

Research on the Construction of Brand Stories of Liquor in the Era of Big Data - Analysis Based on Nvivo

Xinyu Jiang^{1,a}, Sifan Pei^{1,b}, Hao Wang^{1,c}, Kun Qin^{1,d}, Chunmei Chen^{1,e*}

¹Sichuan Agricultural University, School of business and tourism, Chengdu, china

^ajiangxinyu59947@163.com, ^bffynly@163.com, ^c961220569@qq.com, ^d1366463612@qq.com,

^e*corresponding Author: 1172460256@qq.com

Abstract

The era of Big Data, with the development of the internet, brand stories have become an essential way of brand shaping and communication. This paper selects 15 brand stories of Sichuan liquor brands as research samples, and uses Nvivo software, combined with qualitative analysis methods, to explore the text characteristics from brand stories' four elements which include messages, conflicts, events, and characters about the brand stories. It finally provides references for the construction of brand stories of liquor, and effectively promotes brand communication of liquor.

Keywords: Brand story, Qualitative Analysis, liquor, Nvivo

1. INTRODUCTION

With the development of Internet technology, social media has brought about a series of changes in the channels and ways of accessing and disseminating information to consumers. Nowadays, traditional advertisements have lost their competitiveness, while brand stories with characteristics of legend, twist, conflict, drama, communication, and inheritance often attract the audience's attention and become good communication tools [10].

Brand story is to integrate corporate image, product information and other basic elements in the process of brand communication, add time, place, people and related information, and spread and promote in the form of a complete narrative structure or perceptual "information group"[5]. Brand story can effectively attract consumers' attention and make consumers invest more cognitive efforts to interact with the story [8].

How is a good brand story constructed? It not only contains message, but also needs to consider sending this message to a plot stored in the receiver's memory. A plot with conflict points can be more appealing to consumers, and the plot requires the actions of characters. Messages, plots, conflicts, and characters are the four elements of a story [3].

Throughout the Liquor brand, with a long history, brewing process, heritage and other characteristics, the brand story includes the story of the company, the story of quality and so on. So what are the characteristics of the four elements of a liquor brand story? Is it possible to summarize the construction of a liquor brand story from them?

This paper selects 15 brand stories of Wuliangye, Luzhou Laojiao, Jiannanchun, Tuopaiqujiu, and Langjiu as research samples, and uses Nvivo software, to explore the text characteristics from brand stories' four elements which include messages, conflicts, events, characters about the brand stories. It finally provides references for the construction of brand stories of liquor, and effectively promotes brand communication of liquor.

2. RESEARCH DESIGN

2.1. Source of research data

This paper initially used the six golden flowers of Sichuan liquor as the research object. Still, due to the lack of extant information on Quanxing Daqu, we chose to discard Quanxing Daqu and use 15 brand stories from the other five brands as the research object. The sample sources of stories include the official websites of the five brands, search engine pages, advertising words, and promotional videos.

2.2. Research methods and tools

In this paper, we use qualitative research methods to identify and summarize themes in the text of 15 liquor brand stories by coding them with Nvivo. NVivo is a processing of non-quantitative, unstructured data software, it can process text data, such as Word documents, PDF documents, but also can process non-text data, such as photos, visual images and other formats of the document. [6]. Its development and application is regarded as the beginning of computerization of qualitative research. [11] The use of Nvivo for text analysis will lead to rigorous and valid research results.

2.3. Data analysis process

The literature that facilitates qualitative analysis of NVivo software is generally coded in two ways: fully open-ended coding and coding based on an existing theoretical framework [7]. The latter is generally considered more realistic and effective, so this coding approach is adopted in this study. The specific process is as follows: (1) we import the collected liquor brand stories into Nvivo software; (2) we establish messages, conflicts, characters, and events as core nodes for coding based on the constituent elements of brand stories; (3) we read the text word by word and extract topic words for the core nodes as first-level sub-nodes respectively. (4) we read the text word by word and extract topic words for the first-level sub-nodes as the second-level sub-nodes until the content of each node is completely independent. (5) The construction law of brand stories of Sichuan liquor is summarized.

