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Multidimensional Study on the Revitalization of Macao's History, Folklore and Cultural Heritage

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Abstract

This article delves into the revitalization of Macao's history, customs, and cultural heritage, aiming to explore the role, challenges, and sustainable development strategies of cultural heritage revitalization in Macao's development through a multidisciplinary approach. On the basis of sorting out the historical development of Macao, this article discusses the diverse presentation of Macao's folk culture, evaluates the composition and value of Macao's cultural heritage, analyzes the theoretical basis and practical models of cultural heritage revitalization, as well as the challenges and opportunities faced by Macao's cultural heritage revitalization. It also discusses the strategies and path choices for Macao's cultural heritage revitalization. The main conclusions of this paper include that the historical folk culture of the Historic Center of Macao, which combines Chinese and Western culture, has bred the Macao historic district; The traditional Chinese festivals and the customs of the Macanese people, as well as their folk art and culinary culture, have jointly shaped the folk culture of Macao; The value of Macao's tangible and intangible cultural heritage is enormous, but it faces challenges such as aging inheritors, modern cultural impact, and foreign cultural impact; The revitalization of Macao's cultural heritage faces challenges such as relatively lagging policies and regulations, poor cross departmental communication and coordination, funding shortages and single sources, cognitive biases and insufficient protection awareness, as well as difficulties in management and maintenance. To better revitalize Macao's cultural heritage, it is necessary to improve the policy and legal protection system, expand funding sources, enhance social participation, innovate revitalization methods and management models.

Keywords: Macao, History, Folk Customs, Cultural Heritage, Cultural Revitalization, Heritage Protection

1. Introduction

Macao has a unique historical, geographical, and cultural background, and holds a special position in cultural exchanges between the East and the West. The revitalization of cultural heritage is of great significance for the sustainable development of Macau's society, economy, and culture. It helps to enhance the cultural identity of Macau residents and promote the development of Macau's tourism industry.

This article uses historical archives, folkloric materials, cultural department statistical data, and field research

materials to explore the connotations and interrelationships of Macau's history, folk customs, and cultural heritage. It also analyzes the existing models and effectiveness evaluations of Macau's cultural heritage revitalization, as well as the challenges and opportunities it faces.

2. Literature Review and Evaluation

At present, the research on Macao's history, folk customs and cultural heritage mainly focuses on the heritage significance and value of the Historic Center of Macao, Macao's folk customs and intangible culture, and the tourism development of Macao's cultural heritage. Social science and technology journals have published the most results, as shown in Figure 1.

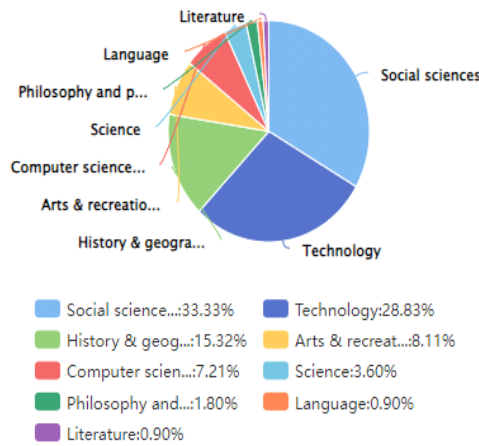


Figure 1: Disciplinary classification statistics of macro cultural heritage

From the perspective of academic development trends, the academic development curve of Macao's cultural heritage books from 1999 to 2024 was at a high level in 1999, 2004, and 2010, and tended to flatten out in other years. The specific situation is shown in Figure 2. The academic development trend of Macao's cultural heritage journals from 1994 to 2024 is expected to reach its peak in 2022-2023 and then decline in 2024. Please refer to Figure 3 for specific journals. The academic development trend of Macao's cultural heritage degree from 1998 to 2024 reached its peak in 2017 and has been declining since 2021. Please refer to Figure 4 for specific journals. The academic development trend of Macao's cultural heritage conferences from 2009 to 2024 reached its peak in 2016, declined in 2017, and gradually rose after 2018. The specific journals are shown in Figure 5.

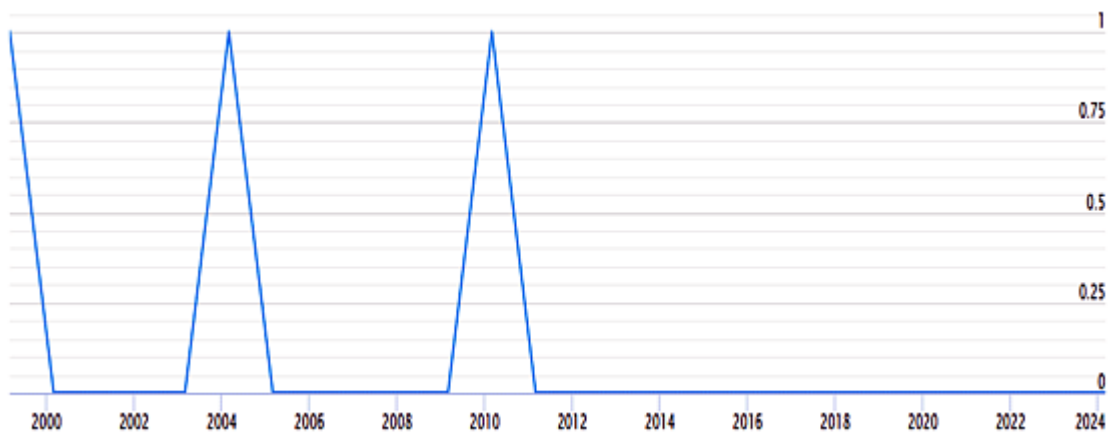


Figure 2: Academic Development Trends of Cultural Heritage Books in Macao from 1999 to 2024

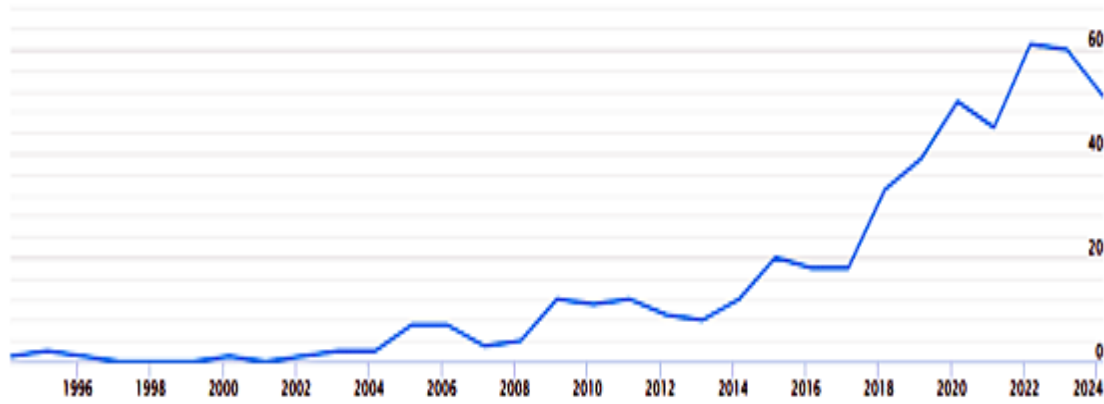


Figure 3: Academic Development Trends of Macao Cultural Heritage Journals from 1994 to 2024

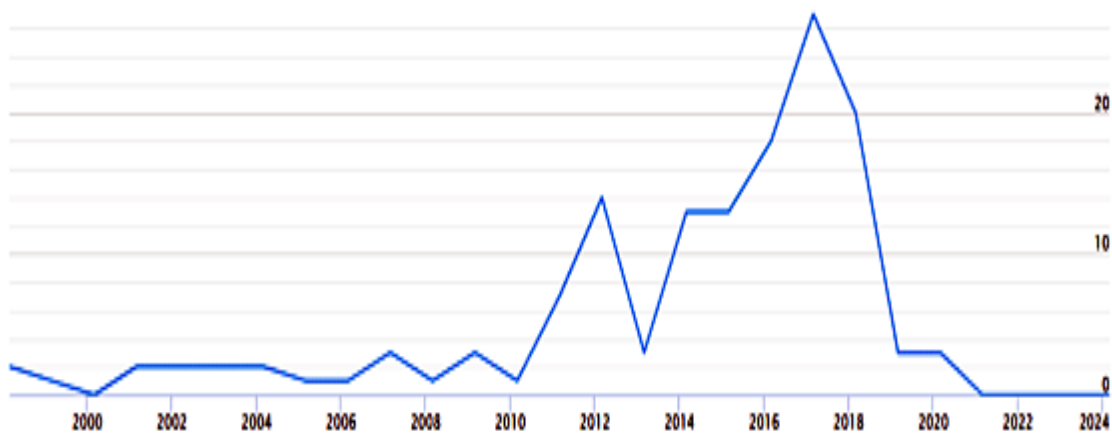


Figure 4 Academic Development Trends of Degree in Macao Cultural Heritage from 1998 to 2024

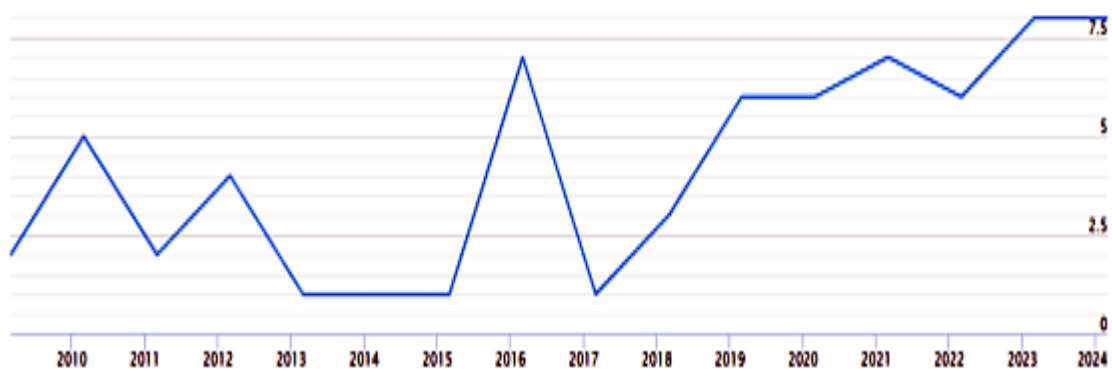


Figure 5 Academic Development Trends of Macao Cultural Heritage Conference from 2009 to 2024

Liu Xianbing (2003) believes that the lotus spirit of "emerging from the mud without getting stained" among the elderly residents of Macao, as well as the diverse and inclusive cultural landscape of multiple religions coexisting, respecting each other, and promoting ethnic harmony and tolerance in Macao society, are two rich historical heritages of Macao and invaluable spiritual wealth created by Macao's culture and education. Liu Xianjue and Chen Zecheng(2005)systematically summarized the development process of Macao's architectural cultural heritage over the past 400 years and analyzed the characteristics of various types of buildings. Wu Yao, Fan Feihao (Portugal), and Yong Meishu (Japan) (2009) succinctly, systematically, and vividly describe the unique style of Macao from the aspects of its urban historical background, historical architectural cultural heritage, formation and development of historical urban areas, urban and architectural features, and historical spatial renewal design. Tong Qiaohui and Zhang Jieru (2016) explored the conservation value of landscape architecture, established a value evaluation framework for modern landscape architecture in Macao, and proposed corresponding conservation strategies.

Liu Zhifeng(2012)used field survey data as a case study to compare and analyze the differences in traditional cultural heritage, historical appearance, activity methods, and behavioral effects between folk behavior and government behavior in the process of historical folk activities, in order to explore the scientific nature of government behavior in the protection of historical folk customs. Liang Meijuan(2019)believes that the forms of land worship in Macao's land customs and Hong Kong's land temples are different, but there is a commonality in people's psychology. Li Jitai and Li Min(2022)analyzed the development process, artistic characteristics, historical status, cultural heritage attributes, and several outstanding universal values that meet the World Heritage evaluation criteria of Jiasi Lan Garden.

Zhao Zheng(2009)believes that the historical and cultural heritage of Macao has become an important lever and competitive advantage for Macao to achieve urban economic transformation and social progress. Zhu Rong(2015)elaborated on the fundamental theories of the connotation, significance, and development process of the protection and management of world cultural heritage, and summarized the general rules and international experience of protection and management through the development of the protection theory and management practice of world cultural heritage in Edinburgh, UK. Deng Ru(2020)emphasized the three elements of overall protection, place spirit protection and community participation, analyzed the protection status of the Historic Center of Macao through comprehensive evaluation and SD semantic evaluation, and proposed corresponding protection strategies and methods. Li Jitai and Zhang Wenyong(2022)used a case study method to analyze and compare the renewal cases of historical districts in developed Western countries with the possibility of renewal in Macao's historical districts, and explored the renewal strategies for Macao's historical districts.

Wu Wenxue(2012)advocates that only by protecting heritage through tourism and promoting heritage through tourism can sustainable development of world heritage sites be achieved. Zhong Mengyan(2020)proposed three suggestions to improve the promotion of Macao's historical heritage resources: "exploring the added information value of historical heritage resources", "using appropriate communication technologies to highlight attractive information", and "broadening horizons and seizing all opportunities to attract audiences". Zhang Zhiqing et al.(2022)analyzed the diversity structure (Porosity) characteristics of Macao culture, emphasizing its diversity, inclusiveness, and openness. Le Wanyi and Yan Yu(2024)used the historical and cultural heritage of the Macao Special Administrative Region as the object, constructed a heritage spatial network using the minimum cumulative resistance model and GIS spatial analysis method, and analyzed its spatial structure and suitability. Wang Zhong and Li Laibin(2024), from the perspective of embeddedness theory, introduced three variables, namely cultural attachment, role identity and benefit perception, to build a structural equation model of the impact of social embeddedness on pro tourism behavior of community residents in cultural heritage tourism destinations. Taking the the Historic Center of Macao as a case study, based on 402 valid questionnaires, they tested the hypothesis using partial least squares method.

Vong(2012)hoda that from a tourism perspective, the critical factors that are essential to enhance tourist experience when visiting Macao's major heritage sites.Wong(2014)suggests that the difficulties of saving intangible heritage can be explained through rational human behavior amid political and demographic changes.Neuwirth(2023)assesses the role of underwater cultural heritage in diversifying its economy and stresses the need for greater policy coherence both between different cultural policies but also between cultural, commercial and other policy areas.Nguyen(2023)holds that any discussion on the relationship between planning and representation of heritage for tourism development and the notions of modernity, sustainability and identity from a Chinese perspective is of immediate academic and practical interest.

These representative research results provide useful references for the study of this article, which further expands the scope of this research.

3. Sorting out the historical context of Macao

3.1 Ancient Macao: From Fishing Village to Trade Port (Prehistory -1840)

3.1.1 Early Indigenous Peoples and Fishing Village Culture in Macao

(1) Archaeological discoveries of indigenous traces

Macao, a city that blends Eastern and Western cultures, has a history that can be traced back to ancient times. In recent years, archaeologists have conducted in-depth excavations at multiple sites in Macao, revealing traces of indigenous life. For example, archaeologists have discovered a large number of artifacts such as stone tools, pottery, and shells in places like Coloane Island and Black Sand Beach. These artifacts not only prove the early human settlement in Macao, but also reflect their lifestyle of fishing, hunting, and gathering. What is particularly noteworthy is that the production techniques of some stone tools are already quite exquisite, demonstrating the high survival skills and wisdom of the indigenous people.

(2) Early Indigenous Peoples of Macao Recorded in Literature

In addition to archaeological discoveries, ancient literature also provides valuable information for studying the early indigenous peoples of Macao. According to historical records such as "A Brief History of Macao", Macao had a relatively stable population during the *Ming* dynasty and *Qing* dynasty, including descendants of indigenous people. These documents not only record the living conditions of the indigenous people, but also describe the social structure and religious beliefs at that time, such as the widespread dissemination of *Mazu* belief among fishermen, reflecting the indigenous people's reverence and dependence on the ocean, as well as their interaction with foreign immigrants. For example, literature mentions that indigenous people were mostly engaged in fishing and agriculture, living a simple and hardworking life, forming a sharp contrast with later Portuguese colonizers. These records provide important clues for us to understand the diverse structure of early Macao society.

(3) Early fishing village culture and indigenous production and living customs in Macao

The early fishing village culture in Macao is an important manifestation of the production and living customs of the indigenous people. The indigenous people have developed a unique fishing economic system by utilizing abundant marine resources. They are not only good at fishing, but also adept at utilizing marine resources such as shellfish and seaweed, enriching their diet and life. In addition, indigenous peoples also engage in trade with surrounding areas through the exchange of fish catches, promoting economic and cultural exchange and development.

In terms of production and living customs, indigenous people follow strict seasonal and natural laws. They arrange fishing activities based on tidal changes and use seasonal catches to produce various types of food, such as salted fish, dried fish, etc., for emergency use. At the same time, indigenous people have also preserved rich folk beliefs and ritual activities, such as sea worship, prayer, fishing songs, fishing dances and other folk art forms. These customs not only reflect their reverence for nature, but also strengthen the cohesion and sense of identity within the community. In addition, fishermen have formed unique community organizations such as "fishing associations" to maintain community order and coordinate fishery production. These organizations played an important role in the early social governance of Macao.

In short, the early indigenous people and their fishing village culture in Macao are an important part of Macao's history. Through archaeological discoveries, documentary records, and the comprehensive display of indigenous production and living customs, they have revealed to us a vibrant and dynamic ancient society. Through comprehensive analysis of archaeological discoveries, literature records, and indigenous production and living customs, we can gain a deeper understanding of the structure and development of early Macao society.

3.1.2 Portuguese Eastward Arrival and Opening of Ports in Macao

(1) The specific historical process of Portugal's arrival and rental in Macao

At the beginning of the 16th century, European navigation technology developed rapidly, and Portugal, as a maritime power, actively expanded its routes to the East. In 1513, Portuguese Alvarez Cabral led his fleet to the

coast of Guangdong, China, marking the beginning of Portugal's eastward expansion. Subsequently, the Portuguese attempted to establish strongholds along the coast of China, but were hindered by the Ming Dynasty's maritime ban policy.

In 1533, the Portuguese bribed local officials in Guangdong to obtain the right to dock and reside at the southern end of the Macao Peninsula, which was the starting point for the Portuguese to officially rent Macao. In 1553, the Portuguese built a temporary residence in the South Bay of Macao under the pretext of drying goods, and gradually expanded their residence area. In 1557, the Ming government officially recognized the Portuguese's right of residence in Macao, making Macao the first overseas colony of Portugal in China.

(2) The Changes of Macao's Commercial Ports: From Fishing Villages to About Opening Commercial Ports and Foreign Trade Ports

Before the arrival of the Portuguese, Macao was just an ordinary fishing village with a sparse population and a backward economy. After the Portuguese rented Macao, they took advantage of its geographical location to develop maritime trade, gradually building Macao into an important commercial port in the Far East region.

In the late 16th and early 17th centuries, Macao became a hub for East West trade, attracting a large number of merchants, craftsmen, and adventurers to settle there. The Portuguese have built numerous churches, monasteries, and municipal buildings in Macao, forming a unique Portuguese style architectural complex. At the same time, Macao also became a gateway for European missionaries to enter China, promoting the exchange and integration of Chinese and Western cultures.

In the late 18th and early 19th centuries, with the arrival of Western powers and the relaxation of the Qing Dynasty's maritime ban policy, Macao gradually transformed from a treaty port to an officially open port to the outside world. Macao formed close trade relations with Hong Kong, Guangzhou and other places, becoming an important window for the Qing Dynasty's foreign trade.

(3) Macao Port and Foreign Trade Ports in the Ming and Qing Dynasties

During the Ming Dynasty, Macao, as a Portuguese settlement, although strictly managed by the Ming government, still became an important hub for Sino foreign trade. The Portuguese transported Chinese silk, porcelain, tea and other goods to the European market through Macao, while bringing back watches, glassware and other goods from Europe, promoting the prosperity of Sino-Western trade.

During the early Qing Dynasty, Macao continued to maintain its important position as a foreign trade port. During the Kangxi reign, the Qing government implemented a maritime ban policy, but Macao, as a chartered foreign trade port, still enjoyed trade privileges. During the *Qianlong* period, with the relaxation of the Qing Dynasty's foreign trade policy, the trade links between Macao and Guangzhou, Hong Kong and other places became even closer, becoming an important part of the Qing Dynasty's foreign trade.

