, from case studies and thick descriptions and take a more macroscopic approach to historical records. Instead of focusing on a single cult or place, this article examines in totality all the cult temples listed in local gazetteers that were compiled in the Song (960–1279) and Yuan (1271–1368) dynasties in China's Lower Yangzi region. By taking an aerial view and using the methods of network analysis, this article seeks to reveal patterns of popular religious connections that no study of a single cult or place could disclose.

2. Data Sources

The temporal and geographical scopes of this study are defined by available data. While gazetteers provide the best sources for reconstructing the local pantheons, only forty-two of them have survived from Song and Yuan times. Of these forty-two, thirty-two were compiled for a total of twelve prefectures located along China's east coast, forming a contiguous stretch of space that is roughly coextensive with the core zones of G. William Skinner's Lower Yangzi macroregion. These thirty-two gazetteers (see Appendix A) provide the primary data sources for the present study. Twenty-three of them are prefectural gazetteers, eight are county gazetteers, and the remaining one is a gazetteer for a market town. All but two of these gazetteers were compiled between 1150 and 1350, including nineteen completed in the thirteenth century, six in the latter half of the twelfth century, and five in the first half of the fourteenth century.[2] Of the twelve prefectures surveyed in this study, seven had the latest prefectural-level gazetteer dating from the thirteenth century, three from the first half of the thirteenth century, and two from the last quarter of the twelfth century. In brief, the source materials in the present study reflect mainly popular religious cultures in the Lower Yangzi spanning two centuries from 1150 to 1350. Considering the size of my data and the difficulty of ascertaining when a cult gained or lost popularity in each place, this study takes these two centuries (1150–1350) as a single unit of analysis, assuming no change in popular religion transpired in this area during this span of two hundred years.

All but one of these gazetteers have one or more sections on cult temples, titled variously as *cimiao* 祠廟, *shenmiao* 神廟, *ciyu* 祠宇, and so forth. These sections list, by county, the names of these temples and their locations, often followed by a brief description of the main deity enshrined in each temple. These lists provide the primary data sources for this study. While the information in these lists can surely be supplemented by other source materials, such as temple inscriptions that are preserved in literary anthologies or the collected works of individual authors (*wenji* 文集), these epigraphical materials have survived in different quantities for different localities. To ensure uniformity in my data, I chose not to use these sources in the present study. Also left out are gazetteers compiled in Ming (1368–1644) and later times, which may have listed a few Song or Yuan temples not recorded in earlier sources, but these claims are difficult to verify, and collecting these data points is also very time-consuming. A small number of temples are listed as "derelict," but it is usually unclear when and why these temples fell into disrepair. Considering that the timeframe of this study spans two centuries, these "derelict" temples are included in this analysis with the assumption that the associated cults were active in the area at least at some point in recent times.

It should be noted that chapels, cloisters, and monasteries in the Buddhist and Daoist orders are listed separately in these local gazetteers and excluded from the present study. Also excluded are temples to eminent local officials (*minghuan* 名宦), former worthies (*xianxian* 先賢), and Neo-Confucian masters, which were more relevant to the construction of a literati identity than to local religious cultures. Whereas literati shrines were sponsored by local literati and officials and were expressions of a shared literati culture and class consciousness, popular cult temples were fueled by belief in the efficacy (*ling* 靈) of the deities in answering prayers and usually engaged a much larger segment of the local population. (Hymes 1986) (p. 130), (Neskar 1993). Admittedly, the distinction could be blurry at times in the historical record. For instance, the 1251 county gazetteer of Kunshan 崑山 (Pingjiang prefecture 平江府) records a temple of Lord Zhang (*Zhang gong miao* 張公廟). Originally erected on the premises of the county's Confucian school in honor of its eleventh-century magistrate Zhang Fangping 張方平 (1007–1091), the thirteenth-century temple was a reconstruction on a different site. By the time of the reconstruction, Zhang was clearly venerated as a cult deity that "always answered prayers for deliverance from flood and drought" (水旱致卜亦靈) (Xiang [1251] 1990, (xia, 21a)). Similarly, the 1268 prefectural gazetteer of Lin'an 臨安府, the Southern Song capital, lists a range of buildings under the category of "Temples to Meritorious Local Officials" (*shixian* 仕賢). While some of these buildings

were ritual spaces suiting the literati taste, such as the Hall of Three Worthies (*Sanxian tang* 三賢堂) in honor of the famous local scholars and officials Bai Juyi 白居易 (772–846), Lin Bu 林逋 (967–1028), and Su Shi 蘇軾 (1037–1101), others were undoubtedly cult temples, such as those dedicated to Hu Ze 胡則 (963–1039) and Chen Xu 陳頊 (d.u.) (Qian [1268] 1990, 72.8a–11a), (Shen [1201] 1990, 6.17ab). Hu, a man from the nearby Wuzhou 婺州, was Prefect of Hangzhou in 1026. By the early twelfth century, a cult had developed around him, which remains active today.[3] Chen, believed to be a general and diplomat in Eastern Jin (317–420), held fiefs near Hangzhou Bay and was later buried on a mountain northeast of the city. A temple to Chen was constructed by the side of his grave, and by the late thirteenth century, several branch temples of Chen had been standing in Lin'an. The cult of Chen flourished: it became associated with the worship of several other deities, including a female deity in Lin'an, said to be Chen's sister,[4] and Su Jun 蘇峻 (d. 328), a fourth-century rebel who was said to be Chen's subordinate and venerated in several prefectures of the Lower Yangzi.[5] Given these complexities pertaining to literati shrines and cult temples, I assessed them on a case-by-case basis. The way these shrines and temples were classified in the gazetteers is considered instructive but not definitive.

I also excluded from this study "generic deities," who were "referred to by type more frequently than by their own individual names."[6] These include earth gods (*tudi* 土地), city gods (*chenghuang* 城隍), and dragons. It is debatable whether belief in the same class of divine beings fostered integration in Chinese society as did the worship of the same cult deity. Either way, the network approach adopted in the present study is not well suited for understanding the former phenomenon, not only because the temples of earth gods, city gods, and dragons were almost ubiquitous in the thirteenth century, but also because this phenomenon was qualitatively different and thus must be analyzed separately from the common worship of the same individual cult deities. Exceptions are made for dragons that had a distinctive identity and were worshipped in several places. These included, among others, the dragon on Mount Jia (*Jiashan bailong* 嘉山白龍), which had temples in two different counties, (Shi [1268] 1990, 14.10ab), (Tuoyin [1332] 1990, 8.17b) and the state-endorsed sacrifices to the Dragons of Five Directions (*wulong* 五龍).[7] Nonetheless, these exceptions are few and have a minimal impact on my results.

After these exclusions, I constructed a two-mode network from the lists of temples in the gazetteers. The dataset includes two types of nodes (i.e., cults and places), and a tie connecting two nodes describes which cult was present in which place. This dataset adopts some working definitions of places and cults that merit some clarification. First, this study uses the county as the geographical unit of analysis, because the gazetteers usually give a clear description of which county a temple was located in. Places are therefore defined primarily as counties. Temples in the prefectural city (*fucheng* 府城 or *zhoucheng* 州城) are usually listed separately from those in a prefecture's subordinate counties. In the Song, the prefectural city was nonetheless not a separate administrative unit but was administered by one or two metropolitan counties (*yiguo xian* 倚郭縣). Since a temple in the prefectural city must have also served the population in its immediate environs, especially residents of the metropolitan counties, it would be misleading if the city was coded as a separate place. Therefore, the present study makes no distinction between the prefectural city and the metropolitan county (or counties) that administered it. When the administration of a prefectural city was divided between two metropolitan counties, both metropolitan counties and the city are conceptualized as a single expansive metropolitan area and coded heuristically as a single "place," which I will henceforth refer to simply as the "prefectural seat."

Moreover, while the gazetteers record the names of temples and identify the deities enshrined in them, my dataset does not code temples or deities, but cults. Cults are defined here heuristically as a collection of deities who are believed—or claimed by some adherents, if not all—to be closely associated. Valerie Hansen once described the structure of popular cults in China as a "spider plant that begins as [an upper] tier of leaves supported by a central stalk," from which "stems sprouted that supported lower tiers of leaves." Take

the cult of King Zhang (*Zhangwang* 張王) as an example. To use Hansen's metaphor, King Zhang was the central stalk and the upper tier of leaves, and the multitude of subdeities associated with him formed the lower tiers, including Zhang's family members as well as Marquis Li (*Li hou* 李侯) and Emissary Fang (*Fang shizhe* 方使者), all of whom took auxiliary ritual positions in Zhang's temple as his relatives and divine assistants (Hansen 1990) (pp. 152–55), (Pi 2008) (pp. 34–96, 257n7). These auxiliary deities usually had no temple in their own right, but were installed in the main or side halls of the temple of the main deity and were rarely mentioned in the gazetteers. In any event, even if they were enshrined in separate temples, these auxiliary deities are not coded separately from the main ones in the present dataset.

The cults of the auxiliary deities may have been spin-offs from miracle stories of the main deity, but there is also evidence that in some cases, this spider-plant structure could be the product of local politics, when different social groups each installed their patron deities in the pantheon in the process of negotiating their own positions in local society and hammering out a way of co-existence (Szonyi 2017) (pp. 159–87). In this latter scenario, the spider-plant-like pantheon could be viewed as the symbolic expression of a milestone in an ongoing process of social structuring. It is therefore appropriate to conceive of patrons of the main and auxiliary deities alike as participants in a shared religious culture without denying the very real possibility of tensions and conflicts that must have also existed within this culture. For example, in Liyang 溧陽 county (Jiankang prefecture 建康府), there was a temple dedicated to a lady from the Shi 史 family. Local legend had it that when Wu Zixu 伍子胥 (559–484 BCE), a nobleman known for his loyalty and wrongful death, was passing by Liyang in flight from persecution, Lady Shi provided for him and then committed suicide to help cover Wu's tracks (Zhang [1344] 1990, 11A.22ab). Nowhere else did the cult of Lady Shi appear to have had an appeal except in Liyang, where the Shi was a prominent local family. Yet the story linked the cult of Lady Shi to the broader religious culture centered on Wu Zixu, which spanned six different prefectures. While the association between Wu and Lady Shi was almost certainly fabricated and perhaps persuaded only a small number of Wu's adherents, it stands to reason that the legend fostered among some of Lady Shi's devotees some sense of belonging to the broader religious culture of Wu Zixu. Therefore, in the present study, Liyang is considered to have ties with the cult of Wu. In other words, the cult of Lady Shi is not coded separately in my dataset; it instead shares the same code with the cult of Wu.

It should become obvious that by compiling my data this way, I have taken a methodological position that sets aside, in this study, the substantive issue of what devotees actually had in common when they participated, or claimed to participate, in the same popular cult. James L. Watson argues that in late imperial China, unity in popular religious culture existed only in symbols and practices, not in doctrines or beliefs. To Watson, the standardization of symbols and practices was sufficient for achieving a meaningful degree of social and cultural integration in Chinese society (Watson 1985) (p. 323), (Watson 1993) (p. 87). Taking Watson's argument one step further, Michael Szonyi contends that even the standardization of symbols and practices was, at least in some cases, more apparent than real. It was an illusion deliberately fabricated by the literati elite to provide legitimacy and cover for locally specific religious symbols and rituals that persisted under this guise. Unity, Szonyi argues, derived as much from "claims to participation in a shared culture" as from "a substantively common culture." (Szonyi 2007) (pp. 64–65); (Szonyi 1997). These studies sound a note of caution that popular religious culture in late imperial China was perhaps less substantively uniform than what our textual evidence suggests (Szonyi 2007) (p. 63). These complexities destabilize the meaning of historical records in the gazetteers. When temples ostensibly dedicated to the same deity are recorded in two different places, they may be evidence of a more substantively unified religious culture that shared a common repertoire of doctrines and rituals, or merely indicative of a claim to commonality that provided camouflage for enduring diversity in religious beliefs, practices, and even symbols. This uncertainty is further complicated by a very real possibility that the religious

landscape was always in a state of flux: over time, a dubious misidentification of a deity in literati discourses at one moment of history may have gradually stuck in the minds of local adherents later in history. These issues cannot be satisfactorily resolved without a thorough investigation of each individual cult, but this is beyond the scope of my study. Instead, this article adopts a loosely interpretive approach. It assumes that a meaningful religious tie existed between any two places that had temples to the same deity (or the deity's close associations). It acknowledges that what this "religious tie" meant, in reality, is ambiguous and could encompass a wide spectrum from common beliefs to common symbols and to merely an appearance or discourse of commonality. Much less should a "religious tie" between two places be construed as an organizational link between a founding temple and its branches, though such links certainly existed between many localitie (Hansen 1990) (p. 128).

These ambiguities and caveats notwithstanding, I did not take the mere occupation of the same temple complex as adequate evidence of a close association between deities. For example, the Branch Temple of the God of the Eastern Peak (*Dongyue xinggong* 東嶽行宮) in the prefectural city of Changzhou 常州 had on its premises a "branch hall" dedicated to King Zhang (*Guanghui xingdian* 廣惠行殿), but no evidence suggests that these two deities were otherwise connected in popular beliefs and practices. They are therefore coded separately in my dataset (Shi [1268] 1990, 14.4a). Also coded separately are all the apotheosized members of a ruling house, such as Sun Quan 孫權 (182–252), ruler of Wu (222–280) in the Three Kingdoms Period, and his son Sun He 孫和 (224–253). While the two men were father and son, the two cults seem to have developed independently from each other in the Lower Yangzi. Sun Quan had a temple in Jiankang, the former capital of the Wu state, while the temples of Sun He were all located close to his burial site in Huzhou and the neighboring counties (Tan [1201] 1990, 13.9b, 13.15b–16a, 13.19a), (Shan [1288] 1990, 12.17b), (Ma [1261] 1990, 44.20a), (Zhang [1344] 1990, 11A.9b).

In about a quarter of the temples (322/1163) listed in the gazetteers, it was impossible to determine on available evidence what deities were worshipped. I acknowledge that the deities in some of these temples may be identified by consulting a wider range of source materials, which will improve the quality of my data. But for now, my two-mode network data are limited to a total of 841 temples where the main deities can be identified with reasonable assurance and without extensive research. This dataset contains 60 place nodes, 442 cult nodes, and 737 ties linking places to cults. The majority (359) of the cults are active in only one place. Removing these 359 cults leaves a final dataset that contains 56 place nodes and 83 cult nodes, linked by 378 ties (Figure 1). All ties are unweighted. In other words, this study only considers whether a cult was present in a given county, regardless of how many temples to the cult are recorded in the gazetteers.

These decisions were driven by a concern with missing data in the historical record. Obviously, the lists of local temples in the gazetteers are far from exhaustive.[8] They include only those temples that the compilers deemed worthy of mention. The criteria for inclusion inevitably varied from one gazetteer to another, and this problem was compounded by the varying number of extant gazetteers that have survived for each prefecture. Consequently, the number of local temples listed for each prefecture ranged widely, from 224 in Lin'an to only 50 in Huizhou 徽州 (Table 1). Statistically, there are on average 97 temples recorded for each prefecture, with a standard deviation of 45, giving a coefficient of variation (CV, i.e., standard deviation as a percentage of the mean) of 47%. While there is no way to fully redress this imbalance in the sources, it is perhaps reasonable to assume that a temple whose enshrined deity had only an obscure identity and a small following was more likely to go unmentioned in the gazetteers than a temple dedicated to a deity who had followers in several counties and prefectures. Moreover, if a deity had many temples and a wide following, gazetteer compilers may not have painstakingly recorded every single temple they knew, but they were unlikely not to make a mention at all. Therefore, it can be argued that gazetteers from different places and periods were probably more consistent in documenting the more prominent deities. If so, it is methodologically prudent to ignore

the number of temples in each county that were associated with each cult and to also leave out those temples whose deities appeared only once in the record. I hope that these decisions help mitigate, to an extent, the imbalance in the extant historical sources. In the final dataset, variation remains in the number of temples recorded for different prefectures, but the standard deviation is reduced to less than a third of the mean (32%).
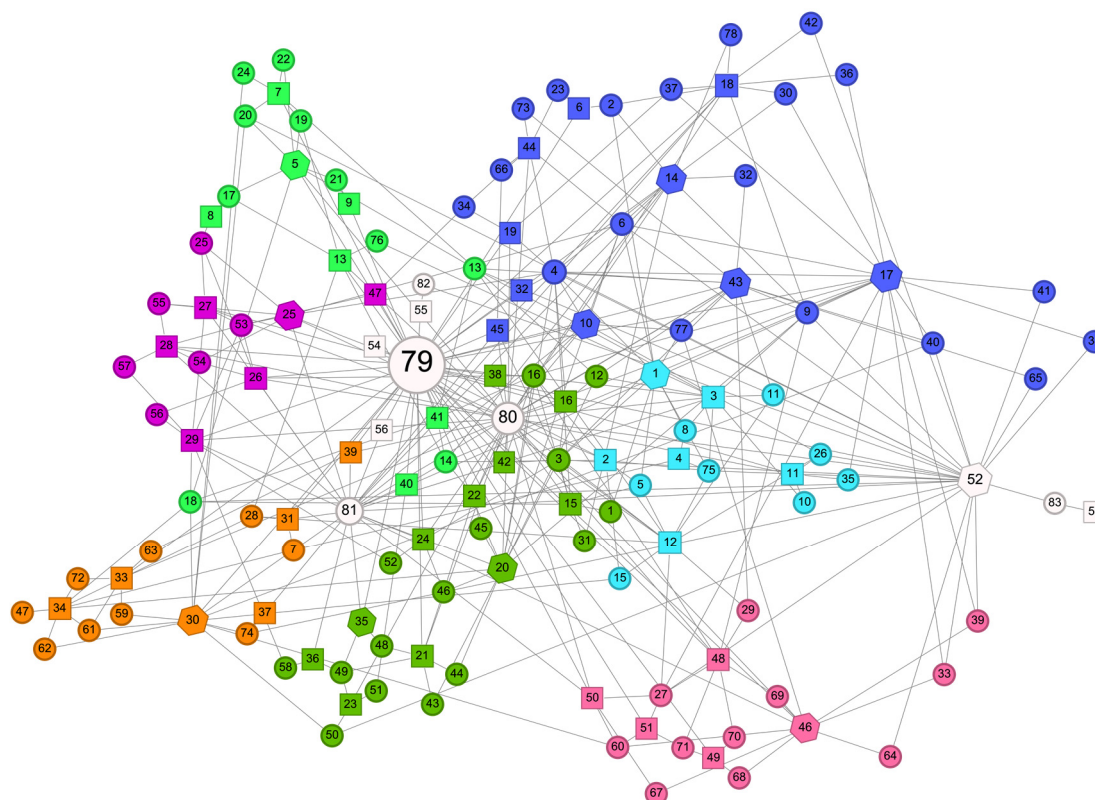

Figure 1. Visualization of the 56 × 83 data matrix. Squares represent counties, hexagons represent prefectural seats, and circles represent cults. Nodes are sized according to degree centrality and colored according to their modified Louvain cluster membership: blue = I, turquoise = II, light green = III, dark green = IV, orange = V, pink = VI, purple = VII, white = other. For a discussion of the Louvain cluster membership, see Section 3 and Table 6. For descriptions of the node labels (where the prefixes "P" and "C" are dropped for clarity), see Appendices B and C. For a breakdown view of each cluster with Chinese labels, see Appendix D. All network graphs in this article are generated in Gephi 0.10 using the Force Atlas 2 layout with Lin-Log mode, which keeps nodes in the same cluster closer together.

