

Qing Dynasty Official Documents as a Genre for Developing Ontologies for Digital Humanities Research



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RESEARCH OBJECT

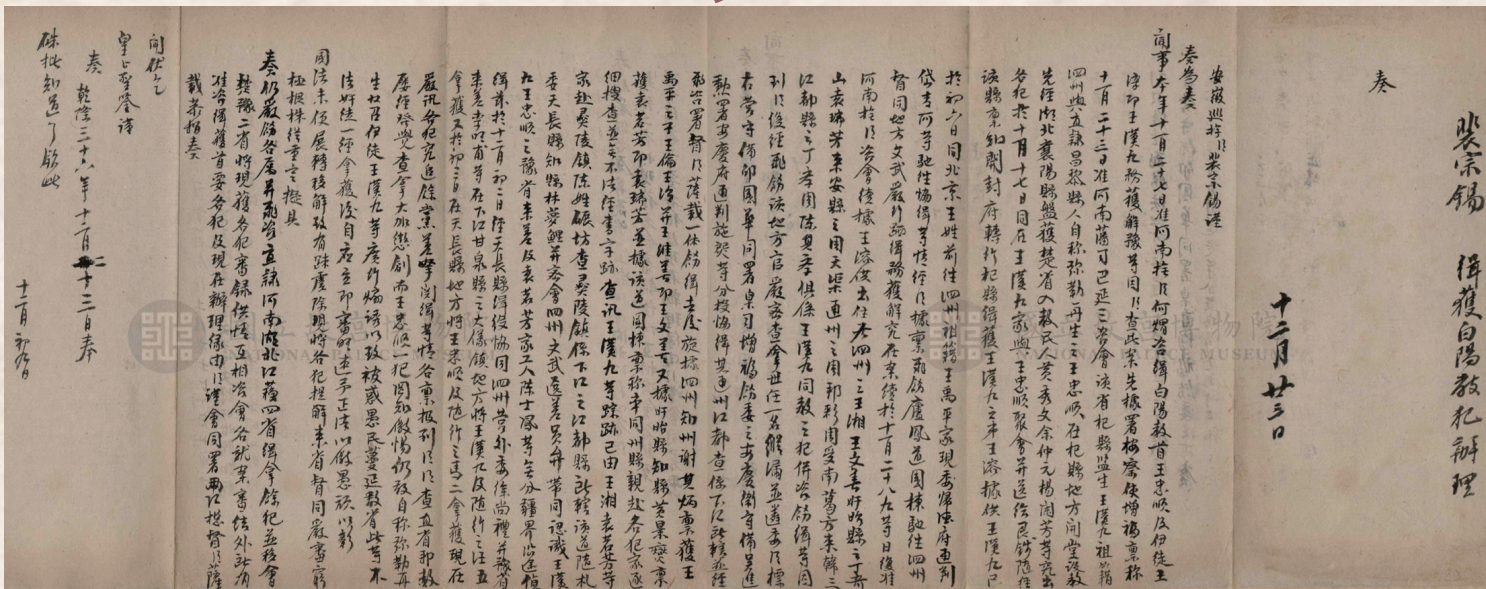


Fig. 1: Archive of Qing palace memorial. The content of “Sect event of Wang Zhongshun” (王忠順教案) in 1772, National Palace Museum, Taipei.

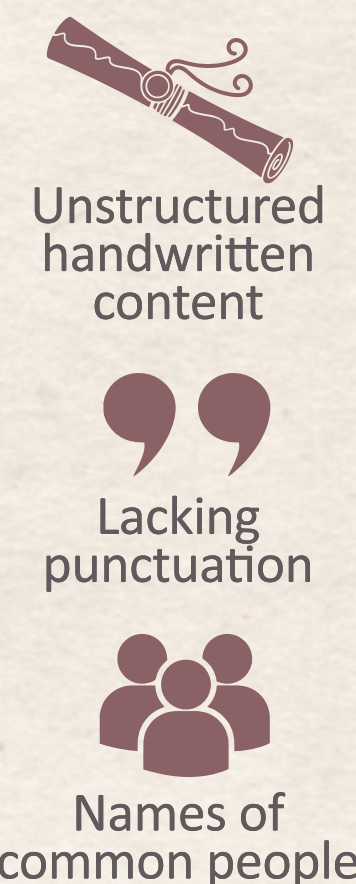
Material Archives of official documents from National Palace Museum (Taipei), Institute of History and Philology at the Academia Sinica (Taipei), First Historical Archives of China (Beijing)
Period Chinese Qing dynasty (1644 - 1911)