In short, Portugal's arrival from the east and its profound impact on the opening of Macao not only changed the fate of Macao, but also promoted the exchange and integration of Chinese and Western cultures. The transformation of Macao from a fishing village to a commercial port has witnessed the prosperity and development of Sino-Western trade. The important position of Macao Port in foreign trade during the Ming and Qing dynasties has left valuable historical heritage for future generations.

3.1.3 Cultural Characteristics of Macao during the Ming and Qing Dynasties

(1) The Debate between Religious Propagation and Etiquette

During the Ming and Qing dynasties, Macao became an important base for the spread of Catholicism in China. In 1553, the Portuguese were allowed to settle in Macao, and subsequently Jesuits such as Matteo Ricci came to China one after another. They not only brought Western religious ideas, but also devoted themselves to

integrating Catholic doctrine with traditional Chinese culture. However, this process was not smooth sailing, but was accompanied by a fierce conflict with traditional Confucian etiquette, known as the "Battle of Etiquette" in history.

Matteo Ricci and other Jesuits advocated an "adaptive strategy" that respects traditional Chinese customs such as ancestor worship and Confucius worship, believing that this does not violate Catholic doctrine. However, this viewpoint has been strongly opposed by other denominations such as the Dominicans, who believe that these customs have an idol worship nature and are contrary to the Catholic faith. This debate not only affects the dissemination strategy of Catholicism in China, but also deeply reflects the collision and integration of Chinese and Western cultures in the field of religion.

(2) Initial formation of architectural style

With the settlement and trade activities of the Portuguese in Macao, Western architectural styles began to blend with local culture, forming a unique Macao architectural style. During this period, many buildings integrating Chinese and Western elements emerged in Macao, such as the memorial archway of Dasanba and the front of the Parliament Pavilion.

The memorial archway of Dasanba used to be the site of the front wall of a Catholic church (St. Paul's Cathedral). Its architectural style combines Baroque and Oriental traditional elements, and it has become one of the most representative landmarks in Macao. The area in front of the Senate is the center of the old town of Macao, with surrounding buildings incorporating both Portuguese colonial style and traditional Chinese architectural elements such as upturned eaves, blue bricks, and gray tiles, showcasing the harmonious coexistence of Chinese and Western cultures.

(3) Diverse convergence of language, cuisine, and customs

During the Ming and Qing dynasties, Macao was a melting pot of diverse cultures. In terms of language, multiple languages such as Portuguese, Cantonese, and Chinese coexist, forming a unique language environment. This diverse linguistic background not only promotes cultural exchange between the East and the West, but also provides convenience for Macao's international trade and cultural development.

In terms of cuisine, Macanese combine Chinese and Western cooking techniques to create many unique and flavorful dishes, such as Portuguese egg tarts and pork chop buns. These delicacies are not only loved by local residents, but also attract a large number of tourists to come and taste them.

In terms of customs, Macanese have not only preserved traditional Chinese festivals and customs such as Spring Festival and Mid Autumn Festival, but also absorbed Western festival culture such as Christmas and Valentine's Day. This diverse customs and habits not only enrich the cultural life of Macao people, but also reflect the mutual infiltration and integration of Chinese and Western cultures.

In short, during the Ming and Qing dynasties, Macao became an important window for cultural exchange between the East and the West with its unique cultural characteristics. The struggle between religious dissemination and etiquette, the initial formation of architectural styles, and the diverse convergence of language, cuisine, and customs together constitute the rich and colorful cultural landscape of Macao during this period. Thoroughly studying the cultural characteristics of this period not only helps to reveal the inherent laws of cultural exchange between China and the West, but also provides useful references for the protection and inheritance of contemporary cultural diversity.

3.2 Modern Macao: Development and Changes under Colonial Rule (1840-1949)

3.2.1 Changes in the Political Status of Macau after the Opium War

(1) The sovereignty of Macao is gradually losing

The Opium War (1840-1842), as the beginning of modern Chinese history, not only marked the decline of feudal society in China, but also profoundly influenced the political status of the Macao region. Before the war, although Macao was under the actual control of Portugal, it was still nominally part of Chinese territory and enjoyed a relatively independent sovereign status. However, with the signing of unequal treaties such as the Treaty of Nanjing, the Qing government gradually lost its actual control over Macao. Especially with the signing of the Treaty of Wangxia, Portugal's permanent residency and autonomy in Macao were officially confirmed, marking the gradual transfer of sovereignty over Macao to Portugal.

(2) Portugal's colonial rule strengthened

After the Opium War, Portugal took advantage of the changes in the international situation to further consolidate and expand its colonial rule in Macao. They not only strengthened military defense, but also gradually built a complete colonial rule system through infiltration in various aspects such as economy and culture. For example, Portugal established the Governor General's Office in Macao, responsible for handling administrative affairs in the Macao region; At the same time, significant economic benefits were obtained through means such as monopolizing trade and imposing tariffs. In addition, Portugal actively promotes Portuguese language education, attempting to assimilate Macao residents culturally and further consolidate its colonial rule.

(3) Social changes resulting from the loss of sovereignty and governance over Macao under Portuguese colonial rule

With the strengthening of Portuguese colonial rule, the sovereignty and governance of Macao gradually lost, which triggered profound social changes. On the one hand, Portugal's colonial policy accelerated the singularity and dependence of the Macao economy, making Macao an important base and source of raw materials for Portuguese commodity exports. On the other hand, the social structure under colonial rule also underwent significant changes, with diverse ethnic groups such as Portuguese, Chinese, and Indian forming complex class relationships in Macao. Among them, although Chinese people make up the majority of the population, they have long been in a disadvantaged position in politics, economy, culture, and other aspects.

Taking education in Macao as an example, Portuguese colonizers promoted Portuguese language education in an attempt to cultivate pro Portuguese forces, while Chinese faced a crisis of cultural identity. This education policy not only exacerbates the cultural divide between Chinese and Portuguese, but also limits the autonomous development of Chinese society.

In short, the changes in the political status of Macao after the Opium War are an undeniable chapter in modern Chinese history. It not only reveals the erosion of China's territorial sovereignty by Western powers, but also reflects the profound impact of colonial rule on Macao society. In the face of this history, we should deeply reflect, strengthen our awareness of national sovereignty, promote ethnic unity and cultural confidence, and contribute to the great rejuvenation of the Chinese nation.

3.2.2 Changes in the Economic Structure and Cultural Alienation of Macao during the Portuguese colonial period

(1) The Economic Structure and Changes of Macao from 1840 to 1949

Since the Opium War in 1840, Macao gradually became an important trading port and stronghold for Portugal in the Far East. During this period, significant changes occurred in the economic structure of Macao. According to historical records, from the late 19th century to the early 20th century, Macao's foreign trade volume continued to grow, especially with mainland China, becoming its economic pillar. For example, in 1887, the transit trade volume between Macao and Hong Kong reached 27 million silver dollars, accounting for nearly half of its total trade volume.

However, with changes in the international trade environment and political turmoil in mainland China, traditional trade in Macao has gradually been impacted. At the end of the 19th century, Macao began to attempt economic diversification, but the results were limited. It was not until the early 20th century, with the aftermath of the Industrial Revolution and the introduction of Western technology, that Macao began to see the emergence of some small factories and handicraft workshops, but overall it still could not shake off its dependence on trade.

(2) The Rise and Development of Macao's Gaming Industry

Under Portuguese colonial rule, the gambling industry gradually became an important component of Macao's economy. In the 1930s, the Macao government began issuing gambling licenses, marking the legalization and commercialization of the gambling industry. According to statistics, the revenue of Macao's gambling industry was only 200000 silver dollars in 1937, but by 1948, this number had skyrocketed to nearly 5 million silver dollars, with an astonishing growth rate.

The rise of the gambling industry has not only brought abundant tax revenue to Macao, but also promoted the development of related industries such as hotels, catering, and tourism. However, the prosperity of the gambling industry has also brought about social problems such as gambling addiction and rising crime rates. These issues attracted widespread attention and discussion in the Macao society at that time.

(3) Cultural alienation in Macao under Portuguese colonial rule and economic structural transformation

Under Portuguese colonial rule, the changes in the economic structure of Macao not only affected economic development, but also profoundly altered social structure and cultural traditions. With the influx of foreign cultures and the integration of local cultures, Macao has gradually formed a unique cultural landscape.

On the one hand, Portuguese culture, European architectural styles, and Western lifestyles have been widely spread and accepted in Macao. For example, the landmark buildings in Macao, such as the memorial archway of Da Sanba and the front of the Convention Pavilion, are all cultural heritage left by Portugal during the colonial period. On the other hand, traditional Chinese culture has also been preserved and developed in Macao, forming a unique cultural style that combines Chinese and Western elements.

However, the transformation of economic structure and cultural integration have also brought about the phenomenon of cultural alienation. Some Macao residents are gradually moving away from traditional culture and pursuing Western lifestyles and values. This cultural alienation phenomenon attracted attention and reflection from all sectors of society at that time, and also left valuable experience and lessons for the protection and inheritance of Macao culture in the future.

In short, the changes in the economic structure and cultural alienation of Macao during the Portuguese colonial period were a complex and profound historical process. Through the analysis in this article, we can see that the transformation of economic structure has had a profound impact on Macao's society and culture. In the future development, Macao should continue to strengthen cultural protection and inheritance work, promote the exchange and integration of Chinese and Western cultures, and lay a solid foundation for Macao's long-term prosperity and stability.

3.2.3 Social Changes in Modern Macao under Colonial Rule

(1) The changes and struggles of the Chinese community in Macao

Since the Portuguese settled in Macao in the 16th century, Macao has gradually become a colony of Portugal. During this period, the Chinese community in Macao experienced unprecedented changes. Economically, Chinese were forced into the colonial trade system, becoming cheap labor and living in dire straits. At the same time, with the influx of Western goods, traditional handicrafts have been impacted, and many Chinese have lost their livelihoods, further widening the wealth gap in society.

Politically, Chinese people have long been in a state of powerlessness, and a series of policies implemented by the colonial government, such as the "Portuguese rule over Australians" system, severely deprived Chinese people of their political rights. The unequal status of Chinese people in politics and law has exacerbated social unrest and dissatisfaction.

(2) The Awakening of Ethnic Consciousness among Chinese in Macao

Faced with the oppression and exploitation of colonial rule, the Chinese people in Macao gradually awakened and began to seek national independence and liberation. At the end of the 19th century and the beginning of the 20th century, with the deepening of the national crisis, the ethnic consciousness of the Chinese in Macao was unprecedentedly high. They organized various forms of resistance activities, such as strikes, demonstrations, etc., attempting to express their dissatisfaction with colonial rule through collective action.

At the same time, a group of intellectuals with national sentiments began to advocate for national self rescue. They spread national ideas and stimulated the patriotic enthusiasm of the people through the establishment of newspapers, education, and other means. These efforts not only promoted the unity of the Chinese community, but also laid the ideological foundation for the later national liberation movement.

(3) Adhering to and integrating local culture in Macao

Under colonial rule, the local culture of Macao faced severe challenges. On the one hand, colonizers attempted to assimilate Chinese people through cultural infiltration, while on the other hand, Chinese people stubbornly adhered to their cultural traditions. For example, in terms of religious beliefs, although Catholicism has been widely spread in Macao, the folk beliefs of Chinese people are still deeply rooted, and the two have formed a unique cultural landscape through mutual collision.

However, the adherence to culture is not about being closed and self-sufficient, but about achieving integration and innovation through communication. During the colonial period, Macao became an important window for cultural exchange between China and the West. While absorbing Western culture, Chinese people have also integrated it into their local culture, forming a cultural phenomenon with Macao characteristics. The food culture and architectural style of Macao reflect the integration and coexistence of Chinese and Western cultures.

In short, the social changes in modern Macao under colonial rule are a microcosm of the Chinese society's pursuit of development through oppression and struggle. Through the discussion in this article, we can deeply understand that although colonial rule brought profound disasters to Macao, the resilience and wisdom demonstrated by the Chinese community in adversity not only promoted national awakening and unity, but also provided valuable experience for the preservation and integration of Macao's local culture. In the future, Macao should continue to promote this spirit and advance social harmony and progress.

3.3 Modern Macao: Historical Process before and after the Return (1949 present)

3.3.1 The Relationship between Macao and Mainland China from the Founding of the People's Republic of China to the Return of China

(1) Changes in the Relationship between Macao and Mainland China from the Founding of the People's Republic of China to the Reform and Opening Up Era

After the establishment of the People's Republic of China, Macao, as a colony of Portugal, maintained a certain distance from the mainland of China in terms of politics and economy. However, civil exchanges have not been interrupted as a result. According to historical records, during this period, there were many mainland residents who entered Macao through legal or illegal means to make a living, forming a unique "wave of immigration". Economically, although Macao relies on transit trade, the demand for its goods in the mainland market still has a

significant impact. However, due to differences in political systems and the complexity of the international situation, economic cooperation between the two regions is mostly limited to informal channels, and official exchanges are relatively limited.

(2) The relationship between Macao and mainland China during the post transitional period

In the 1980s, with the deepening of reform and opening up, the mainland economy developed rapidly, and the relationship between Macao and the mainland also reached a new turning point. In 1986, the governments of China and Portugal signed the Joint Declaration, which confirmed that Macao would return to China in 1999. This historical event marks the beginning of Macao's post transition period and the gradual normalization of relations between the two regions. During this period, the mainland has increased its support for Macao, including infrastructure construction, economic cooperation, and talent cultivation. At the same time, Macao actively utilizes the policy advantage of "One Country, Two Systems" to strengthen economic and trade exchanges with the mainland, achieving rapid economic growth and social stability and prosperity.

(3) Changes in Macao's international status before its return

Prior to its return, Macao's international status underwent significant changes. On the one hand, with the improvement of the comprehensive national strength of the mainland and the expansion of its international influence, Macao, as an inseparable part of China's territory, has achieved unprecedented international status. On the other hand, under the framework of "One Country, Two Systems", Macao has maintained a high degree of autonomy and a unique social system, becoming an important window for the international community to observe China's reform, opening up, and modernization construction. In addition, Macao actively participates in international exchanges and cooperation, especially in the fields of tourism, trade, culture, etc., and has achieved significant achievements, further enhancing its international reputation and influence.

In short, from the establishment of the People's Republic of China to the return, the relationship between Macao and mainland China went through a process from alienation to gradual integration. In the post transition period, the relationship between the two regions has achieved a qualitative leap, laying a solid foundation for the smooth return of Macao and the successful implementation of "one country, two systems". On the eve of its return, the elevation of Macao's international status is not only a recognition of its unique historical status, but also a vivid reflection of China's achievements in reform, opening up, and modernization.

3.3.2 Historical significance of Macao's return and significant events during the return process

(1) Historical significance

The historical significance of Macao's return is profound. It is not only a strong proof of the Chinese government's firm stance in safeguarding national sovereignty and territorial integrity, but also an important milestone in the great rejuvenation of the Chinese nation. Macao has been a territory of China since ancient times, but in modern times it has been occupied by Portuguese colonizers for various reasons. With the establishment of the People's Republic of China and the continuous improvement of its comprehensive national strength, the Chinese government began to address the issue of Macao. The return of Macao not only restored China's territorial integrity, but also demonstrated to the world the determination and ability of the Chinese government and people to safeguard national interests.

Not only that, the return of Macao also reflects the successful practice of the great concept of "One Country, Two Systems". Under the guidance of the "One Country, Two Systems" policy, Macao has maintained its original social system and way of life, while enjoying a high degree of autonomy. This practice has not only brought long-term prosperity and stability to Macao, but also provided useful reference for the international community to solve similar problems.

(2) Major events

The process of Macao's return was full of twists and turns, but the Chinese government remained steadfast in advancing the negotiation process, ultimately achieving a peaceful return of Macao. The following are several major events during the process of Macao's return:

- ① Signing of the Sino-Portuguese Joint Declaration: On April 13, 1987, the governments of China and Portugal officially signed the "Joint Declaration on the Question of Macao" in Beijing, confirming that the Chinese government resumed exercising sovereignty over Macao on December 20, 1999. The signing of this statement laid a solid legal foundation for the return of Macao.
- ② Formulation of the Basic Law of the Macao Special Administrative Region: In order to ensure the stability and development of Macao after its return, the Chinese government has formulated the Basic Law of the Macao Special Administrative Region of the People's Republic of China. The Law was adopted at the first session of the Eighth National People's Congress on March 31, 1993, providing legal guarantees for the political, economic and cultural development of the Macao Special Administrative Region.
- ③ The establishment of the Macao Special Administrative Region: On December 20, 1999, the Macao Special Administrative Region was officially established, marking the historical moment of Macao's return to the motherland. On this day, the government of the Macao Special Administrative Region was sworn in and held a grand celebration.
- ④ Economic development and improvement of people's livelihood in Macao: After the return, the Macao Special Administrative Region government actively promoted economic development and social progress, achieving significant results. Macao's economy continues to grow, residents' living standards continue to improve, and public service systems such as education and healthcare are constantly improving.

In short, the return of Macao is one of the important events in modern Chinese history, with profound historical significance. By sorting out the major events, we can have a clearer understanding of the Chinese government's firm stance in safeguarding national sovereignty and territorial integrity, as well as the successful implementation of the great concept of "one country, two systems".

3.3.3 Development achievements of Macao under the "One Country, Two Systems" policy after its return

(1) Sovereignty Return: Successful Practice of 'One Country, Two Systems'

On December 20, 1999, Macao returned to the embrace of the motherland, marking a significant victory for the Chinese government in safeguarding national sovereignty and territorial integrity. After the return, the Macao Special Administrative Region has maintained long-term prosperity and stability under the principles of "One Country, Two Systems", "Macao people governing Macao", and a high degree of autonomy. This successful practice not only demonstrates the superiority of "One Country, Two Systems", but also provides a new approach for the international community to solve historical legacy issues.

(2) Improving Governance: From "Australians Governing Australia" and "High Autonomy" to "Patriots Governing Australia" and "Central Comprehensive Governance"

After the return of Macao, the governance system has been continuously improved. On the basis of "Australians governing Macao" and "a high degree of autonomy", the central government has gradually strengthened its comprehensive governance over Macao, ensuring the political stability and administrative efficiency of the Macao Special Administrative Region. At the same time, the establishment of the principle of "patriots governing Macao" has further consolidated the political foundation of the Macao Special Administrative Region and provided a solid guarantee for the long-term prosperity and stability of Macao.

(3) Economic development: actively integrating into the overall development of the country, moderately

diversifying the economy

Since its return, the Macao Special Administrative Region has actively integrated itself into the overall national development situation and actively participated in regional cooperation such as the construction of the "the Belt and Road", resulting in sustained and rapid economic growth. At the same time, the Macao Special Administrative Region government actively promotes moderate economic diversification, vigorously develops emerging industries such as tourism, exhibitions, finance, and traditional Chinese medicine, effectively reduces dependence on the gambling industry, and enhances the economy's ability to resist risks.

(4) Livelihood Services: Sunshine Government, Livelihood oriented, Relieving Difficulties and Difficulties

The government of the Macao Special Administrative Region has always adhered to the governance philosophy of "putting the people first", committed to building a transparent government, improving administrative transparency and credibility. In terms of livelihood services, the government has increased investment in education, healthcare, housing and other fields, effectively addressing the hot and difficult issues that residents are concerned about. Especially in response to emergencies such as the COVID-19 epidemic, the government acted quickly and took effective measures to ensure the life safety and health of residents.

(5) Cultural construction achievements

After the return, the Macao Special Administrative Region has made significant achievements in cultural construction. The government actively promotes cultural exchange and mutual learning between China and the West, and strengthens the protection and inheritance of cultural heritage. At the same time, the Macao Special Administrative Region actively participates in international cultural exchanges and cooperation, enhancing Macao's international reputation and influence.

In short, the rapid development of Macau after its return is a vivid portrayal of the successful implementation of the "One Country, Two Systems" policy. In the future, the Macao Special Administrative Region should continue to deepen exchanges and cooperation with the mainland, promote moderate economic diversification and sustainable development; At the same time, we will strengthen people's livelihood services and cultural construction, continuously improving residents' sense of happiness and belonging. This will lay a solid foundation for the long-term prosperity and stability of the Macao Special Administrative Region.

4. Diversified presentation of Macao's folk culture

4.1 Folk Festivals

4.1.1 Representative Traditional Chinese Festivals

(1) Spring Festival: This is one of the most important traditional festivals in Macao. During the Spring Festival, lights and decorations are hung everywhere in Macao. People will conduct a thorough cleaning, symbolizing the elimination of the old and the welcome of the new. On New Year's Eve, a family gathers together to have a reunion dinner, usually with dishes symbolizing good luck, such as seaweed, oyster sauce, and black beans (symbolizing wealth and prosperity). On the first day of the Chinese New Year, people will wear new clothes and go to temples to offer incense and pray for blessings. Temples such as A-Ma Temple are bustling with people, praying for a safe and smooth new year.