Table 1. Records of Temples in the Gazetteers.

Prefecture	Number of Temples *	Number of Cults
Lin'an	224 (122)	49
Shaoxing	126 (70)	34
Taizhou	123 (94)	41
Qingyuan	108 (90)	37
Zhenjiang	103 (76)	34
Jiaxing	74 (70)	32
Yanzhou	73 (80)	37
Pingjiang	66 (62)	30
Changzhou	65 (57)	25
Huzhou	61 (49)	22
Huizhou	50 (14)	7
Jiankang	90 (57)	30

Table 1. *Cont.*

Prefecture	Number of Temples *	Number of Cults
Total	1163 (841)	378
Mean	96.9 (70.1)	31.5
Std. dev.	45.1 (25.5)	10.0
Coefficient of variation	0.47 (0.36)	0.32

* Numbers in parentheses count only temples where the identity of the enshrined deities can be ascertained.

3. Four Tiers of Popular Cults

Degree centrality provides a useful measure of the influence of different cults. In a two-mode network like the one constructed in the present study, ties exist only between nodes of different types (i.e., between a place node and a cult node) but not between nodes of the same type. Therefore, the degree centrality of a cult node equals the number of places where the cult had one or more temples, and the degree centrality of a place node equals the number of cults recorded for that place.

Based on the distribution of degree centrality scores (Table 2), I have classified cult nodes into four tiers. These four tiers form a pyramidal structure: from top to bottom, the number of cults in each tier increases, while the influence of each cult becomes more restricted geographically.

Table 2. Degree Centrality of Cults.

Tier	Degree	N. of Cults	List of Cults
1	45	1	C79
	34	1	C80
	26	1	C81
2	15	1	C04
	11	1	C16
	10	1	C03
	8	2	C06, C09
	7	2	C14, C18
	6	4	C13, C27, C75, C53
	5	2	C12, C54
3	4	11	C02, C05, C20, C25, C26, C28, C40, C46, C49, C60, C77
	3	17	C07, C08, C11, C15, C17, C19, C29, C30, C33, C34, C37, C39, C50, C55, C61, C71, C74
	2	39	C01, C10, C21, C22, C23, C24, C31, C32, C35, C36, C38, C41, C42, C43, C44, C45, C47, C48, C51, C52, C56, C57, C58, C59, C62, C63, C64, C65, C66, C67, C68, C69, C70, C72, C73, C76, C78, C82, C83
Total (Cults)		83	
Average degree		4.55	
Std. dev.		6.48	

Notes: All network metrics in this article are calculated in UCINET 6.733. For a description of cult labels (e.g., C79), see Appendix C.

At the top are three highly successful cults whose temples were widely distributed in the Lower Yangzi: the God of the Eastern Peak (C79, *Dongyue* 東嶽), King Zhang (C80), and the Five Manifestations (C81, *Wuxian* 五顯).[9] These three cults had region-wide influence, and for convenience, I will call them the "three superstars." These regional cults created a shared religious culture that was like a canopy in which the diverse local religious communities were shrouded. Each of these three cults has a degree centrality score far greater than that of any other cult node in the network. Temples to the God of the Eastern Peak were recorded in 45 of the 56 places, and temples to King Zhang and the Five Manifestations were found in 34 and 26 places, respectively. These cults are far outliers in the network,

where nearly half of the cults (39) had temples only in two places, and the other half (38) had temples in three to eight places.

Occupying the second tier are 13 mild outliers, each of which had temples in 5 to 15 places. Like the superstars, these were also translocal cults, although they were less widespread. Based on the spatial distribution of their temples, these thirteen cults can be divided into two categories. Five of them (C04, C27, C53, C54, C75) each had temples that were largely concentrated in one area of the Lower Yangzi. Chen Gaoren 陳杲仁 (C04), for example, was recorded in fifteen different places, but nine of his temples were located in the prefectures of Jiankang, Zhenjiang, and Changzhou, which constituted a contiguous area north of Lake Tai. In each of these prefectures, Chen's temples were found in three different places. By contrast, outside this area, Chen's temples were much sparser and found mainly in the prefectural seats.[10] Similarly, the temples of Guan Yu 關羽 (C27) were recorded in six places. Half of these places were inside Qingyuan prefecture 慶元府, and the others were scattered across three different prefectures. The pattern is even more conspicuous with Zhao Bing 趙炳 (C53), Zhou Qing 周清 (C54), and Fuchai 夫差 (C75), each of which had temples in five or six places in the Lower Yangzi. Nearly all of Zhao's and Zhou's temples were inside the prefecture of Taizhou 台州, and nearly all of Fuchai's temples were inside Pingjiang.

A special case is the cult of King Yan of Xu 徐偃王 (C16), a legendary local ruler in the 10th century BCE. The worship of King Yan started with the Xu family in Quzhou 衢州 (Zhejiang) in Tang times, but by the Song, his cult had gained a large following in the adjacent prefectures of Wuzhou, Yanzhou 嚴州, and Chuzhou 處州 (Zheng 2019), (Sue 1993), (Zhu 2008) (pp. 157–59, 174). Since no gazetteers have survived in this area from Song–Yuan times, except two for Yanzhou, the data I have compiled for this study give the misleading impression that King Yan's temples were scattered all over the Lower Yangzi without a subregional concentration. Rather, there is reason to believe that had the bias in my data sources been corrected, the distribution of his temples in reality would be similar to those of Chen Gaoren and other deities discussed above.

In contrast to these six cults are seven others (C03, C06, C09, C12, C13, C14, C18), whose temples were indeed more or less evenly distributed across several different prefectures. A full explanation for this phenomenon has to await further study, but at least two different processes seem to have been at work. On the one hand were the cases of Vaiśravaṇa 毘沙門天王 (C06) and Lord Zitong 梓潼帝君 (C09), whose temples were scattered throughout the region and found predominately in the prefectural seats. This phenomenon may have reflected their close association with the state and the literati population. Vaiśravaṇa had a strong connection to state authorities: he was a protector of city walls and gates and probably the precursor of city gods (*chenghuang*) (Hansen 1993). The cult of Zitong originated from Sichuan, but by Song times, it had spread widely across the country, and the deity was venerated by the literati and believed to be a patron of examination success (Kleeman 1993).

Unlike those of Vaiśravaṇa and Zitong, however, temples of the other five cults (C03, C12, C13, C14, C18) did not appear to have coalesced around the prefectural seats. Nor did they show any sign of subregional concentration. The cults of Jiang Ziwen 蔣子文 (C12) (Lin 2008), (He 2015) and Su Jun 蘇峻 (C13) (Quan 2010) gained popularity in Jiankang as early as the third and fifth century, respectively, but each had only one or two temples in Jiankang in late Song and Yuan. Similarly, the cult of Xiang Yu 項羽 (C18) (Miyakawa 1964) (pp. 391–417), (Johnson 1985) (pp. 428–31). originated in Huzhou in the Eastern Han (25–220), but in my dataset he had only two temples recorded in Huzhou. The cult of Wu Zixu (C03) also dated from the Han, if not earlier, and by the late Song and Yuan, his temples were widely scattered in the entire region (Xu 2013), (Li and Wang 2017), (Johnson 1980a), Johnson (1980b).Temples to Zhang Xun 張巡 and Xu Yuan 許遠 (C14) (He 2012) (p. 8). commemorated the two famous Tang martyrs who died in the An Lushan Rebellion (755–763). Xu hailed from Yanguan 鹽官 County in Lin'an, where one of the first temples was erected. Nonetheless, in my dataset, nothing suggests a high density of their temples

in Lin'an and its environs. The reason for the lack of a subregional concentration must be studied more carefully in future research. But since all five cults had originated from somewhere in the Lower Yangzi and often had a long history, it may be surmised that the answer lies in both their longevity and popularity. Because these cults had spread so widely and for so long in the Lower Yangzi, their temples were more evenly distributed in and outside the area where they originated, but being less popular than the superstars, the density of their temples in and outside their homeland was relatively low.

The third tier comprises a total of 67 cults, each of which had temples in two, three, or four places. Like those in the second tier, some of these cults (e.g., C34) had temples scattered across different prefectures, while the temples of others cults (e.g., C25, C46) tended to be concentrated in a small area of the Lower Yangzi. The line between these two patterns of spatial distribution is more difficult to draw for cults in this tier, because each of them had only a few temples recorded in the gazetteers. Nonetheless, it is worth pointing out, once again, that like Vaiśravaṇa and Zitong in the second tier, many of the cults in this tier whose temples were scattered across prefectures and showed no clear sign of subregional concentration were closely associated with political, social, economic, and religious forces that tied the Lower Yangzi to larger structures. Some of these cults were closely associated with state authorities, some with the Daoist religion, and others were "outsiders" that spread to the Lower Yangzi from elsewhere. For example, Lü Shang 呂尚 (C11) was the officially sanctioned god of war in Tang (618–907) and Song times, (Meulenbeld 2015) (p. 176). and the Dragons of Five Directions (C77, *wulong* 五龍) were at the center of the official rain-making rituals (Pi 2008) (pp. 153–60). Of cults closely associated with Daoism, examples are also numerous: Tao Hongjing 陶弘景 (C34) was an eminent Daoist scholar and "perfected man" (*zhenren* 真人); Generals Tang 唐, Ge 葛, and Zhou 周 (C41) were protectors of the Heavenly Gate in the Daoist tradition; and Zhenwu 真武 (C29), or "Perfect Warrior," received imperial patronage and became an important Daoist deity in the eleventh century (Chao 2011). Cults that spread to the Lower Yangzi from elsewhere include, for instance, Mazu 媽祖 (C39) from Fujian, Pichang 皮場 (C33) from Kaifeng 開封, Erlang 二郎 (C65) from Sichuan, and the Two Trustful and Beneficent Kings of Mt. Yang 仰山孚惠二王 (C38) from Jiangxi (Pi 2008) (pp. 224–54). The fact that temples of these "outside" cults were found almost exclusively in the prefectural seats and not in the subordinate counties underscores the importance of prefectural seats in transregional religious exchanges. This lends support to the observation of Valerie Hansen and Robert Hymes, who argued that the spread of popular cults in the Song was often an urban phenomenon by way of traveling merchants, scholars, officials, and religious specialists (Hansen 1990) (p. 139).

Not reported in Table 2 is the bottom tier of cults, 359 in total, each of which had temples in only one county and are therefore excluded from the present study (see Section 2 of this paper). It should be noted, in passing, that these cults themselves also varied greatly in influence. Some had branch temples in different parts of a county,[11] although most appear to have been venerated only by the residents of one or a few villages.

Perhaps not surprisingly, the degree centrality scores of cult nodes in my network follow a power law distribution. That is, the degree of a cult (i.e., the number of places where a cult had temples) and the total number of cults having that degree form a straight line on a log–log plot, which is a common characteristic shared by many real-world networks (Barabási and Albert 1999). On a related note, the Pareto principle (the so-called "80-20 rule") (Newman 2005) applies consistently: of all the 442 cults, about 81% (359 cults) fall inside the fourth tier; of the remaining 83 cults, 81% (67 cults) fall inside the third tier; of the remaining 16 cults, 81% (13 cults) fall inside the second tier.

The spread of cults from city to city finds additional support in the distribution of degree centrality scores of place nodes (Table 3). Recall that in a two-mode network like the one studied here, the degree centrality of a place node equals the number of cults recorded for that place. The degree centrality scores of place nodes do not follow a power law distribution as neatly as those of cult nodes. Nonetheless, it is informative to divide place nodes

into three tiers, using the cut-off values of 7 and 12: the percentage of prefectural seats in each tier is worthy of note. In the top tier (degree centrality greater than 12), all five places are prefectural seats. In the bottom tier (degree centrality less than or equal to 7), where the majority of place nodes end up, only one is a prefectural seat. The middle tier includes 13 places, of which about half are prefectural seats. In other words, a prefectural seat in general hosted more cults than an ordinary subordinate county. We may look at this from yet a different perspective: the average degree of place nodes in the network is close to 7, and of the 18 places with above-average degrees, 11 are prefectural seats. The average degree of prefectural seats is as high as 12, while that of the counties is only 5. Also worthy of note is that the Southern Song capital, Lin'an (P52), far outranks all the other places in degree centrality. As many as twenty-five cults in the present dataset had temples in the prefectural seat of Lin'an, making it a mega-hub of popular cults in the Lower Yangzi. All this demonstrates that prefectural cities and the surrounding metropolitan counties were important contact zones for diverse religious cultures. Although the data collected here do not tell us whether patrons of these temples in Lin'an and other prefectural seats were mainly sojourners from elsewhere or also included local residents, anecdotal evidence shows that many of these cults had probably gained support among the local population (Hansen 1990) (pp. 142, 147).

Table 3. Degree Centrality of Places.

Tier	Degree	N. of Places	List of Places
1	25	1	P52 *
	18	1	P17 *
	15	1	P43 *
	14	1	P20 *
	13	1	P30 *
2	12	2	P12, P14 *
	11	3	P03, P18, P46 *
	10	1	P29
	9	4	P01 *, P05 *, P25 *, P48
	8	3	P10 *, P15, P26
3	7	7	P02, P13, P21, P27, P28, P34, P44
	6	5	P07, P24, P33, P45, P50
	5	6	P11, P16, P19, P22, P41, P42
	4	7	P23, P31, P35 *, P39, P40, P49, P51
	3	5	P04, P06, P36, P38, P47
	2	6	P08, P09, P32, P37, P55, P56
	1	2	P53, P54
Total (Places)		56	
Average degree		6.75	
Std. dev.		4.45	

Notes: Places with asterisks (*) are prefectural seats. For a description of place labels (e.g., P52), see Appendix B.

Betweenness centrality scores (Table 4), a measure of how important a node is in joining together different parts of a network, reaffirm the foregoing observations. In the present network, the betweenness centrality of a node correlates strongly with its degree (correlation coefficient is 0.94). Whether ranked by degree or betweenness centrality, the same cults and places occupy the top three and five positions, respectively (Table 5).

Table 4. Freeman Node-Betweenness Centrality of Cults and Places.

Betweenness	N. of Cults	List of Cults
1000~3500	3	C79, C80, C81
100~320	8	C03, C04, C06, C09, C16, C18, C75, C83
30~100	10	C08, C12, C13, C14, C17, C20, C25, C27, C28, C40
10~30	16	C02, C05, C07, C15, C26, C33, C39, C46, C47, C49, C50, C53, C60, C61, C74, C77
0~10	46	C01, C10, C11, C19, C21, C22, C23, C24, C29, C30, C31, C32, C34, C35, C36, C37, C38, C41, C42, C43, C44, C45, C48, C51, C52, C54, C55, C56, C57, C58, C59, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C76, C78, C82
Average betweenness		106.01
Std. dev.		443.91
Betweenness	N. of Places	List of Places
1300~1400	1	P52 *
300~610	11	P17 *, P20 *, P30 *, P43 *, P46 *, P03, P29, P05 *, P14 *, P12, P18
100~300	22	P33, P48, P21, P13, P25*, P26, P15, P44, P28, P27, P31, P07, P02, P01 *, P45, P50, P24, P11, P10 *, P35 *, P40, P49
50~100	7	P19, P34, P23, P06, P39, P51, P22
10~50	8	P47, P41, P09, P36, P16, P42, P55, P04
0~10	7	P38, P37, P32, P08, P56, P54, P53
Average betweenness		109.39
Std. dev.		224.39

Notes: Places with asterisks (*) are prefectural seats. Betweennness centrality is calculated in UCINET 6.733 on the bipartite version of the two-mode data.

Table 5. Betweenness Centrality and Ranking by Centrality Measures.

