



News Data Analysis and Social Science Research on Intangible Cultural Heritage Canton Embroidery

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Abstract. Big data analysis methods have been widely applied in social science research, and the public knowledge and practice of intangible cultural heritage(ICH) protection are greatly influenced by media reports. This paper takes Canton embroidery, an ICH treasure in Southern Chinese, as the research object, and obtains 1,161 related news reports from Wisers News Database. Through the analysis of LDA topic modeling, it is found that the media's attention to Canton embroidery focuses on 4 themes: the protection, inheritance, and development of Canton embroidery; the creation of Canton embroidery and its artistic characteristics; Canton embroidery to the world; and the related exhibition activities of Canton embroidery. Then, it sorts out the inheritance and communication situation of Canton embroidery in the aspects of artistic characteristics, industrial development, talent training, exhibition and publicity, and global communication. Finally, in view of the new development tendency of Canton embroidery, the paper puts forward some suggestions of using modernization and digital means to better disseminate it.

Keywords: LDA topic modeling; Intangible cultural heritage; Canton embroidery

1 Introduction

Canton embroidery is a general term for the folk embroidery crafts of Guangzhou and its ancient dependencies of Nanhai, Panyu, and Shunde. Canton embroidery, together with Chaozhou embroidery, forms Cantonese embroidery, which is known as one of the four famous embroideries in China, together with Suzhou embroidery, Hunan embroidery, and Sichuan embroidery, and has been included in the list of the first batch of representative items of national intangible cultural heritage. In the course of history, Canton embroidery has connected the North and South, blended the East and West, and become famous overseas as an important carrier of Lingnan culture. However, with the change of time, Canton embroidery is facing the dilemma of a shrinking sales market, the impact of industrialization on handmade skills, and the lack of successors to carry on the tradition. To explore the following 3 research questions: (1) What are the news

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report themes of Canton embroidery? (2) What is the current situation of the protection and inheritance of Canton embroidery? (3) How can we do a better job of spreading Canton embroidery? This paper will collect news reports related to Canton embroidery from paper media in mainland China from November 1, 2007, to October 31, 2022, and analyze the distribution of topics through LDA topic modeling, to construct the basic appearance of Canton embroidery in media reports, explore the innovative development of Canton embroidery, and help the millennium embroidery blossom into a new vitality.

2 Literature review

The protection of ICH cannot be separated from its popularization and communication, and the communication process is often accompanied by cultural modification, in which mass media plays an important role. Some scholars believe that, compared with material restoration and maintenance, media means can often provide more opportunities and space for the development of ICH in modern society^[1]. Therefore, we should give full play to the social efficacy of news reports in the protection of ICH, and launch a series of reports on its historical origin, protection status, and cultural value, to arouse the public's cultural self-awareness of ICH protection^[2]. One study found that Tibet Daily focused on the storytelling of the inheritors when conducting ICH reports, but showed an avoidance of religious festivals, which is not conducive to the protection and inheritance of these festivals and cultures^[3]. Other studies have shown that People's Daily is constructing the audience's cultural identity of ICH through ritualized communication, while also reflecting the policy orientation in its reports promptly, which is of positive significance in promoting the protection of ICH as a social consensus^[4]. It can be seen that how news reports present Canton embroidery-related content profoundly affects the public's cognition and practice of Canton embroidery conservation. And the study of Canton embroidery in news reports has an important reference value for enhancing ICH protection, inheritance, and development in Guangdong, Hong Kong, and Macao Greater Bay Area. Based on the above, this article would focus on the domestic paper media news reports of Canton embroidery.

3 Method

3.1 Data collection

In this paper, we used "Canton embroidery" as the keyword to search in the Wisers News Database, collecting the relevant news reports from domestic paper media (except Hong Kong, Macao, and Taiwan) from November 1, 2007, to October 31, 2022. Then we got a total of 1191 articles. After cleaning the data, 1,161 reports were obtained as analysis samples. The sample source (Fig. 1) shows that the key areas for the communication of Canton embroidery are still concentrated in Guangdong Province.