(2) Mid-Autumn Festival: Watching the moon and eating moon cakes are essential activities. Major bakeries in Macao will offer various flavors of mooncakes. In addition, there are traditional customs such as dancing fire dragons, and in some communities, fire dragons can be seen shuttling around, which is very lively. This festival embodies the cultural connotation of reunion.

4.1.2 Festival customs of native Portuguese people

(1) Parade of Our Lady of Fatima: This is an important religious festival for the Macanese people. The parade carried the statue of Our Lady of Fatima and set off from the church, with many believers following along the way. There is also a band playing traditional religious music in the team, with people holding flowers and a sense of ceremony, showcasing the religious beliefs and cultural traditions of the Portuguese people.

(2) Portuguese Tarta Festival: Although not strictly a traditional festival, it is related to Portuguese food culture. During the festival, there will be various competitions and tasting activities for making Portuguese tarts, where everyone can taste authentic Portuguese tarts and experience the continuation of Portuguese culinary culture in Macau.

(3) The Differences and Similarities between the Festival Customs of Macanese and the Local Customs of Portugall

1) Similarities

① The importance of religious festivals: The vast majority of Portuguese people believe in Catholicism, and religion occupies an important position in their culture. Many festivals are related to religion and are highly valued. Macanese born in Portugal also believe in Catholicism, and their celebration and emphasis on religious festivals are somewhat similar to those of mainland Portugal. For example, Easter is an important holiday in both Portugal and the Portuguese speaking community, where people engage in corresponding religious ceremonies and family gatherings.

② The tradition of family reunion: Both native and native Portuguese emphasize family reunion on some important festivals. For example, during Christmas in Portugal, families will reunite on December 24th; Macanese people also celebrate major holidays with their families to maintain family relationships and bonds.

2) Different points

① The integration and transformation of festival celebration forms

In terms of cuisine, Portugal has its own traditional food culture and specialty dishes, such as roasted turkey and cod on Christmas, as well as deep fried desserts such as emperor cake, "filh ó s", "sonhos", and "rabanadas". The food culture of the Macanese people reflects the characteristics of diversity and integration. Their culinary skills are based on Portuguese cooking methods, integrating European, Asian, and African ingredients and cooking methods. For example, Macao's "Portuguese chicken" is made with ingredients such as chicken, curry, coconut milk, shredded coconut, potatoes, onions, black olives, and Portuguese sausages, combining Western cuisine and Southeast Asian style. However, this dish is not included in the local cuisine of Portugal.

In terms of celebration activities, some local festivals in Portugal have strong local characteristics and traditional ways of celebration. For example, in Porto, Portugal, on the Saint Joao Festival, people will celebrate in the whole city on the eve of the festival, with fireworks, street performances, and barbecued sardine. The festival celebrations of Macanese Macanese are influenced by other local cultures, and their forms are more diverse and integrated. For example, in some festivals, in addition to traditional Portuguese celebrations, Chinese or other Asian cultural elements may also be incorporated, such as music, dance, and other performance forms that may blend Eastern and Western artistic characteristics.

3) The Evolution of Cultural Connotation in Festivals

The cultural connotations of Portuguese festivals are mainly based on Portugal's history, religion, and traditional values, retaining relatively pure Portuguese cultural characteristics and historical heritage. Due to their long-term living in Macau, a region where Chinese and Western cultures blend together, the cultural connotations of their festival customs have been influenced to some extent by Chinese culture, exhibiting a characteristic of cultural integration between the East and the West. The festival customs of Macanese not only include the inheritance of

Portuguese traditional culture, but also reflect the adaptation and integration of local culture in Macau, forming a unique cultural phenomenon.

4.1.3 Cultural connotations and functions of Macao festival customs

(1) Cultural connotation: Macao's festival customs blend Eastern and Western cultures.

Chinese traditional festivals reflect the importance placed on concepts such as family reunion, ancestor worship, and good luck; The festivals of native Portuguese people showcase their religious and cultural traditions in Portugal. This fusion of diverse cultures reflects the unique charm of Macao as a place where Chinese and Western cultures blend together.

(2) Cultural function: These festival customs contribute to enhancing social cohesion in terms of social function. Traditional festivals bring the Chinese community closer together, encouraging everyone to participate in activities and inherit culture; The festivals of the Macanese also play a crucial role in maintaining their identity and cultural heritage as a group. At the same time, these festivals also have economic functions. During festivals such as the Spring Festival and the Mid-Autumn Festival, Macao's commercial activities such as tourism and retail will flourish and stimulate consumption.

4.1.4 Modern Inheritance and Changes of Religious and Folk Festivals in Macao

(1) Changes in religious beliefs

1) The trend of diversified beliefs is strengthening. Macao was originally a region where multiple religions coexisted. In addition to traditional religions such as Buddhism, Taoism, Catholicism, and Christianity, some emerging religions or religious groups are also constantly developing. For example, the Bah á í Faith has been spreading in Macao for a certain period of time and is relatively active, while other emerging religions such as the Soka Gakkai Society in Japan and the Guanyin Dharma sect in Taiwan have also carried out activities in Macao. This has made the religious landscape of Macau more diverse, but traditional religions still dominate.

2) The secularization tendency of religious beliefs. The influence of religion on people's daily lives is gradually shifting from strict adherence to doctrine to a more flexible and secularized direction. For example, although some religious festivals are still valued, people's motivation for participation may not only be purely based on religious beliefs, but also include factors such as cultural identity and social needs. In some religious activities, the integration of elements such as entertainment and cultural exchange also reflects the secularization of religious beliefs.

(2) Changes in holiday concepts

1) The integration of values from tradition to modernity. In the past, religious and folk festivals mainly carried traditional meanings such as religious beliefs, praying for blessings and disaster relief. In modern society, people's understanding of these festivals is more diverse. In addition to their religious significance, they also pay attention to the cultural value, family reunion, community cohesion, and other aspects that the festivals bring. For example, during the Spring Festival, people not only go to temples to pray for peace, but also consider it an important time for family reunion and visiting relatives and friends; Festivals such as Mazu's birthday are not only celebrations for religious believers, but also important events to attract tourists and promote Macao culture.

2) The mindset of young people has changed. The attitude of the younger generation towards religious and folk festivals is different from that of the older generation. On the one hand, some young people are influenced by modern culture and education, and their enthusiasm for religious beliefs is relatively low. Their enthusiasm for participating in religious and folk festivals may not be as high as that of the older generation; On the other hand, the younger generation tends to view and participate in these festivals from the perspectives of cultural experience, entertainment, and leisure. They are more concerned about the fun and sociality of festivals.

(3) Changes in celebration methods

1) Innovation in the form of activities: While preserving traditional religious rituals, the forms of celebration activities continue to innovate. For example, in the celebration of some religious festivals, in addition to traditional religious parades, masses and other activities, cultural performances, art exhibitions, food festivals and other projects are also added, attracting more people to participate. Like the Mazu Cultural Tourism Festival in Macao, in addition to religious ceremonies such as the Mazu Festival, there are also cultural activities such as special performances by the Tianjin Art Troupe.

2) The application of technological means: Modern technological means are widely used in celebration activities, such as light shows, audio equipment, multimedia displays, etc., adding new visual and auditory experiences to festivals. In some religious places, they also began to use the Internet, social media and other platforms for publicity and promotion, expanding the influence of the festival.

3) Diversity of participants: In the past, the main participants in religious and folk festivals were local religious believers and residents. Now, with the development of Macao's tourism industry, more and more tourists are also participating in the celebration activities of these festivals, making the participants of the festivals more diverse. The participation of tourists not only brings new vitality to the festival, but also promotes communication and integration between different cultures.

(4) Integration with the tourism industry

1) Tourism Festivalization

The religious and folk festivals in Macao have gradually become important tourism resources and have been included in the development plan of the tourism industry. The government and tourism organizations actively promote and publicize these festivals, turning them into distinctive tourism events that attract a large number of tourists to come and experience. For example, festivals such as Nezhua's birthday, Earth's birthday, and Mazu's birthday have become important highlights of Macao tourism, attracting many tourists to experience Macao's religious and folk culture.

2) Development of tourism products

A series of related tourism products and services have been developed around religious and folk festivals, such as religious and cultural themed tourism routes, specialty souvenirs, and food experiences. These tourism products not only meet the needs of tourists, but also bring new economic growth points to Macao's tourism industry.

3) Enhance the image of tourist destinations

The hosting of religious and folk festivals showcases the unique cultural charm and historical heritage of Macao, enhancing its image and reputation as a tourist destination. Through these festival activities, tourists can gain a deeper understanding of Macao's cultural traditions, enhance their sense of identity and goodwill towards Macau, and contribute to the sustainable development of Macau's tourism industry.

4.2 Folk Art

4.2.1 Cantonese Opera

(1) Characteristics

1) Performance characteristics: Cantonese opera has six types of roles: civil and martial arts performers, young performers, formal performers, second tier performers, ugly performers, and martial artists. The performances

are simple and rough, with a unique charm and style. Actors vividly showcase the personality traits and emotional changes of the characters in the play through their superb performances.

2) Vocal music: Cantonese opera has a rich and diverse range of vocal styles, with Banghuang (Xipi, Erhuang) as the basic melody, while also incorporating Gaoqiang, Kunqiang, Guangdong folk music, and current tunes, forming a unique musical style. Its singing style is beautiful and captivating, full of infectiousness, and can effectively express the emotions and atmosphere of the plot.

3) Costume props: Cantonese opera's makeup is concise, the colors are rich, and the costumes are mostly made of Guang embroidery, exquisite and gorgeous, rich in local characteristics. Exquisite costumes and props not only enhance the performance of actors, but also bring visual enjoyment to the audience.

(2) Case and Development Status

1) Performance venues and activities: Cantonese opera has a wide range of performance venues in Macao. Cantonese opera plays are often performed at the Macao Cultural Centre, Wing Lok Theatre, and other venues; During festivals, temporary theaters are also set up in temples and other places in Macao for Cantonese opera performances. For example, during traditional festivals such as the birthday of Mazu in Macao, Cantonese opera performances are often performed to add a festive atmosphere to the festival. In addition, the Macao Arts Festival is also an important stage for showcasing Cantonese opera. Cantonese opera has always held a place in the performances of the Macao Arts Festival, which has been going on for 30 years.

2) Inheritance and Innovation: There are many Cantonese opera performance groups in Macao, mostly amateur in nature, such as the Macao Cantonese Opera Quyi Association, Macao Neighborhood Association Cantonese Opera Training Center, Macao Lijin Cantonese Opera Society, Macao Workers' Cantonese Opera Troupe, etc. There are also dozens of Cantonese opera clubs that occasionally perform Cantonese opera. At the same time, Cantonese opera is constantly innovating and developing, such as the Cantonese opera "Mirror Sea Soul" jointly created by the Macao Cultural Bureau and Foshan Cantonese Opera House. In addition to the wonderful Cantonese opera singing style, it also integrates elements such as Cantonese nursery rhymes, saltwater songs, and Nanyin rap, showcasing the innovation and vitality of Cantonese opera.

4.2.2 Dragon Dance and Lion Dance

(1) Characteristics

1) Integration of skills: Macao mainly inherits the tradition of southern lions and integrates martial arts, dance, and music into one. Lion dancers need to have a solid foundation in martial arts. Through flexible movements and exciting performances, they can present different expressions of joy, anger, sadness, happiness, worry, thought, sorrow, fear, and surprise, vividly portraying the image of the lion.

2) Production process: The traditional lion dance production process is very particular. The production of lion heads requires multiple steps such as lion binding, lion catching, coloring, decoration, etc. Each bamboo and paper is handmade. A lion's head has about 1300 binding points, which require the use of bamboo to create a base frame for the lion's head. Then, small bamboo strips are woven into the shape of the lion's head, and materials such as gauze, mosquito net cloth, and silk are laid flat on the lion's corridor to make it more sturdy and durable. Finally, according to the Cantonese opera facial makeup and requirements, a base color is applied, and various auspicious patterns are painted. Then, accessories such as dental brushes, fluffy balls, and small copper lenses are installed to complete a majestic lion head.

(2) Case Study

1) Macao Fishing Drunken Dragon Festival: This is a unique and influential traditional folk festival in Macao.

On the evening of the seventh day of the fourth lunar month every year, residents engaged in wholesale or retail of fish in Macao gather at the market, sitting on the ground and dining around tables, forming the tradition of "Dragon Boat Head Longevity Rice". On the eighth day of April, all members of the guild will hold a Drunken Dragon and Lion Dance event at the Three Streets Guild Hall in Macao, including sacrificial ceremonies, Drunken Dragon and Lion Dance performances, street parades, and distributing dragon boat head meals. The dancers danced dragons and drank alcohol at the same time, with dance steps that seemed to be drunk but not drunk, as the saying goes, 'Drunk in form, drunk in intention, but not drunk in person', which is very interesting.

2) Festival celebrations and performances: Dragon and lion dance performances are indispensable in Macao's Spring Festival, Yuanxiao (Filled round balls made of glutinous rice-flour for Lantern Festival) and other major festivals and various celebration activities. The wonderful dragon and lion dance performance not only adds a festive atmosphere to the festival, but also showcases the unique charm of Macao's folk art. For example, during the Chinese New Year, exciting performances of dragon and lion dance teams can often be seen on the streets and alleys of Macao, attracting many citizens and tourists to stop and watch. In 2020, dragon and lion dance was included in the list of intangible cultural heritage in Macao.

4.2.3 Portuguese National Style Dance

(1) Characteristics

1) Cultural Integration: Portuguese folk dance is the most effective artistic expression that fully embodies the characteristics of the integration of Chinese and Portuguese cultures in Macau. It is based on Portuguese dance elements, while incorporating local cultural characteristics and elements of Macau, forming a unique style. The dancers are dressed in brightly colored traditional Portuguese costumes, dancing gracefully to the cheerful rhythm of music, with passionate and energetic movements.

2) Entertainment and interactivity: Portuguese folk dance has strong entertainment and interactivity, often attracting audiences to participate. Dancers will interact with the audience, inviting them to dance together, allowing them to enjoy the dance while also experiencing the joy and charm of the dance firsthand.

(2) Case Study

1) Music Festival Performance: Portuguese folk dance often appears as an important performance in some large-scale cultural events and music festivals. For example, in the "Hengqin Tianmu River Grassland Music Festival" hosted by the Livelihood Affairs Bureau of the Hengqin Guangdong Macao Deep Cooperation Zone and co organized by the Cultural Bureau of the Macao Special Administrative Region Government on February 18-19, 2023, the Portuguese national dance performance kicked off, showcasing the characteristics of cultural integration between China and Portugal in Macao to the audience and adding a different color to the music festival.

2) Tourism Culture Exhibition: Portuguese folk dance is also an important part of Macao's tourism culture, often performed in some tourist attractions and cultural activities to showcase Macao's unique cultural charm to tourists. For example, in some historical and cultural districts and tourist attractions in Macao, performances of Portuguese folk dance can often be seen, attracting many tourists to come and watch and experience.

4.3 Dietary Culture

4.3.1 Macao Food Culture and Its Characteristics

(1) Chinese cuisine

1) Cantonese cuisine: In Macao, Cantonese cuisine has a profound influence. Its characteristics are fine production and meticulous material selection. For example, White cut chicken, which is made of high-quality

chicken breeds, retains the freshness and original taste of the chicken through proper cooking. The skin is yellow and the meat is white, fat, tender and delicious; Another example is roasted meat, including roasted goose, roasted duck, char siu, etc. The skin is crispy, the meat is tender, the color is shiny, and the aroma is overflowing.

2) Tea snacks: Tea snacks in Macao are also very unique and are one of the favorite foods of local residents and tourists. Shrimp dumplings are a classic snack, filled with delicious shrimp meat and covered with thin and transparent skin, providing a smooth and refreshing taste; The stuffing of Cha siu bao is sweet and salty Grilled pork. The bun is soft and the stuffing is juicy; There are also custard buns, with a sweet but not greasy custard filling that flows through the heart. When you take a bite, the milk aroma is rich.

3) Special pasta: Macao has a wide variety of pasta, such as Zhusheng noodles, which are made of traditional bamboo noodles. They are very resilient and match with delicious soup and various side dishes, such as fresh shrimp Wonton noodles. The shrimp meat in Wonton is full and the soup is delicious.

4) Seafood cuisine: Macao is close to the ocean and has abundant seafood resources, making seafood cuisine naturally excellent. Steamed grouper can preserve the freshness and nutrition of grouper to the greatest extent possible, with fresh and tender fish meat and a sweet taste; Salt and pepper skin shrimp, the skin shrimp is fried and seasoned with salt and pepper, the shell is crispy, and the shrimp meat is delicious.

(2) Portuguese cuisine

1) Authentic Portuguese cuisine

①Portuguese Chicken: This is a representative Portuguese dish made by stewing chicken, potatoes, onions, curry, and other ingredients together. The curry has a strong aroma, and the chicken is tender and juicy. Paired with rice or bread, it is very delicious. Although it is called Portuguese chicken, it has actually been improved in Macao, blending local ingredients and flavors.

②Ma Jiexiu: Ma Jiexiu is a Portuguese specialty ingredient, which is actually marinated cod. Ma Jiexiu can have various methods, such as frying Ma Jiexiu balls. After chopping Ma Jiexiu's fish meat, add mashed potatoes and other seasonings to fry it into a ball shape, with a crispy outer skin and a soft inner texture; Also, Ma Jiexiu Fried Rice, which was cut into small pieces and fried with rice, was salty and delicious.

③Portuguese style Seafood Rice: Based on rice, various seafood such as shrimp, crab, shellfish, etc. are added, and then cooked with seasonings such as tomatoes, onions, olive oil, etc. Rice absorbs the freshness of seafood, with a rich taste and bright colors.

2) Macao style Portuguese cuisine (Macanese Portuguese cuisine)

This is a unique culinary culture in Macao, which is based on Portuguese cuisine, combined with local ingredients and cooking methods, as well as spices and flavors from other parts of Asia. For example, African chicken is marinated and grilled with various spices, resulting in a golden and crispy outer skin, a tender and juicy interior, and a strong flavor of spices; There is also Wuluo chicken, which is stewed with onions, potatoes, tomatoes and other ingredients, and then added with some special spices for a unique taste.

(3) Fusion of Chinese and Portuguese cuisine and snacks

1) Pork Chop Bun: Bread is a Western style dish, baked crispy and filled with Chinese pork chops. Pork chops are marinated and grilled, resulting in tender and juicy meat. Paired with vegetables such as lettuce and tomatoes, and a special sauce, they have a rich taste that combines the aroma of bread with the deliciousness of pork chops.

2) Portuguese tarts: Although egg tarts originated in Portugal, Macao's Portuguese tarts have been improved to better suit the taste of Asians. The outer layer is crispy, the layers are distinct, the filling is tender and smooth, and the aroma of egg and milk is rich. It is one of the most representative snacks in Macao.

3) Mugu Pudding: This is a dessert with Portuguese characteristics, but has been improved and innovated in Macao. Using crushed cookies as the main ingredient, a layer of crushed cookies and a layer of cream are spread together, with a delicate taste, sweet and delicious, like ice cream, and melts in the mouth.

4.3.2 Factors contributing to the formation of Macao's culinary culture

(1) Historical factors

1) The impact of Portuguese colonial rule

Since the 16th century, Portuguese people began to settle in Macao, and Portuguese culinary culture followed suit. For hundreds of years, Portuguese cooking techniques, ingredients, and dietary habits gradually took root in Macao. For example, the Portuguese brought bread making, wine making techniques, and typical Portuguese ingredients such as mackerel, which became a part of Macao's culinary culture.

2) Inheritance of Traditional Chinese Cuisine

The main residents of Macao are Chinese, who have inherited Chinese culinary culture. Chinese culinary culture has a long history, and in Macao, the traditional techniques of Cantonese cuisine have been preserved and developed. Techniques such as roasted meat and seafood cooking in traditional Cantonese cuisine play an important role in Macao cuisine, and their production techniques have been passed down through generations to this day.

(2) Geographical factors

1) Coastal geographical advantage

Macao is located on the southern coast of China and is a natural harbor. The abundant marine resources provide a large amount of fresh seafood ingredients for local cuisine, such as grouper, shrimp, crab, shellfish, etc. This geographical advantage makes seafood an indispensable and important part of Macao's cuisine. For example, simple cooking methods such as steaming and blanching can maximize the deliciousness of local seafood, forming the characteristics of Macao seafood cuisine.

