



An alternative approach to find the relationship between temple and its crafter by using TBDB

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Abstract

The Penghu archipelago, though geographically isolated, presents a rich cultural and religious landscape that is deeply connected to both Taiwan and Mainland China. Situated in the Taiwan Strait, Penghu lies approximately 45 kilometers from Taiwan's main island and about 140 kilometers from Fujian, China. The region is notable for its dense distribution of temples, many of which were constructed by craftsmen originating from Fujian (particularly Quanzhou), Taiwan, or Penghu itself.

During the course of this research, the 2005 revised edition of the Penghu County Annals (Xuxiu Penghu Xianzhi)—particularly the Biography of People section—served as a foundational source. This edition contains extensive references to individuals and geographical locations associated with temple construction across the islands. Drawing upon these textual materials, this study aims to uncover latent patterns and social connections embedded in the historical record. To this end, digital tools and methodologies previously developed for the Taiwan Biographical Database (TBDB) were employed to facilitate the identification and visualization of these relationships.

The TBDB is an operational platform designed to support historical research. It provides a structured database and analytical tools tailored for the study of Taiwanese historical figures, including functionalities for exploring kinship and interpersonal social networks. These relationships are rendered in maps or network diagrams to help historians discover patterns, themes, or previously overlooked connections within biographical records. One of the primary aims of the TBDB is to extract meaningful patterns from large-scale historical data, thereby enabling interdisciplinary research in the humanities.

In analyzing the Biography of People entries, this study utilized named entity recognition (NER) and SNA techniques to extract and represent data. Visualization tools such as Sankey and network diagrams were used to reveal patterns in person-temple-location relationships. Sankey diagrams categorized nodes into persons, locations, and temples, with node size reflecting the number of interconnections. Results indicate that Magong City, the largest urban center in Penghu, hosts the most temples, followed by Baisha Township. Among historical figures, Chia-sheng Tsai (蔡嘉生) and Chu Tsai (蔡擲) were identified as participating in the highest number of temple-building projects. Furthermore, the analysis highlights the substantial contributions of Liang Huang (黃良), Chia-sheng Tsai (蔡嘉生), and Yu-yao Huang (黃玉瑤) in temple construction activities specifically in the districts of Magong City and Huxi Township, where they played central roles in initiating or supporting major temple-building efforts.

Future work will focus on acquiring additional historical evidence to construct a more complete narrative of temple construction and its contributors. By leveraging the analytical capabilities developed through the TBDB project, this study demonstrates the potential of digital humanities tools to reveal hidden networks and generate new insights into the cultural history of Penghu.