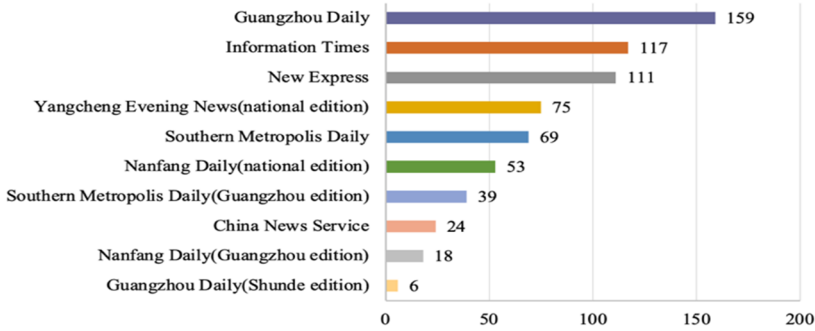


Fig. 1. The highest number of articles from a media source

3.2 Data processing

With the emergence of computational communication, many text analysis methods for journalism and communication research have emerged accordingly. LDA (Latent Dirichlet Allocation) is a dynamic text topic recognition model proposed by D. M. Blei et al. in 2003, which mainly mines the intrinsic topic distribution of text through unsupervised learning to extract the implicit semantics (i.e., topics or concepts) of a given text in an unsupervised manner [5]. In this paper, we use the LDA topic model to analyze the acquired media report samples and classify 1161 news reports into 20 topics. Subsequently, based on the correlation between the topics' contents and their distribution in the intertropical distance map, 4 major themes are further generalized to explore the focus of media attention on Canton embroidery.

4 Results

The analysis of LDA topic modeling reveals that the attention of domestic paper media to Canton embroidery focuses on 4 major themes. Theme 1 is about the protection, inheritance, and development of Canton embroidery (54.3%). Theme 2 is about the creation of Canton embroidery and its artistic characteristics (17.9%). Theme 3 is about Canton embroidery to the world (15.3%). And Theme 4 is about Canton embroidery-related exhibition activities (12.4%). Specific topics and their percentage are shown in Table 1.

Table 1. List of topic categories

Theme number	Theme	Percentage (%)	Topic number	Topic	Percentage (%)
1	Protection, inheritance and development of Canton embroidery	54.3	3	Construction and development of urban cultural industry	6.4
			4	Inheritance and protection of intangible cultural heritage	6.1

			6	Canton embroidery inheritors and their studios	5.7
			8	The innovation and cross-border integration of Canton embroidery cultural and creative design	5.5
			9	Young people participate in Canton embroidery training courses offered by schools or communities	5.2
			10	Citizens experience traditional folk culture activities on site	5
			11	The collection value and market auction of Canton embroidery	4.4
			12	Canton embroidery art in Cantonese opera costumes	4.4
			16	Canton embroidery cultural tourism development and public service construction	4.1
			18	Canton embroidery traditional craft skills training and employment and entrepreneurship support	3.8
			20	Guangfu cultural activities in Guangdong-Hong Kong-Macao Greater Bay Area	3.7
2	Creation of Canton embroidery and its artistic characteristics	17.9	1	Stitch, color, composition and subject matter of the four famous Chinese embroideries	7.1
			2	Canton embroidery master's works and techniques	6.6
			15	The production of embroidery works on the Double Seventh Festival	4.2
3	Canton embroidery to the world	15.3	5	Shunde Canton embroidery crafts exported to Europe	5.9
			7	Canton embroidery shawls were sold overseas in Ming and Qing Dynasties	5.6
			19	Asian Games fashion designers showed Canton embroidery to the world	3.8
4	Canton embroidery related exhibition activities	12.4	13	Lingnan Master's fine arts and crafts exhibitions	4.2
			14	A variety of traditional Guangdong folk crafts appeared at the expos	4.2
			17	Museums launched a series of exhibitions themed on Canton embroidery	4

4.1 Canton Embroidery realizes sustainable development in inheritance

Theme 1 accounts for the highest proportion (54.3%). The specific 11 topics are mainly about the Canton embroidery's conservation status the development of cultural and creative industries, and the cultivation of talents.

Canton embroidery is both aesthetically pleasing and practical. It is worth mentioning that Canton embroidery is widely used in the production of Cantonese opera costumes^[6]. In May 2006, Canton embroidery was approved by the State Council to be included in the list of the first batch of national ICH. However, affected by the impact of machine embroidery, market shrinkage, the quality of the inheritor, and other factors, the traditional idea of protection is no longer applicable.

In the context of the new era, the ICH should be combined with the construction of the humanistic Bay Area, and we should give full play to the advantages of Guangdong's tourism province to create a benchmark project for the integration of ICH and cultural tourism^[7]. Moreover, talent cultivation is the way for Canton embroidery to achieve sustainable development. At present, under the promotion of the Guangzhou Intangible Cultural Heritage Protection Center, the "Canton Embroidery Enters the Campus" project has been carried out in kindergartens, primary and secondary schools, colleges, and universities, forming a more complete training system.