2) Close connection with surrounding areas

Macao is geographically close to other regions in Guangdong and Southeast Asian countries, which facilitates the exchange of food culture. This close connection enables Macao to absorb the culinary characteristics of surrounding areas and enrich its own culinary culture. For example, some cooking methods and ingredients in Macao cuisine are influenced by the Chaoshan region of Guangdong and the Minnan region of Fujian, while also reflecting some Southeast Asian culinary culture.

(3) Diversity of ingredients brought by maritime trade

1) The Status of Trade Ports

Macao was once an important maritime trading port with frequent trade activities. Merchants from all over the world gather here, bringing a variety of ingredients. In addition to local Portuguese ingredients, ingredients from other countries and regions in Europe, Africa, and Asia also appear in Macao. The gathering of these ingredients provides a material foundation for the innovation of Macao's culinary culture. For example, spices introduced

from India and other places have enriched the seasoning of Macao cuisine, making it more diverse in taste.

2) Exchange and integration of ingredients

The convergence of ingredients from different regions in Macao promotes the integration of culinary culture. Chefs combine these new ingredients with local ingredients based on the taste and dietary habits of local residents to create innovative dishes. Curry ingredients commonly found in Macau fusion cuisine are introduced from India or Southeast Asia and combined with local chicken, seafood, and other ingredients to form curry dishes with Macao characteristics.

(4) The Diversity of Ethnic Dietary Culture

1) Multi ethnic settlement environment

Macao is a region inhabited by multiple ethnic groups, including not only Portuguese and Chinese, but also Malays, Indians, and others. Different ethnic groups have their own unique food cultures, which interact and influence each other in Macao. For example, native Portuguese are descendants of intermarriage between Portuguese and other ethnic groups, and their culinary culture blends the characteristics of multiple ethnic groups such as Portugal, China, Malaysia, and India, forming a unique native Portuguese cuisine.

2) The driving role of cultural integration

In a multi-ethnic environment, cultural integration is not only reflected in the integration of population, but also in the integration of food culture. The exchange and integration of various ethnic culinary cultures have resulted in a rich and colorful presentation of Macao's culinary culture. In the street snacks and restaurant dishes of Macao, one can see the blending of Portuguese cooking style, Chinese ingredient use, Malay spice selection, and Indian seasoning methods.

4.3.3 The Role of Macao's Food Culture

(1) Attracting tourists to Macao for tourism

1) The attractiveness of food festivals: Macao hosts various food festivals, such as the Macao Food Festival. These food festivals bring together local and global cuisine from Macao, with Macao's signature cuisine being a highlight. Specialty snacks such as Portuguese tarts and pork chop buns, as well as classic dishes like Portuguese chicken, have attracted a large number of tourists to come and taste. During the food festival, tourists can experience a variety of delicious food in one stop and feel the charm of Macao's food culture. According to statistics, the Macao Food Festival receives a large number of tourists every year. For example, in 2019, the number of visitors to the Macao Food Festival exceeded one million, which has a significant driving effect on Macao's tourism industry.

2) The temptation of specialty dining: Macao's specialty restaurants and street snacks have also become important factors in attracting tourists. From the time-honored Chinese teahouse, tourists can taste authentic Cantonese morning tea, such as shrimp dumplings, Cha siu bao, etc; Visiting exotic Portuguese restaurants allows tourists to experience the flavors of Portuguese cuisine. These specialty restaurants not only satisfy the taste buds of tourists, but also provide them with a window to deeply experience Macao culture.

(2) Promote moderate diversification of Macao's economy

1) The economic contribution of the catering industry: The prosperity of Macao's food culture has driven the flourishing development of the catering industry. Numerous restaurants, snack stalls, cafes, and other establishments have created a large number of job opportunities for the local area, benefiting from the prosperity of the catering industry, from chefs, waiters to food suppliers. Meanwhile, catering revenue accounts for a

certain proportion of Macao's economy. According to relevant data, the revenue of the catering industry has been increasing year by year, contributing to Macao's economic growth.

2) Linked development with other industries: Food culture is also interconnected with industries such as tourism, hotels, and retail. Tourists come for food and also make purchases in terms of accommodation, shopping, and other aspects. For example, a famous Macao restaurant may attract tourists to choose nearby hotels to stay, while tourists purchase specialty souvenirs from nearby shops, etc. This linkage effect promotes the moderate diversification of Macao's economy.

(3) Promote the exchange and mutual learning of human civilization

1) The integration of food culture reflects communication: Macao's food culture is a vivid manifestation of the exchange of Eastern and Western civilizations. For example, dishes that combine Portuguese and Chinese cooking characteristics, such as Portuguese tarts, not only have the basic form of Portuguese desserts, but also adapt to Chinese preferences in terms of production technology and taste. This fusion of cuisine has become a carrier of cultural exchange, allowing people to understand the characteristics and mutual influence of different civilizations through food.

2) Catering venues become communication platforms: Restaurants, snack shops, and other catering venues in Macau are platforms for people from different cultural backgrounds to communicate. Here, tourists, local residents, foreign businessmen, and others gather together to taste delicious food while sharing different cultural concepts. For example, in a Portuguese restaurant, customers may hear stories about the fusion of Portuguese and Chinese cultures, promoting mutual understanding between different cultures.

(4) Building a shared spiritual home for the Guangdong Hong Kong Macao Greater Bay Area

1) The role of food culture as a link: Macao's food culture has close connections with other cities in the Guangdong Hong Kong Macao Greater Bay Area. As an important part of the Cantonese cuisine cultural circle, Chinese cuisine in Macao echoes the culinary culture of other regions in Guangdong. Cantonese style tea snacks are very popular in Macao and other cities in the Greater Bay Area. This common food culture has become a link in building a shared spiritual home for the Guangdong Hong Kong Macao Greater Bay Area, enhancing the cultural identity and sense of belonging of residents in the Greater Bay Area.

2) Food exchange activities promote integration: Through food exchange activities within the Greater Bay Area, Macau's food culture can be better shared with other cities. For example, in activities such as the Great Bay Area Food and Culture Festival, Macao's featured food display can deepen other cities' understanding of Macao, while Macao can also absorb the essence of food culture of other cities in the Great Bay Area, and promote the cultural integration of the Great Bay Area.

(5) Strengthening the awareness of the Chinese national community and building a Chinese national community

1) The role of inheriting Chinese culinary culture: The traditional Chinese parts of Macao's culinary culture, such as Cantonese cuisine and Chinese snacks, are important components of Chinese national culture. The inheritance of these culinary cultures in Macao helps to enhance the local Chinese people's sense of identity and pride in Chinese national culture. Through cuisine, Chinese people in Macao can remember their cultural roots and pass on this culture to future generations, thereby forging a sense of community for the Chinese nation.

2) Cultural exchange promotes community building: In the exchange of food culture with other ethnic groups and regions, Macao's food culture also plays a role in showcasing the charm of Chinese culture. When foreign tourists taste Chinese cuisine in Macao, they are also learning about Chinese culture. This cultural exchange helps to make the world aware of China and promote the construction of a community of the Chinese nation.

5. Composition and Value Assessment of Macao's Cultural Heritage

5.1 Material Cultural Heritage

5.1.1 Heritage Value and Cultural Characteristics of Historical Buildings such as Chinese Temples, Western style Churches, and Ancient Residential Buildings

(1) Chinese temples

1) Heritage value

① Historical value: Chinese temples in Macao have a long history, such as the A-Ma Temple, which has a history of more than 500 years and is the oldest among the three ancient temples in Macao. It witnesses the development and changes of Macao and carries the historical memory of Macao.

② Religious Value: It is the center of religious belief for the people of Macao. The Mazu enshrined in the Mazu Pavilion is regarded as a maritime protector, reflecting the close connection between Macao and maritime culture, as well as the belief culture of the Chinese people. It is of great significance for the study of Chinese religious beliefs and folk belief systems.

③ Architectural artistic value: The unique architectural style of the temple combines the characteristics of Lingnan architecture with the local architectural style of Macao. Its layout is rigorous and its architectural craftsmanship is exquisite, with exquisite decorative arts such as brick carving, wood carving, stone carving, etc. It is a precious heritage of traditional Chinese architectural art.

2) Cultural characteristics

① Religious culture: Represented by the Mazu faith, it reflects the Chinese reverence for the ocean and their pursuit of peace and happiness. Every year, numerous believers come to worship and pray, forming a unique religious and cultural atmosphere.

② Folk culture: closely related to the folk activities in Macao, such as the site in front of the Mazu Temple near the Mazu Pavilion, which was the first place where the Portuguese landed in Macao and the starting point of the integration of Chinese and Portuguese cultures. The surrounding folk activities are rich and colorful, becoming an important exhibition place for Macao's folk culture.

③ Regional culture: It reflects the regional characteristics of Macao in terms of architectural style, decorative arts, etc., and also integrates elements of Central Plains culture, which is the inheritance and development of Central Plains culture in Macao.

(2) Western style church

1) Heritage value

① Historical value: Most Western style churches in Macao were built during the colonial period and are important witnesses to Macao's history. For example, St. Paul's Church was built in 1602. After many times of construction and fire, the existing memorial archway of Da Sanba is the front wall of the church, which has witnessed the historical changes of Macao and the cultural exchanges between China and the West.

② Artistic value: The architectural style is unique, blending European Renaissance architectural styles with Eastern elements, and has extremely high artistic value. The architectural structure of the church is complex, with exquisite art decorations such as sculptures and paintings, such as the oil paintings and sculptures in the Rose Hall and the Gothic church spire in the Western facing Yangshan Cathedral, all of which are outstanding

representatives of Western architectural art.

③ Religious and cultural value: It is an important place for the spread of Catholicism in Macao, with a large collection of Catholic cultural relics, which is of great significance for studying the spread and development of Catholicism in Asia.

(2) Cultural characteristics

① Religious culture: It is the core venue of Catholic culture in Macao, where religious ceremonies, festivals, and other activities are rich and colorful, attracting numerous believers and tourists to participate and forming a strong religious and cultural atmosphere.

② Architectural Culture: Its architectural style reflects Western architectural culture and aesthetic concepts, and has had a profound impact on the architectural style of Macao, becoming an important component of the city's landscape.

③ Cultural exchange: The existence of Western style churches reflects the exchange and integration of Chinese and Western cultures in Macao, and is an important carrier of cultural exchange between the East and the West.

(3) Ancient dwellings

1) Heritage value

① Historical value: For example, the Lu Family Mansion was completed around the 15th year of the Qing Dynasty's Guangxu reign (1889), and the Zheng Family Mansion was first built in 1869. These ancient dwellings are witnesses to the historical development of Macao, reflecting the social landscape and lifestyle of its residents at different times.

② Architectural artistic value: The architectural style combines elements of Chinese and Western architecture, incorporating both the layout and decorative features of Lingnan dwellings such as courtyards, oyster shell windows, brick carvings, and Western architectural elements such as false ceilings, cast iron railings, and blinds, reflecting the fusion of Chinese and Western architectural art and possessing unique architectural artistic value.

③ Humanistic value: It is an important carrier of Macao family culture and traditional way of life. Through ancient dwellings, one can understand the rise and fall of Macao families, social structure, as well as the living habits and cultural traditions of residents.

2) Cultural characteristics

① Family culture: Ancient dwellings are places where families gather, reflecting the family culture and values of Macao. Cultural traditions such as family inheritance, rules, and teachings are reflected in the dwellings.

② Life culture: It reflects the daily life culture of Macao residents, such as the layout of courtyards and the functional division of rooms, all of which reflect the lifestyle and wisdom of Macao residents.

③ Regional culture: It reflects the regional characteristics of Macao in terms of architectural style, decorative arts, and is an important component of Macao's regional culture.

5.1.2 Heritage value, artistic value, historical, geographical and cultural value of the Historic Center of Macao

(1) Heritage value

1) Historical integrity: It is the oldest, largest, most well preserved, and most concentrated historical city zone in

China where Chinese and Western characteristic buildings coexist. It retains a large number of historical buildings and blocks, such as Ma Ge Temple, Zheng Jia Big House, Lu Jia Big House, Da Sanba memorial archway, etc. These buildings and blocks are connected with each other, forming a complete historical city zone, which truly reflects Macao's 400 year history of cultural exchanges and coexistence between China and the West.

2) Cultural diversity: It integrates cultural elements from both the East and the West, including religious culture, architectural culture, folk culture, etc., and is an important witness to cultural exchange between the East and the West. Different cultures blend and influence each other in the the Historic Center of Macao, forming a unique cultural landscape, which is of great value for the study of cultural exchanges between China and the West and the coexistence of multiple cultures.

(2) Artistic value

1) Diversity of architectural styles: The historical urban area has a diverse range of architectural styles, including Chinese temples, traditional residences, as well as Western style churches, squares, and streets. These buildings have different styles, which reflect the characteristics of architectural art under different cultural backgrounds. For example, the cornice arch of wooden architecture and carved beams and painted rafters of Chinese architecture, the Gothic spire of Western architecture, and the Baroque style decoration are all treasures of architectural art.

2) Artistic urban planning: The urban planning of historic urban areas also has high artistic value, with reasonable street layout, spacious plazas, and coordinated architecture and environment, forming a unique urban landscape. For example, the square in front of the Convention Center is exquisitely designed and the surrounding buildings have a unified architectural style, making it an outstanding representative of Macao's urban planning.

(3) Historical, geographical, and cultural value

1) Geographical importance: Macao is located on the southeast coast of China and is an important gateway connecting mainland China and overseas. It has always been an important hub for trade and cultural exchanges between the East and the West in history. The unique geographical location of the Historic Center of Macao reflects its important position and role in history, which is of great significance to the study of China's foreign exchanges and marine culture.

2) Cultural heritage: It is an important carrier of Macaulay culture, carrying the historical memory and cultural traditions of Macao. The buildings, neighborhoods, and customs within the historic district are important components of Macao's culture. By protecting and inheriting the historic district, we can better promote Macao's cultural traditions and enhance the cultural identity and sense of belonging of Macao residents.

5.1.3 The current status and historical significance of the protection of material cultural heritage such as archaeological sites and fortresses in Macao

(1) Protecting the current situation

1) Archaeological Sites: Archaeological sites in Macao have been well protected and studied. The government and relevant agencies have systematically excavated and protected archaeological sites, formulated strict protection measures and management regulations to ensure the safety and integrity of the sites. Meanwhile, through archaeological research, we continuously deepen our understanding and comprehension of Macao's history.

2) Battery: Most of the batteries in Macao are well preserved, such as the Dongwangyang Battery, which is listed as a cultural relic protection unit. The government has carried out repairs and maintenance on the battery, strengthened the improvement and management of the surrounding environment, and enabled the battery to be

better preserved. In addition, some fortresses have been developed as tourist attractions to showcase Macao's history and culture to visitors.

(2) Historical significance

1) Military defense significance: Battery is a military defense facility in the history of Macao, witnessing the historical changes and development of military defense in Macao. They have played an important role in resisting foreign invasion and safeguarding the security of Macao, and are an important component of Macao's military defense system in history.

2) The significance of historical witness: Archaeological sites and fortresses are both witnesses of Macao's history, providing important physical materials for studying Macao's history, culture, society, and other aspects. By studying these material cultural heritages, we can better understand the development process and cultural traditions of Macao, which is of great significance for inheriting and promoting Macao's historical and cultural heritage.

5.2 Intangible Cultural Heritage

5.2.1 Types, Values, and Characteristics of Macao's Intangible Cultural Heritage

(1) Type

1) Performing Arts category

Including Cantonese opera, Taoist ritual music, eight tone gongs and drums, Portuguese folk dance, etc. Cantonese opera is a cultural treasure shared by Guangdong, Hong Kong, and Macao, with extensive influence and a strong mass base in Macao; Taoist ritual music has a strong religious and cultural color and a unique musical style; Ba Yin Gong and Drum is a traditional folk music performance form in Macao, usually played during festivals and events; Portuguese folk dance has distinct cultural characteristics of Portugal, with a passionate and unrestrained dance style.

2) Traditional handicrafts

For example, wood carving - statue carving, porcelain micro carving techniques, Chinese skirt and coat making techniques, silverware making techniques, etc. The exquisite carving technique of the statue combines the characteristics of sculpture art from both the East and the West, and occupies an important position in the religious culture of Macao; Ceramic micro carving technique is the creation of micro carvings on porcelain, which has high artistic value; The production techniques of Chinese style skirts and coats inherit the traditional clothing making techniques of China, and their exquisite embroidery and unique design showcase the charm of Chinese traditional culture; The craftsmanship of silverware has a long history, and the silverware produced is exquisite and unparalleled.

3) Festival and Folk Customs

There are Fish Drunken Dragon Festival, Mazu Belief Customs, Nezha Belief Customs, etc. The Fish Drunken Dragon Festival is a unique traditional folk festival in Macao, held on the eighth day of April every year. The performance of the Drunken Dragon Dance is unique, accompanied by the custom of delivering dragon boat meals, reflecting Macao's profound cultural heritage and people's longing for a better life; The Mazu belief and customs are widely spread in Macao, and Mazu Temple is an important religious site in Macao. People express their prayers for peace and happiness through worshipping Mazu; The belief and customs of Nezha also have a profound historical origin in Macao, and Nezha Temple is one of the characteristic temples in Macao.

4) Food and cooking category

The culinary skills of the Macanese people, who are native to Macao, blend elements of Portuguese, Southeast Asian, and Chinese cuisine to form a unique Macao culinary culture. Portuguese chicken and other dishes are typical representatives of this culture.

(2) Value

1) Cultural Value

① Witness of multicultural integration: Macao's intangible cultural heritage is a vivid reflection of the exchange and integration of Eastern and Western cultures, reflecting the mutual influence and infiltration of different cultures in Macao. For example, Portuguese cuisine and cooking techniques, as well as Portuguese folk dances, have obvious elements of Portuguese culture, while Cantonese opera, wood carving, and statue carving are the inheritance and development of traditional Chinese culture. These intangible cultural heritages together constitute the unique cultural landscape of Macao's diverse culture.

② The carriers of historical inheritance: They carry the historical memory and cultural traditions of Macao, and are the crystallization of the wisdom and creativity of the Macao people. Through these intangible cultural heritages, we can gain insights into the historical changes, social development, as well as the way of life and values of the people in Macao. For example, the Fish Drunken Dragon Festival, whose origin legend is closely related to the folk history of Macao, has been passed down for hundreds of years and has become an important part of Macao's historical and cultural heritage.

2) Artistic value

① Exquisite craftsmanship: Whether it is traditional handicrafts such as carving, embroidery, and micro carving, or performing arts such as music, dance, and drama, they all demonstrate superb artistic level and unique artistic style. The delicate craftsmanship of statue carving, the exquisite skills of porcelain micro carving, and the beautiful singing and body performance of Cantonese opera all provide people with aesthetic enjoyment and have high artistic appreciation value.

② Unique artistic aesthetics: Macao's intangible cultural heritage has formed its own unique artistic aesthetic system, integrating the characteristics of Chinese and Western art. It combines the implicit and introverted nature of traditional Chinese art with the unrestrained and passionate nature of Western art. This unique artistic aesthetic provides rich materials and inspiration for artistic creation and research.

3) Social Value

① Enhancing community cohesion: Many intangible cultural heritage projects are jointly participated and inherited by Macao community residents, such as festival and folk activities, which can enhance the connection and cohesion among community residents and promote the harmonious development of the community. In activities such as the Fish and Drunken Dragon Festival, community residents participate in dance performances, preparations for events, etc., which enhances their relationship with each other.

② Promoting economic development: Intangible cultural heritage can become an important resource for Macao's tourism industry, attracting tourists to come and experience, and promoting the development of Macao's tourism industry. For example, tourists can visit statue carving studios, enjoy Cantonese opera performances, and taste Portuguese cuisine, all of which have brought new opportunities for Macao's economic development.

③ The bridge of cultural exchange: Macao's intangible cultural heritage plays an important role in foreign cultural exchanges and is an important window to showcase Macao's culture to the world. The display and exchange of intangible cultural heritage can promote cultural understanding and friendship between different countries and regions, and enhance Macao's international influence.

(3) Features

1) The combination of Chinese and Western cultures: This is the most prominent feature of Macao's intangible cultural heritage. In Macao's intangible cultural heritage, we can see elements of traditional Chinese culture, such as Confucianism, Taoist beliefs, and traditional handicrafts, as well as the influence of Western culture, such as the language, music, dance, and cuisine of Portugal.

2) Active inheritance: Intangible cultural heritage is continuously inherited and developed in people's production and life, closely connected to the daily life of the people of Macao. Many intangible cultural heritage projects are still passed down in Macao's communities and families, and are constantly innovating and developing in the process of inheritance to adapt to the changes and needs of the times.