Cults	Btw. Cent.	Rank by			
		(B)	(D)	(E)	(C)
C79	3456.0	1	1	1	1
C80	1945.9	2	2	2	2
C81	1132.1	3	3	2	2
C04	319.1	4	4	4	4
C18	198.0	5	9	12	4
C75	146.1	6	11	8	7
C83	137.0	7	45	58	16
C03	133.2	8	6	6	8
C06	125.2	9	7	8	3
C16	119.5	10	5	4	5

Places	Btw. Cent.	Rank by			
		(B)	(D)	(E)	(C)
P52 *	1369.0	1	1	1	1
P17 *	607.2	2	2	2	2
P20 *	569.2	3	4	4	3
P30 *	561.5	4	5	24	8
P43 *	489.8	5	3	3	3
P46 *	420.1	6	8	12	8
P03	417.4	7	8	9	5
P29	401.1	8	11	14	11
P05 *	387.6	9	12	25	13
P14 *	372.1	10	6	5	5

Notes: (B) betweenness centrality; (D) degree centrality; (E) eigenvector centrality; (C) closeness centrality. Places with asterisks (*) are prefectural seats. Centrality scores are calculated on the bipartite version of the two-mode data.

In short, centrality analysis at the node level leads to several observations that are broadly in line with the received knowledge, but it also raises new questions and casts new light on popular religion in late Song and Yuan times. Many scholars have noted the rise of regional cults in Song times. As Valerie Hansen puts it, whereas "local deities . . . had just one temple in a village or city," "regional cults were not confined to a single locality but spread across space, so that their temples covered regions and in some cases the nation." (Hansen 1990) (p. 128). This dichotomy between local and regional, as the present study shows, obscures the wide diversity of popular cults whose scope of influence varied along a full continuum. Between the few "regional cults" that have consistently captured scholarly attention and numerous obscure deities whose influence was confined to a single village, there was a multitude of deities that attracted devotees from as few as several counties or as many as several prefectures. The distribution of temples suggests that these cults spread in two different ways. Naturally, one mode of spread was to adjacent counties and prefectures, urban and rural alike, and as a result, the temples of these cults were often concentrated in a contiguous space comprising a few counties and sometimes a few prefectures. These cults created distinctive religious cultures in different subregions of the Lower Yangzi. On the other hand, some cults appear to have also spread from city to city—whether carried by traveling literati, officials, merchants, or religious specialists—without immediately expanding into more rural areas nearby. As a result, their temples were dispersed across the Lower Yangzi, linking together the smaller subregional cultures in the region. In other words, translocal cults in the Song played a dual spatio-cultural role: they fostered the formation of subregional popular religious cultures, but also built connections between them. Because it focuses exclusively on the number of localities where a cult was present, centrality analysis is ill-equipped for identifying subregional religious cultures or describing their connections. To do so, I will turn to cluster analysis in the following section.

4. Subregional Religious Cultures

To understand the different subregional religious cultures, this section presents analysis that used the Louvain algorithm. The purpose is to explore whether the dozens of places in the Lower Yangzi may be meaningfully partitioned into a few subregional clusters based on shared popular cults.

The Louvain method uses an iterative algorithm to partition a network into clusters by maximizing the density of ties within each cluster and minimizing the density of ties between clusters. As described earlier, this study uses a two-mode dataset that consists of two types of nodes (places and cults) and in which connections exist only between the two types of nodes but not between nodes of the same type. A common approach to studying a two-mode network is to construct two one-mode projections out of it: one containing only cult nodes, with ties representing whether any two cults were recorded in the same place, and the other containing only place nodes with ties representing whether any two places had temples belonging to the same cult. This approach is believed to cause a loss of crucial structural information. Although some scholars argue that the data loss is minimal so long as both projections are studied and neither projection is dichotomized (Everett and Borgatti 2013) the conversion approach assumes, for each one-mode projection, that all ties are the same, even though they are derived from connections to different nodes of the other type.[12] These differences, which are obscured in one-mode projections, are nevertheless crucial for the present study. Therefore, the study in this section took a direct approach and analyzed the two-mode network as is.

A major drawback of the Louvain method, which also troubles many other clustering algorithms, is that each node is assigned to one and only one cluster. This is not meaningful for cults that were widespread in the Lower Yangzi or places that were host to many cults. Therefore, to best understand the tendency towards subregional clustering, the superstar cults and the mega-hub of Lin'an were excluded from cluster analysis, thus leaving 80 cults and 55 places in the dataset. Of these nodes, 51 places (P01~P51) and 78 cults (C01~C78),

linked by 249 ties, comprise the main component. This section takes this 51×78 matrix as the object of analysis and submits its bipartite version to the Louvain routine in UCINET.

Within the main component, the Louvain algorithm identified seven clusters with a Q value of 0.545. I have coded these clusters with Roman numerals. The Q value, also known as the modularity score, measures the extent to which the fraction of ties that fall within a cluster deviates from what is expected by random chance (Newman 2004). It does so by comparing the density of links inside clusters and the density of links between clusters. When the Q value is 0, it indicates that the distribution of ties inside clusters is no better than at random. Conversely, if the Q value approaches 1, which is the maximum, it indicates that the nodes in a network show a strong tendency of coalescing into distinct clusters. Since the Q value in real-world networks typically falls between 0.3 and 0.7 (Newman and Girvan 2004), the value of 0.545 obtained in the present analysis suggests a meaningful partition.

Nonetheless, it should be noted that the Louvain algorithm is non-deterministic and may produce slightly different outcomes every time it is run. The outcomes are particularly problematic for nodes that do not have a strong connection to any specific cluster, such as the superstar cults. While excluding the superstars and the mega-hub of Lin'an from the input data mitigates the problem, it cannot fully eliminate it. Therefore, several precautions were taken in the present analysis: I used quantitative (e.g., the Q score) and visual clues to assess the validity of the Louvain outcome; I also consider the Louvain outcome as instructive but not definitive; and I focus on the general pattern of clustering but avoid reading too much into which cluster each individual node is assigned to.

Because I take the outcome of the Louvain algorithm as instructive but not definitive, I made some small changes to the output from UCINET. These changes include: moving the prefectural seat of Pingjiang (P01) from Cluster I to II, moving the prefectural seat of Taizhou (P25) from Cluster I to VII, and moving Deqing 德清 county (P08) from Cluster VII to III. I also moved C17 from Cluster VII to III, C34 from Cluster VII to I, and C11 from Cluster I to II. These modifications are to ensure that a cult always had temples in more places in the cluster where it is assigned than in any of the other clusters. In the modified outcome, the number of nodes in each cluster—places and cults combined—ranges from 13 to 29. The modified outcome is summarized in Table 6 and used to color the nodes in Figure 1.

Table 6. Louvain Clusters (Subregional Popular Religious Cultures).

Cluster	Size		Representative Prefectures	Top Cults
	Places	**Cults**		
I	10	19	Zhenjiang (3/3), Jiankang (3/3)	C04
II	6	8	Pingjiang (4/4), Jiaxing (2/4)	C75
III	7	10	Huzhou (4/4), Lin'an (2/6)	C14, C19
IV	11	15	Yanzhou (5/5), Huizhou (2/2), Changzhou (2/3), Lin'an (2/6)	C03, C16
V	6	9	Shaoxing (4/5), Lin'an (2/6)	C61
VI	5	11	Qingyuan (5/6)	C27, C60, C71
VII	6	6	Taizhou (5/5)	C53, C54

Notes: The Louvain algorithm was run on the bipartite version of the 51×78 matrix. "Size" reports the total number of places and cults assigned to each cluster by the Louvain algorithm after modifications. The "Representative Prefectures" column lists the prefectures that each cluster is most closely associated with. The numerator in the parentheses following each prefecture is the number of places in each prefecture that fall inside a given cluster, and the denominator is the total number of places in that prefecture. Top cults are those that had ties to the largest number of places inside the cluster.

Using the Louvain clustering outcome, the original 51×78 matrix was permutated so that places (and cults) belonging to the same cluster are placed close together in the rows (and columns) (Matrix 1). This was to facilitate the visual inspection of how ties are distributed in the network, as well as to calculate the number and density of ties within and

between clusters. The calculations show that about 73% of the ties are between places and cults within the same cluster (see the concentration of ties in the diagonal blocks of Matrix 2). Accordingly, the density of ties within a cluster (i.e., the diagonal values in Matrix 3) ranges from 20.6% to 58.3%, whereas the tie density between clusters is consistently below 7%, usually hovering between zero and 4%. The distribution of ties within and between clusters confirms the validity of the Louvain clustering outcome.

Matrix 1. The 51 × 78 Data Matrix, Blocked by the Modified Louvain Clusters

Notes: Place nodes are in rows, and cult nodes are in columns. Each block represents a modified Louvain cluster, or subregional popular religious culture (I to VII, from left to right and from top to bottom). The cross (×) indicates the presence of a tie between the place in the row and the cult in the column. Places with asterisks are prefectural seats.

Matrix 2. Number of Ties Inside and Between Clusters

	I	II	III	IV	V	VI	VII
I	48	3	3	6	0	4	0
II	5	20	4	5	2	2	0
III	0	0	21	3	1	0	1
IV	5	1	2	34	1	0	0
V	1	1	4	1	18	1	0
VI	2	0	0	1	0	21	0
VII	3	0	1	3	0	0	21

Notes: Shades of orange vary with the number of ties.

Matrix 3. Density of Ties (%) Inside and Between Clusters

	I	II	III	IV	V	VI	VII
I	25.3	3.8	3.0	4.0	0	3.6	0
II	4.4	41.7	6.7	5.6	3.7	3.0	0
III	0	0	30.0	2.9	1.6	0	2
IV	2.4	1.1	1.8	20.6	1.0	0	0
V	0.9	2.1	6.7	1.1	33.3	1.5	0
VI	2.1	0	0	1.3	0	38.2	0
VII	2.6	0	1.7	3.3	0	0	58.3

Notes: Shades of orange vary with the density of ties.

When the places are projected on a map (Figures 2 and 3) and colored by their cluster affiliations, it becomes obvious that those in the same cluster are often—albeit not always—located close to each other. The distance matrix (Matrix 4) provides a quantitative confirmation that places of the same cluster are usually in the same area of the Lower Yangzi. The matrix shows that the average distance between each pair of places within the same cluster is invariably below 130 km, usually significantly shorter than the average distance between places in different clusters. Geographical clustering was particularly conspicuous in Clusters II, III, V, VI, and VII. Inside each of these clusters, the average distance between two places ranges from only 40 to 75 km. Each cluster, in other words, signifies a subregional religious culture that was centered on a distinctive group of cults (Table 6). Cluster II, for example, encompasses the entire prefecture of Pingjiang and two counties in the adjacent prefecture of Jiaxing. Seven cults were found predominately in these places, and among them the most widespread was the cult of Fuchai (C75), a local ruler from the fifth century BCE, who had temples in five of the six places inside Cluster II. Similarly, all five places in Cluster VI were inside the Qingyuan prefecture, and its most popular deities included Guan Yu (C27), Gentleman Bao 鮑郎 (C60), and Emperor Yang of Sui 隋煬帝 (C31).

By partitioning the network into clusters, it becomes easier to identify which cults were most closely associated with which subregion of the Lower Yangzi. It should not surprise us to see that many of the cults (e.g., C04, C16, C27, C53, C54, C75) whose temples are known to have concentrated in a specific area of the Lower Yangzi (see discussion in the preceding section) are listed in Table 6 among the top cults of different subregions.

The relationship between the subregional clusters of popular cults and other aspects of local culture warrants further research. For now, it suffices to point out that there is a recognizable correspondence between the subregional clusters of popular cults, identified here by the Louvain algorithm, and the distribution of dialect groups in today's Lower Yangzi (see Figure 4).[13] The correspondence is understandably only approximate, given that the language atlas is produced from twentieth-century surveys. Nonetheless, it is instructive to see that the twelve prefectures included in this study span eight dialect clusters (A to H on map) in modern times, and each dialect cluster correspond roughly to a subregional cluster of popular cults discovered by the Louvain algorithm. The only exception is perhaps Louvain Cluster I, which also includes some areas that today speak a variant of Jiang-Huai Mandarin (*Jiang-Huai guanhua* 江淮官話).
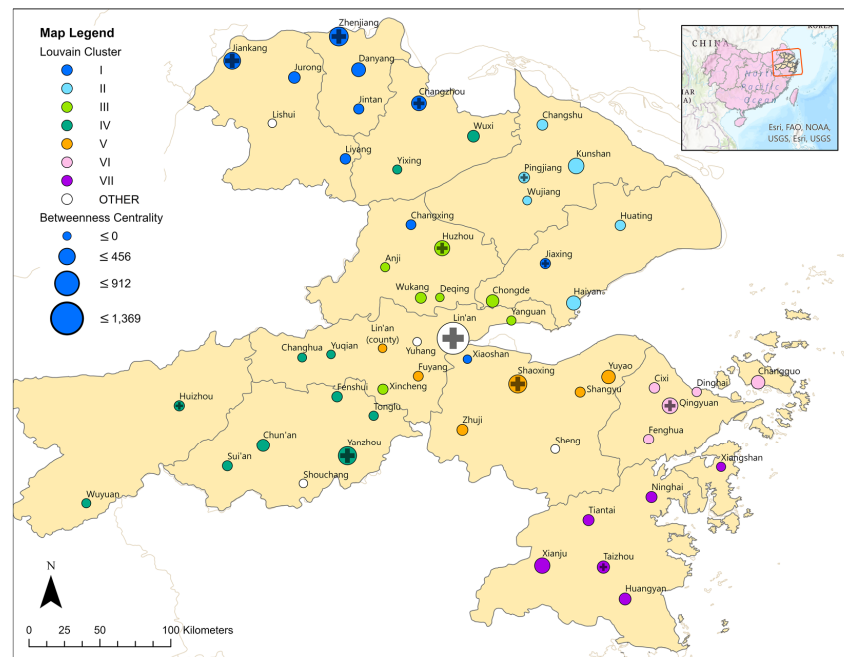
Figure 2. Map of subregional popular religious cultures. Places are colored according to their modified Louvain cluster memberships. Places not in the 51 × 78 matrix are colored white and marked as "other" in the legend. Places are sized by betweenness centrality. Prefectural seats are represented with a cross in the circle. Polygons represent prefectural borders in 1250 based on the time series data in the China Historical GIS (CHGIS), version 6. All maps in this article are generated in ArcGIS Pro 2.7.3.
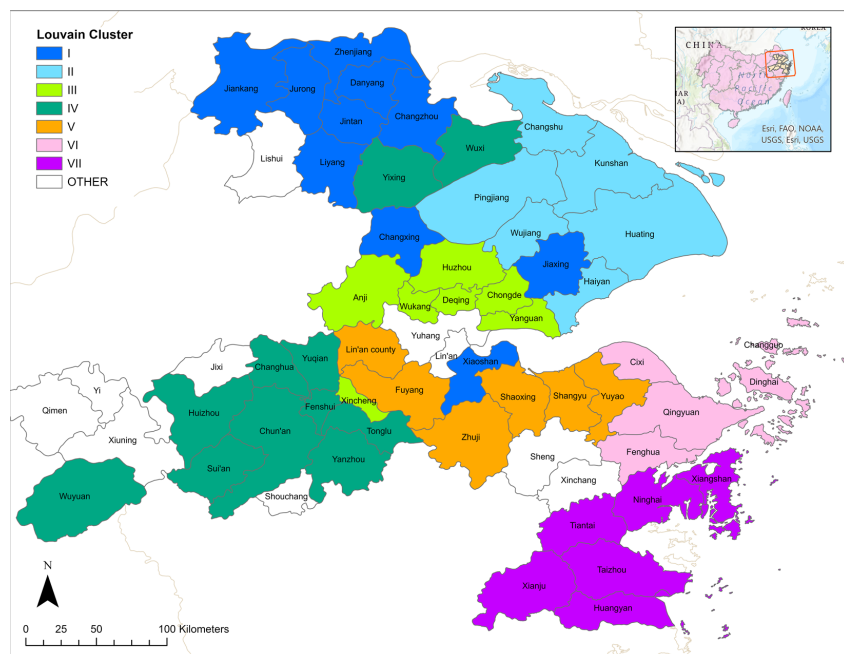

Figure 3. Map of subregional popular religious cultures shown in county polygons, which provides a more intuitive view of subregional clustering. County borders are based on Robert Hartwell, "Hartwell China Historical GIS," https://doi.org/10.7910/DVN/29302, Harvard Dataverse, version 2, 2015. Counties are colored according to their modified Louvain cluster memberships. Places not in the 51 × 78 matrix are colored white and marked as "other" in the legend.

