



Dushan Jade Carving Art: Material Culture and Design Innovation in the Context of
Inheriting China's Traditional Cultural Heritage

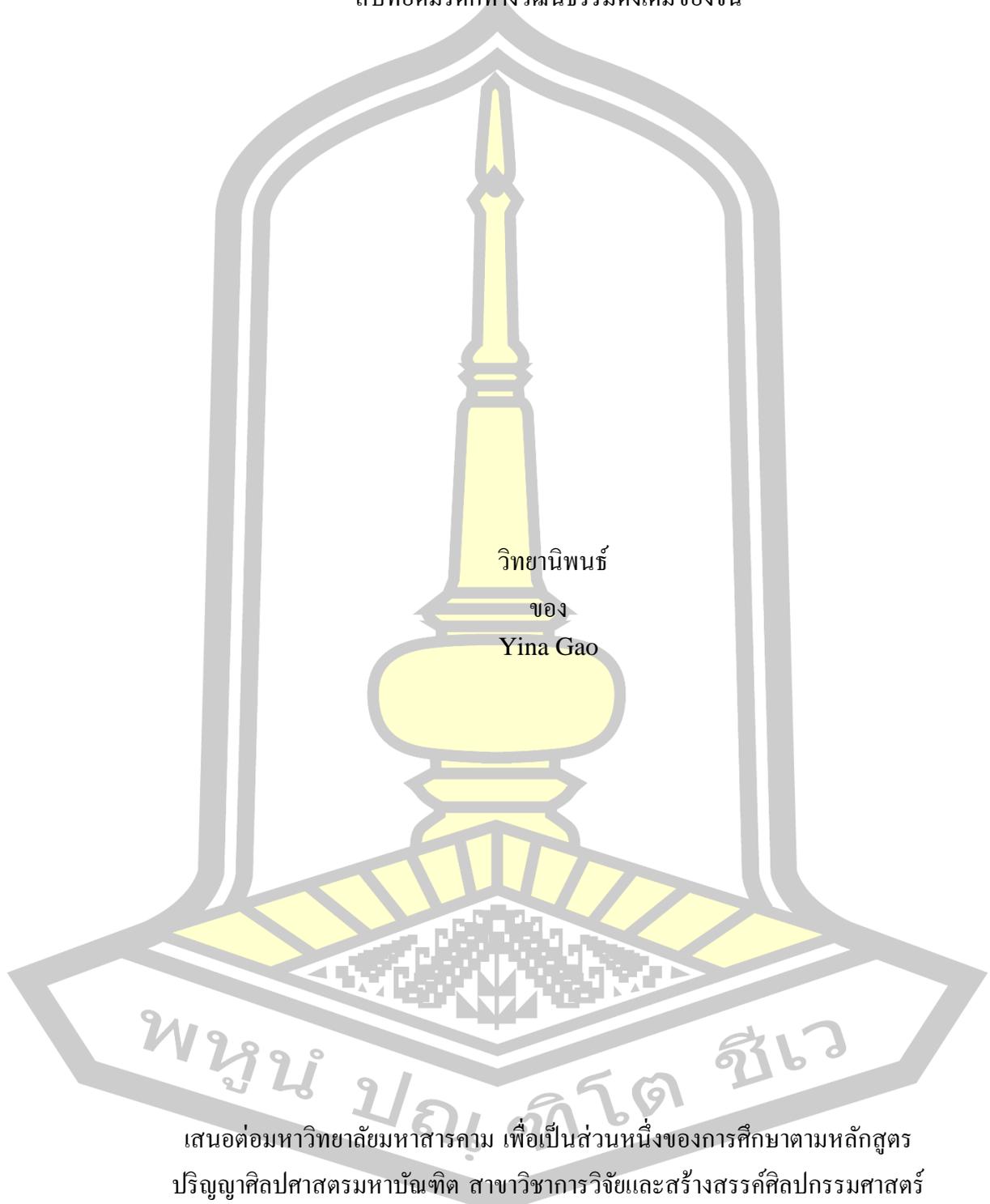
Yina Gao

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Master of Arts in Fine and Applied Arts Research and Creation