3) Distinctive regional characteristics: Macao's intangible cultural heritage has strong regional characteristics, reflecting the historical, geographical, and social features of Macao. For example, the architectural style, dietary habits, language, and other aspects of Macao have had a significant impact on the formation and development of intangible cultural heritage, giving it a unique Macao charm.

5.2.2 Challenges faced by the inheritance and protection of intangible cultural heritage in Macao

(1) The aging of inheritors

1) The inheritance team is in short supply: Many inheritors of intangible cultural heritage projects are older, and the younger generation has low interest and enthusiasm for intangible cultural heritage, and is unwilling to learn and inherit these skills. For example, some traditional handicraft projects require long-term learning and practice to master, and young people often lack patience and perseverance, leading to a gap in the inheritance team.

2) The way of inheritance faces difficulties: the traditional way of inheritance between master and apprentice has been challenged in modern society, and young people's lifestyle and values have changed. They are more inclined to acquire knowledge and skills through modern education systems and the Internet and other channels. The traditional way of inheritance between master and apprentice is difficult to attract young people. In addition, some inheritors are unable to effectively impart skills due to age and physical reasons, which also affects the inheritance of intangible cultural heritage.

(2) The Impact of Modern Culture

1) Changes in cultural consumption concepts: In modern society, cultural consumption concepts are becoming more diversified and fast food oriented. People tend to pursue fashionable and popular cultural products, and their attention and interest in traditional intangible cultural heritage have decreased. For example, young people prefer modern entertainment such as watching movies and listening to popular music, while their interest in traditional performing arts such as Cantonese opera and Taoist ritual music is not high.

2) The influence of foreign cultures: With the development of globalization, foreign cultures have had an impact on Macao's intangible cultural heritage. Some foreign cultural products and activities have occupied the cultural market in Macao, squeezing the living space of intangible cultural heritage. For example, Western festivals, music, movies, etc. are popular among young people in Macao, while local intangible cultural heritage projects in Macao face the risk of marginalization.

6 Theoretical basis and practical model for revitalizing cultural heritage

6.1 Relevant theories of cultural heritage revitalization

6.1.1 Cultural Capital Theory

(1) Theoretical connotation

Cultural capital refers to the capital composed of corporate culture (values, beliefs, behavioral norms, and patterns) and the material carriers of culture. It is divided into three levels, including external material capital such as employees' mental state, clothing, and company image; The institutional capital that supports the effective operation of the company, such as sound systems and efficient management mechanisms; The capital formed by the deep core driving forces such as the core values and historical mission of the enterprise and all employees. The formation of cultural capital includes both monetary forms of investment, such as establishing formal norms and shaping corporate image through training, education, and cultural activities; This also includes non monetary forms of investment, such as leadership style, energy, time, and level of attention.

(2) The significance of revitalizing Macao's cultural heritage

The theory of cultural capital can help explore the unique value contained in local cultural heritage. For example, historical buildings in Macao, such as the Zheng Family Mansion and the A-Ma Temple, have valuable cultural capital in terms of their architectural style and decorative arts. By identifying and evaluating these cultural capitals, we can better understand the value of Macao's cultural heritage and provide a foundation for revitalization. Meanwhile, the theory of cultural capital also emphasizes the importance of education in cultural inheritance. Macao can strengthen education and training on cultural heritage related knowledge, cultivate residents' and tourists' awareness and appreciation of cultural heritage, thereby increasing the attractiveness and influence of cultural heritage.

(3) Practical application

On the one hand, Macao's cultural heritage can be transformed into cultural products and services, such as developing cultural and creative products related to cultural heritage, hosting cultural exhibitions and performances, etc. These activities can not only spread the value of cultural heritage, but also create economic benefits, providing financial support for the protection and revitalization of cultural heritage. On the other hand, establishing and improving the management and protection system of cultural heritage, enhancing the management level and protection effect of cultural heritage, is also an important manifestation of institutional capital. For example, establishing strict regulations for the protection of historical buildings and regulating the development and utilization of cultural heritage.

6.1.2 Theory of Cultural Sustainable Development

(1) Theoretical connotation

Emphasis should be placed on providing space for future generations to survive and develop while meeting the various needs of contemporary humanity. This theory focuses on the rational utilization of resources and environmental protection, and believes that economic and social development should be carried out under the constraints of resources and environment, and cannot meet current needs at the expense of sacrificing the future. In the field of cultural heritage, the theory of sustainable cultural development requires the reasonable development and utilization of cultural heritage while protecting its authenticity and integrity, so that cultural heritage can continue to contribute to the development of human society.

(2) The significance of revitalizing Macao's cultural heritage

For a city like Macao with rich cultural heritage, the theory of sustainable cultural development has important guiding significance. The cultural heritage of Macao is a precious asset of the city and an important resource for attracting tourists and promoting economic development. Guided by the theory of cultural sustainable development, it is possible to ensure that the protection and revitalization of cultural heritage are coordinated with the economic, social, and environmental development of cities, achieving long-term sustainable development. For example, when developing cultural tourism projects, it is necessary to fully consider the

impact of tourist numbers on cultural heritage and avoid excessive development that may cause damage to cultural heritage.

(3) Practical application

In the process of revitalizing Macao's cultural heritage, attention should be paid to ecological environment protection and rational utilization of resources. For example, in the restoration and renovation of historical buildings, environmentally friendly materials and energy-saving technologies are used to reduce the impact on the environment. At the same time, strengthen the monitoring and evaluation of cultural heritage, timely identify and solve problems, and ensure the sustainable development of cultural heritage. In addition, by developing cultural and creative industries, cultural heritage can be combined with modern design, technology, etc. to create innovative and sustainable cultural products and services.

6.1.3 Traditional Cultural Renaissance and Cultural Reproduction Theory

(1) Theoretical connotation

The theory of traditional cultural revival emphasizes the re understanding, inheritance, and development of traditional culture in order to restore its important position in social life. The theory of cultural reproduction emphasizes that education uses culture as an intermediary to achieve social reproduction functions, and believes that cultural processes are important in maintaining the socio-economic structure. Cultural reproduction not only includes the inheritance and continuation of culture, but also the innovation and development of culture. Through continuous reproduction, culture can adapt to social changes and development.

(2) The significance of revitalizing Macao's cultural heritage

Macao is a city that blends Eastern and Western cultures, with a unique traditional culture. The theory of traditional cultural revival can help Macao explore and promote local traditional culture, enhance residents' cultural identity and pride. At the same time, the theory of cultural reproduction can provide theoretical support for the revitalization of Macao's cultural heritage. Through education and cultural activities, cultural heritage can be passed down to the next generation, achieving the reproduction and continuation of culture. For example, Macao can carry out traditional cultural education activities, such as holding traditional craft training classes, folk culture lectures, etc., to cultivate young people's interest and love for traditional culture.

(3) Practical application

On the one hand, strengthen the research and collation of Macao's traditional culture, excavate its essence and characteristics, and provide theoretical support and cultural materials for the activation of cultural heritage. For example, conducting systematic research and organization on traditional music, dance, drama, etc. in Macao, and publishing relevant academic works and cultural materials. On the other hand, combining traditional culture with modern life to create cultural products and services that meet modern aesthetics and needs. For example, integrating traditional architectural elements of Macao into modern architectural design to create a city landscape with Macao characteristics; Innovate and improve traditional cuisine, and launch food products that are suitable for modern tastes.

6.1.4 Comprehensive Guidance and Practice of Cultural Heritage Revitalization Theory for Macao's Cultural Heritage Revitalization

(1) Comprehensive guidance

The above three theories are interrelated and complementary, providing comprehensive theoretical guidance for the revitalization of Macao's cultural heritage. The theory of cultural capital provides methods and ideas for the value assessment and development of Macao's cultural heritage; The theory of sustainable cultural development

provides principles and directions for the protection and development of Macao's cultural heritage; The theory of traditional cultural revival and cultural reproduction provides theoretical support and practical approaches for the inheritance and innovation of Macao's cultural heritage. In the actual process of revitalizing cultural heritage, it is necessary to comprehensively apply these three theories to achieve the organic unity of protection, inheritance, and development of cultural heritage.

(2) Practical Cases

The Wangxia Mountain House Revitalization Project in Macao is a good example. In the process of revitalization, Wangxia Mountain House fully considers the historical value and cultural characteristics of cultural heritage, preserves the original style and structure of the building, and integrates modern design elements and functional requirements, making it a cultural venue that integrates cultural exhibitions, artistic creation, and leisure and entertainment. In this process, the value of cultural capital is reflected, and the principle of sustainable cultural development is followed, while also achieving the reproduction and innovative development of traditional culture.

6.2 Reference to International Cultural Heritage Revitalization Practice Models

6.2.1 Revival of European Ancient Cities

(1) Source of Funds

Firstly, there is government investment. For example, the French government spent 209 million euros to restore the Ville de Cotte Castle for the protection of historical and cultural heritage.

Secondly, there is support from financial institutions. The European Investment Bank, the European Bank for Reconstruction and Development, and other institutions provide funding for infrastructure projects, such as the construction of the E60 highway in Georgia.

The third is the participation of private institutions. Private organizations such as the Toledo Foundation in Toledo, Spain, are involved in the preservation and revitalization projects of the ancient city.

The fourth is the return of tourism revenue. By developing the tourism industry and investing a portion of tourism revenue into the maintenance and development of ancient cities, we can achieve the recycling of funds, such as ancient cities like Bologna in Italy.

(2) Management mechanism

One is government led. In the renovation of Paris, France at different times, the government played a leading role in formulating plans, policies, etc., promoting the renewal of the ancient city, such as the Paris renovation plan led by Osman, which opened avenues, built squares, etc.

The second is to establish specialized institutions. Poland establishes a state-owned cultural relic protection enterprise responsible for restoring and protecting various cultural heritage and historical sites, and sets up multiple dedicated departments; Toledo, Spain has established an urban development consortium responsible for managing the ancient city, project planning, financing and investment.

The third is to follow the principle of protection. Italy follows the principles of "maintaining the original appearance" and "restoring the old as before", stipulating that the external structure of ancient buildings belongs to the government, and businesses or individuals only have the right to use the internal buildings. Any changes must be approved by the cultural relics department

The fourth is partition management. Italian cities have set up restricted areas in historic centers to restrict the

movement of unregistered vehicles, avoid excessive commercialization, and maintain the vitality and unique charm of old cities.

(3) Community participation

Firstly, residents participate in decision-making. Bologna, Italy focuses on seeking a balance between public resources and community residents in urban development, allowing residents to participate in decision-making for the protection and development of the ancient city, enhancing their sense of belonging and responsibility, and enabling 90% of residents to stay after the renovation of the historical center of the ancient city.

Secondly, it is to protect the way of life. Bologna proposed the concept of "protecting people and houses together", which not only protects ancient buildings but also preserves the original living conditions and ways of residents, preserving the charm of the ancient city.

Finally, there is the inheritance of community culture. In the protection of the ancient city of Krakow, Poland, a deep understanding of the formation process and cultural characteristics of the community's historical buildings is carried out, and comprehensive renovation and development are carried out to excavate and inherit community culture, making the ancient city more meaningful and dynamic.

(4) Experience and lessons learned

One is the successful experience. Combining overall protection with dynamic inheritance, maintaining the original layout and style of the ancient city, while integrating modern functions, such as the Kazimierz Historical District in Krakow; Pay attention to balancing the interests of tourists and residents, avoiding the negative impact of excessive tourism development on residents' lives and the sustainable development of the ancient city, such as Toledo's development strategy plan.

The second is the lesson of failure. The transformation of the Champs - Élysées in Paris has led to issues such as pollution, traffic congestion, and tourism consumerism, indicating the need for more forward-looking and comprehensive planning that fully considers various factors such as the environment, transportation, and society.

6.2.2 Renovation of Historical Blocks in Other Asian Regions

(1) Nanjing Old Town South Gate East Historical and Cultural Block

1) Activation mode: Following the policy of "overall protection, organic renewal, government leadership, and cautious use of the market", adopting the "repair as before" method, quantitative surveying and mapping of components such as building flooring, doors and windows, beams and columns are carried out, and a technical atlas of repair is compiled as a reference to preserve historical information.

2) Funding source: Mainly funded by the government for protection and restoration.

3) Management mechanism: The planning department of Qinhuai District, Nanjing City, in conjunction with professional institutions such as the School of Architecture at Southeast University, jointly develops repair plans and plans, with the government leading the entire renovation process.

4) Community participation: From the perspectives of material space and residents, protect the "authenticity" of the block, achieve "seeing people, seeing things, and seeing life", and integrate residents' lives with the protection of historical and cultural blocks.

(2) Wuxi Qingmingqiao Historical and Cultural Block

1) Activation mode: Under the guidance of the architectural master Academician Wu Liangyong, the principle of

"overall creation, organic renewal" is formulated to classify and activate cultural relics, historical buildings, and traditional style buildings, such as transforming kiln sites into museums and introducing business forms that meet protection requirements.

2) Funding sources: mainly government investment and participation of social capital such as cultural and tourism enterprises.

3) Management mechanism: Professional cultural and tourism enterprises such as Wuxi Liangxi Cultural and Tourism Development Group Co., Ltd. are responsible for specific operation and management, following the principle of combining protection and utilization.

4) Community participation: By developing tourism and other means, it drives the economic development of surrounding communities, benefits residents from the revitalization of the neighborhood, and supports and participates in the protection and development of the neighborhood.

(3) Guangzhou Yongqing Fang

1) Activation mode: Innovatively realizing the project mode of four-dimensional synchronous compilation of block protection planning, implementation plan, architectural design, and industrial operation, promoting the integration of historical culture and modern commerce.

2) Funding source: Adopting a government led and market-oriented approach, introducing social enterprises for catering operations, etc., to broaden the sources of protection funds.

3) Management mechanism: The government takes the lead in planning and policy-making, while enterprises are responsible for specific operational management. Multiple parties participate together to form a mutually beneficial and win-win model.

4) Community participation: The project respects the existing property rights structure and complex land patterns, fully considers the interests of residents and businesses, mobilizes the enthusiasm of all parties, and achieves a positive interaction between historical and cultural protection and community development.

(4) Zhongshan Congshanfang Historical and Cultural Block

1) Revitalization mode: On the basis of preserving the historical style, the infrastructure is renovated and new formats such as "food, clothing, housing, culture, education, and exhibition" are introduced to bring new vitality to the historical and cultural blocks.

2) Funding source: Guided by the government, funds are raised from various sources, including government fiscal funds, social donations, corporate investments, etc.

3) Management mechanism: The government plays a guiding and coordinating role, the project team attaches importance to residents' opinions, invites professional teams to participate in planning, and ensures that the renovation plan is scientific and reasonable.

4) Community participation: Residents, overseas Chinese, experts and scholars and other forces participate together. Residents actively participate in the decision-making of the renovation, while overseas Chinese provide suggestions and resources such as housing for the renovation of the neighborhood.

(5) Nantou Ancient City, Shenzhen

1) Revitalization mode: With the positioning of "the capital of eastern Guangdong and the source of Hong Kong and Macao", through three major ways of historical and cultural reproduction, urban vitality enhancement, and

diversified content implantation, while improving cultural relics protection, it injects fresh blood into the ancient city, achieving spatial and content upgrading.

2) Funding sources: government investment and attracting social capital to participate in the renovation.

3) Management mechanism: Led by the government, relevant policies and plans are formulated, and various departments collaborate to promote the protection and renewal of the ancient city.

4) Community participation: Pay attention to listening to the opinions and suggestions of community residents, fully consider the interests and needs of residents during the renovation process, improve the quality of life and happiness of residents, and enhance their sense of identity and support for the renovation of the ancient city.

6.3 Existing Models and Case Studies for the Revitalization of Macau's Cultural Heritage

6.3.1 Main modes of revitalizing Macao's cultural heritage

(1) Museumization

Firstly, it is necessary to build themed museums, such as the Poly MGM Museum, which use technological means to make cultural relics "touchable" and "able to speak", telling the story of the combination of Chinese and Western cultures and the fusion of ancient and modern times through the combination of reality and culture and technology.

The second is the transformation of historical buildings into museums. Like the New Central Hotel, after restoration and revitalization, it has preserved and restored its original appearance and characteristics, incorporating retro and nostalgic elements into hotel services. It also has dedicated tour guides to narrate the building's history and culture, allowing visitors to experience it.

(2) Tourism development

One is to hold characteristic festival activities. During important festivals and celebrations, various activities will be held in cultural heritage sites, such as the Mid Autumn Festival Concert of "Full Moon at Three Buses Night" held at the memorial archway of Dasanba on Mid Autumn Night, and the light show and music performance held at the Grand Battery Garden.

The second is to create cultural and tourism routes. Integrate multiple cultural heritage sites, design and launch distinctive cultural tourism routes, allowing tourists to experience Macau's history and culture more comprehensively and deeply.

The third is to improve tourism supporting facilities. Provide convenient transportation conditions, add parking lots, bus routes, etc; Improve the signage system, rest areas, dining and shopping facilities in the scenic area to enhance the tourist experience.

(3) Utilization of cultural and creative industries

One is creative activities and experiences. Set up art tour points and organize impromptu art experience areas in the former site of Yilong Cannon Factory and the Litchi Bowl Shipyard area, allowing the public to participate and unleash their creativity.

The second is the development of cultural and creative products: using cultural heritage as elements, developing various cultural and creative products with commemorative significance and practical value, such as the Yilong Cultural and Creative Gift Store showcasing creative products designed with Yilong Cannon Bamboo Factory elements.

The third is the renovation and utilization of historical areas: through government enterprise cooperation, the historical areas will be renovated and transformed, incorporating cultural and creative industry elements, such as the "Macao No. 8" project, bringing together international and local brands while retaining old building elements, achieving the integration of old and new.

6.3.2 Typical Case Analysis

(1) Revitalization Case of Macao Museum

1) Poly MGM Museum

The activation mode of the museum is to integrate traditional intangible cultural heritage technology and new exhibition planning mode with innovative technology, and enable traditional intangible cultural heritage technology through modern architectural language. For example, the indoor colonnade presents cloisonne filigree enamel technology and Chinese arch of wooden architecture design features; By utilizing self-developed OLED screen interactive cultural relic display cabinets and directional speaker systems, cultural relics can be "touched" and "spoken".

As a brand new world-class cultural and tourism landmark, its debut exhibition "Blue Ribbon - Exploring Mysterious Seas and Encountering Silk Road Treasures" is themed around the Maritime Silk Road. Through four themed spaces, it systematically showcases relevant historical and cultural heritage, attracting a large number of tourists. This museum not only serves as an important platform for inheriting excellent traditional Chinese culture and presenting the charm of intangible cultural heritage, but also promotes the integration of culture, art, technology, cultural exchange, and mutual learning of civilizations, enhancing Macao's influence in the field of cultural tourism.

2) Macao New Central Hotel

The revitalization method of the hotel is that Lixing Group has invested heavily in the acquisition, comprehensively repairing, maintaining and revitalizing the foundation, structure, etc. of the building, maximizing the preservation and restoration of its original appearance and characteristics, integrating retro and nostalgic elements into various services of the hotel, and setting up dedicated guides to tell the story of the building's past.

After the hotel resumed its trial operation, it welcomed a large number of guests. Its nostalgic environment makes tourists feel like they have traveled through time and space, becoming a new highlight of Macao's cultural tourism. At the same time, as a historical building, the stories it carries have been better inherited and disseminated, further highlighting the historical and cultural value of Macao.

3) Zheng Guanying Memorial Hall

The revitalization method of this memorial hall is to build a new Zheng Guanying Memorial Hall next to the Zheng family's mansion, which looks like a giant wheel, symbolizing the revival of modern China. It not only learns advanced Western technology, but also remembers Chinese cultural traditions. The "Zheng Guanying Cultural Relics Exhibition" is held in the museum, showcasing over 100 exhibits with multiple themes, and adding multimedia equipment such as projection, touch screen interaction, analog telegraph machine, interactive sand table, AR virtual reality, etc.

In terms of effectiveness, the memorial hall has become an important place for people to understand Zheng Guanying and his thoughts. Through modern display methods, it allows the audience to more intuitively feel the influence of "The Scare of a Prosperous Age" on future generations, and also makes positive contributions to inheriting and promoting the historical and cultural celebrity spirit of Macao.

4) Virtual Reality Experience Art Creation in the Historic Center of Macao

Its activation mode is related training projects held by City University of the Historic Center of Macao. The trainees created six groups of design works, including Creative City: Cultural and Science Popularization Interaction System of the Historic Center of Macao, with the help of virtual reality technology, to reinterpret the unique style and features of Macao Historic District from a new perspective.