INTRODUCTION

Archival research, which relies on using documents as materials for data investigation, is one of the important methodologies in the discipline of history studies. Because of its “repetitive structure”, archival document can be regarded as a kind of genre, from which the knowledge organization (KO) can be developed. This study centers around a research project on the archives of secret societies during the Qing Dynasty in China, with a focus on investigating the KO design in digital humanities (DH)

research. The process of KO is crucial throughout the entire research endeavor and requires extensive collaboration among research teams specializing in history, library and information studies, and information engineering. In this study, the Qing Dynasty official documents are treated as a distinct genre. The primary objective is to dissect the key features of this genre, encompassing its form, content, and function, to facilitate the development of ontology based-metadata design.

CHALLENGES



Name authority Files _Sect participants/ selected	
ID	R_0001
Name	Wang Dianqui(王殿魁) ⁽¹⁾
Alt. Name	Wang Jiuju(王九如) ⁽¹⁾
Gender	Male(男)
Occupation	Grain Merchant(糧商) ⁽²⁾
Dynasty	Qing-Qianlong(清-乾隆)
Native place	Lulong(盧龍)
Active place	Jianning(江寧), Sizhou(泗州), Hua'an(懷安), Sushui(溧水) ⁽³⁾
Active year	Qianlong 57 th year(乾隆五十七年) ⁽⁴⁾
Relative relation	Father Wang Zhongshun(父 王忠順), Son Wang Manding(子 王滿定), Son Wang Dezhi(子 王得子)...
Master-disciple relation	Disciple Xu Erning(徒弟 徐二寧), ⁽⁶⁾ Disciple Qin Guohai(徒弟 秦過海), Disciple Wu Chungeng(徒弟 吳長庚), Disciple Xu Wanzhi(徒弟 徐萬志), Disciple Gau Wenju(徒弟 高文舉)...

Archive on the Investigation of the Wan Dianqui Sect, 1816-01-08
清廷查辦秘密社會案/07(嘉慶20年12月10日)錄副奏摺_江蘇拿獲清茶門教首王殿魁在此所傳之徒

據王朝文供稱:有徐萬志、高文舉,均拜伊父王九如即王殿魁為師習教,並有花滿壽亦係吃素,曾至伊家拜佛等情。隨後會同各親家各搜獲,均無不法經卷圖像,惟有金剛經論百中經

Archive on the Investigation of the Wan Dianqui Sect, 1815-12-03
清廷查辦秘密社會案/03(嘉慶20年11月3日)硃批奏摺_直隸查拿傳習清茶門教之灤州石佛王姓姓及初審情況

...據王殿魁供認,於乾隆五十七年即直隸懷安、灤水、泗州、江寧等處傳習,伊即在山陽開經會,五十七年回家一過。並據供出伊族人在湖北傳教共有三人(一)一名王書魯,小名三重,一名王泳太,一名王興建。...

Archive on the Investigation of the Wan Dianqui Sect, 1816-05-08
故宮/18(嘉慶21年4月12日)故宮047264·兩江總督百齡·奏摺查拿直隸傳教逆犯王殿魁案內被誘習教及緣坐各犯審明定擬

...奉上諭將王殿魁之子王滿定王得子及在山陽家屬並所傳習教之徐二寧、秦過海、吳長庚等逐一拿獲親提審訊.....

Fig. 2: Information on person scattering over different archives by editing authority files. An example of Wang Dianqui (王殿魁)

Since such information is scattered all over different archives (Fig. 2), using methods of KO is necessary for data curation based on the features of archival content.

QUESTIONS

Historical official documents as a “genre” of human intellectual creation, the project focuses on exploring the following questions:

- Is historical official document a genre of specific form, content and function, which can be used as the basis for the development of the ontology?
- How to develop a suitable ontology for the study of Qing secret societies and serve as the basis for subsequent research?

HISTORICAL OFFICIAL DOCUMENTS AS GENRE: DEFINITION, TYPES AND CHARACTERS

DEFINITION

Genre is a method of “division and grouping of texts” based on form, function, and content (Hughes 2004) or “a sorting mechanism” (Rafferty 2021).

Genre is a structure that can classify human intellectual creation products, and when applied in information science, those products can be classified, integrated, and retrieved according to a KO structure.

TYPES AND CHARACTERS

Official document is work produced in the process of government affairs, designed to convey information through specific format and typed content. Such “typified communicative actions” enable the content of official document to be regarded as a genre (Yates & Orlikowski 1992). Through its transmission and preservation, the Qing government could effectively manage imperial affairs and maintain the stability of imperial rule.