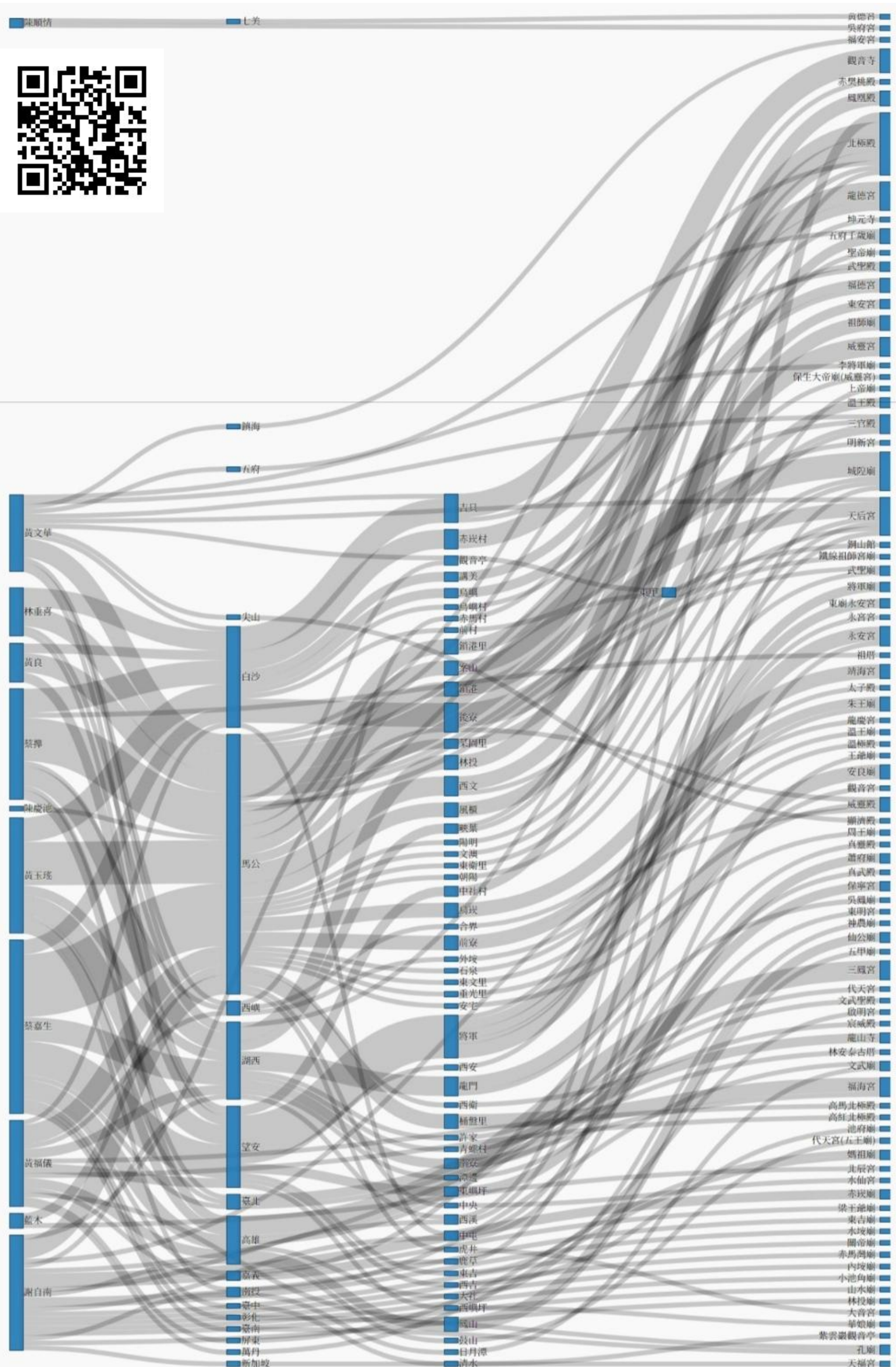


Fig. 1. The relations between crafter, locations, and temples

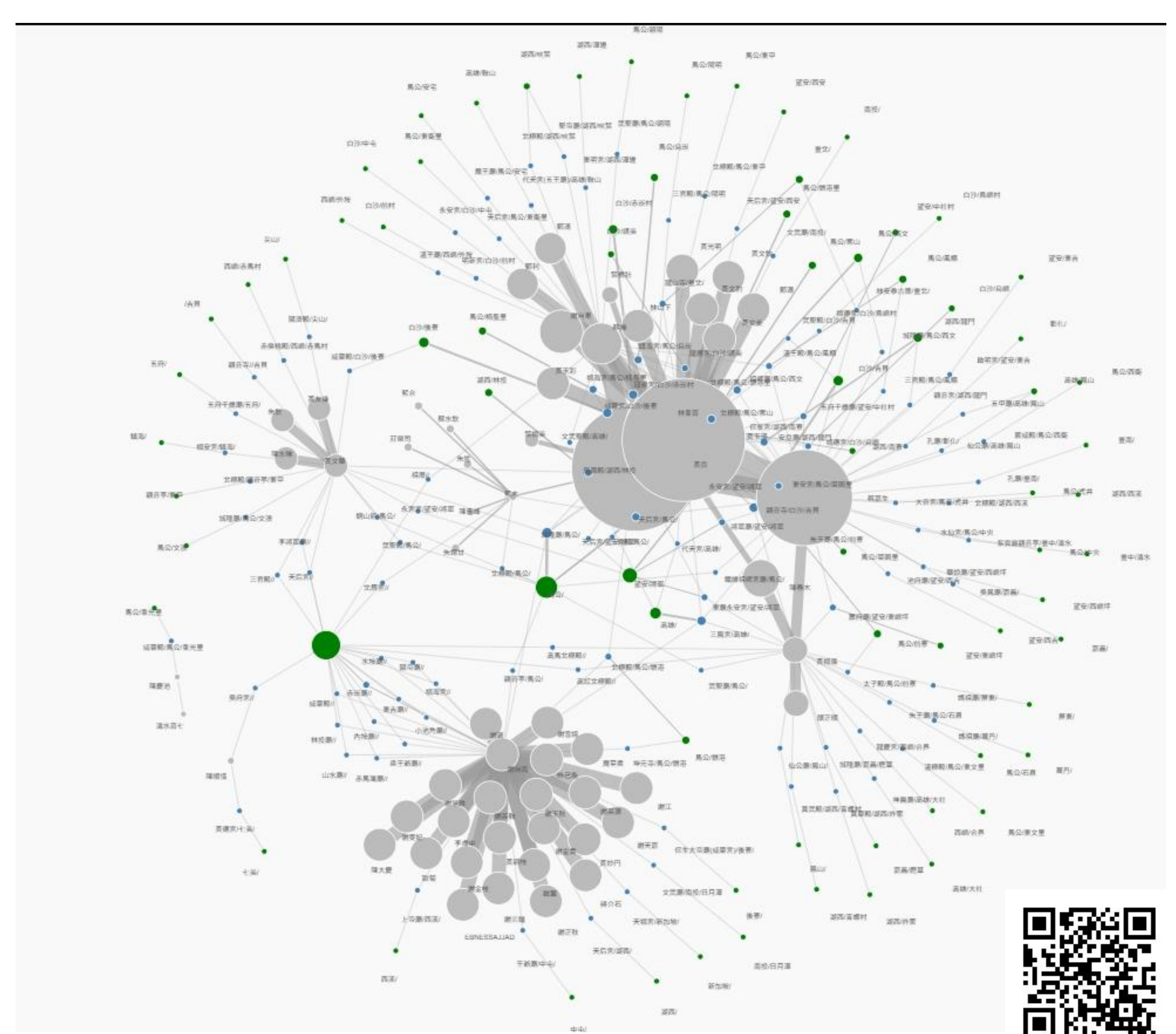


Fig. 2. The part of SNA image of Penghu

Conclusions

Future work will focus on acquiring additional historical evidence to construct a more complete narrative of group or people connections. The researcher needs more evidence to complete whole scenario about the group and its members, by using some tools develop from TBDB, we can provide some viewpoint or hidden clues quickly to help historian to descript raw data, this project will continue to expand the content of the database by adding information extracted from biographies of other gazetteers, dictionaries of historical figures, and other sources that is truly useful to scholars and people.

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