June 2024

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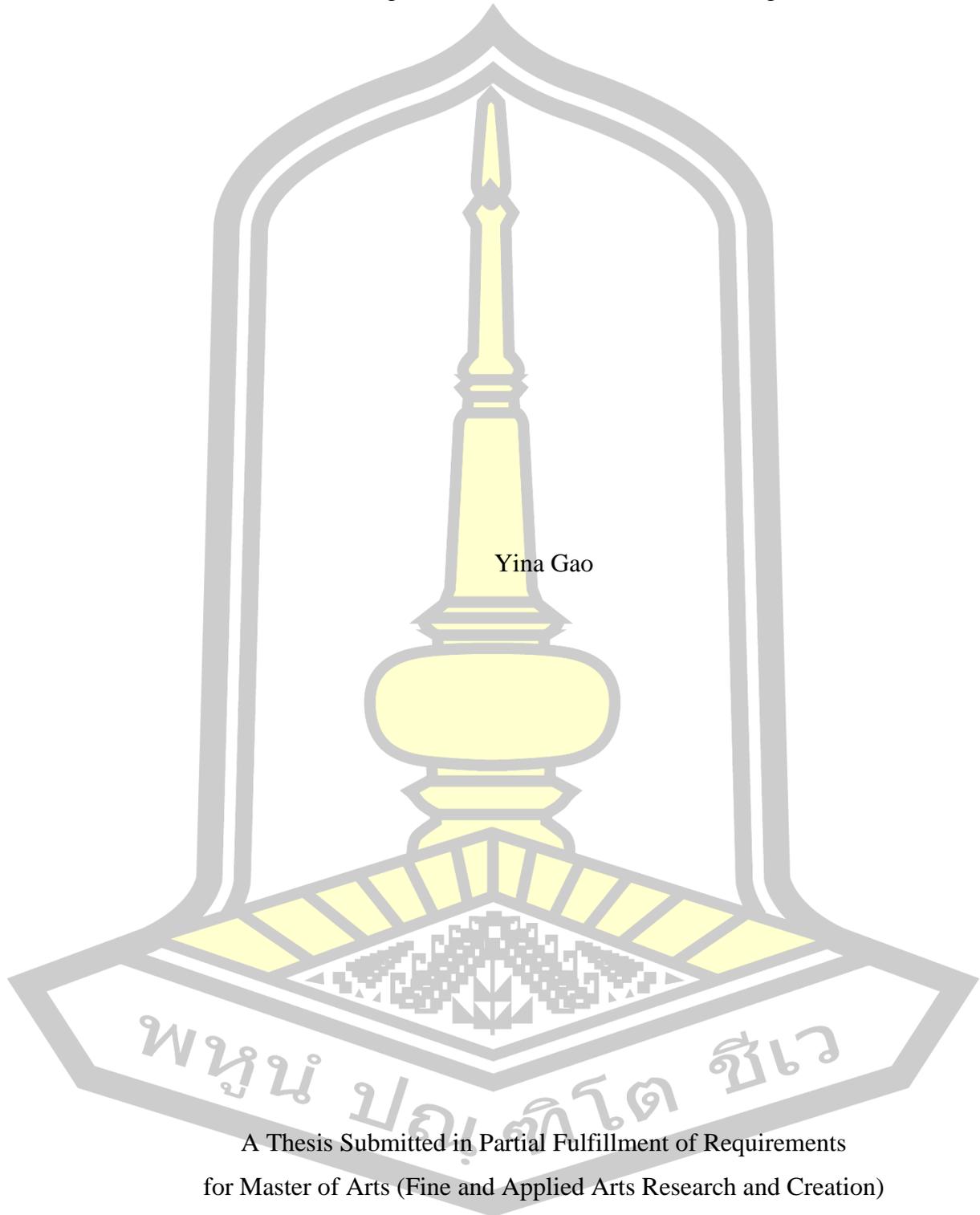


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Dushan Jade Carving Art: Material Culture and Design Innovation in the Context of
Inheriting China's Traditional Cultural Heritage



Yina Gao

A Thesis Submitted in Partial Fulfillment of Requirements
for Master of Arts (Fine and Applied Arts Research and Creation)

June 2024

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The examining committee has unanimously approved this Thesis, submitted by Ms. Yina Gao , as a partial fulfillment of the requirements for the Master of Arts Fine and Applied Arts Research and Creation at Mahasarakham University

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DEGREE	Master of Arts	MAJOR	Fine and Applied Arts Research and Creation
UNIVERSITY	Maharakham University	YEAR	2024

ABSTRACT

This study is a basic study using qualitative research methods to examine the Dushan traditional jade carving art and its innovative design from the perspective of material culture in the context of the inheritance of traditional cultural heritage in Henan Province. There are three main research objectives: 1> Study the historical development of Dushan jade carving art, Henan Province, China. 2> Study the artistic characteristics of traditional Dushan jade carvings and the innovative designs of contemporary Dushan jade carvings from the perspective of material culture. 3> Research and analyze the inheritance and protection of Dushan jade carvings from the perspective of traditional cultural heritage inheritance in Henan Province. The research results show that the art of Dushan jade carving has rich historical and cultural significance, and its origins can be traced back to the Neolithic Age. The unique geological structure and mineralogy of Dushan jade played a vital role in the development of this traditional craft, affecting the carving skills, artistic style and symbolic meaning of jade. The research also highlights the importance of material culture in understanding the evolution and innovation of Dushan jade carving art, and its relationship to the wider social, cultural and economic context of Henan Province. However, with the rapid modernization and globalization of Chinese society, traditional Dushan jade carving art faces various challenges, such as the loss of skilled artisans, the impact of mass production, and the changing market demands. To address these challenges and ensure the sustainable development of this cultural heritage, the research emphasizes the need for innovative designs and approaches that balance the preservation of traditional techniques and values with the adaptation to contemporary needs and technologies.

The study proposes a framework for the inheritance and innovation of Dushan jade carving art, which involves the collaboration among multiple stakeholders, including artisans, scholars, government agencies, and cultural institutions. This framework includes the documentation and digitization of traditional knowledge and skills, the development of new materials and technologies, the promotion of cultural tourism and creative industries, and the engagement of younger generations in the appreciation and continuation of this cultural heritage.