Matrix 4. Average Distance (km) Between Pairs of Places Inside and Between Clusters

	I	II	III	IV	V	VI	VII
I	110.9	141.9	137.6	198.0	194.3	263.4	317.0
II	141.9	62.1	113.9	213.2	148.1	164.8	244.1
III	137.6	113.9	55.9	134.0	88.4	169.2	205.6
IV	198.0	213.2	134.0	127.4	150.6	251.7	247.4
V	194.3	148.1	88.4	150.6	74.1	119.7	144.8
VI	263.4	164.8	169.2	251.7	119.7	40.5	109.3
VII	317.0	244.1	205.6	247.4	144.8	109.3	65.9

Notes: Distances shorter than 100 km are in bright yellow. Distances between 100 and 130 km are in light yellow.
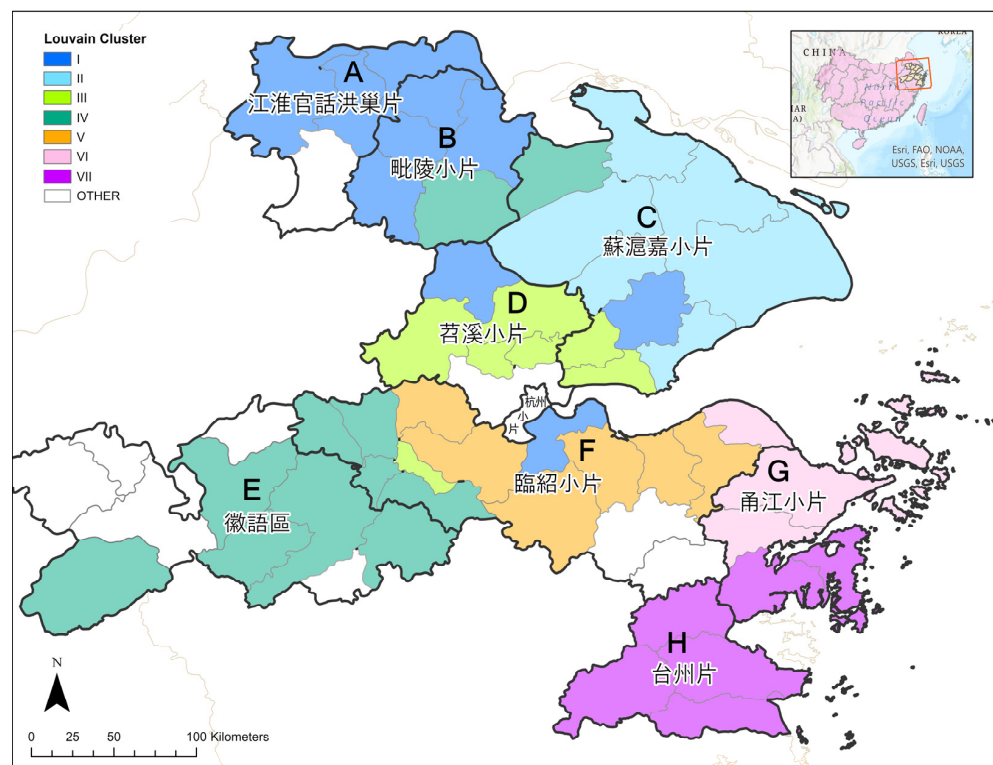

Figure 4. Map showing the correspondence between subregional clusters of popular cults and modern dialect groups. Grey lines represent county borders in the late Song, based on Robert Hartwell, "Hartwell China Historical GIS"; black lines are borders of twentieth-century dialect clusters. Data source: (Australian Academy of the Humanities and Chinese Academy of Social Sciences 1988) (c1987). In the area marked A on the map, the language spoken today is a variant of Jiang-Huai Mandarin that covers a wide area between the Huai River and the Yangzi River. Modern inhabitants in E speak a wide diversity of languages that are either lumped together as the "Hui language" (*Huiyu* 徽語) or considered variants of the Wu language (*Wuyu* 吳語). In all the other clusters, the languages spoken today are variants of the Wu language. The *Language Atlas of China* also places the Hangzhou dialect (*Hangzhou xiaopian* 杭州小片) as a separate cluster in the Wu dialect group, which roughly corresponds to the prefectural seat of Lin'an in the present study.

Although places in a Louvain cluster are usually in contiguous space, the Louvain clusters do not correspond to administrative units. The boundaries of a Louvain cluster frequently cut across the borders of the prefectures. For example, places in Clusters III are all in close proximity to each other, but they include counties in three different prefectures. Similarly, the average distance inside Cluster V is 74 km, but it includes places from both

Shaoxing 紹興 and Lin'an prefectures. To test this observation, I constructed two 51×51 adjacency matrices where every row and column is a place. Each matrix has only binary values of 0 (no) and 1 (yes), representing, respectively, whether each pair of places falls inside the same prefecture and whether each pair of places is assigned to the same Louvain cluster. The Pearson correlation coefficient between these two matrices (0.416) suggests that prefectural affiliation was only moderately correlated with the clusters of places detected by the Louvain algorithm. Except for Cluster VI, all of the other clusters each contain places from two or more prefectures. An extreme case is Cluster I, which has places from six different prefectures, although the average distance inside the cluster is moderate (111 km).

In brief, beneath the canopy of the three extremely widespread cults (the God of the Eastern Peak, King Zhang, and the Five Manifestations), there were seven subregional popular religious cultures (i.e., the Louvain clusters) in the Lower Yangzi, each comprising five to eleven places that were usually located near each other. Each subregional culture was centered around the worship of a distinctive group of deities, whose temples were located primarily inside that subregion. About half of these cults (42/78) had no temples outside their own subregion. For example, Wang Hua 汪華 and his sons (C49) were worshipped only in Yanzhou and Huizhou (Cluster IV), Qian Liu 錢鏐 (C74) only in Lin'an and Shaoxing (Cluster V), and so forth. Although it is shown in the previous section that the hierarchy of places mattered and that the prefectural seats were host to a wide variety of cults, it is also clear that the boundaries of popular religious subregions did not conform to administrative divisions. In the Lower Yangzi during late Song and Yuan times, the influence of a cult frequently went beyond prefectural borders.

5. Connections between Subregional Cultures

5.1. Cults across Subregional Cultures

In Section 3 of this article, I have shown with centrality calculations the wide diffusion of three superstar cults. By partitioning the network into subregional religious cultures, it becomes clear that these superstars played a uniquely integrative role in linking together these subregions. Of all the cults included in this study, only these three had temples in all seven subregions of the Lower Yangzi (Table 7).

Table 7. Distribution of the Superstar Cults by Subregion.

Cult	Lin'an (P52)	I	II	III	IV	V	VI	VII	Other	Total
C79	1	9	4	6	7	4	5	6	3	45
C80	1	8	4	2	9	2	3	5	0	34
C81	1	6	1	1	5	4	2	5	1	26

Notes: "Other" refers to places (P53~P56) that are not included in the 51×78 matrix and therefore not assigned to any Louvain cluster. Roman numerals refer to the subregional religious cultures identified by the Louvain algorithm after the modifications. Numbers in these columns report the number of places in each subregion where each superstar had at least one temple.

However, it must be emphasized that the seven subregions were not linked together exclusively by these superstars. A quick look at off-diagonal blocks in Matrix 1 reveals that popular religious ties across subregional cultures were sparse, but not entirely absent. In addition to the three superstars, a total of thirty-six cults had temples in more than one subregion (Figure 5): twenty-three had temples in two subregions; twelve in three or four; and the King Yan of Xu (C16) was nearly as influential as the three superstars and had temples in six of the seven subregions. While not as ubiquitous as the three superstars, these thirty-six cults nonetheless played a role in connecting different subregional cultures.
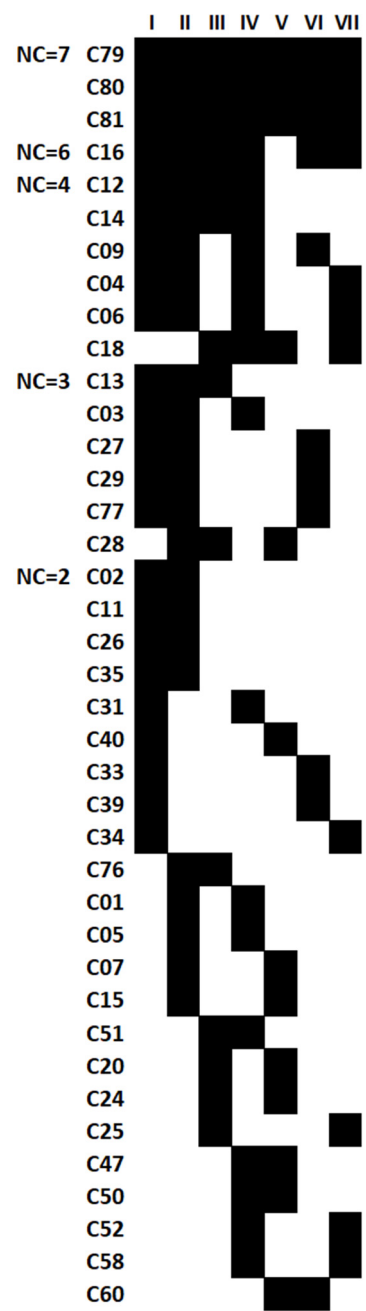
Figure 5. NC is the number of subregional cultures to which a cult node had one or more ties. A filled square indicates that the cult (represented in the row) had ties to one or more places inside the subregion (represented in the column).

Compared to the three superstars, these cults were far less widespread, and each had influence only in a more limited geographical area. Nonetheless, they were "bridges" between the Louvain clusters, and collectively they tied together all seven subregions in an interlocking manner. Ji Zha 季札 (C02), for example, had temples only in Subregions I and II, King Helü 闔閭 of Wu (C76) only in II and III, Zhou Xiong 周雄 (C51) only in III and IV, and Lord Chunshen 春申君 (C05) only in II and IV, but together they linked these four subregional cultures into an expansive network. A metaphor may help elucidate the differences between superstars and these less influential cults: if the superstars were like the leather foundation onto which different subregional cultures were sewn like the metallic rings onto a ring armor, these thirty-six cults connected the subregions in a way similar

to chain mail. By way of these thirty-six cults, different subregional cultures, like metallic rings on chain mail, became interlocked with each other.

The pruning table (Table 8) underscores the importance of these bridges in linking up different subregions. In this table, the influence of a cult is measured by the number of subregions (NS) where it had one or more temples. It is clear that when the superstar cults (NS = 7) are hypothetically removed, the two-mode network linking cults to places becomes only very slightly fragmented. The remaining cults successfully held all but two places together in the network. Collectively, even the sixty-seven least influential cults (i.e., those that had influence in only one or two subregions) alone[14] were capable of linking together all but seven of the places in the Lower Yangzi. Not surprisingly, the network becomes considerably more fragmented if all the prefectural seats are also removed from the network. The biggest fall-off takes place when the three superstars and all the prefectural seats are removed all at once, which immediately breaks the network down into five disconnected components. Nonetheless, all but five of the counties remain in the main component, and no substantial change is observed insofar as the seventy-three least influential cults (i.e., those that had temples in one, two, or three subregions) are retained.

Table 8. Pruning Nodes by Number of Louvain Clusters.

Cults Pruned	N. of Cults Remaining	No Places Pruned			All Prefectural Seats Pruned		
		Places (MC)	Comps.	Iso. (P)	Places (MC)	Comps.	Iso. (P)
None	83	56	1	0	43	2	0
NS = 7	80	54	1	2	38	5	2
NS ≥ 6	79	53	1	3	37	5	3
NS ≥ 5	79	53	1	3	37	5	3
NS ≥ 4	73	52	1	4	36	5	4
NS ≥ 3	67	49	1	7	29	6	7

Notes: NS is the number of cultural subregions where a cult had one or more temples. The columns report, from left to right: the number of cult nodes remaining in the network after pruning, the remaining number of places in the main component (MC), the total number of components, and the total number of place nodes that become isolates in the network.

5.2. The Structure of Cross-Subregional Connections

In an interlocking manner, the thirty-six bridges tied together the seven subregional clusters into an expansive network that spanned the entire Lower Yangzi region (Figure 6 provides an intuitive illustration of these connections). However, it is obvious that some subregions (e.g., I and II) had more cults in common, while others (e.g., VI and VII) did not. To fully understand the structure of the connections between subregions, the following analysis constructed a one-mode network and explored the strength of ties between each pair of subregions.

The one-mode network used in this analysis is a 7 × 7 adjacency matrix where each row and column represents a subregion. In other words, each row and column can be conceptualized as a collection of all the places that belong to a specific subregional cluster. Ties between subregions are undirected and weighted (that is, the matrix is symmetric and valued). The weight of a tie between any two subregions is determined by two factors: (i) the number of cults shared by the two subregions and (ii) the number of places inside each subregion where the shared cult had a presence. The first factor measures how many cults the two subregions had in common, and the second measures how widespread the common cult was inside each of these two subregions.

Take the cult of the First Emperor of Qin (C28), for example (Figure 7). It had temples in four different places which were scattered across three subregions (P12 was in Subregion II, P13 in Subregion III, and P31 and P34 in Subregion V). Therefore, four place-to-cult ties are registered in the original 51 × 78 two-mode matrix (see the left panel in Figure 7). After the data were transformed into a one-mode network between places (see the central panel) and places were further consolidated into subregions (see the right panel), the tie between

subregions II and V, for example, has a strength of two, reflecting the two place-to-place ties (P12 to P31, and P12 to P34) that span these subregions.
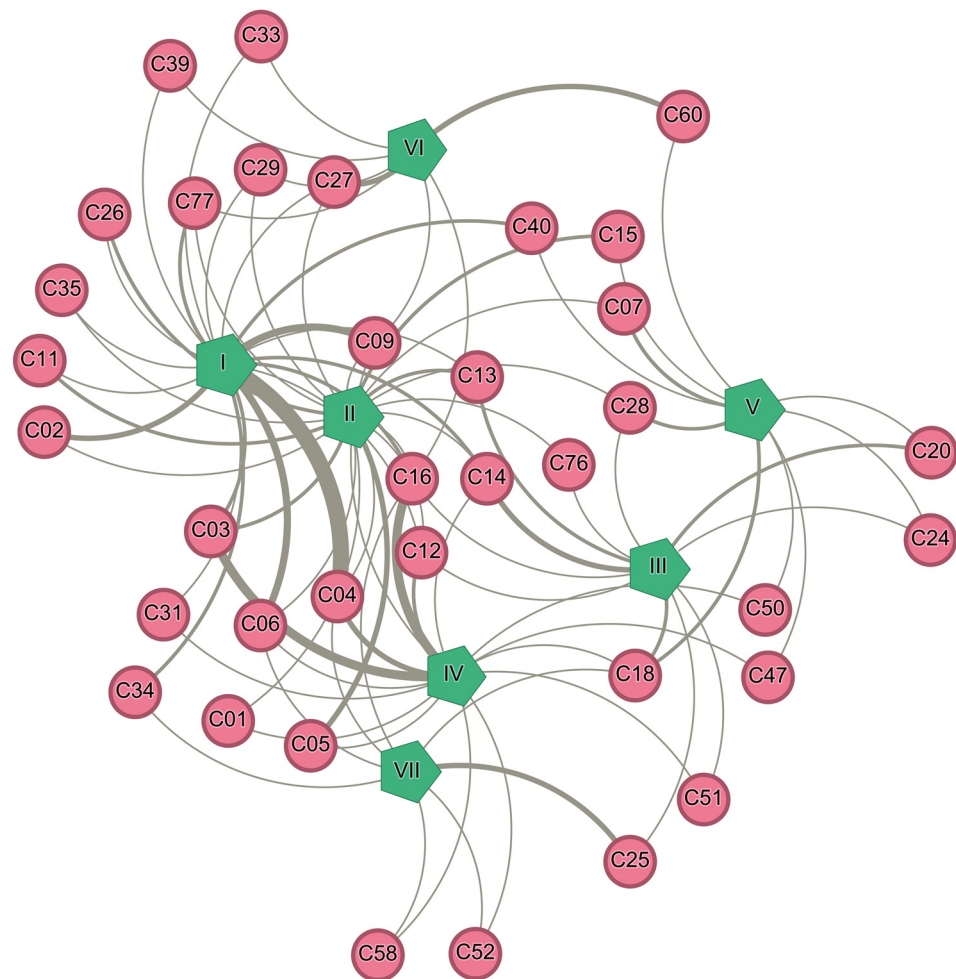

Figure 6. Connections of Subregional Popular Religious Cultures through Cults. This graph shows the 36 cults ("bridges") that had ties with two to six subregional cultures ($2 \leq NC \leq 6$). Green pentagons represent the seven subregional cultures, and red circles represent the cults. The thickness of a line between a cult and a subregion is based on the number of places the cult had ties to inside the subregion.
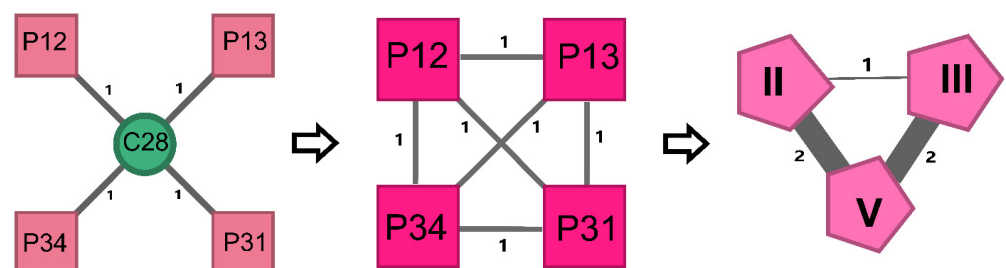

Figure 7. Transformation of the Two-Mode Data Matrix: An Example.

Obviously, the strength of a tie between two subregions is contingent on the total number of places each subregion contains. To address this issue, the weight of a tie was normalized by the maximum possible weight between each pair of subregions, the latter being the product of the total number of places inside one subregion multiplied first by

that in the other subregion and then by the total number of cults (in this case, 78) included in this analysis. In other words, the maximum possible weight between any pair of subregions was obtained under the hypothetical scenario where every cult had a temple in every place inside each of the two subregions. To summarize this procedure in mathematical terms, the strength of a tie (s_{ij}) between any two subregions i and j is obtained using the following equation:

$$s_{ij} = \frac{t_{ij}}{(p_i + p_j) \times 78}, \; i \neq j$$

where p_i is the total number of places in subregion i; p_j is the total number of places in subregion j; and t_{ij} is the total number of pairs of places between subregions i and j that shared a cult, weighted by the number of cults they shared. The value of t_{ij} is obtained by first transforming the original 51×78 matrix into a 51×51 adjacency matrix with the sum-of-cross-products method, then blocking the 51×51 matrix based on the Louvain cluster membership of each place node, and lastly adding up the off-diagonal values in each block. All diagonal values were coded as zeros and ignored in the subsequent analysis. The result, presented in Matrix 5, shows the strength of ties between subregions. Matrix 5 reveals that cross-subregional ties were common, but their strength varied from zero to 85‰, with an average of 25.7‰ and a standard deviation of 20.9‰.