From the perspective of effectiveness evaluation, it not only cultivates professionals, but also provides new ways and means for the spread of Macao's history and culture. Through virtual reality experience, more people can deeply understand the cultural connotation of the Historic Center of Macao, and enhance the public's attention and participation in the protection of cultural heritage.

(2) Typical case of tourism development projects in the vicinity of Ruins of St. Paul's

1) "Time and Space Shuttle, Three Buses Tour" Big Three Buses memorial archway Immersive Digital Experience Exhibition

The digital restoration of Dasanba memorial archway is carried out by using naked 3D, VR and other technologies, and the Cathedral of the Mother Catholic Church of St. Paul's College in its heyday is revived, so that tourists can have a new experience of "traveling through", feel its historical style through time and space, enhance the interest and interaction of cultural heritage through scientific and technological means, make the ancient buildings "live", and better present the historical and cultural characteristics of Macao, which is a mixture of Chinese and Western cultures.

2) Reconstruction of blocks around the memorial archway of Dasanba

The ancient temples such as Nezha Temple and Nuwa Temple around the memorial archway of Dasanba have retained the traditional architectural style and cultural connotation, and set off with the memorial archway of Dasanba, which together demonstrate the charm of Macao's multiculturalism. After the renovation of Guanqian Main Street, it retains a retro atmosphere and hides many old brands, Han style small shops, and creative graffiti, becoming a good place for tourists to experience Macao's history, culture, and unique style.

3) Macao No.8

It was transformed from the staff dormitory of the Macao Post and Telecommunications Office, surrounded by 8 world cultural heritage sites within a radius of over 100 meters, and is a microcosm of Macao's history. The project retains many old building elements, such as old laundry sinks, old railings, old spiral staircases, etc., and combines them with modern commercial elements, gathering over a hundred international and local brands. It also has cultural exhibition spaces and has won multiple international professional awards.

4) Fulong New Street Pedestrian Area Revitalization Plan

Fulong New Street has a history of hundreds of years and retains the traditional Chinese style residential style. The pedestrian area activation plan has optimized the road paving, lighting and environmental sanitation, combined with enterprises to inject elements such as commercial display, artistic performance, leisure catering, etc., and connected the core tourist areas such as Dasanba memorial archway to attract tourists with colorful activities, revitalize the community economy, and promote tourism consumption.

6.3.3 Analysis of factors contributing to the successful revitalization of Macao's cultural heritage

(1) The government values and supports it. The government places cultural heritage protection and development in a prominent position and invests a large amount of special funds. For example, in 2007, the SAR government spent 1.2 billion Macao dollars on culture and religion, accounting for 6.5% of the government's public expenditure, providing strong financial support for revitalization work. In addition, the Macao SAR government

has launched a series of revitalization plans for historical areas through government enterprise cooperation. The revitalization of the new Central Hotel in Macao was acquired and renovated by Lixing Group at a huge cost, and the government included it in the protection list. While preserving its historical features, modern service elements were integrated to give it a new lease on life.

(2) Integrating diverse cultures. As a place where Chinese and Western cultures intersect, Macao's cultural heritage integrates Chinese and Western characteristics. For example, the "Macao No. 8" project cleverly integrates elements of Chinese and Portuguese culture, which attracts a large number of tourists with its unique cultural charm and provides rich cultural resources for innovative revitalization models. In addition, during the revitalization process, projects such as the New Central Hotel and M8 Macao No. 8 have maximally preserved the original style and historical elements of the buildings, such as old tiles and railings, allowing tourists to feel a strong historical atmosphere and inherit Macao's historical memory.

(3) Innovative activation concept. Adopting various innovative methods to revitalize cultural heritage, such as Wangxia Shanfang's concept of "cultural inheritance and integration innovation", preserving the historical memory and regional characteristics of architecture and culture; Through the integration of old and new, "Macao No. 8" preserves the elements of old buildings, attracts young people to take photos, and revitalizes cultural heritage. Poly MGM Museum integrates culture and technology, with the theme of the Maritime Silk Road. Through innovative curation and high-tech display methods, such as transparent OLED interactive display cabinets, it presents cultural relics and artworks, achieving a fusion of Chinese and Western cultures and a fusion of ancient and modern.

(4) Emphasize the application of technology. Using technological means to promote the revitalization of cultural heritage, such as the Poly MGM Museum making cultural relics "touchable" and "able to speak", telling stories through a combination of virtual and real, cultural and technological integration, enhancing tourists' experience and participation.

(5) Combining with tourism: Deeply integrating cultural heritage with tourism, attracting a large number of tourists to visit through holding characteristic festival activities, creating cultural and tourism routes, improving tourism supporting facilities, etc., driving the economic development of surrounding areas, and also allowing cultural heritage to be better inherited and spread in tourism. In front of the memorial archway of Dasanba, activities such as the Mid Autumn Festival Concert of the Full Moon and Three Buses Night were held, and elements such as commercial display, artistic performance, leisure catering were injected into the pedestrian area of Fulong New Street. Through a variety of cultural activities, a large number of tourists were attracted, the deep integration of culture and tourism was promoted, and the community economy was revitalized.

(6) Community participation and identification: Emphasis is placed on community participation, allowing residents to benefit from the revitalization of cultural heritage, enhancing their sense of identity and protection awareness of cultural heritage, and encouraging them to actively support and participate in revitalization work, such as the "Youth Bureau - Macao Youth Architecture Culture Camp" activity, which allows young people to understand and protect Macao's history and culture. In addition, communities and clubs are encouraged to participate in tourism development projects, such as the "Huahui North District" event, which is jointly created by the government and the community. Activities such as setting up check-in devices and connecting food shops not only showcase the charm of traditional communities in Macao, but also promote the development of community economy.

(7) Professional management and operation. The introduction of a professional management team and operational model has improved the management level and operational efficiency of cultural heritage revitalization projects, ensuring their sustainable development. For example, the "Macao No. 8" project, representing Macao, has won more than ten international professional awards, and its professional operational management has laid the foundation for the success of the project.

7 Challenges and Opportunities Faced by the Revitalization of Macao's Cultural Heritage

7.1 Challenge

7.1.1 Insufficient policies and regulations

(1) The policy of balancing protection and activation is lacking. At present, policies and regulations mainly focus on the protection of cultural heritage, and there is a lack of clear and actionable guidance policies on how to moderately activate and utilize it on the basis of protection, in order to fully realize its economic and social value. This has led to many restrictions and controversies in the implementation of some revitalization projects.

As the former residence of the Zhao family in Macao, the Zhao Family Mansion has high cultural value, but it has fallen into disrepair. Although the Macao SAR government has initiated preliminary work for restoration, its revitalization faces challenges from insufficient policies and regulations, such as a lack of clear policies and supporting funds for revitalization and utilization, resulting in slow progress in restoration and difficulty in fully realizing its cultural value. Meigao Meiji aims to turn Magotang District into a landmark, but faces restrictions on cultural heritage protection policies. When conducting artistic creation and event planning, strict adherence to cultural heritage protection regulations is required, and there is a balance between innovative display and utilization of cultural heritage and protecting its authenticity.

(2) The supporting policies are not perfect. There is a lack of systematic supporting policies in terms of funding support, tax incentives, talent cultivation and introduction for the revitalization of cultural heritage. The main source of funding relies on government investment, with low participation of social capital, which limits the scale and quality of revitalization projects; At the same time, the shortage of professional talents also affects the innovation and sustainability of revitalization projects. For example, after the revitalization of the Mazu Temple area, the Mazu Temple parking lot was transformed into a tourist rest area, causing inconvenience in parking and leading many domestic travel agencies to cancel Mazu Temple itineraries, resulting in a decrease in tourists. This reflects a lack of overall consideration for the construction of supporting facilities in the revitalization of cultural heritage, incomplete policies, and insufficient balance between protection and development, as well as the needs of tourists and merchants. As the first historical building revitalization project, although Wangxia Mountain House conforms to the concept of multicultural coexistence, it also faces the problem of insufficient policies and regulations, such as a lack of clear policy support and norms in fundraising, operation and management, mainly relying on government investment and limited social sponsorship, unstable funding sources, and affecting the long-term sustainable development of the revitalization project.

(3) The supervision and evaluation mechanism is not sound. There is a lack of effective supervision and evaluation mechanisms for the implementation process and effectiveness of cultural heritage revitalization projects. Some projects may face issues such as overdevelopment and destruction of cultural heritage authenticity due to a lack of regulation; However, the evaluation of project effectiveness is insufficient, and it is difficult to summarize lessons learned and provide reference for subsequent projects. Since 1991, the successive owners of the Six Nations Hotel have failed to fulfill their legal obligations to protect cultural relics, resulting in serious disrepair and almost abandonment. The cultural and engineering departments have not held them accountable in a timely manner, leading to the elimination of related responsibilities due to time constraints. After the new Cultural Heritage Law came into effect, the Cultural Bureau initially did not impose administrative penalties on property owners who did not fulfill their obligations to protect cultural heritage and notify them, and the engineering department did not effectively exercise specific powers and administrative penalty powers over illegally demolished assessed real estate, highlighting issues such as insufficient coordination between departments and insufficient enforcement of cultural heritage laws. As the M8 commercial city renewal and reconstruction project is located in the core area of the the Historic Center of Macao, the activation of Zhao Family Mansion needs to follow strict laws and policies in terms of architectural transformation, commercial operation, etc. If there is a contradiction between retaining the characteristics of historical buildings and meeting the needs of modern commercial functions, it needs to coordinate the interests of all parties, and while attracting investment and tourists, it needs to avoid the negative impact of excessive

commercialization on cultural heritage.

7.1.2 Difficulties in departmental coordination

(1) Poor communication across departments. The revitalization of cultural heritage involves multiple government departments such as culture, tourism, planning, construction, and economy. There are differences in responsibilities and goals among these departments, which can lead to poor communication and information sharing, resulting in cumbersome project approval processes, low decision-making efficiency, and affecting project progress.

(2) Lack of overall coordination mechanism. In the revitalization project of cultural heritage, due to the lack of a unified coordination mechanism, it is difficult for various departments to form a working force, which can easily lead to a situation of each department acting independently. For example, in the revitalization of historical urban areas, the cultural department focuses on the protection of cultural relics, while the tourism department focuses on tourism development. If there is a lack of coordination, it may lead to conflicts between protection and development, affecting the overall effectiveness of cultural heritage revitalization.

7.1.3 Shortage of Funds and Single Source

(1) The cost of repair and maintenance is high. Many cultural heritage buildings in Macao are old, with outdated structures and materials. The restoration of traditional Chinese temples and Portuguese style buildings requires professional ancient architectural restoration techniques and expensive materials. For example, the restoration of traditional tile roofs requires not only finding matching old tiles, but also skilled craftsmen who are proficient in traditional craftsmanship, which greatly increases the cost of restoration.

(2) The activation project requires a large investment of funds. When transforming cultural heritage into museums, art spaces, or cultural tourism integration projects, a large amount of funds are needed for internal decoration, equipment procurement, environmental creation, etc. To build a modern historical and cultural themed museum, in addition to the renovation of the building itself, it is also necessary to purchase exhibition equipment, security systems, and design and produce multimedia interactive display content.

(3) Government led but with limited budget. At present, the revitalization of cultural heritage in Macao mainly relies on government funding, and the government arranges budgets through departments such as the Cultural Bureau. However, the government budget needs to be allocated to numerous social affairs areas, and the funds for revitalizing cultural heritage are relatively limited. For example, the government needs to allocate funds annually in various areas such as education, healthcare, and social welfare, and the growth rate of funds that can be specifically used for cultural heritage revitalization projects is limited.

(4) Low enthusiasm for social capital participation

One is investment risk awareness. Cultural heritage revitalization projects are subject to strict restrictions from various policies and regulations, such as the need to follow protection principles in terms of building appearance and functional settings, which makes investors believe that investment flexibility is limited and risks are high. For example, conducting commercial activities within historical buildings may have special regulations regarding business formats, operating hours, etc.

The second is the return cycle and uncertainty of returns: the return cycle of cultural heritage revitalization projects is often long, and the returns are influenced by various factors, such as the volatility of the tourism market and changes in tourist preferences. Taking a newly developed historical building cultural and tourism project as an example, it may take several years to attract enough tourists to achieve a balance of income and expenditure, which makes social capital hesitant.

7.1.4 Cognitive bias and insufficient protective awareness

(1) Public cognitive bias

One is a one-sided understanding of the value of cultural heritage. Many Macao residents and tourists often only see the tourism and commercial value of cultural heritage. For example, most people like to take photos in front of the memorial archway of Dasanba and regard it as a popular tourist attraction, but they ignore its profound religious culture, architectural art, historical changes and many other values.

For some non-famous cultural heritage sites, such as the traditional old houses in the streets and alleys of Macao, the public may only consider them ordinary old buildings, without realizing that they carry the unique local culture and traditional way of life memories of Macao.

Secondly, there is a misunderstanding about the activation method. Some members of the public simply equate the revitalization of cultural heritage with commercial development. When seeing many shops and restaurants around some cultural heritage sites, it is believed that this is an excessive use of cultural heritage and destroys its original cultural atmosphere. For example, commercial activities around some alleys in the the Historic Center of Macao have aroused some people's concern about excessive commercialization.

Thirdly, for some innovative ways of activation, such as using modern technology to digitally display or creatively transform cultural heritage, the public may find it difficult to accept at the moment. For example, when renovating traditional buildings internally and adding modern multimedia display devices to tell the history of the building, some members of the public may feel that this renovation destroys the original antique style of the building.

(2) Protection awareness

1) Regarding residents

In daily life, some residents may not be aware of the potential impact of their actions on cultural heritage due to a lack of sufficient educational guidance. For example, randomly stacking debris around some ancient buildings, or engaging in destructive behavior such as improper graffiti on the walls of ancient buildings. When cultural heritage revitalization projects involve residential living areas, such as in the process of renovating old neighborhoods, some residents may be more concerned about personal interests, such as demolition compensation, and overlook the overall interests of cultural heritage protection.

2) Regarding tourists

Tourists may engage in behaviors that are detrimental to the protection of cultural heritage due to a lack of relevant behavioral norms education when visiting cultural heritage. For example, touching cultural relics, taking photos in prohibited areas, or making loud noises inside ancient buildings. Tourists have a relatively weak understanding of the responsibility of cultural heritage protection, believing that protection is mainly the responsibility of local governments and management departments. They are only temporary visitors and have not integrated protection awareness into their tourism behavior.

7.1.5 Management and maintenance challenges

(1) Shortage of professional talents

One is the shortage of repair skilled personnel. Macao's cultural heritage includes various types of traditional Chinese architecture, Portuguese style architecture, and requires professionals who are proficient in the restoration of ancient buildings, such as craftsmen who master traditional Chinese wood carving and stone carving techniques, and experts who are familiar with the restoration of colored ceramic tiles in Portuguese architecture. But these traditional skilled talents are becoming increasingly scarce in modern society, and

inheritance is facing difficulties.

Secondly, there is a shortage of management and operation talents. Projects that revitalize cultural heritage require operational talents with comprehensive knowledge in culture, tourism, business management, and other areas. For example, a museum that has undergone revitalization and renovation of a historical building requires talents who understand both cultural relic management and market promotion to operate effectively. However, such versatile talents are relatively scarce in Macao.

(2) Building aging and environmental issues

One is the aging of the building structure. Many cultural heritage buildings in Macao are of ancient age, and their building materials and structures have long been influenced by natural factors such as weathering and rainwater erosion, as well as human factors such as early overuse. The wooden structures of some traditional temples in Macao have decayed and cracks have appeared on the walls, posing significant challenges to maintenance.

The second is the pressure of the surrounding environment: changes in the surrounding environment of cultural heritage can also have an impact on it. For example, with the development of the tourism industry, the flow of people around popular attractions such as Ruins of St. Paul's has increased, leading to environmental pollution, increased ground wear and tear, and the construction of new buildings in the surrounding area may affect the landscape and lighting of cultural heritage sites.

(3) Complex management and coordination

One is the difficulty of cross departmental collaboration: the management and maintenance of cultural heritage involves multiple departments such as the Cultural Bureau, Tourism Bureau, and Municipal Administration. For example, the Cultural Bureau is responsible for the protection and appraisal of cultural relics, the Tourism Bureau focuses on the tourism development and utilization of cultural heritage, and the Municipal Administration is responsible for the surrounding environmental sanitation. These departments have different work priorities, which may result in poor communication and unclear division of responsibilities in actual work, affecting the efficiency of management and maintenance.

The second challenge is the interweaving of public and private property rights: some cultural heritage buildings have separate property rights belonging to private individuals and the government, which can easily lead to conflicts in management and maintenance. For example, private property owners may be more concerned about economic benefits and have a lower willingness to invest in building protection, while the government faces many difficulties in regulating and promoting private property owners to fulfill their protection obligations.

7.2 Opportunities

7.2.1 Cultural exchanges and cooperation between countries and regions along the "the Belt and Road"

Cultural exchanges and cooperation between countries and regions along the "the Belt and Road" have brought many new opportunities for the activation of Macao's cultural heritage, which are mainly reflected in the following aspects:

(1) Expand cultural display platform

The increase in cultural exchange activities among countries along the route has provided a broader platform for showcasing Macao's cultural heritage. For example, Poly MGM Museum, based on the design concept of multi-cultural symbiosis, integrates the cultural relics and artistic elements of the "the Belt and Road" countries. Through various exhibitions, it shows the achievements of Macao's cultural heritage and cultural exchanges and integration of different countries, and improves the international popularity and influence of Macao's cultural

heritage.

(2) Promote the integration of cultural elements

The collision of cultural elements from different countries and regions injects new vitality into the revitalization of Macao's cultural heritage. Macao can draw on the cultural creativity and forms of expression of countries along the route to enrich the means and content of revitalizing cultural heritage. In some traditional architectural revitalization projects in Macao, art exhibitions, performances, and other activities from other countries can be introduced to combine local culture with foreign culture, creating more attractive and innovative cultural experiences.

(3) Attracting diversified capital investment

Strengthening cultural exchange and cooperation can attract more funds from countries and regions along the route to invest in Macao's cultural heritage revitalization projects. On the one hand, cooperation projects in the cultural industry may have related investments and sponsorships; On the other hand, with the increasing attractiveness of cultural tourism in Macao, it will also drive more commercial investment and provide financial support for the protection and revitalization of cultural heritage.

(4) Promote the development of cultural tourism

The "the Belt and Road" initiative has promoted tourism cooperation between countries and regions along the line. As an important node, Macao's cultural heritage has become an important resource to attract tourists. For example, as a world cultural heritage, the the Historic Center of Macao integrates Chinese and Western architectural cultural characteristics, which has great attraction for domestic and foreign tourists. The development of cultural tourism can bring more resources and impetus to the activation of cultural heritage and promote the development of related cultural industries.

(5) Strengthen talent exchange and cooperation

The deepening of cultural exchanges enables Macao to engage in talent exchange and cooperation with countries and regions along the Belt and Road. In terms of cultural heritage protection, revitalization, management, etc., we will introduce advanced technology and experience, cultivate and introduce professional talents, improve the professional level and innovation ability of Macao's cultural heritage revitalization, and promote the high-quality development of cultural heritage revitalization projects.

(6) Enhance public awareness of protection

Through cultural exchange activities with countries and regions along the route, it can enhance the public's awareness and sense of identity towards the protection of their own cultural heritage in Macao. At the same time, it also makes more people aware of the importance of cultural heritage protection, creates a good atmosphere for the whole society to participate in the protection and revitalization of cultural heritage, and lays the foundation for the sustainable development of cultural heritage.

7.2.2 The Role and Revitalization Opportunities of Macao's Cultural Heritage in the Construction of the Guangdong Hong Kong Macao Greater Bay Area

(1) Important role

One is the role of cultural bridge. As a crossroads of Eastern and Western cultures, Macao can leverage its unique historical and cultural background and extensive network of external connections to promote cultural exchanges between the Greater Bay Area and Portuguese speaking countries as well as other overseas regions, helping Chinese culture to go global, while introducing diverse cultures and enriching the cultural connotations

of the Greater Bay Area.

The second is the role of resource integration. Actively integrating cultural resources within the Greater Bay Area, such as organically combining with Hong Kong's film and entertainment resources, Guangdong's historical and cultural resources, etc., to form complementary advantages and jointly promote the development of cultural industries in the Greater Bay Area.