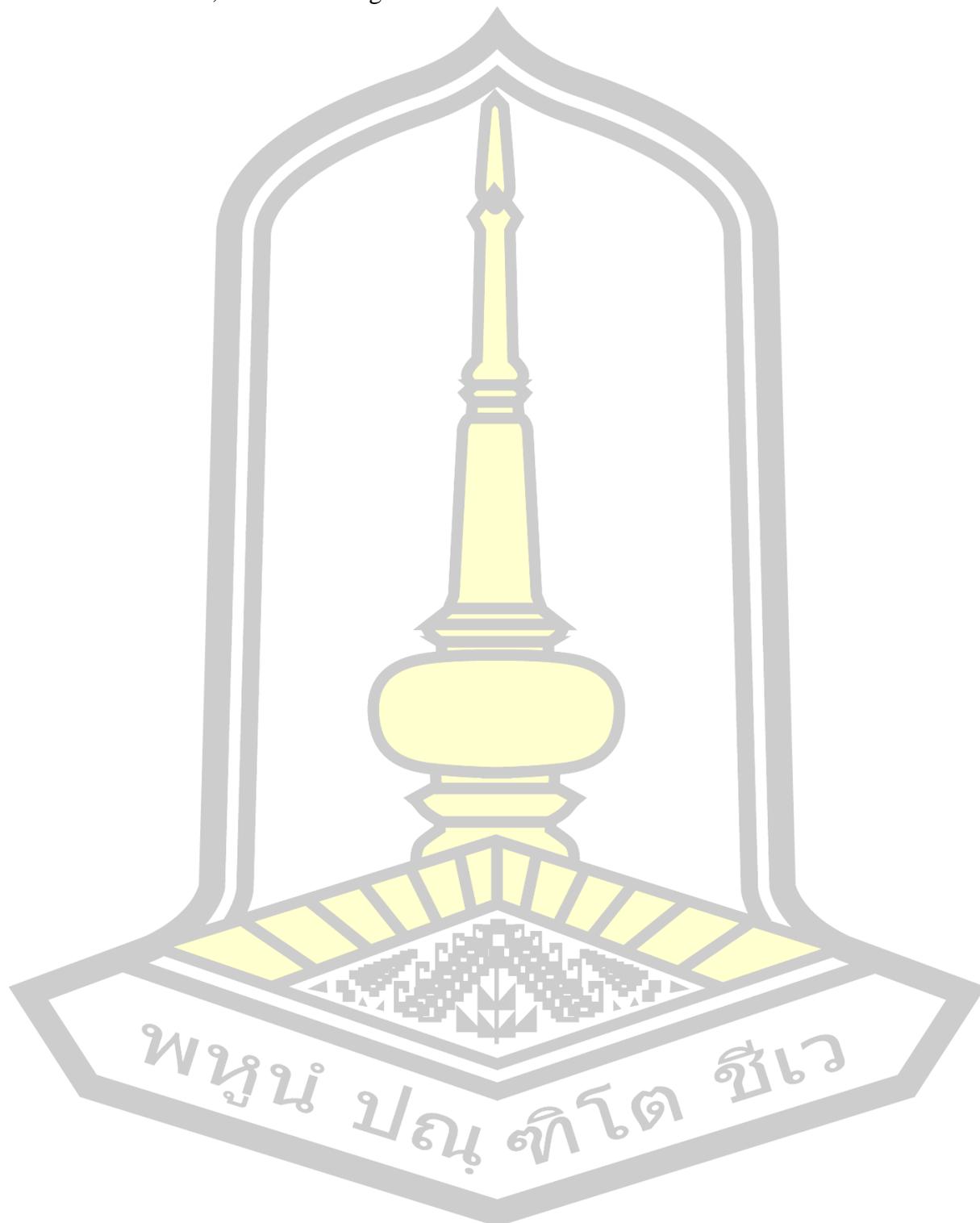
The research findings provide valuable insights and recommendations for the safeguarding and revitalization of traditional Dushan jade carving art, as well as the promotion of cultural diversity and sustainable development in Henan Province and beyond. The study also contributes to the broader discourse on the role of material culture in the inheritance and innovation of intangible cultural heritage in the context of globalization and social transformation.

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Keyword : : Dushan jade carving art, material culture, innovative design, Digital Innovation, cultural heritage inheritance Henan Province



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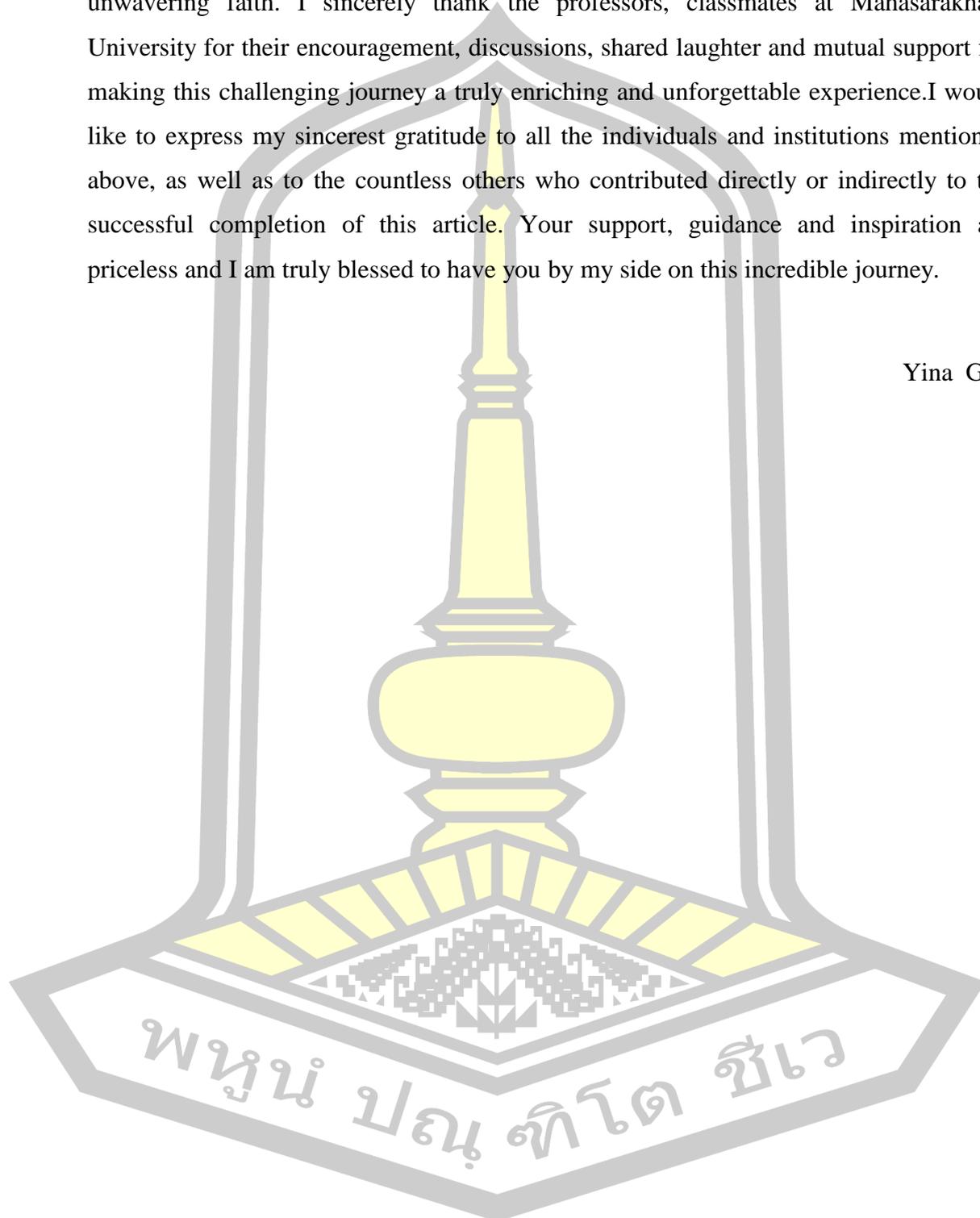