Matrix 5. Adjacency Matrix of Cross-Subregional Ties

	I	II	III	IV	V	VI	VII
I	0	85	20	70	4	36	36
II	85	0	34	52	21	30	11
III	20	34	0	22	27	4	18
IV	70	52	22	0	8	14	23
V	4	21	27	8	0	13	7
VI	36	30	4	14	13	0	4
VII	36	11	18	23	7	4	0

Notes: Cell values in the matrix are in ten thousandths (‰). Greater values are colored in darker green, and lesser values in lighter green. Therefore, darker cells indicate stronger ties between the two subregions.

It is possible to apply algorithms of cluster analysis to Matrix 5 and divide it into two or more groups. The Newman community detection (NCD) algorithm, for example, places Subregions I, II, and IV in one group and Subregions III and V in another, while each of the remaining two subregions (VI and VII) constitutes a single-member group (Figure 8). This partition is broadly consistent with the outcome of the Louvain algorithm,[15] but it is not particularly informative. The *Q* score is close to zero at every level of clustering, indicating that the partitions are not much better than pure randomness. It is also obvious in Matrix 6, especially if compared to Matrix 3, that the average strength of ties inside a group is not consistently greater than that between groups. For example, the tie between Groups 1 and 3 is as strong as that within Group 2, and the tie between Groups 1 and 4 is only slightly weaker than that within Group 2.

```
Level     C C C C C C C
          L L L L L L L
          3 5 6 1 2 4 7

------    --------------
      0   . . . . . . .
 -0.111   . . . XXX . .
 -0.078   XXX . XXX . .
 -0.009   XXX . XXXXX .
  0.006   XXX . XXXXXXX
  0.002   XXXXX XXXXXXX
  0.000   XXXXXXXXXXXXX
```

Figure 8. The Nested Hierarchy of Newman Community Detection (NCD) Partitions. Each cluster or subregion is represented in the matrix by "CL" followed by an Arabic numeral. For example, CL2 in the figure refers to Subregion II. Same below.

Matrix 6. Average Tie Strength (‰) within and between NCD Groups

	1	2	3	4
1	69.0	18.2	26.7	23.3
2	18.2	27.0	8.5	12.5
3	26.7	8.5		4.0
4	23.3	12.5	4.0	

Notes: Numbers in rows and columns represent the four groups generated by the NCD algorithm, with a Q value of -0.009. Group 1 contains subregions I, II, and IV; Group 2 contains III and V; Group 3 contains VI; Group 4 contains VII. Shades of green vary according to the average strength of ties.

Compared to the uninformative outcomes obtained from cluster analysis, a core–periphery model proves a much better fit for the data in Matrix 5. The core–periphery model partitions a network into a core whose members are closely connected and a periphery whose members have no connections among themselves but participate in the network through their ties with the core. A direct application of the core–periphery algorithm to Matrix 5 places Subregions I and II in the core and all the others in the periphery. However, given that the data in Matrix 5 are highly skewed (i.e., the ties between I and II and between I and IV are much stronger than those between any other subregions), I consider it more appropriate to first reduce the skewness with a natural log transformation on Matrix 5 and then use the log-transformed matrix as the input for core–periphery analysis. As a result, the categorical core–periphery algorithm finds a partition that comes very close to an ideal core–periphery structure (with a correlation coefficient of 0.841). It places four subregions (I to IV) in the core and three (V to VII) in the periphery (Matrix 7). The partition in Matrix 7 indicates that the area comprising the three peripheral subregions overlaps nearly perfectly with the three prefectures located south of Hangzhou Bay (i.e., the prefectures of Shaoxing, Qingyuan, and Taizhou). Although popular religious ties were dense inside each of these peripheral subregions, they were sparse between them.

Matrix 7. Log Transformation of Matrix 5, Blocked by Core and Periphery Memberships

```
          CL1   CL2   CL3   CL4     CL5   CL6   CL7
        ---------------------------------------------
CL1 |         4.443 2.996 4.248 | 1.386 3.584 3.584 |
CL2 | 4.443       3.526 3.951 | 3.045 3.401 2.398 |
CL3 | 2.996 3.526       3.091 | 3.296 1.386 2.890 |
CL4 | 4.248 3.951 3.091       | 2.079 2.639 3.135 |
        ---------------------------------------------
CL5 | 1.386 3.045 3.296 2.079 |       2.565 1.946 |
CL6 | 3.584 3.401 1.386 2.639 | 2.565       1.386 |
CL7 | 3.584 2.398 2.890 3.135 | 1.946 1.386       |
        ---------------------------------------------
```

Matrix 8 summarizes how many cults, excluding the three superstars, were shared by each pair of subregions. The differences between core and peripheral subregions stand out prominently in the matrix. While every pair of subregions in the periphery had only one cult in common, those in the core were connected by four to fifteen cults. Additionally, the peripheral subregions each shared a greater number of cults with one or more subregions in the core than with each other. Subregion VII (Taizhou),[16] for example, shared three to six cults with each of the core subregions, but only one cult with each of the two peripheral subregions nearby (V and VI). Likewise, Subregion VI (Qingyuan) shared seven cults with I and five with II, but only one with each of its peripheral neighbors (V and VII). On average, every pair of subregions in the core shared as many as five cults with each other. By contrast, those in the periphery shared only one cult with each other and three-and-a-half cults with subregions in the core.

Matrix 8. Number of Cults Shared Between Subregions, Blocked by Core and Periphery Memberships

```
          C  C  C  C    C  C  C
          L  L  L  L    L  L  L
          1  2  3  4    5  6  7
        ------------------------
CL1 | 20 15  4  8 |  1  7  4 |
CL2 | 15 21  6  9 |  3  5  3 |
CL3 |  4  6 11  5 |  4  1  3 |
CL4 |  8  9  5 16 |  3  2  6 |
        ------------------------
CL5 |  1  3  4  3 | 10  1  1 |
CL6 |  7  5  1  2 |  1  8  1 |
CL7 |  4  3  3  6 |  1  1  8 |
        ------------------------
```

Notes: The off-diagonal elements represent the number of cults—excluding the three superstars—that were shared by each pair of subregions. Only the thirty-six cults with an NC score between 2 and 6 are included in this analysis. The diagonal values show how many of these thirty-six cults had one or more temples inside the subregion they were primarily associated with. Many cults had temples in two or more subregions. Which subregion a cult was "primarily associated with," or "belonged to," is determined by its membership in the Louvain clusters (see Matrix 1).

Based on the above analysis, we can represent the 51 × 78 data matrix with a simplified graph (Figure 9) that illustrates, in broad strokes, the spatial structure of popular religious connections in the Lower Yangzi in the absence of the mega-hub of Lin'an and the superstar cults.
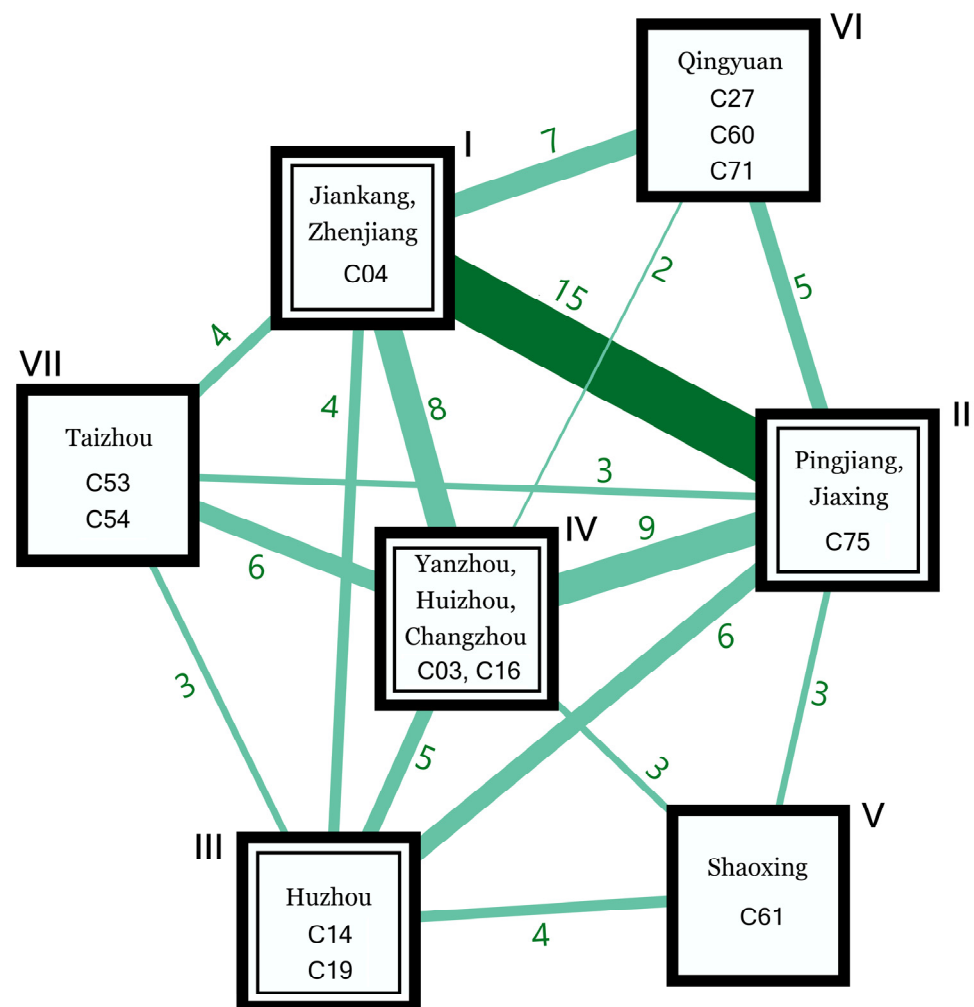
Figure 9. Spatial Structure of Popular Religious Connections in the Lower Yangzi. Lin'an (P52) and the superstar cults (C79~C81) are excluded. Each node represents a subregional popular religious culture; labels are representative prefectures and top cults in each subregion (for definitions, see Table 6). Core subregions are represented by squares with double-line borders. The thickness and darkness of an edge are both based on the number of cults shared by each pair of subregions, which is reported in Matrix 8 and also used here to label each edge. Because every pair of subregions shared at least one cult, for the sake of visual clarity, edges are not displayed between subregions that had only one cult in common.

5.3. Religious Diversity in Prefectural Seats

Previously, with centrality calculations, I have shown that prefectural seats, especially the Southern Song capital Lin'an, were host to large numbers of cults.[17] Partitioning the network into several subregions (i.e., Louvain clusters) and examining the popular religious ties between them sheds new light on the distinctive role of prefectural seats, which, as explained earlier in the article, encompassed both the walled cities and the metropolitan counties of the prefectures.

The unique role of prefectural seats in the network is nowhere more obvious than in the distribution of cross-subregional religious connections. A cross-subregional religious connection is defined here as a tie linking a cult to a place outside the Louvain cluster to which the cult is assigned. In other words, cross-subregional religious connections are the ties in off-diagonal blocks of Matrix 1. As shown in Table 9, of the 66 such connections, 53% were incident on a total of eleven prefectural seats, which comprised only 22% of the fifty-one place nodes included in this analysis. In contrast, nearly 80% of the ties incident

on counties connected cults and places within the same subregional cluster discovered by the Louvain algorithm. Take the cult of Chen Gaoren (C04) as an example. It had temples in fifteen different places, and fourteen of them are reported in Matrix 1 (see column 4 in Matrix 1).[18] Nine of these temples were inside the subregion the cult was primarily associated with (i.e., Subregion I). Five temples were located in other subregions, and of these five, three were in prefectural seats. In other words, of all the five ties linking the cult of Chen to places outside its primary subregion, three linked it to prefectural seats.

Table 9. A Survey of Place–Cult Ties, by Prefectural Seats and Counties.

| | Number of Ties Connecting Cults and Places Belonging to | | | | |
| | Same Subregion | | Different Subregions | | Total |
	N	%	N	%	N
Incident on Pref. Seat	60	32.8	35	53.0	95
Incident on County	123	67.2	31	47.0	154
Total	183 *	100	66 †	100	249

* This number equals the total number of ties in the diagonal blocks of Matrix 1 (i.e., the sum of diagonal values in Matrix 2). † This number equals the total number of ties in the off-diagonal blocks of Matrix 1 (i.e., the sum of off-diagonal values in Matrix 2).

The role of prefectural seats was similar inside the core as well as between the core and periphery. Of the 66 cross-subregional religious connections, 37 linked places and cults that belonged to different subregions in the core. Of these 37 ties, 54% were incident on prefectural seats. Similarly, exactly half of the 28 ties connecting cults in peripheral subregions to places in the core, or vice versa, were incident on prefectural seats (Table 10).

Table 10. Cross-Subregional Religious Connections by Core and Periphery.

| | Cross-Subregional Religious Ties Connecting Cults and Places | | | | | | |
| | Inside Core | | Inside Periphery | | Btw Core and Periphery | | Total |
	N	%	N	%	N	%	N
Incident on Pref. Seat	20	54.1	1	100	14	50	35
Incident on County	17	45.9	0	0	14	50	31
Total	37	100	1	100	28	100	66

In short, prefectural seats not only hosted more cults than ordinary subordinate counties. Usually, they were also more religiously diverse. To measure the diversity of each place, I constructed the "diversity score" as an indicator. To calculate the diversity score of a place, I first looked at how many cults had temples in that place and then what subregion each of these cults was primarily associated with (i.e., which Louvain cluster each of these cults is assigned to). The total number of unique subregions, or Louvain clusters, found in this manner was taken as the diversity score of that place. As reported in Table 11, more than half of the counties (22/40) had a diversity score of 1, and another 30% of the counties (12/40) had a diversity score of 2. In other words, the vast majority of the counties had only cults from one or two subregional cultures. By comparison, two-thirds of the prefectural seats (8/12) had a diversity score greater than or equal to three. That is, they were host to cults from three or more different subregional cultures. For example, seven cults were recorded in Chun'an county 淳安 (P21), two of which were the superstars. All the other five were primarily associated with the same subregion, Subregion IV, which was also the subregion that Chun'an itself belonged to. By contrast, the seat of Shaoxing prefecture (P30) was host to thirteen cults. Of these thirteen, two were superstars and four were primarily associated with Subregion V (which Shaoxing itself belonged to). The remaining seven cults had close ties with five different subregions. This remarkable diversity places Shaoxing on par with the prefectural seat of Lin'an, where twenty cults from

six different subregional cultures established a presence (Table 12). The runners-up were the seats of Jiankang and Zhenjiang prefectures, each of which had cults from four different subregional cultures. In short, the contrast between a prefectural seat and an ordinary subordinate county lies not only in the number of cults they each hosted, as their centrality scores have shown, but also in the wide diversity of subregional cultures these cults were closely associated with. These differences stand out clearly in Figure 10, where the circles for prefectural seats are both bigger (reflecting the greater number of cults they hosted) and more colorful (reflecting the greater diversity of cults they hosted).

Table 11. Diversity of Cults in Prefectural Seats and Counties.

Diversity Score	Number of Places by Diversity Score	
	N. of Counties	N. of Prefectural Seats
6	0	2 (Lin'an, Shaoxing)
5	1	2 (Zhenjiang, Jiankang)
4	2	0
3	3	4 (Pingjiang, Jiaxing, Changzhou, Yanzhou)
2	12	2 (Qingyuan, Taizhou)
1	22	2 (Huzhou, Huizhou)
Total	40	12

Notes: The "diversity score" of a place, be it a prefectural seat or an ordinary subordinate county, is the total number of subregions with which the cults recorded in that place were primarily associated.

Table 12. Number of Cults in Each Prefectural Seat, by Louvain Cluster Affiliation.