3. ANALYSIS OF RESEARCH RESULTS

3.1. Analysis of word frequency characteristics of brand story texts

Word frequency is the number of words appearing in story texts. Its level will reflect the importance of a specific word in brand stories. The 20 most frequently occurring words in texts are selected, and the word frequency is visualized as a word cloud, where the coarseness of the words in the word cloud is proportional to their frequency of occurrence. It is shown in Figure 1.



Figure 1: Brand stories word cloud

After classifying high-frequency words, it can be found that China, liquor, enterprise, Luzhou, and Mianzhu are keywords that show the importance of liquor; brewing, culture, ecology, history, old cellar, and workshop show the influencing factors of liquor.

3.2. Element Analysis

In this study, four nodes are formed by Nvivo12plus qualitative text encoding, and number of texts and reference point values are shown in Table 1.

Table 1. Number of texts and references of nodes

| Name of Nodes | Number of texts | References |
|---------------|-----------------|------------|
| Message | 15 | 218 |
| Conflict | 8 | 37 |
| Character | 15 | 162 |
| Event | 15 | 231 |

3.2.1. Message

Message refers to the core message conveyed by storytellers when telling a story, which is usually the origin of the story. It forms the main axis of the story, which is actually ideology, or a point of view, position and view. Through storytelling, messages are more easily understood and internalized.[3]. There are four first-level sub-nodes of history and culture(HAC), natural beauty(NB), Inheritance and development(IAD), and brewing technology(BT), 19 second-level sub-nodes, and 239 references. The encoding of the message is shown in Table2. Among them, the brewing technology has the largest number of reference points, including seven secondary sub-nodes of raw materials (RM), old cellar(OC), process, storage, and workshop, blending, koji, which reflect the quality assurance of the Sichuan liquor brand by conveying the brewing technology of the Sichuan liquor brand. History and culture include five secondary sub-nodes of development history (DH),

brewing history(BH), liquor culture(LC), corporate culture(CC), national culture(NC) which reflect the long history of the brand through archaeological and historical relics, and the deep heritage of the company due to historical deposits [2]. Inheritance and development include three sub-nodes of technology inheritance (TI), and artisan inheritance(AI), strategic development (SD).On the basis of inheriting the principle of traditional wine making, some innovations are made to improve the efficiency of liquor making and ensure the quality of liquor making. Through the craftsman's inheritance, skills have been continued. Through strategic development, brand quality make better. Natural beauty includes four sub-nodes of geography, water source (WS), hole and soil. By passing on the unique natural environment, Sichuan liquor production area has an unrepeatable advantage, which provides natural advantages for Sichuan liquor.

Table 2. Number of nodes, texts, and references contained in the message node

| Name of Node | first-level sub-nodes | second-level sub-nodes | Number of texts and references |
|----------------------|-----------------------|------------------------|--------------------------------|
| Message (15, 239) | HAC (13, 64) | DH | (8, 15) |
| | | BH | (11, 19) |
| | | LC | (7,20) |
| | | CC | (4,6) |
| | | NC | (2,,4) |
| | BT (15, 84) | RM | (12,20) |
| | | OC | (10,24) |
| | | process | (9,13) |
| | | storage | (8,13) |
| | | workshop | (4,7) |
| | | blending | (2,2) |
| | | koji | (4,5) |
| | NB (11, 31) | geography | (7, 19) |
| | | WS | (6, 8) |
| | | soil | (4, 4) |
| | | hole | (4,5) |
| | IAD (12,50) | TI | (11,36) |
| | | AI | (8,14) |
| | | SD | (4,5) |

Note: In parentheses, the number of texts before the comma is the number of texts of the brand story of the content of the node, and the reference point after the comma is the number of occurrences of related content under the node. The following table is the same.