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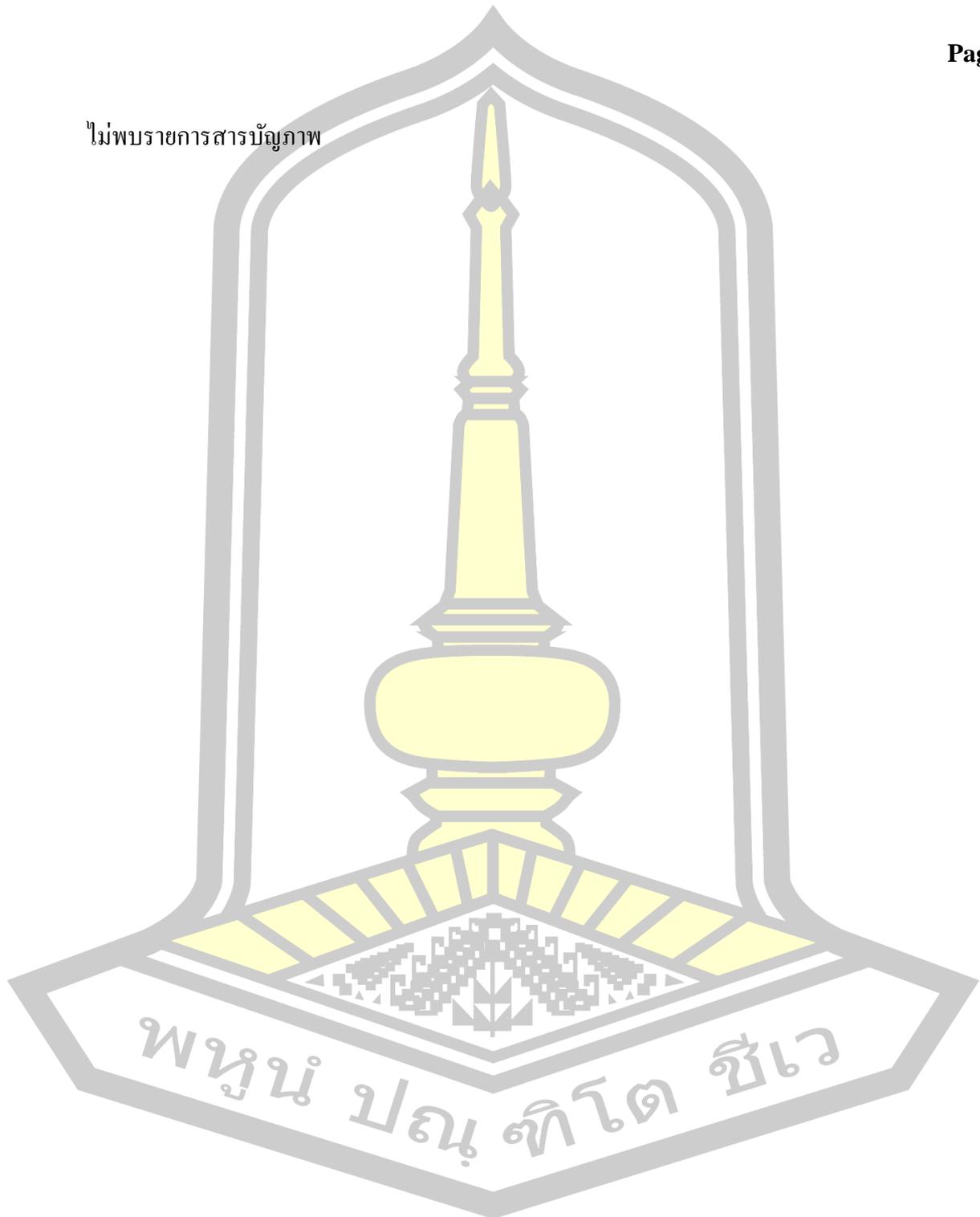
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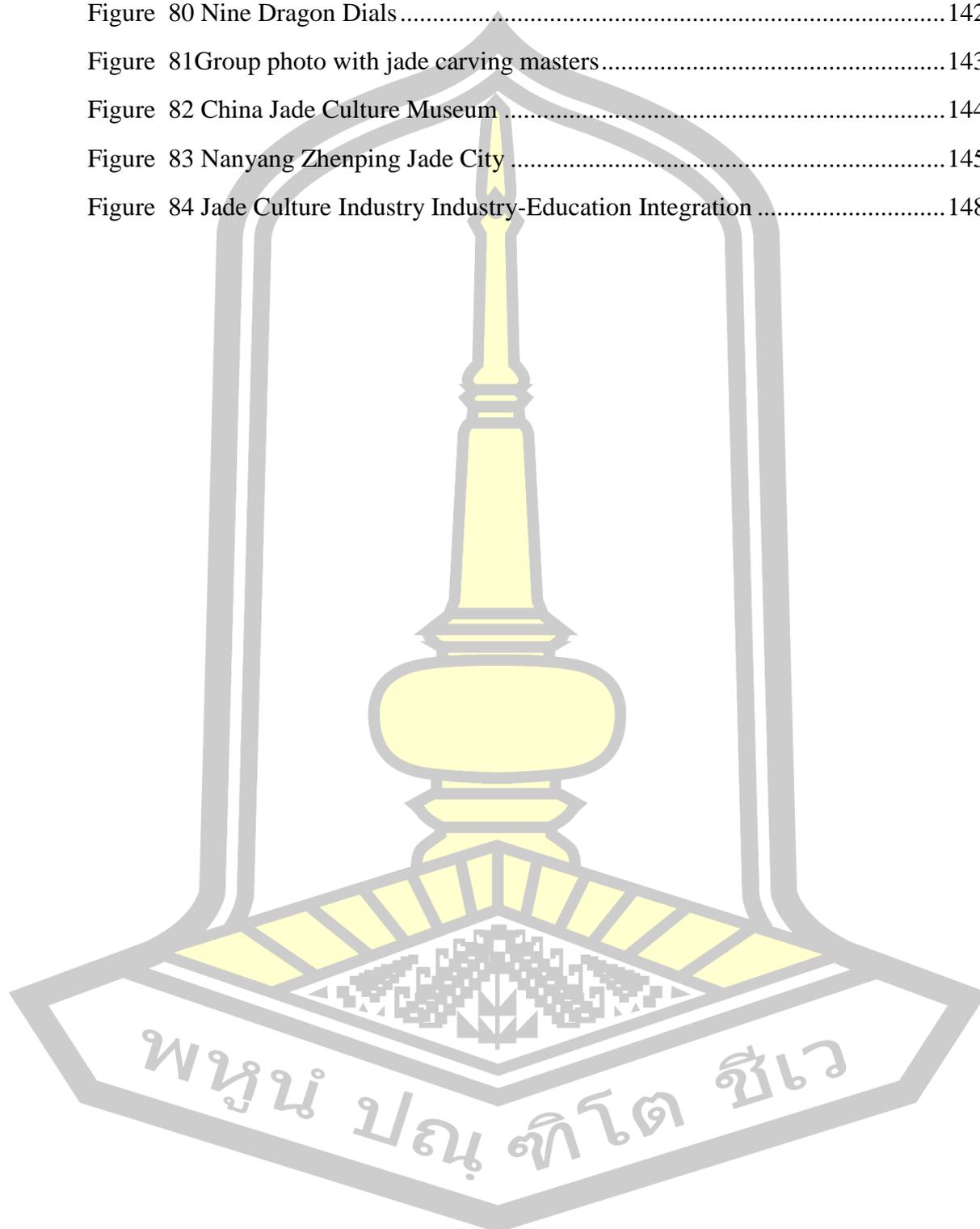
The Dushan Jade Carving Apprenticeship Center, established in 2010, was one of the most prominent examples of such institutions. The center offered a three-year apprenticeship program that combined theoretical learning and practical training, covering all aspects of jade carving, from material selection and processing to design