Prefectural Seat		Superstars	Louvain Cluster Affiliation of the Cults								Total
			I	II	III	IV	V	VI	VII	Other	
Lin'an	P52	3	8	2	3	2	1	4		2	25
Shaoxing	P30	2	1	1	3	1	4	1			13
Jiankang	P43	3	7	1	1	2		1			15
Zhenjiang	P17	3	9	1	1	1		3			18
Pingjiang	P01		4	3		2					9
Jiaxing	P10	3	3	1		1					8
Changzhou	P14	3	7		1	1					12
Yanzhou	P20	3	3			7	1				14
Qingyuan	P46	3	1					7			11
Taizhou	P25	3	2						4		9
Huzhou	P05	2			7						9
Huizhou	P35	2				2					4

Notes: Roman numerals refer to the subregions identified by the Louvain algorithm with modifications. "Other" refers to cults (C82~C83) that are not included in the 51 × 78 matrix. Values in the columns report the number of cults in each prefectural seat that were primarily associated with a given subregion.
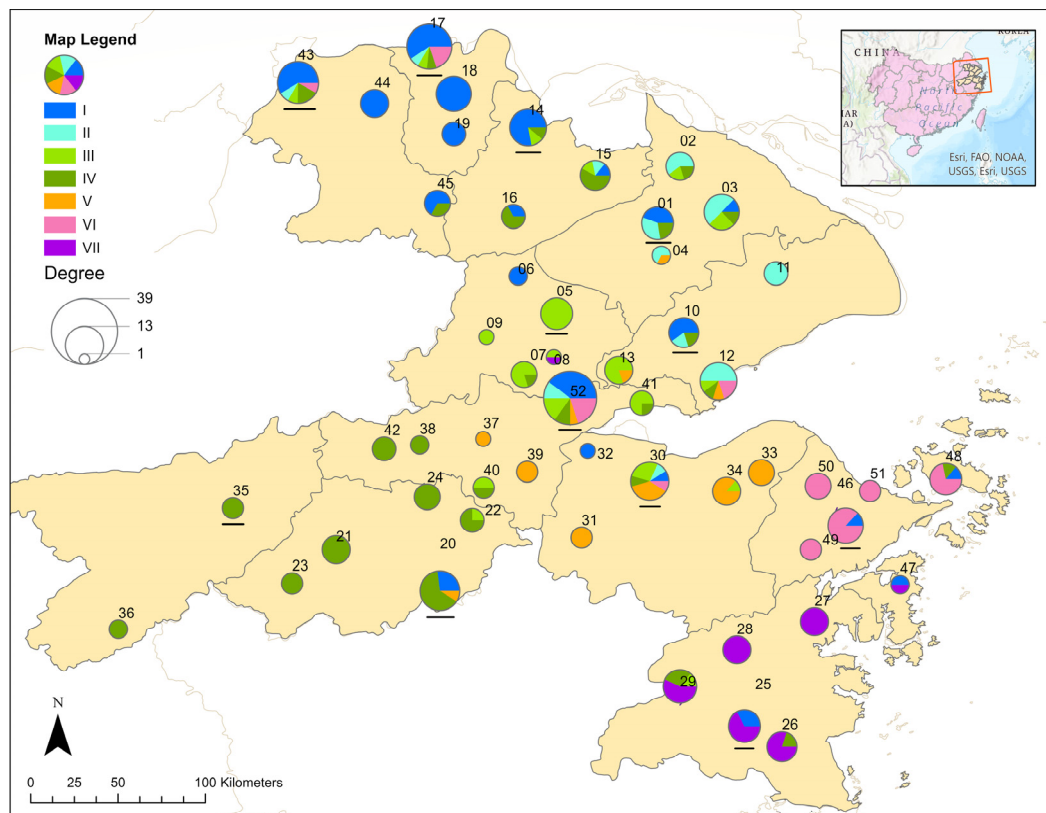
Figure 10. Diversity of Cults in Counties and Prefectural Seats. Prefectural seats are indicated by a line under the symbol. For labels on the places (with the prefix "P" dropped), see Appendix B.

5.4. Summary

The analysis in this section demonstrates that different subregional popular religious cultures were not linked together only through a few regional cults, like the superstars, which had devotees all over the Lower Yangzi. Just as important were cults of lesser influence, such as the thirty-six cross-subregional cults discussed in this section. While each of these cults only had an influence in a more confined geographical area than did the superstars, the overlaps between their spheres of influence created an interlocking chain of connections that linked up each subregional culture to another. Also worthy of note is the role of prefectural seats, which provided a meeting ground for a diverse range of cults that had devotees in different subregions. These cross-subregional cults and the prefectural seats created a crisscrossing network that spanned the Lower Yangzi and connected different subregional religious cultures in an interlocking manner.

6. Concluding Discussion

Unlike Buddhist and Daoist monasteries, which were homes to the clergy, cult temples were constructed and maintained by local devotees who sought the protection of the deities' miraculous powers. Although devotees in different places and from different social backgrounds—as James Watson and Michael Szonyi have observed—may have had different interpretations of the enshrined deities and perhaps even followed different ritual practices, these cults nonetheless provided shared symbols that could be used for pursuing diverse social purposes and interests. In this sense, popular cults and the activities associated with them, such as temple festivals, processions (*saishen* 賽神), and pilgrimages, played an important role in defining communities and shaping identities. While many cults had influence only in one or a few villages, the Song dynasty witnessed the growth of translocal cults that attracted devotees from multiple counties, prefectures, and even provinces. These translocal cults created crosscutting connections between different local-

ities and fostered the formation of overlapping identities. In his classical study of Mazu, Watson argues that religious symbols in popular cults provided a "structure" of integration across class and regional lines (Watson 1985) (p. 323). The integrative role of popular religion has since captured the attention of many scholars, who usually take a case-study approach and are strongly influenced by the interpretive traditions of cultural anthropology. These studies have yielded perceptive insights into many questions, such as how integrated Chinese society was in the late imperial era and how substantive that integration was. However, the crisscrossing web of connections across space, created and sustained by the large number of translocal cults that overlapped significantly in their spheres of influence, is rarely analyzed as a totality that has meaningful and describable patterns. This is the question that the present article takes on.

Setting aside interpretive issues, such as the substantiveness of integration in Chinese society, this study takes a structural approach to analyze the intersecting web of popular religious linkages between places. In doing so, I hope it sheds some new light on the issue of how popular cults fostered integration between different parts of the Lower Yangzi in the late Song and Yuan times. By shelving the issue of substantiveness, I hope to gain a better understanding of the *pattern* of integration that was brought to pass by popular religious connections. Using the lists of cult temples in extant local gazetteers and employing the methods of network analysis, this study shows that there were seven discernible, statistically significant subregional clusters of popular cults. Each cluster comprised five to eleven places, connected by a handful of cults whose temples were found predominantly in those places. These subregional clusters were in contiguous space, but they did not always correspond to administrative units. As distinctive as they were, they were nevertheless linked together in a variety of ways. This study discovered three complementary mechanisms of translocal linkages that invite us to rethink the issue of integration across space.

First and foremost, these subregional religious cultures were integrated by the diffusion of a few exceptionally popular cults, including the three superstars and perhaps also the cult of King Yan of Xu. As James Watson and other scholars have pointed out, these regional cults each fostered a shared religious culture that cut across geographical lines.

Although the spread of superstar cults was a powerful integrative force across space, the seven subregional clusters were also linked together in other ways. A second mechanism of linkage relied on thirty-five less influential cults that established a presence only in two and, less commonly, three or four subregions. Despite their more restricted spheres of influence, each cult functioned as a bridge between two or more subregional cultures; collectively, they created an interlocking chain of linkages among these subregions and brought them together into an interconnected social world. Notably, these interlocking religious ties were nearly absent among the three subregions (Shaoxing, Qingyuan, and Taizhou) south of Hangzhou Bay, but they played a significant role in connecting each of them to the more northerly subregions, as well as connecting those northerly subregions themselves. The distribution of these thirty-five cults, therefore, divided the popular religious subregions of the Lower Yangzi into a densely connected core and a loosely connected periphery.

Perhaps it comes as no surprise that places belonging to the same subregional culture were often located close to each other, but the boundaries of these subregions were not defined by the administrative borders of the prefectures. The organization of territorial administration mattered only in that higher-level administrative seats—the capital and the prefectural seats—provided yet a third mechanism of linkage between different subregional clusters. Not only did the prefectural seats on average host a greater number of cults than did the ordinary counties, but they were also more likely than those counties to have cults that were closely associated with a more diverse range of subregional cultures. The Southern Song capital, Lin'an, enjoyed an especially unique status. Of all the places included in this study, the prefectural seat of Lin'an had by far the largest number of cults and was one of the only two places, alongside the seat of Shaoxing, that hosted cults from as many as six different subregional cultures. Indeed, it seems that prefectural seats

were also an important meeting ground between religious cultures in the Lower Yangzi and those beyond. While the evidence presented here is at best tangential to this question, it is worth noting that several deities from outside the Lower Yangzi region, such as Mazu (C39), Pichang (C33), and Erlang (C65), had temples only in the prefectural seats. The unique position of prefectural seats in the network appears to have been the product of several different forces. In some cases (e.g., Vaiśravaṇa), a cult's close association with state authorities brought about a concentration of its temples in prefectural seats. In more cases (e.g., Mazu and Erlang), cults were spread from city to city by traveling merchants, scholars, officials, and religious specialists. All this turned prefectural cities, both as seats of government and hubs of commerce and transportation, into meeting grounds for a wide diversity of popular religious cultures.

These findings, I think, invite us to rethink the integration of Chinese society in new ways. Although previous studies often equate integration with the development of a unified religious culture, it is perhaps fruitful to conceptualize integration as a more general phenomenon that could also take place through the interactions between different subregional religious cultures without necessarily relying on the creation of a common, unified religion or the erasure of religious differences. On the one hand, the role of superstar cults is certainly not to be ignored. As many scholars have noted, the Song dynasty witnessed the growth of translocal religious cultures, such as those centered on the God of the Eastern Peak, King Zhang, and the Five Manifestations, which swept through the entire Lower Yangzi region and beyond. These cults provided a common set of religious symbols—if not always a common set of beliefs and practices—that facilitated the formation of a common, translocal identity and sense of belonging. Nevertheless, these exceedingly successful regional cults and the shared religious culture they fostered, were not the full story of integration in Chinese society across localities. Also important were those cults whose influence was more restricted to a few cities or a subregion of the Lower Yangzi and the prefectural cities that provided a meeting ground for a diversity of subregional popular religious cultures. These cults and cities facilitated interaction and exchange between disparate local communities and promoted pan-regional integration by joining them together in a chainmail fashion.

In short, I hope that the above analysis has revealed several complementary mechanisms by which integration across space was facilitated and sustained: the spread of a few extraordinarily popular cults that fostered the growth of a shared pan-regional religious culture; the presence of dozens of translocal cults that had narrower but overlapping spheres of influence and, as a result, tied nearby places into subregional clusters and linked together different clusters in an interlocking manner; and finally, the gravitational forces of prefectural seats that, as a hub of cultural exchange, facilitated the interactions between different subregions. These complementary mechanisms ensured that the integration in the Lower Yangzi was remarkably "robust," in the sense that it was durable and able to withstand the potential destructions of the few highly influential cults and places. The robustness can be illustrated with a pruning table (Table 13). Table 13 shows that the hypothetical removal of prefectural seats alone would not bring about an immediate fragmentation of the network, nor would the mere removal of the few highly influential cults. Indeed, insofar as all prefectural seats are retained, the presence of merely those cults with a degree centrality of two or three was sufficient for keeping the majority of the places (41/56) connected. Likewise, as long as all superstar cults are retained, removing the prefectural seats alone would not fragment the network, either. Only the simultaneous removal of superstar cults and prefectural seats would be significantly more damaging to the network. Even under this scenario, the remaining cults would still connect the majority of places (38/43) into a giant component.

Table 13. Pruning Nodes by Degree.

Cults Pruned	No Places Pruned			All Prefectural Seats Pruned		
	Places (MC)	Comps.	Iso. (P)	Places (MC)	Comps.	Iso. (P)
None	56	1	0	43	2	0
D ≥ 16	54	1	2	38	5	2
D ≥ 10	51	1	5	35	5	5
D ≥ 5	49	1	7	27	6	7
D ≥ 4	41	2	8	15	12	7
D ≥ 3	19	4	19	5	15	17

Notes: D is the degree of a cult node. The columns report, from left to right: the remaining number of places in the main component (MC), the total number of components (not including the isolates), and the total number of place nodes that become isolates in the network.

Lastly, the availability of a reasonably exhaustive list of temples and deities for the late Song and Yuan defines the scope of the present study as the twelve prefectures of the Lower Yangzi, but it should be emphasized that by no means should the Lower Yangzi be conceived as a bounded or self-contained space. Rather, the boundary of the region was porous, and it was traversed by religious ties linking the Lower Yangzi to other regions. The cult of King Zhang (C80), for example, had its base temple in Guangde Commandery 廣德軍 of Jiangnan East Circuit. Some of the lesser deities that had temples only in a few places of the Lower Yangzi, in fact, originated from and had a great influence in other regions. Temples to the deities of Mount Yang 仰山 (C38), for instance, were found only in the prefectural seats of Lin'an and Zhenjiang, but the cult had originated from Yuanzhou 袁州 (Jiangxi), and its branch temples were scattered widely in Jiangxi and Hunan (Pi 2008) (pp. 236–41). Likewise, Erlang (C65) had only a few temples in the prefectural seats of Lin'an and Jiankang, but it nevertheless linked the Lower Yangzi to the Chengdu Plain in Sichuan, where it originated. Similar cases include the cult of Pichang (C33) from Kaifeng and the cult of Mazu (C39) from Fujian, both of which established a presence only in the three prefectural seats of Zhenjiang, Lin'an, and Qingyuan. Nevertheless, the presence of these cults is indicative of the sprawling web of transregional religious connections in which the Lower Yangzi was embedded. As Wu Jiang has aptly put it, "the region is not a fixed entity with a clear boundary. Rather it is a geographic area composed of various converging relationships with political, economic, and cultural elements." (Wu 2022, p. 5). Integration in Chinese society must be understood as something realized at different geographical scales and through several complementary mechanisms. This complex structure of integration enhanced its robustness and gave it the ability to endure potential disruptions.

Appendix A

Table A1. Data Sources.

Title	Year	Type
Jiankang 建康府		
Ma Guangzu 馬光祖. *Jingding Jiankang zhi* 景定建康志. *Song Yuan fangzhi congkan* 宋元方志叢刊 (hereafter *SFCK*), vol. 2. Beijing: Zhonghua shuju, 1990.	1261	PG *
Zhang Xuan 張鉉. *Zhizheng Jinling xin zhi* 至正金陵新志. *SFCK*, vol. 6.	1344	PG
Zhenjiang 鎮江府		
Shi Mijian 史彌堅. *Jiading Zhenjiang zhi* 嘉定鎮江志. *SFCK*, vol. 3.	1213	PG
Tuoyin 脫因. *Zhishun Zhenjiang zhi* 至順鎮江志. *SFCK*, vol. 3.	1332	PG
Changzhou 常州		
Shi Nengzhi 史能之. *Xianchun Piling zhi* 咸淳毗陵志. *SFCK*, vol. 3.	1268	PG
Wuxi zhi 無錫志. *SFCK*, vol. 3.	c. 1296	CG *
Pingjiang 平江府		
Zhu Changwen 朱長文. *Wujun tujing xu ji* 吳郡圖經續記. *SFCK*, vol. 1.	1084	PG
Fan Chengda 范成大. *Wujun zhi* 吳郡志. *SFCK*, vol. 1.	1192	PG
Xiang Gongze 項公澤. *Chunyou Yufeng zhi* 淳祐玉峰志. *SFCK*, vol.1. (Gazetteer of Kunshan county.)	1251	CG
Xie Gongying 謝公應. *Xianchun Yufeng xu zhi* 咸淳玉峰續志. *SFCK*, vol. 1. (Gazetteer of Kunshan county.)	1272	CG
Yang Hui 楊譓. *Zhizheng Kunshan jun zhi* 至正崑山郡志. *SFCK*, vol. 1. (Gazetteer of Kunshan county.)	1341	CG
Sun Yingshi 孫應時, Bao Lian 鮑廉, and Lu Zhen 盧鎮. *Qinchuan zhi* 琴川志. *SFCK*, vol. 2. (Gazetteer of Changshu county.)	1363 †	CG
Jiaxing 嘉興府		
Shan Qing 單慶. *Zhiyuan Jiahe zhi* 至元嘉禾志. *SFCK*, vol. 5.	1288	PG
Yang Qian 楊潛. *Yunjian zhi* 雲間志. *SFCK*, vol. 1. (Gazetteer of Huating county.)	1193	CG
Luo Shushao 羅叔韶. *Ganshui zhi* 澉水志. *SFCK*, vol. 5. (Gazetteer of Ganpu 澉浦 market town.)	1230	TG *
Huzhou 湖州		
Tan Yue 談鑰. *Jiatai Wuxing zhi* 嘉泰吳興志. *SFCK*, vol. 5.	1201	PG
Lin'an 臨安府		
Zhou Cong 周淙. *Qiandao Lin'an zhi* 乾道臨安志. *SFCK*, vol. 4.	1169	PG
Shi E 施諤. *Chunyou Lin'an zhi* 淳祐臨安志. *SFCK*, vol. 4.	1252	PG
Qian Yueyou 潛說友. *Xianchun Lin'an zhi* 咸淳臨安志. *SFCK*, vol. 4.	1268	PG
Yanzhou 嚴州		
Chen Gongliang 陳公亮. *Chunxi Yanzhou tujing* 淳熙嚴州圖經. *SFCK*, vol. 5.	1185	PG
Qian Keze 錢可則. *Jingding Yanzhou xu zhi* 景定嚴州續志. *SFCK*, vol. 5.	1262	PG
Huizhou 徽州		
Zhao Buhui 趙不悔. *Xin'an zhi* 新安志. *SFCK*, vol. 8.	1175	PG
Shaoxing 紹興府		
Shen Zuobin 沈作賓. *Jiatai Kuaiji zhi* 嘉泰會稽志. *SFCK*, vol. 7.	1201	PG
Zhang Hao 張淏. *Baoqing Kuaiji xuzhi* 寶慶會稽續志. *SFCK*, vol. 7.	1225	PG
Shi Anzhi 史安之. *Shan lu* 剡錄. *SFCK*, vol. 7. (Gazetteer of Sheng county.)	1214	CG
Qingyuan 慶元府		
Zhang Jin 張津 et al. *Qiandao Siming tujing* 乾道四明圖經. *SFCK*, vol. 5.	1169	PG
Hu Ju 胡榘. *Baoqing Siming zhi* 寶慶四明志. *SFCK*, vol. 5.	1227	PG
Wu Qian 吳潛. *Kaiqing Siming xu zhi* 開慶四明續志. *SFCK*, vol. 6.	1259	PG
Ma Ze 馬澤. *Yanyou Siming zhi* 延祐四明志. *SFCK*, vol. 6.	1320	PG
Wang Yuangong 王元恭. *Zhizheng Siming xu zhi* 至正四明續志. *SFCK*, vol. 7.	1342	PG
Feng Fujing 馮福京. *Dade Changguozhou tuzhi* 大德昌國州圖志. *SFCK*, vol. 6. (Gazetteer of Changguo county.)	1298	CG

Table A1. *Cont.*

Title	Year	Type
Taizhou 台州		
Huang Xun 黃䇓 and Qi Shuo 齊碩. *Jiading Chicheng zhi* 嘉定赤城志. *SFCK*, vol. 7.	1223	PG

Notes: Primary sources are listed by prefecture and year of completion. Prefectures are listed according to their geographical location (from north to south). * PG stands for a prefectural gazetteer, CG for a county gazetteer, and TG for a gazetteer of a market town. † First compiled in 1196, subsequently expanded in 1254 and 1363.