Based on the perspectives of form, function, and content in the definition of genres, the historical official documents are classified as follows (Fig. 3):

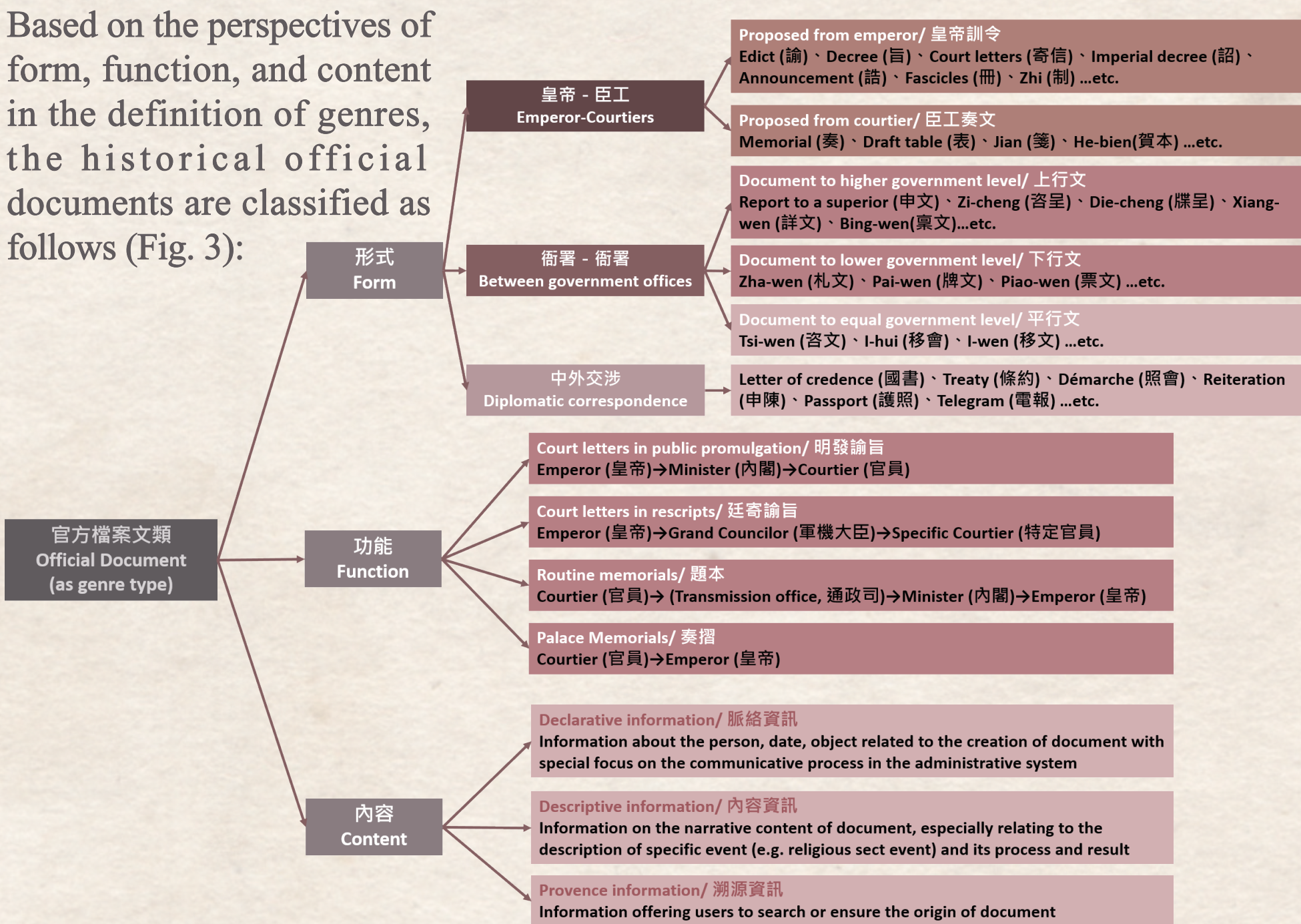


Fig. 3: Qing official document as genre. Types distinguished by elements as form, function and content based its definition

Proposing the historical official documents as a specific genre type, in order to describe the declarative, descriptive, and provenance information in the document content and develop KO design for Qing official documents (Fig. 4).