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Chapter I

Introduction

1. Background research

Jade has been an integral part of Chinese civilization for thousands of years, with its origins dating back to the Neolithic period. The earliest known jade artifacts in China were discovered at the Xinglongwa culture site in Inner Mongolia and the Chahai culture site in Liaoning Province, dating back to 7000-8000 years ago (Zhongguo Yuqi Xuehui, 2012). These early jade pieces, made from nephrite, were primarily used as tools and decorative objects, reflecting the aesthetic pursuits and beliefs of ancient Chinese societies.

During the Shang and Zhou dynasties (1600-256 BCE), jade became increasingly associated with political power and social status. According to the "Rites of Zhou," jade was used to create the "Six Ceremonial Jades" and "Six Sacrificial Jades," which were symbols of authority and were used in rituals to pay tribute to heaven, earth, and the four directions (Yang, B. (2018) 15-28). The designs and patterns on jade objects from this period, such as dragons, phoenixes, and clouds, were rich and varied, reflecting the development of jade carving techniques and the cultural significance of jade.

In the Spring and Autumn period (770-476 BCE), jade from Hotan in Xinjiang was introduced to central China, and the nobles competed for the best jade pieces. The most common type of jade object from this period was the jade lamp, which was decorated with patterns from the Warring States period (475-221 BCE) Liu, X. (2015) 112-117). Confucian scholars of the time combined the characteristics of Hotan jade with the concept of li (ritual), infusing jade with spiritual connotations and moral values. They believed that "a gentleman is like jade," and proposed the concepts of the "five virtues," "nine virtues," and "eleven virtues" of jade (Liao, M. (2014) 34-45).

The "five virtues" of jade, as described in the "Shuowen Jiezi" by Xu Shen of the Eastern Han dynasty (25-220 CE), are benevolence, righteousness, wisdom, courage, and purity. These virtues correspond to the five characteristics of jade: warmth and moisture, consistency inside and out, a clear sound when struck, resistance to damage, and a smooth cut that does not harm others (Xu, S. (2013)). Over time, people have attributed to jade a series of social elements, such as wealth and power, and artisans have imbued jade with the cultural symbols and spiritual aspirations of different historical periods. As a result, jade has become an important carrier of traditional Chinese culture and a theoretical basis for the study of Chinese cultural history, earning it the title of "the cornerstone of traditional Chinese culture and the foundation of Chinese civilization" (Zhao, L. (2017) 56-63).

The art of jade carving reached its peak during the Qing dynasty (1644-1912), particularly during the reign of Emperor Qianlong (1736-1795). The jade objects from this period were characterized by exquisite craftsmanship, diverse forms, and the use of jade as a symbol of imperial power (Wang, H. (2019) 132-145). Emperor Qianlong himself was a patron of the arts and created over 1,800 jade seals during his lifetime, many of which are now housed in the Palace Museum in Beijing. Unfortunately, many of these jade seals were looted by foreign forces during the sacking of the Old Summer Palace in 1860 and the invasion of the Eight-Nation Alliance in 1900, and

are now scattered in museums and private collections around the world(Ding, Y. (2016) 143-156).