Appendix B

Table A2. List of Place Nodes.

Label	ID	Name		Prefecture	Cluster	Notes
P01 *	2100	Pingjiang	平江府	Pingjiang	II	Includes Wu 吳 and Changzhou 長洲 counties.
P02	2103	Changshu	常熟	Pingjiang	II	
P03	2104	Kunshan	崑山	Pingjiang	II	
P04	2105	Wujiang	吳江	Pingjiang	II	
P05 *	2110	Huzhou	湖州	Huzhou	III	Includes Wucheng 烏程 and Gui'an 歸安 counties.
P06	2113	Changxing	長興	Huzhou	I	
P07	2114	Wukang	武康	Huzhou	III	
P08	2115	Deqing	德清	Huzhou	III	
P09	2116	Anji	安吉	Huzhou	III	
P10 *	2120	Jiaxing	嘉興府	Jiaxing	I	Includes Jiaxing 嘉興 county.
P11	2122	Huating	華亭	Jiaxing	II	
P12	2123	Haiyan	海鹽	Jiaxing	II	
P13	2124	Chongde	崇德	Jiaxing	III	
P14 *	2130	Changzhou	常州	Changzhou	I	Includes Wujin 武進 and Jinling 晉陵 counties.
P15	2133	Wuxi	無錫	Changzhou	IV	
P16	2134	Yixing	宜興	Changzhou	IV	
P17 *	2140	Zhenjiang	鎮江府	Zhenjiang	I	Includes Dantu 丹徒 county.
P18	2142	Danyang	丹陽	Zhenjiang	I	
P19	2143	Jintan	金壇	Zhenjiang	I	
P20 *	2150	Yanzhou	嚴州	Yanzhou	IV	Includes Jiande 建德 county.
P21	2152	Chun'an	淳安	Yanzhou	IV	
P22	2153	Tonglu	桐廬	Yanzhou	IV	
P23	2154	Sui'an	遂安	Yanzhou	IV	
P24	2155	Fenshui	分水	Yanzhou	IV	
P25 *	2160	Taizhou	台州	Taizhou	VII	Includes Linhai 臨海 county.
P26	2162	Huangyan	黃巖	Taizhou	VII	
P27	2163	Ninghai	寧海	Taizhou	VII	
P28	2164	Tiantai	天台	Taizhou	VII	
P29	2165	Xianju	仙居	Taizhou	VII	
P30 *	2170	Shaoxing	紹興府	Shaoxing	V	Includes Kuaiji 會稽 and Shanyin 山陰 counties.
P31	2174	Zhuji	諸暨	Shaoxing	V	
P32	2175	Xiaoshan	蕭山	Shaoxing	I	
P33	2176	Yuyao	餘姚	Shaoxing	V	
P34	2177	Shangyu	上虞	Shaoxing	V	
P35 *	2200	Huizhou	徽州	Huizhou	IV	Includes She 歙 county.
P36	2204	Wuyuan	婺源	Huizhou	IV	
P37	2214	Lin'an †	臨安	Lin'an	V	
P38	2215	Yuqian	於潛	Lin'an	IV	
P39	2216	Fuyang	富陽	Lin'an	V	
P40	2217	Xincheng	新城	Lin'an	III	
P41	2218	Yanguan	鹽官	Lin'an	III	
P42	2219	Changhua	昌化	Lin'an	IV	
P43 *	2220	Jiankang	建康府	Jiankang	I	Includes Jiangning 江寧 and Shangyuan 上元 counties.
P44	2223	Jurong	句容	Jiankang	I	

Table A2. *Cont.*

Label	ID	Name		Prefecture	Cluster	Notes
P45	2225	Liyang	溧陽	Jiankang	I	
P46 *	2230	Qingyuan	慶元府	Qingyuan	VI	Includes Yin 鄞 county.
P47	2232	Xiangshan	象山	Qingyuan	VII	
P48	2233	Changguo	昌國	Qingyuan	VI	
P49	2234	Fenghua	奉化	Qingyuan	VI	
P50	2235	Cixi	慈溪	Qingyuan	VI	
P51	2236	Dinghai	定海	Qingyuan	VI	
P52 *	2210	Lin'an	臨安府	Lin'an	—	Includes Qiantang 錢塘 and Renhe 仁和 counties.
P53	2213	Yuhang	餘杭	Lin'an	—	
P54	2156	Shouchang	壽昌	Yanzhou	—	
P55	2173	Sheng	嵊縣	Shaoxing	—	
P56	2224	Lishui	溧水	Jiankang	—	

Notes: Places are assigned to clusters using the Louvain algorithm. IDs are used in the published dataset. All place IDs start with 2, followed by a two-digit code for the prefecture and a one-digit code for the county. The last digit in the ID of a prefectural seat is 0. Places excluded from the 51 × 78 matrix are not members of any cluster. * Prefectural seat. † Lin'an county, which was part of—and should be distinguished from—Lin'an prefecture.

Appendix C

Table A3. List of Cult Nodes.

Label	ID	Description	Cluster
C01	1001	Taibo 泰伯 and brother and son (Western Zhou)	IV
C02	1002	Jizha 季札 (Spring and Autumn Period)	I
C03	1008	Wu Zixu 伍子胥 with family and sympathizer Lady Shi 史 (Spring and Autumn Period)	IV
C04	1009	Chen Gaoren 陳杲仁 (a.k.a. Chen Guoren 陳果仁) and subordinates (Sui dynasty)	I
C05	1010	Lord Chunshen 春申君 (a.k.a. Huang Xie 黃歇) and son (Warring States Period)	II
C06	1014	Vaiśravaṇa 毘沙門天王	I
C07	1016	Fan Li 范蠡 (Spring and Autumn period)	V
C08	1018	Lu Guimeng 陸龜蒙 (Tang dynasty)	II
C09	1047	Lord Zitong 梓潼帝君	I
C10	1050	Gu Yewang 顧野王 (Six Dynasties)	II
C11	1051	Lü Shang 呂尚 (a.k.a. Jiang Ziya 姜子牙) (Zhou dynasty)	II
C12	1053	Jiang Ziwen 蔣子文 and sister (Late Han)	IV
C13	1054	Chen Xu 陳頊 and family, and subordinates (Su Jun 蘇峻, Commander-in-Chief Yang 楊都督, and Attaché Yu Qiansheng 俞千勝) (Eastern Jin)	III
C14	1055	Zhang Xun 張巡, Xu Yuan 許遠, and subordinates (martyrs, Tang dynasty)	III
C15	1056	Goujian 勾踐 (Spring and Autumn Period)	II
C16	1058	King Yan of Xu 徐偃王 and subordinates (Western Zhou)	IV
C17	1061	Sun He 孫和 (son of Sun Quan 孫權) (Three Kingdoms)	III
C18	1069	Xiang Yu 項羽 (Qin dynasty)	III
C19	1070	Supervisor Zhao of the Bronze Foundry 趙銅官 (Han dynasty)	III
C20	1071	Fangfeng 防風氏	III
C21	1073	Li Jing 李靖 (Tang dynasty)	III
C22	1076	Three fictitious brothers surnamed Xu 許, Chen 陳, and Xin 辛	III
C23	1082	Lord Yi 后羿 (Xia dynasty)	I
C24	1086	Fan Kuai 樊噲 (Western Han)	III
C25	1090	Kong Yu 孔愉 (Jin dynasty)	VII
C26	1099	Huo Guang 霍光 (Western Han)	II
C27	1115	Guan Yu 關羽 (Three Kingdoms)	VI
C28	1119	First Emperor of Qin 秦始皇	V
C29	1122	Zhenwu 真武	VI
C30	1146	Flood-Taming King 平水王 (legendary son of Zhou progenitor Hou Ji 后稷 and assistant to Yu the Great)	I

Table A3. *Cont.*

Label	ID	Description	Cluster
C31	1148	Magistrates Wu 吳 and Xu 許 (Six Dynasties; magistrates of Jinling 晉陵 and Wuxi counties of Changzhou)	IV
C32	1149	Emperor Yuan of Eastern Jin 晉元帝	I
C33	1184	Earth God of the Leather and Horns Warehouse Service (a.k.a. Pichang) 皮場土地	VI
C34	1188	Tao Hongjing 陶弘景 (Daoist adept in the Six Dynasties)	I
C35	1189	Ji Xin 紀信 (Western Han)	II
C36	1190	Prince Jing of Han 漢荊王 (Western Han, lineage brother of Emperor Gaozu)	I
C37	1193	The Three Augusts 三皇 (Fuxi, Shennong, Huangdi)	I
C38	1196	Two Trustful and Beneficent Kings of Mount Yang 仰山孚惠二王	I
C39	1203	Mazu 媽祖	VI
C40	1204	Yu the Great 大禹	I
C41	1205	Daoist Generals Tang 唐, Ge 葛 and Zhou 周	I
C42	1206	Lü Meng 呂蒙 (Three Kingdoms)	I
C43	1215	King of Five Numina 五靈王	IV
C44	1217	Shao Renxiang 邵仁詳 (Eastern Jin) and kin Shao Tan 邵坦	IV
C45	1218	The Pacifying Marquis 鎮寧侯 and siblings	IV
C46	1219	The Broadly Benevolent, Widely Trusted King of the Willow Mountain 柳山弘仁廣信王	IV
C47	1224	Zhu Maichen 朱買臣 (Western Han)	V
C48	1226	Fang Chu 方儲 and brothers and sons (early settlers, Eastern Han)	IV
C49	1236	Wang Hua 汪華 and sons (early settlers, Sui dynasty)	IV
C50	1240	The Jing 景 brothers (martyrs, Northern Song)	IV
C51	1241	Zhou Xiong 周雄 (Southern Song)	IV
C52	1245	Magu 麻姑	IV
C53	1254	Zhao Bing 趙炳 (Eastern Han)	VII
C54	1256	Zhou Qing 周清 (merchant, Western Jin)	VII
C55	1260	General Dong 董將軍 (local official, Tang dynasty)	VII
C56	1264	Chen the Ninth 陳九郎	VII
C57	1278	Wei Qiang 韋羌 and brothers	VII
C58	1290	The Lunar Lodge of Wunü (constellation)/Lady of Wuzhou 婺女	IV
C59	1300	Sea-Aiding Marquis 助海侯	V
C60	1301	Gentleman Bao 鮑郎	VI
C61	1303	Shun 舜	V
C62	1306	Lady Zhu 朱娥	V
C63	1329	Yan Guang 嚴光 (Western Han)	V
C64	1393	Xiao He 蕭何 (Western Han)	VI
C65	1402	Erlang 二郎神	I
C66	1468	General Mao 茅將軍	I
C67	1486	Filial Dong 董孝子	VI
C68	1487	Ci Fei 伖飛	VI
C69	1497	Four Whiteheads of Mount Shang 商山四皓	VI
C70	1500	Chen Leng 陳稜 (Sui dynasty)	VI
C71	1511	Emperor Yang of Sui 隋煬帝 and consorts	VI
C72	1556	Emperor Wu of Liang 梁武帝 (Six Dynasties)	V
C73	1557	Prince Zhaoming of Liang 梁昭明太子 (Six Dynasties)	I
C74	1559	Qian Liu (King of Wuyue) 吳越王錢鏐 and subordinates (Ten Kingdoms)	V
C75	1561	Fuchai of Wu 吳王夫差 (Spring and Autumn Period)	II
C76	1562	Helü of Wu 吳王闔閭 (Spring and Autumn Period)	III
C77	1600	Dragons of the Five Directions 五龍	I
C78	1601	White Dragon of Mount Jia 嘉山白龍	I
C79	1019	God of the Eastern Peak 東嶽	—
C80	1024	King Zhang 張王 of Temple Mountain 祠山	—
C81	1025	Five Manifestations 五顯	—
C82	1318	Hu Ze 胡則 (Northern Song)	—
C83	1390	King Nan of Zhou 周赧王	—

Notes: IDs are used in the published dataset. All cult IDs start with 1. Cults excluded from the 51 × 78 matrix are not members of any cluster.

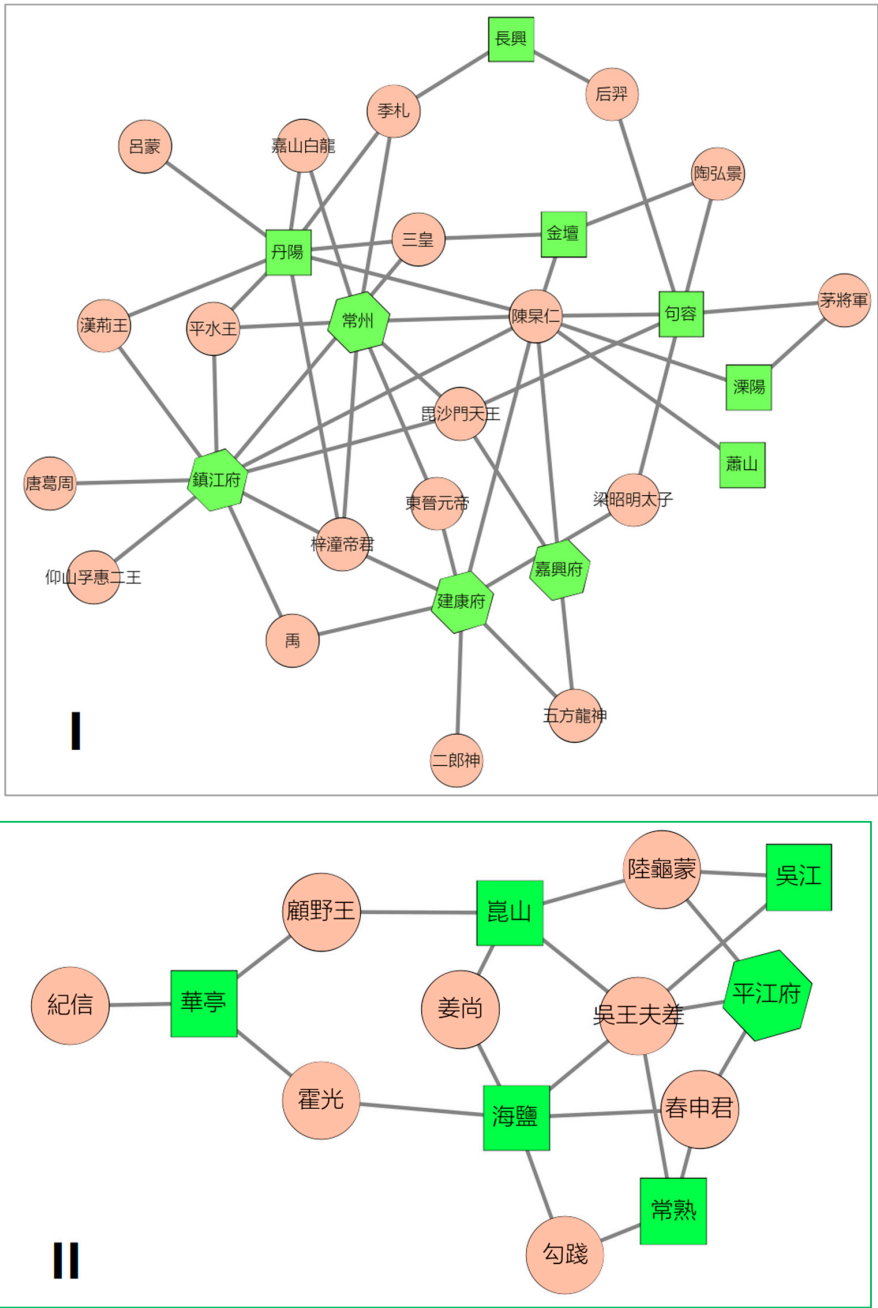**Appendix D. Popular Religious Connections by Louvain Cluster**
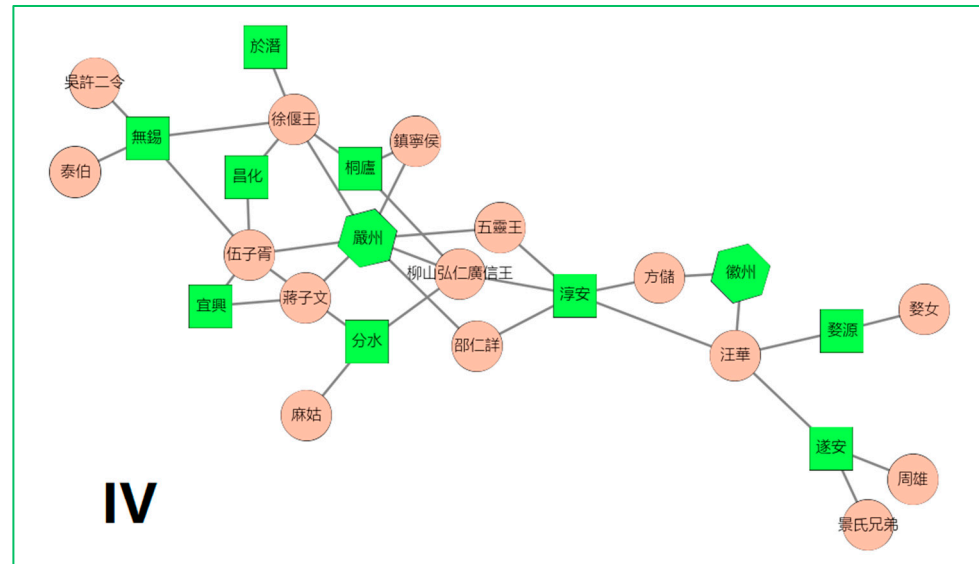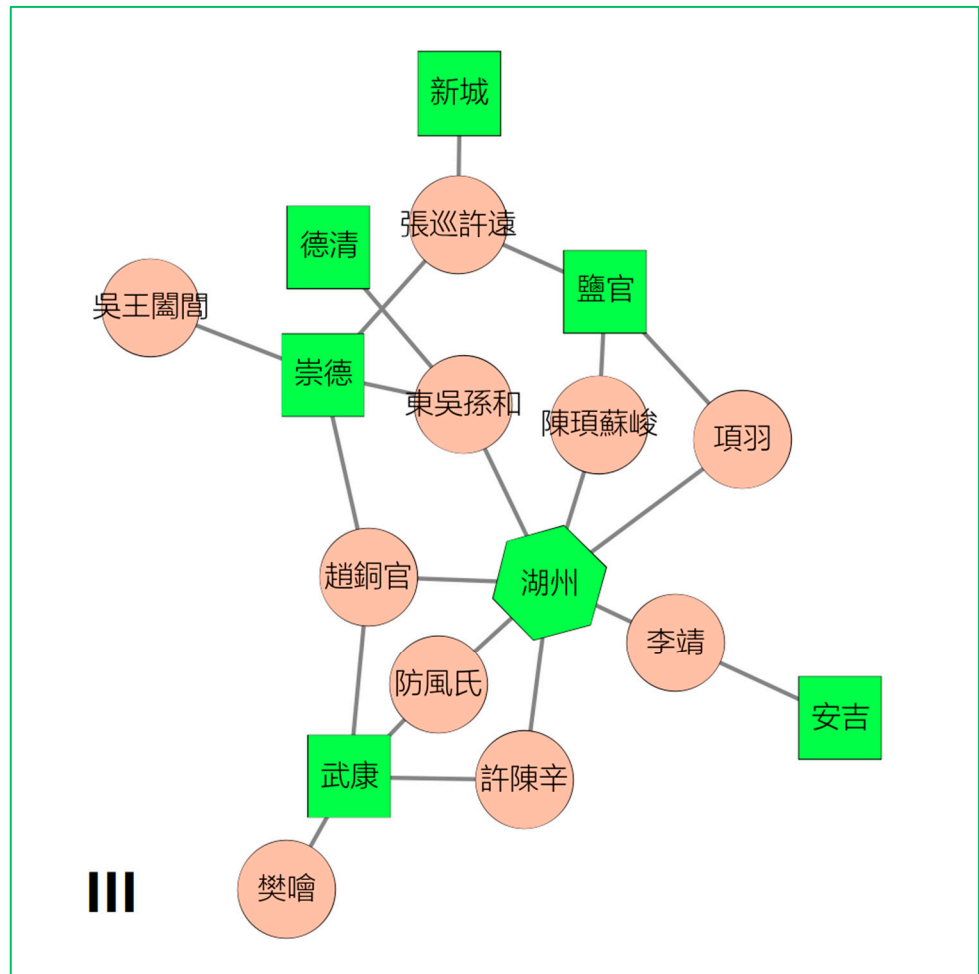