Palace Memorials and Grand Council Archives in National Palace Museum, Taipei 故宮宮中檔與軍機處奏摺 (1)	
(A) Creator, 上奏者	Pei Zongxi, 裴宗熙
(B) Creation date, 上奏時間	23, Dec. (1772), 十二月廿三日
(C) Related organization, 擬奏衙署	Anhui provincial office, 安徽巡撫 Henan provincial office, 河南巡撫
(D) Document type, 題本	Memorial, 奏
Property (data field)	Object (property value)
(I) Sect, 教派	Baiyang sect, 白陽教
(II) Person, 參與者	Wang Zhongshun, 王忠順 Wang Hangju, 王漢九
(III) Place, 地點	Qi county, 杞縣
(IV) Date, 事件發生時間	17, Oct. (1772), 十月十七日
(V) Action, 詔行	Founding place of worship, 開教處

Fig. 4: Selected ontology-based metadata design and tagging of property values based on content features of Qing official document. Example of “Memorial on the Investigation of the Baiyang sect” (奏報緝獲白陽教犯辦理情形) in 1771.

ONTOLOGY MODELLING BASED ON OFFICIAL DOCUMENTS AS GENRE TYPE

Ontology-based metadata structures as archives, officers, and sect participants can be thus constructed. Each type is designed and includes the declarative, descriptive and provenance information in the archive. The research questions conceived by domain experts were integrated (Fig 5).

This integrated design benefits a flexible transformation of the metadata and ontology structure after different research questions.

Using genre as basis for ontology design of the official document can make its content analyzable according to the RDF standard,