3.2.2. Conflict

Conflict is the driving force of the story [3]. The brand stories find no obvious conflict points, but they contain turning points. There are two first-level sub-nodes of technical change(TC) and strategic change(SC), five second-level sub-nodes, and 37 references. The encoding

of the conflict is shown in table3. The strategic change has the largest number of reference points, including two secondary sub-nodes of production strategy change(PSC) and development strategy change(DSC). Strategy change is conducive to the better development of the Sichuan wine brand and the improvement of its popularity. Technical change includes three secondary sub-nodes of brewing technology change(BTC), storage technology change(STC), and identification technology change(ITC), through which the liquor brand can be further improved.

Table 3. Number of nodes, texts, and references contained in the conflict node

| Name of Node | first-level sub-nodes | second-level sub-nodes | Number of texts and references |
|--------------------|-----------------------|------------------------|--------------------------------|
| conflict (8,37) | TC (6, 17) | BTC | (6,12) |
| | | STC | (2,3) |
| | | ITC | (1,2) |
| | SC (8, 20) | PSC | (3,6) |
| | | DSC | (7,14) |

3.2.3. Character

In a story, the characters drive the action in the plot, and the storyline cannot be developed without them [9]. There are five first-level sub-nodes of company organizations (CO), staff, research teams (RT), celebrities, and consumers,13second-level sub-nodes, and 175references. The encoding of the Character is shown in Table . Among them, company organizations have the largest number of reference points, including six secondary sub-nodes of historical heritage(HH), company development(CD), quality assurance(QA), and company glory(CG),company spirit (CS),public welfare (PW) .The company organization, which appears in the story under the brand name, is the most frequent character in the Sichuan liquor brand story. The dissemination of the Sichuan liquor brand story continuously strengthens and expands the awareness of the Sichuan liquor brand. Staff include three sub-node of brewing liquor(BL), Innovation, difficult, reflecting the development of the brand through the hard work and perseverance of generations of staffs, who continue to drive the development of the brand. Research teams include a secondary sub-node for research and development technology(RADT), which promote the innovation of the brand through the development of new technologies. Celebrities include two sub-nodes of poets and leaders. Narratives of celebrities can humanize the story, which is more conducive to promoting the brand. Consumers include a secondary sub-node of loyalty to brand(LTB),consumers like Sichuan liquor brand.

Table 4. Number of nodes, texts, and references contained in the character node

| Name of Node | first-level sub-nodes | second-level sub-nodes | Number of texts and references |
|--------------------|-----------------------|------------------------|--------------------------------|
| Character (15,175) | CO(15,113) | HH | (5, 8) |
| | | CD | (11, 37) |
| | | QA | (13, 40) |
| | | CG | (10,20) |
| | | CS | (3,5) |
| | | PW | (1,3) |
| | RT (7,18) | RADT | (7, 18) |
| | Staffs(9,21) | BL | (9,16) |
| | | Innovation | (1,2) |
| | | Difficult | (1,3) |
| | Consumers (6, 6) | LTB | (6, 6) |
| | Celebrities (8,17) | poets | (6,13) |
| | | leader | (4,4) |