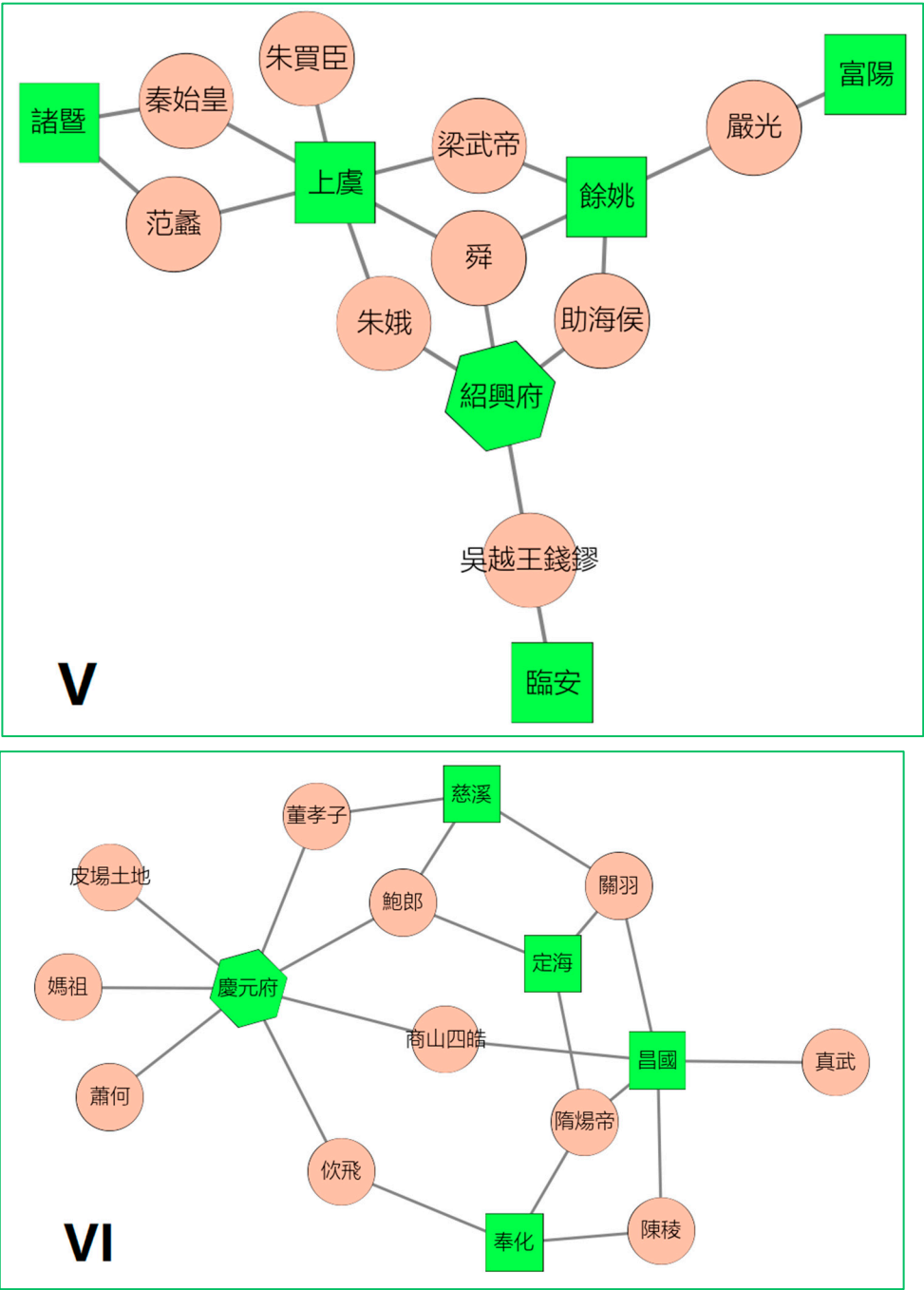**Figure A1.** *Cont.*

Figure A1. *Cont.*
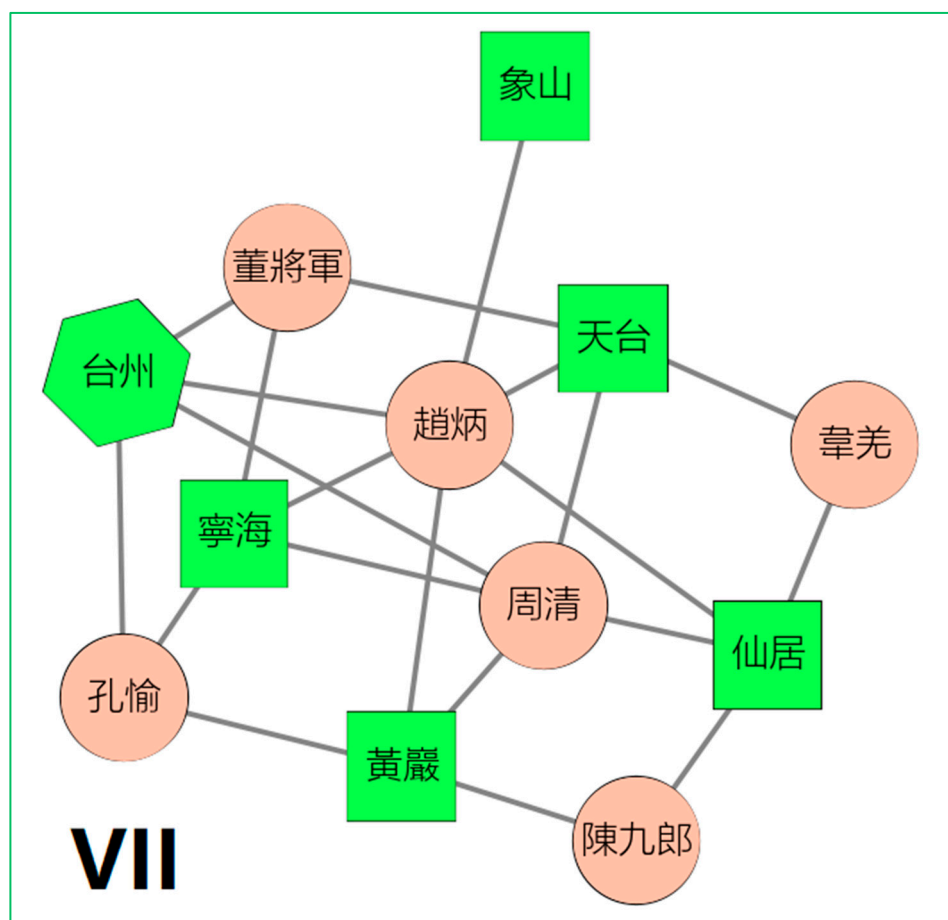
Figure A1. *Cont.*

Figure A1. Visualizations of the 51 × 78 data matrix by modified Louvain clusters. Squares (green) represent counties, hexagons (green) represent prefectural seats, and circles (peach) represent cults.

Notes

1. Many scholars have noted these distinctions and captured them with different terminologies. Paul Steven Sangren (1987, pp. 51 and 87) describes a nested, three-tiered hierarchy of local territorial-cult communities that were linked by pilgramages (e.g., those of Mazu) to much larger ritual systems. Lin (1988) makes a similar distinction between the "ritual sphere" and the "belief sphere." Prasenjit Duara (1988, pp. 119–20) has proposed a useful typology of religious organizations according to their scale and principle of affiliation. Richard Von Glahn (2004, pp. 161–67) captures these differences by distinguishing the regional cults from local tutelary deities (such as earth gods) and sovereign deities (such as city gods). It should be noted, however, that von Glahn's scale of analysis was more macroscopic than Duara's or Lin Mei-rong's. While the "local" usually refers to a village or a handful of villages in Duara's and Lin's works, what von Glahn considers "local tutelary gods" may have won adherents from several counties or two prefectures.

2. Two exceptions are a prefectural gazetteer of Pingjiang, dating to 1084 (Zhu [1084] 1990), and a county gazetteer of Changshu (Pingjiang prefecture), first compiled in 1196 but twice expanded in 1254 and 1363 (Sun et al. [1363] 1990). See also Appendix A.

3. The cult to Hu appears to have started with a conflation of his identity with the god of Fangyan Mountain 方巖山 in his native Yongkang county. See Shen ([1201] 1990, 6.17ab); Xu (1957, li 20.106). On a study of the cult of Hu Ze, see Zhu (2005).

4. Her temple was called the Temple to Half Mountain Damsel the Seventh (*Banshan Qi niangzi miao* 半山七娘子廟), where Half Mountain was another name for the Gaoting Mountain 皋亭山 where Chen's grave was believed to be located. See Qian ([1268] 1990, 73.6a).

5. On the cult of Su Jun, see Quan (2010). Temples to General Su (*Su jiangjun* 蘇將軍), Calvary General Su (*Su piaoji* 蘇驃騎), or the like were recorded for several prefectures in the Lower Yangzi. In some cases, the deities in the temples were explicitly identified as Su Jun (courtesy name Zigao 子高), while in other cases such an identification seems a very reasonable assumption. A difficult case was the Temple to Calvary General Su (*Su piaoji miao* 蘇驃騎廟) located in Hanyan county, Jiaxing prefecture, where the deity was identified as a certain Su Ju 蘇峻 in Eastern Jin, who had a courtesy name of Ziyu 子羽 and a noble title as the Marquis of Wucheng 烏程侯. Whether this Su Ju was a variation of Su Jun in local legend is unclear. In my dataset I assume that this temple in Haiyan was at least associated with the cult of Su Jun, but this assumption should not have a significant impact on the

analytical results. See Shan ([1288] 1990, 12.15a). The 1268 gazetteer of Lin'an claims that Su Jun was a subordinate of Chen Xu, although there is no evidence that this association was widely shared. See Qian ([1268] 1990, 73.6a).

6 For a brief discussion of "generic gods," see Hansen (1990, pp. 181–82).

7 For a discussion of the Dragons of Five Directions and the associated rainmaking rituals in the Song, see Pi (2008, pp. 153–57, 160–62).

8 Dean (2022, pp. 191–92) argues convincingly that only 5 to 10 percent of actual existing temples are mentioned in official sources.

9 For studies of the Five Manifestations, see Cedzich (1995); Von Glahn (2004, chaps. 4–5). On King Zhang, see Hansen (1990, pp. 148–59); Pi (2008, pp. 34–96). On the God of the Eastern Peak, see Hansen (1990, p. 181); Pi (2008, pp. 215 and 224). Pi emphasizes, in particular, the role of government and the Daoist church in the spread of the God of the Eastern Peak.

10 Pi (2008, p. 216) contends that the Chen of Chen Gaoren was confined to Changzhou because of its connections to the local Chen family. Chen's temples elsewhere were erected mainly on government orders. My data provide some support for this observation, but they also demonstrate the cult's influence in some of Changzhou's neighboring prefectures.

11 For example, a certain Magistrate Yuan 袁 from the Han dynasty appears to have been worshipped only in Yixing 宜興 county (Changzhou) and nowhere else. Nonetheless, in Yixing, he was popular enough to have had three temples: a main temple named Guoli (*Guoli miao* 果利廟) and two branch temples. See Shi ([1268] 1990, 14.12b–13a).

12 For example, we can speculate about two different scenarios of how a set of three places A, B, and C are connected. In one scenario, Cult X has a temple in each place, thus creating a common culture that is shared by all three places. In an alternative scenario, no cult is practiced in all three places. Instead, places A and B have temples associated with Cult X, B and C have temples associated with Cult Y, and A and C have temples associated with Cult Z. Through these three cults (X, Y, and Z), the three places are also connected in an interlocking manner. The distinctions between these two scenarios are important for this study, but they are not fully captured in one-mode projections.

13 My data source for the geographical distribution of modern dialect groups is the first edition (the 1987 edition) of the *Language Atlas of China* (Australian Academy of the Humanities and Chinese Academy of Social Sciences 1988). A revised edition of the atlas was published in 2012 (Chinese Academy of Social Sciences and The City University of Hong Kong 2012). One important change in the revised edition is to take the Shanghai Municipality out of the Su-Hu-Jia 蘇滬嘉 cluster (C in Figure 4) and treat it as a separate cluster in the Wu dialect group, a decision that was partly justified by modern Shanghai's high adminstrative status and large population. Another change relevant to this study is to merge the Tiaoxi 苕溪 cluster (D in Figure 4) into the Su-Hu-Jia cluster. These decisions are debated, and the first decision is especially problematic for my discussion of the thirteenth century. Therefore, I have used the 1987 edition as my data source for Figure 4. See Qian (2006).

14 These included twenty-three cults that had temples in two subregions, forty-two cults that had temples only in a single subregion, and two others (C82 and C83) that are excluded from the 51 × 78 matrix submitted to the Louvain algorithm because they fall outside the main component after the mega-hub (Lin'an) and the superstar cults are removed.

15 The Louvain algorithm assigns the subregions to two groups, with I, II, IV, and VI in one group, and III, V, and VII in the second group. NCD generates a nested hierarchy of groups. At a higher level of clustering, NCD makes a different decision on the assignment of VI and VII: it places VI in the same group as III and V, and VII in the same group as I, II, and IV. A visual inspection of the graph in Figure 6 appears to favor the NCD solutions.

16 I have explained in the previous section that the subregional clusters, discovered by the Louvain algorithm, frequently cut across prefectural boundaries. Here, for ease of understanding, I have added the closely associated prefectures in parentheses following each mention of the subregional cultures. These prefectures should be taken as approximations, not precise definitions.

17 The significant difference in average degree between prefectural seats and counties, as observed in the 56 × 83 matrix, continues to hold for the 51 × 78 matrix analyzed in this section. Of the 249 ties presented in Matrix 1, 95 (38%) linked cults to the eleven prefectural seats. On average, these prefectural seats were each connected to 8.6 cults, whereas the forty county seats in the dataset were each connected only to 3.9 cults. In other words, the average degree of prefectural seats is more than double the average degree of the counties in the 51 × 78 matrix.

18 Matrix 1 reports fourteen places where the cult of Chen Gaoren had temples. Another temple associated with the cult was recorded in the prefectural seat of Lin'an, but this is not reported in Matrix 1 because Lin'an was excluded from the cluster analysis.

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