4.2 Integration of ICH traditional techniques with modern aesthetics

The creation of Canton embroidery and its artistic characteristics is the second most popular theme (17.9%) in media reports. In terms of topic keywords, media reports mainly focused on the aesthetic characteristics of Canton embroidery, the works of Canton embroidery masters, and the creation of Canton embroidery for special festivals.

Canton embroidery is colorful, emphasizing the suitability of coloring, paying attention to the performance of the object's original color, rarely seen compound color changes. And the complexity of Canton embroidery stitches made the learning difficulty high^[8]. Traditional Canton embroidery is rooted in the soil of the past life, with festive themes and vulgar colors, which is contrary to modern aesthetics. Facing the dilemma, the masters of Canton embroidery, represented by Chen Shaofang, expanded the subject matter of Canton embroidery to portraits, and incorporated techniques such as oil painting light and dark intersections, and Chinese painting brush strokes, expanding the color space of Canton embroidery^[9]. At the same time, Canton embroidery masters also attend related activities on special festivals, such as Qixi, to provide opportunities for the general public to learn Canton embroidery.

4.3 From a popular export product to a new fashion icon

The media also paid attention to the export of Canton embroidery (15.3%). According to the keywords, 3 specific topics can be summarized, namely, "Canton embroidery shawls of the Ming and Qing Dynasties were exported overseas", "Shunde Canton

embroidery handicrafts were exported to Europe" and "Asian Games fashion designers showed Canton embroidery fashions to the world".

During the Ming and Qing Dynasties, accompanied by the continuous expansion of the Maritime Silk Road routes, Canton embroidery in Guangzhou under the operation of Shisanhang was exported all over the world^[10]. Today, Canton embroidery shawls made by Shunde embroiderers are still the main embroidery products exported to Spain. On the way to becoming a global "hit", the charm and influence of Canton embroidery have also been manifested, such as the traditional Spanish dress "Manila shawl". The combination of Canton embroidery and fashion can make the old Canton embroidery come out a new path. In July 2012, at the "China Guangzhou-Italy Investment and Trade Cooperation and Exchange Fair" held in Milan, 38 pieces of Canton embroidery fashion boutiques showed the world the unique elegance of Canton embroidery, setting off the new Chinese style fashion trend in the world.

4.4 Based on traditional exhibitions, pioneering digital innovation

Among the sample articles, the content related to Canton embroidery exhibition activities accounts for 12.4%. Many museums have launched a series of exhibitions on Canton embroidery themes to make Canton embroidery accessible to published.

In May 2021, Guangzhou Thirteen Hongs Museum launched the "Splendid as Cloudy Haze - Exhibition of Canton Embroidery Masterpieces in the Collection", which featured more than 70 pieces of Canton embroidery masterpieces in the collection, including shawls, costumes, door curtains, screens, and embroidery balls, etc. Meanwhile, Canton embroidery also often appeared in various fairs. Inheritor Tang Xiaoling embroidered "Red Lychee" on the spot at the Guangdong Folk Crafts Fair in 2019. Moreover, a small number of digital projects reflected the new direction of technology-assisted ICH communication. In 2022, the Guangzhou Intangible Cultural Heritage Protection Center initiated the "Activated Fashion: Research and Transformation of Traditional Canton Embroidery Patterns". The project carried out a comprehensive study on the categories, themes, shapes, and colors of Canton embroidery patterns. It also digitized 236 Canton embroidery patterns, and designed them into more than 50 products such as dynamic posters, wallpapers, blind boxes, etc., to be promoted online. These attempts have opened up new directions in the digital communication of ICH.

5 Conclusions

In this paper, through the machine learning LDA topic modeling study of Canton embroidery news reports in mainland Chinese media, it is found that media reports focus on four themes.

Further analysis reveals that, in terms of artistic characteristics, Canton embroidery is integrated with painting techniques such as oil painting and Chinese painting, embracing modern aesthetics. And the integration of existing resources of Canton embroidery promotes the fusion of culture and tourism and the development of trendy cultural and creative products. Meanwhile, the promotion of "Canton Embroidery Enters the

Campus " has pushed forward the inheritance of Canton embroidery to preserve young strength. As for display and publicity, based on traditional exhibitions and fairs, try and explore digital heritage means. In global communication, it is linked with fashion to enhance the international popularity of Canton embroidery.

To better communicate Canton embroidery, new trends of ICH should be focused on, and combined with new technology in 3 aspects. Firstly, to find new application scenarios in modern life. Secondly, to explore the fashionable qualities and highlights. Thirdly, to apply leading-edge digital technology to attract young audiences.

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