3.2.4. Event

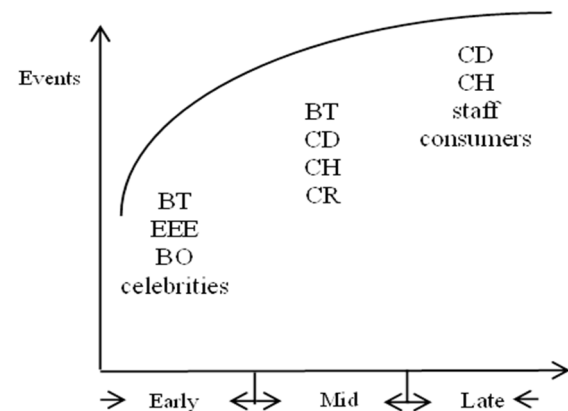
Different events are strung together to form the plot. It is the basic element of the plot [9]. There are three first-level sub-nodes of quality-related events (QRE), enterprise-related events (ERE) and people-related events (PRE), 14 second-level sub-nodes, and 255 references. The encoding of the event is shown in table 5. Among them, quality-related events have the largest number of reference points, including five secondary sub-nodes of brewing technology (BT), mellow taste (MT), strict control (SC), and excellent ecological environment (EEE), Establishing an ecological park (EAEP). Through the transmission of unique brewing technology, unique taste, the establishment of ecological park, strict control of standards, excellent ecological environment and other information, to show the fine quality of Sichuan liquor brand. Enterprise-related events include six secondary sub-nodes of corporate origin (CO), corporate development (CDE), corporate culture (CCU), corporate responsibility (CR), corporate philosophy (CP) and corporate honor (CH), which represent the entire history of Sichuan liquor brand. People-related events include three secondary sub-nodes of staff, consumers, celebrities. The staff can show the core concept of Sichuan liquor brand. People's events can resonate with consumers [4]. Celebrities can enhance the brand awareness of Sichuan liquor brand [1].

Table 5. Number of nodes, texts, and references contained in the character node

| Name of Node | first-level sub-nodes | second-level sub-nodes | Number of texts and references |
|--------------|-----------------------|------------------------|--------------------------------|
| Event | QRE | BT | (14, 83) |

| | | | |
|----------|-------------|-------------|----------|
| (15,255) | (15,136) | MT | (8, 11) |
| | | SC | (3,5) |
| | | EEE | (11,33) |
| | | EAEP | (2,4) |
| | ERE (13,75) | CO | (5, 5) |
| | | CDE | (11, 37) |
| | | CCU | (4,6) |
| | | CR | (2,4) |
| | | CH | (10, 20) |
| | | CP | (3,3) |
| | PRE (10,27) | staffs | (9,21) |
| | | consumers | (6,6) |
| | | celebrities | (8,16) |

3.3. The Construction Law of brand stories of Sichuan liquor brand

**Figure 2:** Event types of agricultural regional brands at different stages**Table 6.** The number of Nodes, texts, references in event nodes at different stages

| Event types | Early brand | Mid brand | Late brand |
|-------------|-------------|-----------|------------|
| BT | (9, 49) | (9, 33) | (0, 0) |
| MT | (0, 0) | (0, 0) | (8, 11) |
| SC | (0, 0) | (2, 2) | (2, 3) |
| EEE | (11, 33) | (0, 0) | (0, 0) |
| CO | (5, 5) | (0, 0) | (0, 0) |
| CDE | (0, 0) | (7, 20) | (9, 17) |

| | | | |
|-----------|--------|---------|---------|
| CCU | (2, 2) | (0, 0) | (3, 4) |
| CR | (0, 0) | (2, 4) | (0, 0) |
| CH | (0, 0) | (7, 10) | (9, 17) |
| staffs | (5, 6) | (4, 4) | (5, 11) |
| consumers | (0, 0) | (2, 2) | (4, 4) |

From the data in Table 6, it can be concluded that the story types of agricultural regional brands at different stages are shown in Figure 2. In the early stage, they mainly talk about brewing technology(BT), excellent ecological environment(EEE), brand origin(BO), celebrities. In the middle stage, they mainly talk about brewing technology(BT), corporate development(CD), corporate honor(CH), corporate responsibility(CR). In the late stage, they mainly talk corporate development(CD), corporate honor(CH), staff, consumers.