Nanyang, a city in Henan Province, has been an important center of jade carving in China for over 2,000 years. The jade mined in the Dushan area of Nanyang, known as Dushan jade or Nanyang jade, is a type of tremolite jade valued for its unique coloration and texture (Deng, J. (2020) 121-123). The earliest evidence of jade carving in Nanyang dates back to the Neolithic period, with jade artifacts such as ceremonial objects and personal ornaments being excavated from various archaeological sites in the region (Henan Provincial Institute of Cultural Relics and Archaeology, 2018. 3-14).

During the Han dynasty (202 BCE-220 CE), Nanyang emerged as a major center for jade carving, thanks to its strategic location along the Silk Road and the patronage of the imperial court. Many of the jade objects produced in Nanyang during this period, such as the famous "Jade Suit of Liu Sheng," showcase the exceptional skills of local artisans and the cultural significance of jade in Chinese society (Zheng, X. (2017) 34-45). The jade carving industry in Nanyang continued to thrive in subsequent dynasties, with the city becoming known as the "Hometown of Jade" and the "Capital of Jade Carving" (Wang, J. (2015) 42-47).

In the 20th century, the jade carving industry in Nanyang faced numerous challenges, including the impact of wars, social upheavals, and economic reforms. However, since the founding of the People's Republic of China in 1949, the government has taken steps to revive and promote the traditional craft of Dushan jade carving. In the 1950s and 1960s, state-owned jade carving factories were established in Nanyang, such as the Nanyang Jade Carving Factory and the Dushan Jade Carving Factory, which played a crucial role in preserving the skills and knowledge of jade carving and training a new generation of artisans (Liu, Y. (2019) 96-101).

In recent years, the Nanyang municipal government has implemented various policies and initiatives to support the development of the Dushan jade carving industry, such as establishing the Dushan Jade Carving Industrial Park, organizing jade carving festivals and exhibitions, and promoting Dushan jade products in domestic and international markets (Nanyang Municipal Government, 2021). These efforts have not only helped to revitalize the traditional craft of jade carving but have also contributed to the economic and social development of the region.

Today, Dushan jade carving is recognized as an important intangible cultural heritage of China, and Nanyang has become a hub for jade carving art, attracting artisans, scholars, and tourists from around the world. The Nanyang Jade Carving Art Museum, established in 2015, houses a collection of over 10,000 jade objects and serves as a center for research, education, and cultural exchange (Nanyang Jade Carving Art Museum, 2021).

As Dushan jade carving continues to evolve in the 21st century, it faces new challenges and opportunities brought about by globalization, technological advancements, and changing consumer preferences. However, with the support of the government, the dedication of artisans, and the growing appreciation for traditional Chinese crafts, the future of Dushan jade carving looks bright. By embracing innovation while preserving its rich cultural heritage, Dushan jade carving has the potential to not only survive but thrive in the modern era, serving as a bridge between the past and the present and a testament to the enduring value of Chinese civilization.

The art of Dushan jade carving, with its long history and cultural significance, is not only an important part of China's material culture but also a valuable case study for understanding the inheritance and innovation of traditional crafts in the context of globalization and social transformation. This research aims to examine the historical development and characteristics of Dushan jade carving art from a material culture perspective, investigate the composition and physical properties of Dushan jade and the techniques employed by artisans, analyze the influence of jade on carving patterns and symbolic designs, and explore the innovative designs and approaches that can contribute to the sustainable development of this cultural heritage in the 21st century.

By conducting a comprehensive and interdisciplinary study of Dushan jade carving art, this research seeks to provide valuable insights and recommendations for the safeguarding and revitalization of traditional crafts, as well as the promotion of cultural diversity and sustainable development in Henan Province and beyond. The findings of this study will contribute to the broader discourse on the role of material culture in the inheritance and innovation of intangible cultural heritage, and shed light on the complex interplay between tradition and modernity, art and technology, and local and global forces in shaping the future of traditional crafts.

Furthermore, this research will have practical implications for the development of the Dushan jade carving industry and the socio-economic development of the Nanyang region. By identifying the challenges and opportunities faced by jade carving artisans and businesses, and proposing strategies for the promotion of cultural tourism, creative industries, and the engagement of younger generations, this study will provide guidance for policymakers, cultural institutions, and other stakeholders in supporting the sustainable development of traditional crafts.

In conclusion, the study of Dushan jade carving art from a material culture perspective and within the context of traditional cultural heritage inheritance is not only academically significant but also socially relevant. By contributing to the understanding and appreciation of this ancient craft, and exploring innovative approaches to its preservation and development, this research will help to ensure that the rich cultural legacy of Dushan jade carving can continue to inspire and enrich the lives of future generations, both in China and around the world.

2. Research Objectives

There are 3 research objectives as follow:

1. To study the historical development of the art of Dushan jade carving. Henan Province of China
2. To study the artistic characteristics of traditional Dushan jade carving and the innovative design of contemporary Dushan jade carving from the perspective of material culture.
3. To study and analyze the transmission and preservation of Dushan jade carvings in the context of traditional cultural heritage inheritance in Henan Province.

3. Research Questions

There are 3 items according to the research objectives.