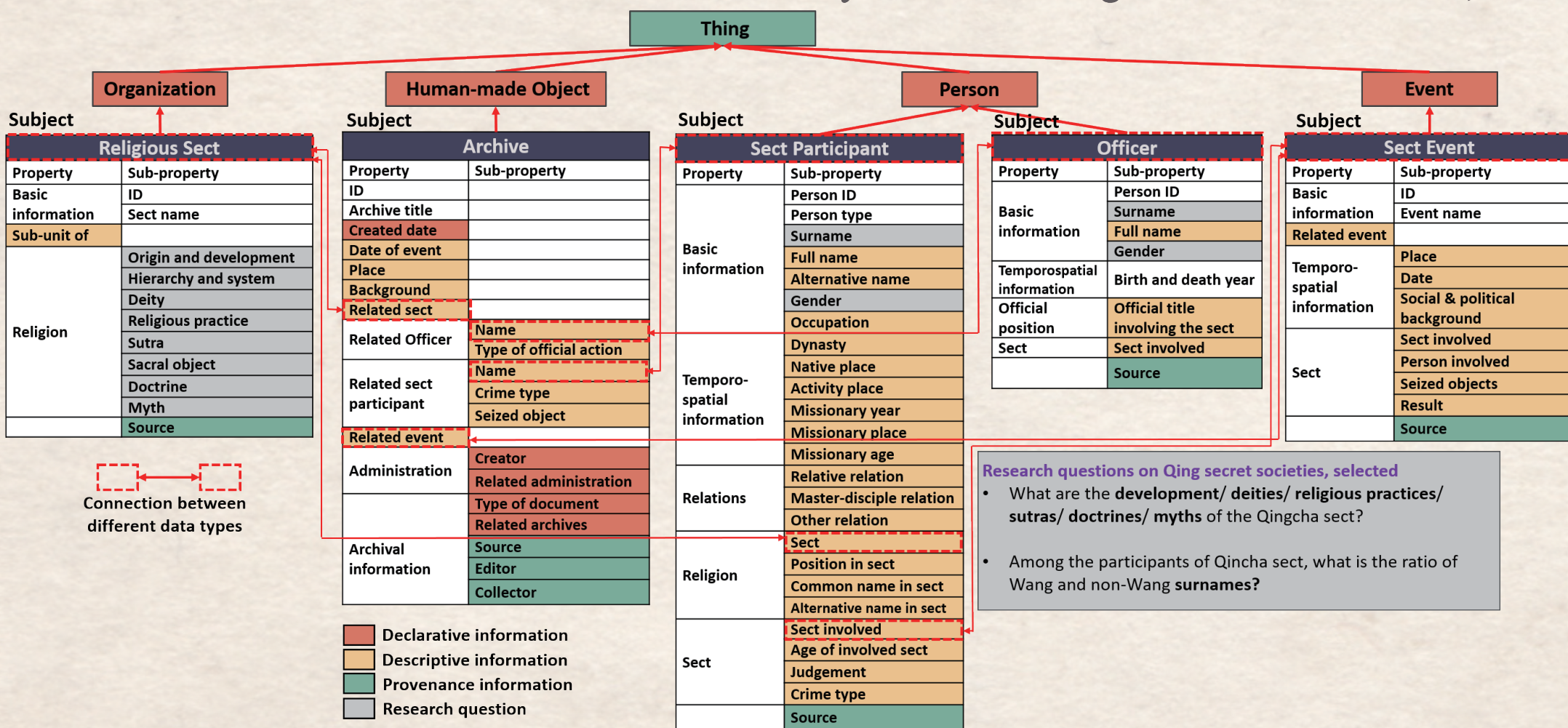


Fig. 5: Ontology-based metadata design for Qing secret societies. A hierarchical view on metadata types

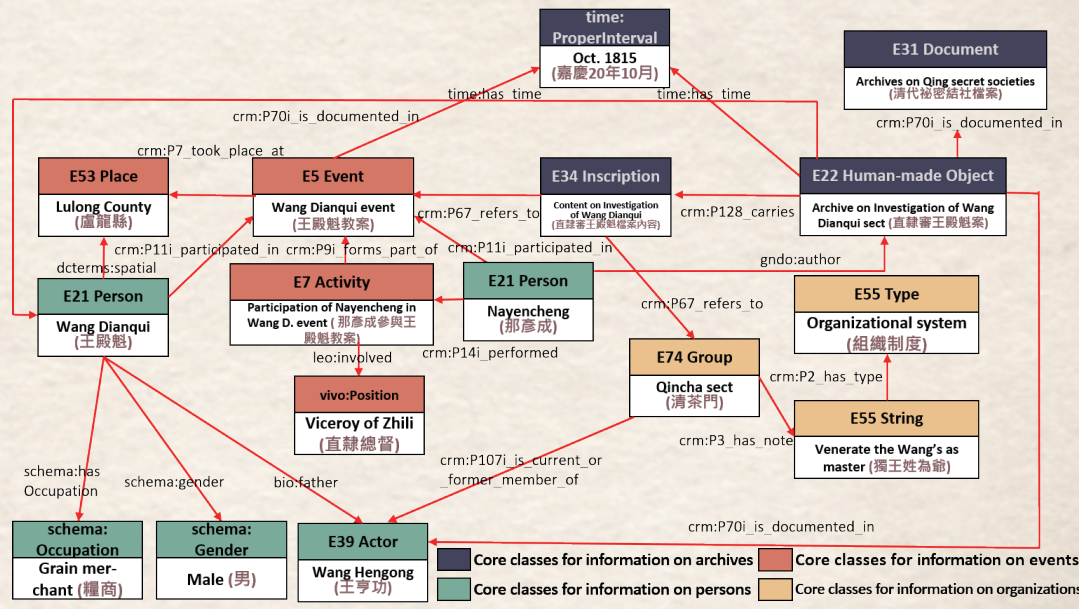


Fig.6: Ontological design for Qing Secret societies. A selected view

such design can be applied to describe knowledge of historical official document. Therefore, research questions are transformed into machine-readable data triples and the original archival content can be integrated into knowledge graphs.

Reusing CIDOC-CRM model to develop ontology and convert the ontology-based metadata into linked open data. This ontology includes 21 classes and 70 properties, and 4 core ontological structures of archival documents, persons, events, and organizations (Fig. 6).

CONCLUSION & FUTURES

- Confirming the Qing official documents as a genre type, which helps to analyze the important features of this document type, construct ontology-based metadata structure, and enhance automatic name entity extraction for further research.
- Exploring method of human-machine collaboration, such as ChatGPT, in future to extract named entities, their semantic relations, and to assist automatic creation of ontology-based data.

REFERENCES, SELETED

- Fafalios, P., Marketakis, Y., Axaridou, A., Tzitzikas, Y., & Doerr, M. (2023). A Workflow Model for Holistic Data Management and Semantic Interoperability in Quantitative Archival Research. In arXiv preprint arXiv:2301.07676.
- Hughes, W. (2004). “Genre”. In New Dictionary of the History of Ideas, edited by Horowitz, C.M. Stamford, Connecticut: Thomson Gate, 912-918.
- Rafferty, P. M. (2021). Genre. In New Literary History Encyclopedia of Knowledge Organization, edited by Hjørland, B. & Gnogli C.
- Yates, J., & Orlikowski, W. J. (1992). Genres of organizational communication: A structural approach to studying communication and media. In Academy of management review, 17(2), 299-326.