4. CONCLUSIONS

4.1. Discussions and prospects

This paper provides a specific value reference for the construction of Sichuan liquor brand stories in terms of message, conflict, Character, event. (1)For the message, we can consider four aspects: history and culture, brewing technology, natural beauty, inheritance and development. Sichuan liquor has a long history and profound historical culture. It is distinguished from other Sichuan liquor brands by the uniqueness of its brewing. (2) In terms of conflict, there are two aspects: technical change and strategic change, Sichuan liquor brand can be better developed by these aspects. (3)In terms of characters, they include company organizations, staff, research teams, celebrities and consumers, with the company organization being the most frequent. Through the communication of the brand story, it can strengthen and expand the brand awareness. Consumer stories are more likely to resonate with consumers, which is something that needs attention in the process of building a brand story.(4) In terms of events, there are three aspects: quality-related events, enterprise-related events and people-related events. With the development of liquor brands, events may change. (5) Most liquor brand stories are based on the history of brand development as the main narrative line. In different development stages, event distribution is different, time continuity is not strong, and the narrative structure of the story is linear.

4.2. Research limitations and prospects

This paper is based on previous research and uses Nvivo software to conduct the analysis. However, the research sample is Sichuan liquor brands, and it is not possible to determine whether the same pattern exists for

other types of liquor brands. It is found that there are fewer consumer-related stories. and the story emotion needs to be further strengthened.

In future research, it can be applied to other situations for discussion starting from the types of brand stories. We can research the brand story elements of other subjects. This paper only conducts qualitative analysis, and we can explore the influence of brand story elements on purchase intention in future research.

ACKNOWLEDGMENTS

This project is funded by research center for Sichuan liquor industry development of Sichuan university of science & engineering. (CJY21-03)

This project is funded by scientific research project of Sichuan Provincial Education Department: Research on Influencing Factors, Mechanism and Construction Countermeasures of Regional Brand Equity of Sichuan Agricultural Products (18SB0520).

REFERENCES

- [1] Bruce D. (2001) Storytelling wins hearts: Ten tips for creating captivating brand stories[J]. Marketing Magazine, 106(9): 26.
- [2] Chen Yuhou. (2017) Visualization Analysis of Research on Liquor Culture in Sichuan Based on Knowledge Graph [J]. Journal of Sichuan University of Science & Engineering, 32(06):10-25.
- [3] Fog K, Budtz C, Yakaboylu B. (2005). Storytelling: Branding in Practice[M]. Berlin.
- [4] Huang Guangyu, Chen Pingyu. (2009). A Comparative Study of the Brand Stories of Cartier, Chanel, and Tiffany[J]. Advertising Studies, (31): 1-34.
- [5] Lin Gang,Liu Ying.(2016).The Exploration and Analysis on the Mechanism of Action of Brand Story in Brand Communication-Taking Foreign Cosmetic Brand Story as Examples[J]. Brand Research, (05):90-96.
- [6] Liu Zhizhong. (2021).The theme, Characteristics and experience of the changes of china's University teacher development policy:An nvivo analysis Based on the policy texts from 1949 To 2020[J]. Jiangsu Higher Education, (12):56-63
- [7] Pan Hong Tang Li. (2020) Qualitative Data Analysis in Chinese Social Science Studies—The Case of Nvivo [J]. Data Analysis and Knowledge Discovery, 4(01):51-62.
- [8] Van Laer T, de Ruyter K, Visconti L M, et al. (2014). The extended transportation-imagery model: A meta-analysis of the antecedents and consequences

- of consumers' narrative transportation[J]. *Journal of Consumer Research*, 40 (5):797-817
- [9] Vincent L. (2002). *Legendary Brands: Unleashing the Power of Storytelling to Create a Winning Market Strategy* [M]. Chicago:Dearborn.
- [10] Wang Tao, Zhou Ling, Peng Chuanxin, Zhu Xiaomei. (2011). Storytelling Brand : Brand Narrative Theory of Constructing and Disseminating Stories -A Case Study of Daphne Brand[J]. *Journal of Management World*, (03): 112-123
- [11] Wu Jing, Wang Hongyi, Zhang Huiqin. (2019). Evolution from Circle of Friends to Virtual Brand Community from the Perspective of Empowerment — A Case Study Based on Si Shi Jiu Fang [J]. *Human Resources Development of China*, 36(03):20-36.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