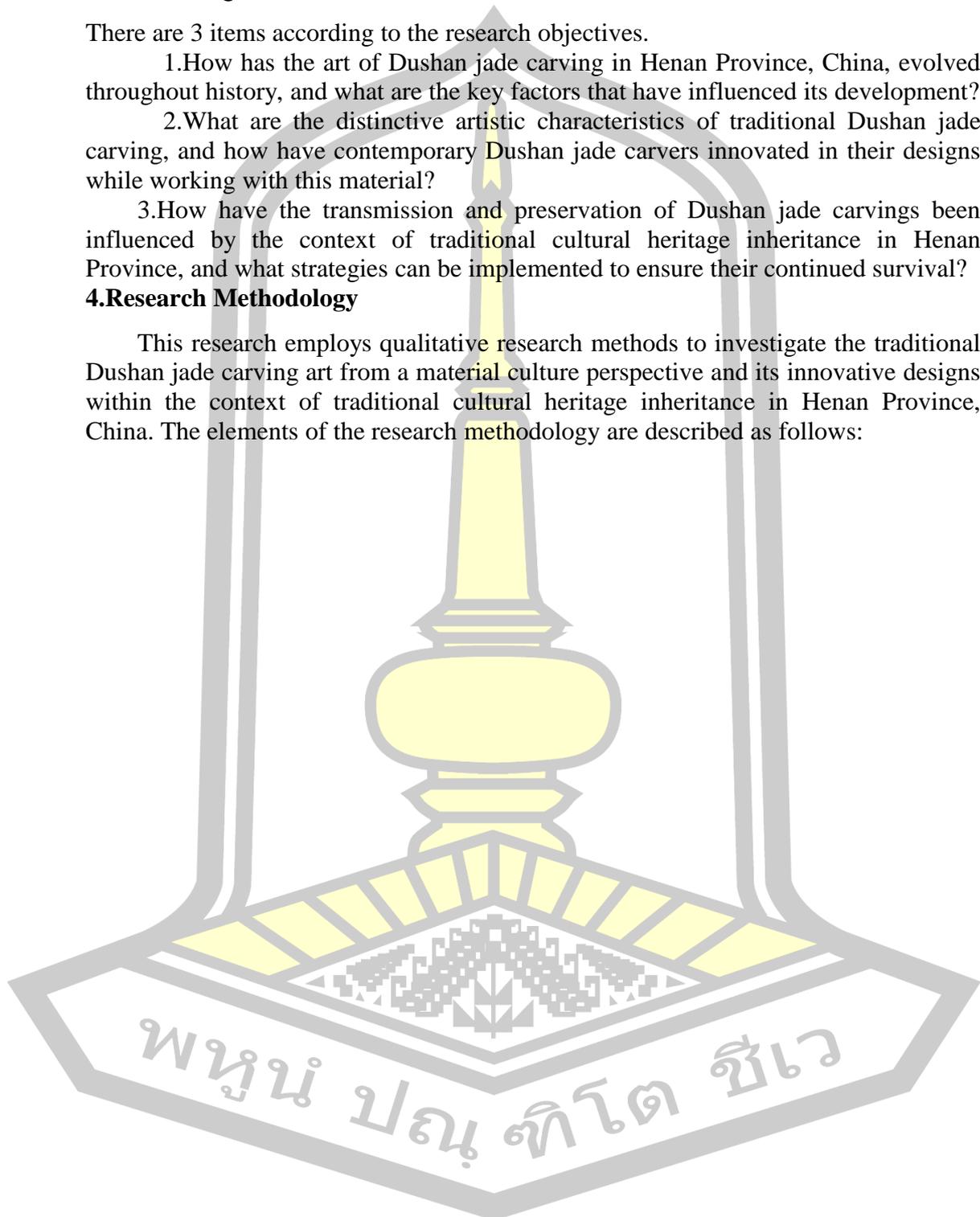
1. How has the art of Dushan jade carving in Henan Province, China, evolved throughout history, and what are the key factors that have influenced its development?

2. What are the distinctive artistic characteristics of traditional Dushan jade carving, and how have contemporary Dushan jade carvers innovated in their designs while working with this material?

3. How have the transmission and preservation of Dushan jade carvings been influenced by the context of traditional cultural heritage inheritance in Henan Province, and what strategies can be implemented to ensure their continued survival?

4. Research Methodology

This research employs qualitative research methods to investigate the traditional Dushan jade carving art from a material culture perspective and its innovative designs within the context of traditional cultural heritage inheritance in Henan Province, China. The elements of the research methodology are described as follows:



4.1 Population:

4.1.1 Dushan jade carving artisans and apprentices

This group consists of experienced jade carving masters and their apprentices who have been engaged in the traditional craft of Dushan jade carving for years or even decades. They possess the invaluable knowledge, skills, and techniques passed down through generations and play a crucial role in the inheritance and innovation of this intangible cultural heritage. Their insights and experiences will provide firsthand information on the historical development, artistic characteristics, and cultural significance of Dushan jade carving.

4.1.2 Scholars and experts in the fields of material culture, art history, and cultural heritage

This group includes researchers, professors, and curators who specialize in the study of Chinese material culture, art history, and cultural heritage. Their expertise and perspectives will contribute to the understanding of the broader social, cultural, and historical contexts of Dushan jade carving, as well as the theoretical and methodological approaches to the analysis of this traditional craft from a material culture perspective.

4.1.3 Local government officials and policymakers

This group comprises officials from the Nanyang municipal government, the Henan Provincial Department of Culture and Tourism, and other relevant government agencies. They are responsible for the formulation and implementation of policies and initiatives related to the safeguarding, promotion, and development of Dushan jade carving as an intangible cultural heritage. Their views and actions will shed light on the institutional and political dimensions of the inheritance and innovation of this traditional craft.

4.1.4 Jade collectors and connoisseurs

This group consists of individuals who have a deep appreciation for and knowledge of Dushan jade carvings, including private collectors, museum patrons, and antique dealers. Their insights into the aesthetic, cultural, and economic values of Dushan jade carvings, as well as their experiences in collecting, preserving, and displaying these objects, will provide valuable perspectives on the contemporary significance and market demand for this traditional craft.



4.1.5 Designers and entrepreneurs in the creative industries

This group includes product designers, artists, and entrepreneurs who are interested in incorporating elements of traditional Chinese crafts, such as Dushan jade carving, into their creative works and business ventures. Their experiences and ideas will offer insights into the potential for innovative designs and collaborative projects that can contribute to the revitalization and sustainable development of Dushan jade carving in the 21st century.