The third is to demonstrate and lead the role. With its experience in cultural heritage protection and revitalization, it provides reference and demonstration for other cities in the Greater Bay Area, leading the protection, inheritance, and innovative development of cultural heritage in the Greater Bay Area, and jointly enhancing the influence and value of cultural heritage in the Greater Bay Area.

(2) Activate opportunities

One is the opportunity for cultural resource sharing. By sharing the cultural resources of various cities in the Greater Bay Area, such as historical buildings, folk culture, art exhibitions, etc., Macao can enrich its cultural tourism product supply, provide tourists with a deeper and broader cultural experience, and also help improve the overall utilization efficiency and effectiveness of cultural resources in the Greater Bay Area.

The second is the opportunity for the development of cultural tourism routes. Jointly developing characteristic cultural tourism routes with other cities in the Greater Bay Area, such as the "Guangdong Hong Kong Macao Greater Bay Area Cultural Relics Theme Tour", connecting scattered cultural attractions to form an attractive tourism product portfolio, extending tourists' stay in the Greater Bay Area, increasing tourism consumption, promoting the coordinated development of the cultural tourism industry in the Greater Bay Area, and enhancing the competitiveness of the Greater Bay Area as a world-class tourism destination.

Thirdly, there are opportunities for the development of cultural industries. Taking advantage of the opportunity of coordinated cultural development in the Greater Bay Area, we aim to attract more cultural and creative talents, enterprises, and projects to settle in Macao, promote the deep integration of culture, tourism, technology, finance, and other industries, promote the diversified development of Macao's cultural industry, create internationally influential cultural brands and cultural industry clusters, and inject new impetus into the moderate and diversified development of Macao's economy.

The fourth is the opportunity for infrastructure construction. With the advancement of infrastructure connectivity in the Greater Bay Area, such as the completion and trial operation of the Hengqin Line extension of the Macao Light Rail Transit, it will further strengthen the transportation connection between Macao and other cities in the Greater Bay Area, provide more convenient transportation conditions for the development of cultural tourism, promote personnel mobility and resource sharing, and advance the coordinated development of culture in the Greater Bay Area to a deeper level.

The fifth is policy support opportunities. The "Outline of the Development Plan for the Guangdong Hong Kong Macao Greater Bay Area" and other policy documents provide clear policy support and direction guidance for Macao's development in the cultural synergy of the Greater Bay Area. Macao can fully utilize these policy advantages, strive for more resource allocation and project support, accelerate the construction of cultural infrastructure, the hosting of cultural activities, and the landing of cultural industry projects, and enhance Macao's position and role in the cultural synergy of the Greater Bay Area.

7.2.3 Technology empowers Macao's cultural heritage revitalization opportunities

(1) Immersive experience of historical scenes

Through accurate 3D modeling and environmental simulation, VR technology can deeply restore the historical scenes of Macao, such as the construction process of Ma Ge Temple, Dasanba memorial archway and other

buildings, and the prosperous street scenes in the past, making people feel the past culture and lifestyle through time and space, and greatly enhancing the understanding and feeling of history and culture.

(2) Innovative forms of cultural heritage display

The use of VR technology can create virtual cultural heritage exhibition spaces, integrating scattered cultural heritage elements together to create virtual museums or cultural exhibition halls that are not limited by physical space. Viewers can freely browse, zoom in, and rotate exhibits in the virtual space, appreciate the details of cultural relics up close, and can also cooperate with voice explanations, text introductions, etc. to obtain a richer and more personalized visiting experience.

(3) Assist in the inheritance of intangible cultural heritage

For some intangible cultural heritage in Macao, such as the Drunken Dragon Festival and silverware making techniques, VR technology can record their production process and details, enabling them to be preserved and passed down.

(4) Enhance the attractiveness of cultural tourism

Applying VR and AR technology to cultural tourism to provide visitors with a new way of navigation. For example, when tourists wear AR glasses to visit the the Historic Center of Macao, when they reach a specific place, the glasses will automatically display the historical information and related stories of the building, making the tour more interesting and educational.

(5) Promote cultural exchange and cooperation

With the help of VR and AR technology, people from different cultural backgrounds can break through geographical limitations, experience the characteristics and charm of Macao's cultural heritage, enhance their understanding and respect for Macao culture, and provide new platforms and opportunities for cultural exchange and cooperation between Macao and other regions, promoting the integration and development of diverse cultures.

(6) Stimulating cultural creativity and industrial development

Artists and designers can use these technologies to create new forms of art and cultural products, such as developing VR games and AR interactive art works themed around Macao's cultural heritage. This not only injects new vitality into cultural heritage, but also drives the development of related cultural and creative industries, creating more economic value.

(7) Case study of technology empowering the revitalization of Macao's cultural heritage

1) Poly MGM Museum. The world-class cultural and tourism landmark in Macao, jointly created by Poly Culture and MGM China, will open on November 2, 2024. Its debut exhibition "Blue Ribbon - Exploring Mysterious Seas and Encountering Silk Road Treasures" is themed around the Maritime Silk Road and utilizes various innovative technologies. The augmented reality technology that combines OLED interactive cultural relics display cabinets with directional sound systems allows cultural relics such as Yuan blue and white phoenix flower patterns, jade pots, and spring vases to be manually controlled to move, zoom, and flip. They can also touch the screen to "erase" the coral on the cultural relics, reproducing their beautiful glaze colors and patterns

2) Macao Cultural Bureau's online VR tour. To strengthen the construction of smart culture, the Cultural Bureau has added 10 online VR guided tours of cultural heritage sites, including A-Ma Temple and Sanjie Guild Hall. The public can browse the virtual exhibition hall online through the website of the Cultural Bureau. In addition to providing multilingual guided tours, the square also offers introductions to surrounding world heritage sites

and VR guide links. Temple attractions have online experiences of "scenic area interaction" and "exhibit interaction", and users can enhance their sensory experience of cloud visits by using VR glasses.

3) MGM2049 conceptual performance. The conceptual performance "MGM 2049", directed by Zhang Yimou and produced by MGM China Holdings Limited, will officially begin in December 2024. The performance features traditional intangible cultural heritage dialogue technology, consisting of seven or eight paragraphs, each showcasing an intangible cultural heritage project. It will invite intangible cultural heritage inheritors from remote areas to participate in the performance and integrate modern technology to create an immersive viewing experience. At the same time, as the first dynamic theater in Asia, the MGM Theater has also undergone significant upgrades in its hardware facilities.

4) Why Civilization "Digital Museum. The museum is located in the Hengqin Guangdong Macao Deep Cooperation Zone and is scheduled to open in early December 2024. The first exhibition theme is a series of digital exhibitions showcasing the achievements of the Chinese Civilization Exploration Project. It showcases cultural relics through digital technology, expands the application scenarios of digital information technology in the cultural field, and interprets the beauty of cultural relics.

5) Canglan Jue VR Immersive Experience Hall. On August 9, 2024, it was unveiled at the Galaxy Resort in Macao, jointly developed by Galaxy Entertainment Group and iQiyi. It is the largest real-life+full sensory VR immersive experience project in Macao. The experience center utilizes globally leading VR full sensory technology, 3D modeling, and generative artificial intelligence technology to construct the world of "Canglan Jue" immortal heroes, allowing visitors to experience the integration of technology and culture.

8 Strategies and Path Selection for the Revitalization of Macao's Cultural Heritage

8.1 Improve the policy and legal protection system

8.1.1 Improve the laws and regulations on the revitalization of Macao's cultural heritage and clarify the rights and responsibilities of each responsible party

(1) The direction of improving laws and regulations

One is to formulate a specialized law for revitalizing cultural heritage. Currently, there are laws related to the protection of cultural heritage in Macao, but the regulations on revitalization and utilization are not detailed and comprehensive enough. Laws specifically targeting the revitalization of cultural heritage should be formulated, clarifying the definition, scope, objectives, and principles of revitalization. For example, the revitalization of cultural heritage is defined as the rational utilization of cultural heritage while protecting its authenticity and integrity, enabling it to realize its economic, educational, cultural, and other values in contemporary society.

The second is to refine the approval process for activation projects. Detailed regulations on the approval departments, approval conditions, and approval time for different types of cultural heritage revitalization projects (such as transforming historical buildings into museums, developing cultural tourism in traditional neighborhoods, etc.). For example, for projects involving the exterior renovation of world cultural heritage buildings, they need to be jointly approved by multiple departments such as the Cultural Bureau and the Urban Planning Department. The approval process should be open to the public and subject to supervision.

Thirdly, establish strict supervision and evaluation mechanisms. Establish a specialized cultural heritage revitalization supervision agency, or assign existing agencies with supervisory responsibilities. The institution is responsible for regularly checking whether the revitalization projects are carried out in accordance with laws, regulations, and approval requirements, establishing an evaluation index system, and evaluating the revitalization projects from multiple dimensions such as cultural heritage protection, social and economic benefits, and public satisfaction.

(2) Clarify the rights and responsibilities of each responsible party

1) Government departments

Firstly, as the core department for the protection and revitalization of cultural heritage, the Cultural Bureau should be responsible for evaluating and recognizing the value of cultural heritage, and formulating overall plans and policies for the revitalization of cultural heritage. For example, conducting a comprehensive census and value assessment of all historical buildings, traditional crafts, and other cultural heritage in Macao, and developing a graded and classified revitalization strategy based on the assessment results. At the same time, conduct preliminary feasibility study approval for the activation project and provide professional guidance and supervision during the project implementation process.

Secondly, the main responsibility of the tourism bureau is to combine the revitalization of cultural heritage with the tourism industry, and formulate cultural tourism development plans. Design tourism routes with cultural heritage as the core, promote Macao's cultural tourism brand, and supervise the business activities of tourism enterprises in cultural heritage areas to ensure that they meet the requirements of cultural heritage protection and revitalization.

Once again, the urban planning department is responsible for the planning and construction management of the surrounding areas of cultural heritage. When approving construction projects, full consideration should be given to the impact on cultural heritage, ensuring that the landscape environment and spatial pattern of cultural heritage are not damaged. For example, it is stipulated that the height, style, color, etc. of newly built buildings within a certain range around cultural heritage should be coordinated with the cultural heritage.

Finally, the economic sector encourages social capital to participate in the revitalization of cultural heritage by formulating economic policies such as tax incentives and fiscal subsidies. For example, enterprises investing in cultural heritage revitalization projects will be granted tax exemptions, and special funds will be established to support small-scale cultural heritage revitalization creative projects.

2) Cultural heritage owner (private or institutional)

One is to maintain and reasonably utilize responsibility. The owner of cultural heritage is the direct responsible party for the daily maintenance and rational utilization of cultural heritage. For privately-owned historical buildings, owners must carry out daily maintenance and repair in accordance with the requirements of cultural heritage protection. When carrying out internal renovation and utilization, approval from relevant departments must be obtained, and the renovation plan must comply with the principles of protecting the authenticity and integrity of cultural heritage.

The second is the obligation to provide information. Owners have the obligation to provide relevant information on cultural heritage to government departments, such as historical records of buildings, current issues, etc., to assist the government in researching and protecting cultural heritage.

3) The general public

One is supervisory responsibility. As the ultimate beneficiaries of cultural heritage, the public has the right to supervise the revitalization projects of cultural heritage. The government should establish smooth public supervision channels, such as setting up dedicated reporting hotlines, online platforms, etc., to facilitate the public to report behaviors such as damaging cultural heritage and illegal revitalization.

The second is the obligation to participate. Encourage public participation in the protection and revitalization of cultural heritage, such as participating in daily maintenance and promotion of cultural heritage through volunteer activities, and fully listening to public opinions and suggestions during the planning stage of cultural heritage revitalization projects.

8.1.2 Establish and improve policy evaluation and adjustment mechanisms to ensure the scientific and effective nature of policies

(1) Establish an evaluation index system

1) Cultural value protection indicators

① Integrity: Evaluate whether the material and non-material elements of cultural heritage have been fully preserved. For example, for historical buildings, check whether the building structure, decorative details, internal furnishings, etc. maintain their original style; For traditional skills, it depends on whether the skill process, tools, and inheritance methods are fully inherited.

② Authenticity: Measuring whether the revitalization process of cultural heritage truly reflects its historical, cultural, and social background. For example, whether the cultural display content is based on accurate historical research, and whether the restoration materials and techniques conform to traditional practices.

2) Social impact indicators

① Public participation: By counting the number and frequency of participants in cultural heritage revitalization related activities (such as cultural festivals, volunteer services, public consultation meetings, etc.), as well as conducting surveys on the public's awareness and satisfaction with revitalization projects, the degree of public participation in cultural heritage revitalization can be evaluated.

② Community Integration: Observing whether cultural heritage revitalization projects promote cohesion and identity in local communities. For example, does the revitalized cultural space provide a place for community residents to communicate, and does it drive community economic development, such as increasing employment opportunities and enhancing surrounding commercial vitality.

3) Economic benefit indicators:

① Direct economic benefits: Accounting for direct economic benefits such as ticket revenue, sales of cultural and creative products, and rental income from cultural heritage revitalization projects.

② Indirect economic benefits: Evaluate the driving effect on related industries (such as tourism, catering, accommodation, transportation, etc.), analyze the comprehensive contribution of factors such as the increase in tourist numbers and the extension of tourist stay time to the local economy.

4) Environmental sustainability indicators:

① Physical Environmental Impact: Check the impact of the cultural heritage revitalization process on the surrounding natural and built environment, such as whether it increases energy consumption, pollution emissions, and damages the coordination of the surrounding landscape.

② Resource utilization efficiency: Evaluate the rationality of cultural heritage revitalization projects in terms of resource utilization, such as water resource recycling, sustainability of building materials, etc.

(2) Selection of evaluation methods

1) Combining regular evaluation with irregular inspections: setting a fixed evaluation cycle, such as conducting a comprehensive evaluation of all cultural heritage revitalization policies once a year or every two years. At the same time, special inspections will be conducted irregularly to conduct in-depth investigations into specific cultural heritage projects or hot issues.

2) Collaboration between internal and external evaluations: Relevant government departments (such as the Cultural Bureau, Tourism Bureau, etc.) form an evaluation team to conduct self-assessment based on policy objectives and evaluation indicators. At the same time, professional third-party evaluation agencies such as university research teams, independent consulting firms, etc. are commissioned to conduct evaluations from a professional and objective perspective, and comprehensively evaluate the results of both parties.

3) Both quantitative and qualitative analysis are emphasized: for quantifiable indicators such as economic benefits, statistical data, financial statements, etc. are used for quantitative analysis. For indicators such as cultural value protection and social impact that are difficult to quantify, qualitative methods such as on-site observation, interviews, and case analysis are used to evaluate and ensure comprehensive and accurate evaluation results.

(3) Policy adjustment strategy

1) Fine tuning based on evaluation results: If the evaluation finds that the policy is not effective in certain aspects but the overall direction is correct, local adjustments can be made to the policy. For example, if it is found that the policy support for the development of cultural and creative products is insufficient, financial subsidies or tax incentives can be appropriately increased.

2) Adaptive adjustment based on new circumstances: adjust cultural heritage revitalization policies in a timely manner with changes in social, economic, technological, and other environments. After the emergence of new technologies (such as virtual reality technology for cultural heritage display), policies should be revised in a timely manner to encourage and regulate the application of new technologies in revitalization.

3) Prudent decision-making for major adjustments: For major adjustments involving policy objectives, basic principles, etc., sufficient research and argumentation, public consultation, and legal procedures must be conducted. When changing the dominant direction of cultural heritage revitalization from tourism development to cultural inheritance, it is necessary to solicit opinions widely to ensure that the adjusted policies are in line with the long-term interests of Macao's cultural heritage protection and social development.

8.2 *Expand funding sources and channels*

8.2.1 Government increases investment

(1) Establish special financial funds. The Macao government can establish a special fund for the revitalization of cultural heritage, which will be used exclusively for the restoration, maintenance, research, and preliminary planning of revitalization projects. For example, a fixed proportion (such as 5% -10%) of the government budget is allocated annually for the revitalization of cultural heritage to ensure the stability of the funds.

(2) Issuing cultural heritage bonds. The government can raise funds by issuing special bonds. These bonds can be issued to local residents, businesses, and financial institutions. Investors who purchase bonds can receive principal and interest returns after a certain period of time, and the funds raised will be used entirely for cultural heritage revitalization projects, such as large-scale restoration and renovation of historical buildings.

8.2.2 Attracting Social Capital

(1) Public Private Partnership (PPP) model. Through the public-private partnership model, the government collaborates with enterprises to jointly carry out cultural heritage revitalization projects. For example, in the project of transforming large historical buildings into hotels or museums, the government provides land and policy support, while enterprises are responsible for the funding, construction, and operation of the project. Both parties share the profits in a certain proportion, which can fully leverage the company's financial advantages and operational management experience.

(2) Cultural Heritage Trust Fund. Establish a cultural heritage trust fund to attract donations from various sectors of society and enterprises. These donated funds can be managed by professional trust institutions, invested in stable financial products, and the proceeds generated can be used for cultural heritage revitalization projects. At the same time, donors can receive corresponding honorary titles or tax incentives based on the donation amount, which can increase the enthusiasm for social donations.

(3) Cultural and Creative Industry Investment Fund. Attract venture capital and private equity investment into the cultural and creative industry, providing financial support for cultural and creative projects centered on cultural heritage. For example, for cultural and creative products, films, games, and other projects developed using Macao's cultural heritage elements, investment funds can provide funding to help the projects be implemented, and the profits will be shared according to the agreed proportion after the projects become profitable.

8.2.3 Carry out international cooperation projects

(1) Collaborate with international organizations. Macao can cooperate with international organizations such as UNESCO to apply for special funds or project assistance for the protection and revitalization of cultural heritage. These international organizations typically provide financial support for projects of significant cultural value, while also offering technical and expert resources for the revitalization of Macao's cultural heritage.

(2) Collaborate with other countries to develop cultural tourism projects. Develop cultural tourism projects with other countries (especially those along the "the Belt and Road") to attract foreign investment. For example, jointly developing a tourism route with the theme of "Sino Portuguese Cultural Exchange History" with Portugal, both sides jointly investing in the construction of related tourism facilities, sharing tourism benefits, and utilizing foreign investment to promote the revitalization of Macao's cultural heritage.

(3) International crowdfunding platform for cultural heritage revitalization. Utilize international crowdfunding platforms to showcase the charm and value of Macao's cultural heritage revitalization project to the world, and attract funding support from the international community. By creating exquisite project promotional videos, detailed project plans, and other materials, we aim to introduce the background, goals, expected returns, and other aspects of the project to the global public, encouraging individuals and businesses to make small donations or investments.

8.3 Enhancing Social Participation

8.3.1 Strengthen cultural heritage education, enhance public awareness and protection consciousness of the value of cultural heritage

(1) Integrating cultural heritage into the education system

1) In terms of school education

One is to incorporate knowledge related to Macao's cultural heritage into the regular curriculum system of schools. Add special chapters or units in history, geography, art and other subjects, for example, in history class, describe the formation background and development process of Macao's cultural heritage in detail, including the religious changes in Macao witnessed by the memorial archway of *Dasanba*; In the art class, guide students to appreciate the artistic style of Macao's traditional buildings, such as the Chinese temple cornice arch of wooden architecture in paintings and the colored tiles of Portuguese buildings.

The second is to organize experts to write cultural heritage textbooks with local characteristics, which can include various aspects of Macao's historical architecture, traditional skills, folk culture, etc. Adding a large number of pictures, stories, and interactive elements to the textbook, such as asking students to guess the steps of making traditional Macao cuisine, makes the textbook lively, interesting, and easy for students to understand.

Thirdly, schools can regularly organize students to visit cultural heritage sites. For example, field trips to historical sites in the Historic Center of Macao and activities such as sketching and archaeological experience were carried out. Cultural heritage protection experts and inheritors can also be invited to the school to hold lectures and workshops, such as inviting traditional woodcarvers from Macao to showcase their woodcarving skills and guide students in making simple woodcarving works.

2) Social education aspect

One is to offer courses related to cultural heritage protection and inheritance in community colleges. The course content can cover multiple fields such as cultural heritage legal knowledge, restoration technology foundation, and cultural heritage tourism. These courses are aimed at people of different age groups and social backgrounds, with the main purpose of popularizing cultural heritage knowledge and raising awareness of conservation.

The second is to carry out short-term training and further education projects on cultural heritage themes through adult education institutions. For example, offering in-depth training on Macao's cultural heritage for tourism practitioners to enhance their professional competence in cultural tourism services and enable them to better disseminate cultural heritage knowledge to tourists.

(2) Diversified cultural heritage promotion activities

1) Media promotion

One is to collaborate with traditional media such as television, radio, and newspapers to produce cultural heritage themed programs and reports. Television stations can produce a series of documentaries that detail the stories and current status of Macao's cultural heritage, such as filming the architectural features, religious rituals, and maritime cultural legends behind Macao's A-Ma Temple; Newspapers can set up cultural heritage columns, regularly publishing the latest developments, expert opinions, and public participation cases on cultural heritage protection.

The second is to use new media channels such as social media platforms and official websites for promotion. Establish an official social media account for Macao's cultural heritage, regularly publishing exquisite pictures and short videos, such as 3D animations showcasing the internal structure of Macao's traditional architecture, and short videos documenting the work scenes of Macao's intangible cultural heritage inheritors, to attract public attention. Meanwhile, through online interactive activities such as cultural heritage knowledge competitions and online voting to select the most popular cultural heritage sites, public participation can be increased.

(3) Organize themed events

One is the Cultural Heritage Day event. Establish a dedicated Macao Cultural Heritage Day and hold a variety of colorful activities on this day. For example, traditional song and dance performances, traditional handicrafts display and other activities will be held in front of the memorial archway of Dasanba, and cultural heritage protection knowledge publicity and volunteer recruitment will be carried out at the same time.

The second is cultural heritage themed exhibitions: cultural heritage themed exhibitions are held in museums, cultural centers and other places, and the exhibition content can include historical relics display, cultural heritage protection achievements report, etc. At the same time, interactive experience areas will be added to the exhibition, such as using virtual reality technology to allow visitors to experience the ancient urban life scenes of Macao, enhancing their intuitive perception of cultural heritage.

(3) Establish a mechanism for public participation

1) Volunteer service project: Establish a cultural heritage protection volunteer team and recruit volunteers through official websites, community promotion, and other channels. Volunteers can participate in the daily

maintenance of cultural heritage, such as assisting in cleaning historical buildings, organizing cultural relics materials, etc; You can also participate in cultural heritage promotion activities, such as serving as a volunteer guide at tourist attractions, introducing cultural heritage knowledge and protection significance to tourists.

2) Public Opinion Collection Platform: Establish a public opinion collection platform that combines online and offline channels, and widely solicit public opinions in the planning of cultural heritage revitalization projects, the formulation of cultural heritage protection policies, and other processes. For example, before renovating and revitalizing a historical building, public suggestions and expectations for the renovation plan can be collected through online questionnaires, on-site discussions, and other methods, allowing the public to participate in cultural heritage protection decisions and enhance their sense of responsibility and protection awareness.

8.3.2 Encourage community residents to participate in cultural heritage revitalization projects

(1) Community participation in the survey of cultural heritage resources

One is training and organization. Government cultural departments or relevant professional institutions provide training on cultural heritage resource census knowledge and skills to community residents, including how to identify ancient architecture, traditional skills, folk culture, etc. Then, based on the community, organize residents to form a census team and conduct comprehensive and detailed census work in every corner of the community, such as old streets and alleys, traditional dwellings, etc. For example, residents of a traditional community in Macao, after receiving training, take detailed records and photos of the ancient temples, family ancestral halls, and distinctive traditional handicraft shops in the community, providing basic information for the comprehensive sorting of cultural heritage resources.

The second is information collection and feedback. Community residents collect various information during the census process, such as the location, current status, and historical origins of cultural heritage, and provide timely feedback to relevant government departments. Meanwhile, residents can also provide some little-known cultural heritage clues. For example, the unique folk rituals or traditional handicraft production methods inherited by a certain family within the community can help enrich the cultural heritage resource pool of Macao, and enable more potential cultural heritage to be protected and valued.

(2) Community participation in the maintenance of cultural heritage

One is daily maintenance work. Organize community residents to participate in the daily simple maintenance work of cultural heritage, such as cleaning the surrounding environment of historical buildings, wiping cultural relics display facilities, etc. In some historic districts of Macau, community residents can regularly clean the exterior walls of ancient buildings, remove debris and garbage around the buildings, and maintain the cleanliness and beauty of cultural heritage. At the same time, residents can also participate in some small-scale maintenance projects, such as replacing sealing strips for doors and windows of ancient buildings, pruning and tidying up green plants in the courtyard, etc. These works can not only reduce the government's maintenance pressure, but also enhance residents' sense of belonging to cultural heritage.

The second is supervision and reporting. Encourage community residents to take on the role of "guardians" of cultural heritage and supervise its daily status. Once cultural heritage is found to be damaged, pose safety hazards, or engage in illegal development activities, report to relevant departments in a timely manner. For example, when community residents discover tourists scribbling on historical buildings or unauthorized construction around them that may affect the safety of cultural heritage, they should immediately report to the Cultural Bureau or Municipal Bureau and other departments, so that relevant departments can take timely measures to stop and deal with it.

(3) Community participation in folk activity organizations

One is to inherit and innovate folk activities. Community residents are the inheritors and practitioners of folk

culture, and they can organize various folk activities and carry out innovative development. During traditional festivals, community residents in Macao hold folk activities such as dragon and lion dance performances and Mazu parades, inviting tourists and other community residents to participate together. On the basis of inheriting traditional folk activities, residents can also innovate by combining modern elements, such as adding modern music and lighting effects to dragon and lion dance performances, or using social media for online live broadcasts to expand the influence and dissemination of folk activities.

The second is the integration of folk activities and cultural tourism. Community residents can combine folk activities with cultural tourism to develop unique tourism products and routes. For example, a community centered around local traditional temples organizes folk activities such as performances, traditional handicraft exhibitions, and specialty food experiences, and connects these activities into a cultural tourism route to attract tourists to visit and experience. Community residents can not only act as event organizers, but also participate in tourism service work, such as serving as tour guides, providing homestay accommodation, etc. While promoting the revitalization of cultural heritage, they can also drive community economic development.

8.3.3 Establish a public supervision mechanism to ensure transparency and rationality in the process of revitalizing cultural heritage

(1) Construction of Information Disclosure Platform

One is to establish a dedicated website. The relevant departments of the Macao government, such as the Cultural Affairs Bureau, should establish a dedicated website for the public disclosure of information on the revitalization of cultural heritage. The website should comprehensively display detailed information about various revitalization projects, including project background, goals, planning schemes, budget arrangements, implementation progress, and other content. For example, for a project to transform a historical building into a museum, the website should publish the historical value assessment report of the building, the functional layout map after the renovation, the expected investment details, and the time nodes of each construction stage.

The second is the expansion of social media. In addition to the official website, social media platforms (such as WeChat official account, Facebook page, etc.) should also be used for information release and interaction. Regularly push the latest progress of cultural heritage revitalization projects, such as posting photos and videos of construction sites, introducing newly adopted protection technologies, or showcasing upcoming public participation activities. At the same time, set up a comment section and online Q&A function to promptly respond to public questions and suggestions.

(2) Smooth supervision channels

One is to establish a reporting hotline and email. Establish a dedicated hotline and email for the supervision and reporting of cultural heritage revitalization, and assign a dedicated person to answer and handle it. The public can report illegal and irregular behaviors, unreasonable development and utilization phenomena, or other situations that damage cultural heritage discovered during the process of cultural heritage revitalization by calling the hotline or sending emails. For example, if the public discovers that a revitalization project has changed the exterior structure of a historical building without permission, or carried out non compliant construction activities within the scope of cultural relics protection, they can provide timely feedback through reporting channels.

The second is the setting of on-site suggestion boxes: suggestion boxes should be set up at the site of cultural heritage revitalization projects (such as historical building construction sites, cultural heritage protection areas, etc.). Regularly collect opinions and suggestions submitted by the public on-site to ensure that they can understand the problems discovered by the public during on-site observations in a timely manner. For the feedback information in the suggestion box, it is necessary to organize and reply in a timely manner, so that the public can feel that their supervisory opinions are valued.

(3) Improve the supervision and feedback mechanism

One is timely investigation and handling: relevant departments should quickly carry out investigation and verification work for public supervision reports and feedback. Establish a clear investigation process and division of responsibilities to ensure that every issue is promptly and fairly addressed. If the report is true, the responsible party shall be punished according to law and regulations, and shall be required to rectify within a specified period of time. For example, if a construction unit of a certain revitalization project is found to have violated cultural relic protection regulations, relevant departments should order it to stop construction, carry out rectification, and impose corresponding administrative penalties according to the severity of the situation.

The second is the feedback processing result. Timely feedback the investigation and handling results to the informant or the public who provided feedback. Feedback can be provided through phone calls, emails, or posting processing result announcements on information disclosure platforms. At the same time, we thank the public for their supervision and support, and encourage them to continue paying attention to cultural heritage revitalization projects, creating a good atmosphere of supervision and interaction.

The third is the evaluation of the effectiveness of public supervision: regularly evaluate the effectiveness of the public supervision mechanism, collect indicators such as the number of participants in public supervision, the types and quantities of reported issues, and the satisfaction of the handling results. Based on the evaluation results, continuously optimize the supervision mechanism, such as adjusting the publicity methods of reporting channels, improving the investigation and handling process, etc., to enhance the effectiveness and enthusiasm of public supervision.

8.4 Innovative activation methods and management models

8.4.1 Utilizing modern technological means to enhance the display and experiential effects of cultural heritage

(1) Development of a Digital Display Platform for Cultural Heritage

One is to establish a three-dimensional model database. Using laser scanning, photogrammetry and other technologies, high-precision 3D modeling of Macao's various cultural heritage, such as historical buildings such as the memorial archway of Dasanba, the Ma Temple and traditional handicrafts. These 3D models can not only accurately reproduce the appearance of cultural heritage, but also showcase its internal structure and detailed textures. For example, through the 3D model, you can clearly see the carved patterns on the memorial archway of Dasanba and the sense of hierarchy of the building structure. Users can freely rotate and scale the model on the platform to appreciate the charm of cultural heritage in an all-round way.

The second is to integrate multimedia resource display: on the digital display platform, in addition to 3D models, multiple multimedia resources are also integrated. For example, adding voice explanations to historical buildings, telling their construction background, historical changes, related legendary stories, etc; Insert historical photos and video materials to showcase the appearance of cultural heritage in different periods. For traditional handicrafts, such as the Portuguese tart making technique in Macau, the production process can be demonstrated through video, accompanied by text introducing the raw materials, process steps, and cultural connotations, allowing users to experience the rich cultural heritage through multiple senses.

(2) Virtual tourism project development

One is to build an immersive virtual tourism environment. Utilize virtual reality (VR) and augmented reality (AR) technologies to create a virtual tourism project for Macao's cultural heritage. By wearing VR equipment, tourists can walk on the ancient streets of the Historic Center of Macao as if they were in the scene, and enter the interior of historical buildings to visit. For example, in virtual tourism, realistic light and shadow effects, environmental sound effects, and interactive elements can be set up. For example, tourists can light virtual candles in the virtual A-Ma Temple, experience traditional prayer ceremonies, and increase the fun and

immersion of tourism.

The second is to develop mobile virtual tourism applications. Develop a specialized virtual tourism application for Macao cultural heritage targeting smartphone users. Users can use the gyroscope and positioning function of their mobile phones to overlay virtual cultural heritage elements in real scenes, achieving an augmented reality experience. For example, when the user walks near the memorial archway of Dasanba and opens the application, the mobile phone screen will display the historical information, related stories and virtual historical scene reappearance of the memorial archway. The user can interact with these virtual elements through the mobile phone screen, such as taking photos, viewing detailed introductions, etc., to provide tourists with a convenient and personalized cultural heritage experience.

8.4.2 Introducing advanced management models to improve the operational efficiency of cultural heritage revitalization projects

(1) Public Private Partnership (PPP) model

1) Clear division of labor and complementary advantages

One is the role and advantages of the government: the government is mainly responsible for planning, guiding, policy-making, and supervising cultural heritage revitalization projects. For example, the Macao government can evaluate the value and classify the protection level of cultural heritage through departments such as the Cultural Affairs Bureau, and formulate overall revitalization strategies and goals. At the same time, the government provides public assets such as land and cultural resources as inputs to ensure that projects comply with public interests and cultural heritage protection requirements.

The second is to leverage the responsibilities and advantages of enterprises: attract companies with professional operational experience and financial strength to participate. The enterprise is responsible for the fundraising, construction, and daily operation management of the project. For example, in the project of transforming historical buildings into hotels or commercial complexes, enterprises can utilize their professional knowledge in architectural design, engineering construction, and hotel management to improve the construction quality and operational efficiency of the project. Meanwhile, the market sensitivity of enterprises helps projects better meet market demands and develop more attractive cultural products and services.

(2) Risk sharing and benefit sharing mechanism

One is the reasonable arrangement of risk allocation: in the public-private partnership model, the risk responsibilities of the government and enterprises are clearly divided. Generally speaking, the government bears the risks of policy and regulatory changes, as well as adjustments to cultural heritage protection standards; Enterprises bear risks such as market demand fluctuations and poor management. For example, if the introduction of new cultural heritage protection policies requires the project to adjust its construction plan, the government should provide certain policy support or compensation to the enterprise; If the enterprise's market positioning is incorrect and leads to poor management, the enterprise shall bear the economic losses on its own.

The second is fair and reasonable distribution of benefits: establish a reasonable mechanism for distributing benefits, and determine the proportion of income distribution based on the input and contribution of both parties. A fixed return model can be determined through negotiation, such as the enterprise receiving a certain proportion of project operating income within a certain period of time, and then dynamically adjusting the profit distribution ratio based on the project's operating situation and market changes. This not only ensures that enterprises can obtain reasonable investment returns, but also safeguards the public interests represented by the government.

(2) Community led model

1) Community mobilization and capacity building

One is to enhance community awareness and participation enthusiasm: through community promotion, educational activities, and other means, enable community residents to fully understand the value of cultural heritage and the significance of revitalization projects. For example, organizing cultural heritage knowledge lectures and community workshops, inviting residents to participate in cultural heritage research and recording work, and enhancing their sense of identity and responsibility towards local cultural heritage.

2) Cultivate community management talents: Provide training for community residents in cultural heritage management, project operation, and other aspects, and cultivate a group of community talents who can lead cultural heritage revitalization projects. We can collaborate with universities and professional training institutions to offer targeted courses, such as cultural tourism management and intangible cultural heritage inheritance, to enhance the professional competence of community residents.

3) Community led operational management

One is that project planning and decision-making are led by the community: during the planning phase of cultural heritage revitalization projects, the opinions and suggestions of community residents are fully listened to. For example, the community can organize a residents' congress to discuss the functional positioning and service content of cultural heritage revitalization projects. If it is decided to transform an abandoned traditional building into a community cultural center, community residents can participate in the design of functional layout and determine which cultural activity spaces to set up, such as traditional handicraft exhibition areas, folk performance stages, etc.

The second is the community participation method in operation and management: encourage community residents to participate in the project operation process. Various forms such as volunteer service and community stock cooperation can be adopted. For example, community residents can participate as volunteers in the daily management of cultural centers, such as lectures, event organization, etc; It is also possible to share the benefits of project operation through community shareholding cooperation, while also assuming corresponding responsibilities, forming a good operating model of self-management and self-monitoring among community residents.

8.4.3 Strengthen the integration of cultural and creative industries with cultural heritage, and expand the economic value of cultural heritage

(1) Exploring cultural elements for creative design

One is the utilization of architectural cultural elements. Deeply explore the architectural features of Macao's historical buildings (such as the memorial archway of Dasanba, Ma Ge Temple, etc.), including their unique shapes, exquisite carvings, color matching, etc. Taking inspiration from these elements, design a series of cultural and creative products. For example, the architectural outline of the memorial archway of Dasanba is designed into the shape of jewelry, which is made into necklaces and earrings; Alternatively, the carved patterns on buildings can be transformed into prints and applied to textiles such as scarves and handkerchiefs.

The second is the integration of folk cultural elements. Integrating the rich folk culture of Macao, such as dragon and lion dances, Mazu customs, etc. Based on the theme of dragon and lion dance, design dynamic dolls and ornaments, or develop a board game with Mazu's beliefs and customs as the background. Through game rules, reflect the sacrificial and blessing activities in Mazu culture, allowing players to understand Macao's folk culture during the entertainment process.

(2) Create cultural and creative brands and series of products

One is brand building. Create cultural and creative brands with Macao characteristics, emphasizing the design of brand image and the storytelling of brand stories. The brand name can be related to the historical, geographical, or cultural characteristics of Macao, such as "Haojiang Impression" and "Macao Charm Cultural and Creative". Brand stories can revolve around the inheritance and innovation of Macao's cultural heritage, allowing

consumers to experience the profound cultural heritage behind the brand while purchasing products.

The second is the development of a series of products. Develop a series of cultural and creative products with brand as the core. For example, with the theme of traditional Macao cuisine culture, the "Macao Flavor" series of products has been launched, including scented candles inspired by Portuguese tarts and ceramic tableware with pork chop buns as patterns. By launching a series of products, enriching the product line, meeting the needs of different consumers, and enhancing the brand's market competitiveness.

(3) Expand sales channels and market promotion

One is to build an online sales platform. Establish a dedicated online sales platform for cultural and creative products in Macao, integrating the product resources of local cultural and creative enterprises and designers. Attract domestic and foreign consumers through exquisite product displays, detailed cultural background introductions, and convenient shopping processes. At the same time, utilizing the big data analysis capabilities of e-commerce platforms to understand consumer preferences and purchasing behavior, providing data support for product development and marketing.

The second is the establishment of offline experience stores and cooperative stores. Open offline experience stores for cultural and creative products in tourist attractions, cultural heritage protection areas, and other places in Macao. These experience stores are not only sales venues, but also spaces for cultural display and interactive communication. Consumers can personally experience the production process of cultural and creative products here, such as participating in hand drawn ceramic cups with Macao characteristics. In addition, we cooperate with local hotels, shopping malls, etc. in Macao to distribute and sell cultural and creative products, and expand sales channels.

The third is cultural tourism activity marketing. Market promotion in conjunction with cultural tourism activities in Macao. Organize cultural and creative product exhibitions, themed markets, and other activities during peak tourism seasons or cultural festivals. For example, during the Macao International Fireworks Festival, cultural and creative products with fireworks as the theme are simultaneously launched to attract tourists to purchase. By increasing the popularity of cultural tourism activities, we aim to enhance the exposure and sales of cultural and creative products, and expand the economic value of Macao's cultural heritage.

9. Conclusion and Prospect

9.1 Research Conclusion

This article summarizes the main achievements of research on the revitalization of Macao's history, customs, and cultural heritage, including a clear overview of Macao's cultural development, evaluation of cultural heritage value, in-depth analysis of opportunities and challenges faced by cultural heritage revitalization, as well as revitalization models and other issues. Based on the previous discussion and analysis, this article draws the following preliminary conclusions:

Firstly, the unique historical process and the transformation of economic and social structure of the Historic Center of Macao have had a profound impact on the history, folk customs and culture of Macao.

Secondly, the traditional Chinese festivals and the customs of the Macanese people, as well as their folk art and culinary culture, have jointly shaped Macao's folk culture and become an important carrier and content of Macao's intangible cultural heritage.

Thirdly, historical buildings such as Chinese temples, Western style churches, and ancient residences in Macao, as well as material cultural heritage such as historic districts, archaeological sites, and fortresses, have high heritage value, artistic value, and historical geographic and cultural value; The intangible cultural heritage of Macao, including performing arts, traditional handicrafts, festive customs, and culinary arts, has significant

value. However, it faces challenges such as aging inheritors, modern cultural impact, and foreign cultural impact. Therefore, it is necessary to draw on international experience and revitalize it through museum building, tourism development, and the utilization of cultural and creative industries.

Fourthly, the revitalization of cultural heritage in Macao faces challenges such as relatively lagging policies and regulations, poor cross departmental communication and coordination, funding shortages and single sources, cognitive biases and insufficient awareness of protection, as well as difficulties in management and maintenance. At the same time, there are also opportunities for revitalization such as national strategies and technological empowerment; We need to improve the policy and legal protection system, expand funding sources, enhance social participation, innovate revitalization methods and management models in order to better revitalize Macao's history, customs, and cultural heritage.

9.2 Future Outlook

Looking ahead to the future, the revitalization of Macao's history, customs, and cultural heritage will be a display of cultural confidence and a key to sustainable urban development. The revitalization of Macao's cultural heritage requires a balance between innovation and protection. Under the new historical opportunities, it is worth further exploring how to deepen the revitalization strategy and achieve sustainable development of cultural heritage. Using digital technology to recreate historical scenes and create immersive experiential spaces; Strengthening international exchange and cooperation, promoting Macao culture to the world, and enhancing international influence should be an effective strategy and method.

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