4.2 Data Collection

4.2.1 Fieldwork and data collection

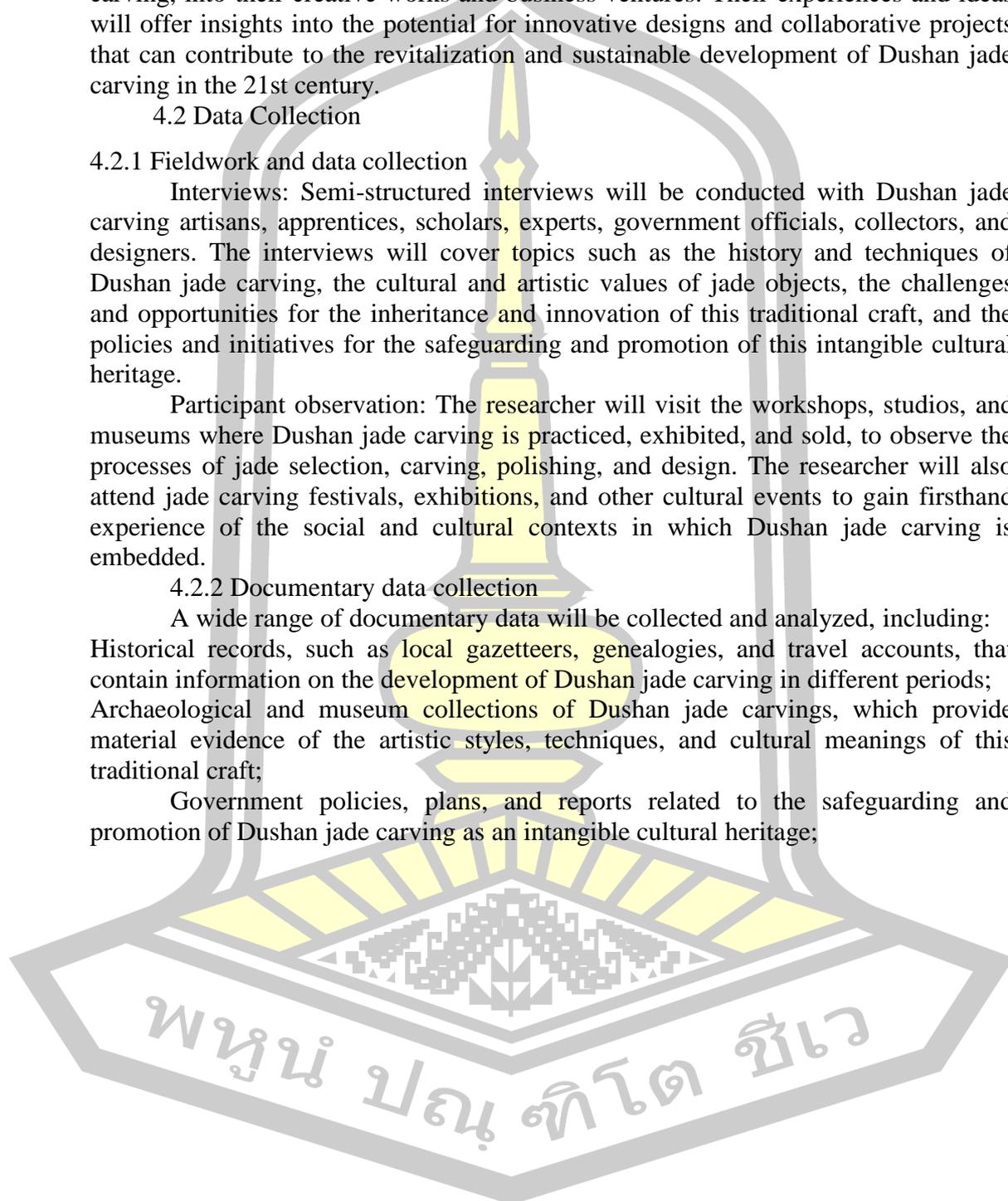
Interviews: Semi-structured interviews will be conducted with Dushan jade carving artisans, apprentices, scholars, experts, government officials, collectors, and designers. The interviews will cover topics such as the history and techniques of Dushan jade carving, the cultural and artistic values of jade objects, the challenges and opportunities for the inheritance and innovation of this traditional craft, and the policies and initiatives for the safeguarding and promotion of this intangible cultural heritage.

Participant observation: The researcher will visit the workshops, studios, and museums where Dushan jade carving is practiced, exhibited, and sold, to observe the processes of jade selection, carving, polishing, and design. The researcher will also attend jade carving festivals, exhibitions, and other cultural events to gain firsthand experience of the social and cultural contexts in which Dushan jade carving is embedded.

4.2.2 Documentary data collection

A wide range of documentary data will be collected and analyzed, including: Historical records, such as local gazetteers, genealogies, and travel accounts, that contain information on the development of Dushan jade carving in different periods; Archaeological and museum collections of Dushan jade carvings, which provide material evidence of the artistic styles, techniques, and cultural meanings of this traditional craft;

Government policies, plans, and reports related to the safeguarding and promotion of Dushan jade carving as an intangible cultural heritage;



Academic publications, such as books, journal articles, and conference proceedings, that offer theoretical and methodological insights into the study of material culture, art history, and cultural heritage;

Media coverage, such as newspaper articles, television programs, and social media posts, that reflect the public perceptions and opinions on Dushan jade carving and its contemporary significance.

4.2.3 Tools and equipment for data collection

Digital cameras and video recorders for documenting the processes, products, and contexts of Dushan jade carving;

Audio recorders for capturing the interviews and oral histories of Dushan jade carving artisans, apprentices, and other informants;

Notebooks and sketchbooks for taking field notes, making observations, and drawing sketches of Dushan jade carvings and related objects;

Measuring tools, such as calipers and scales, for recording the dimensions and weights of Dushan jade carvings and raw materials;

Magnifying glasses and microscopes for examining the detailed features and textures of Dushan jade carvings and raw materials.

4.3 Data synthesis and analysis

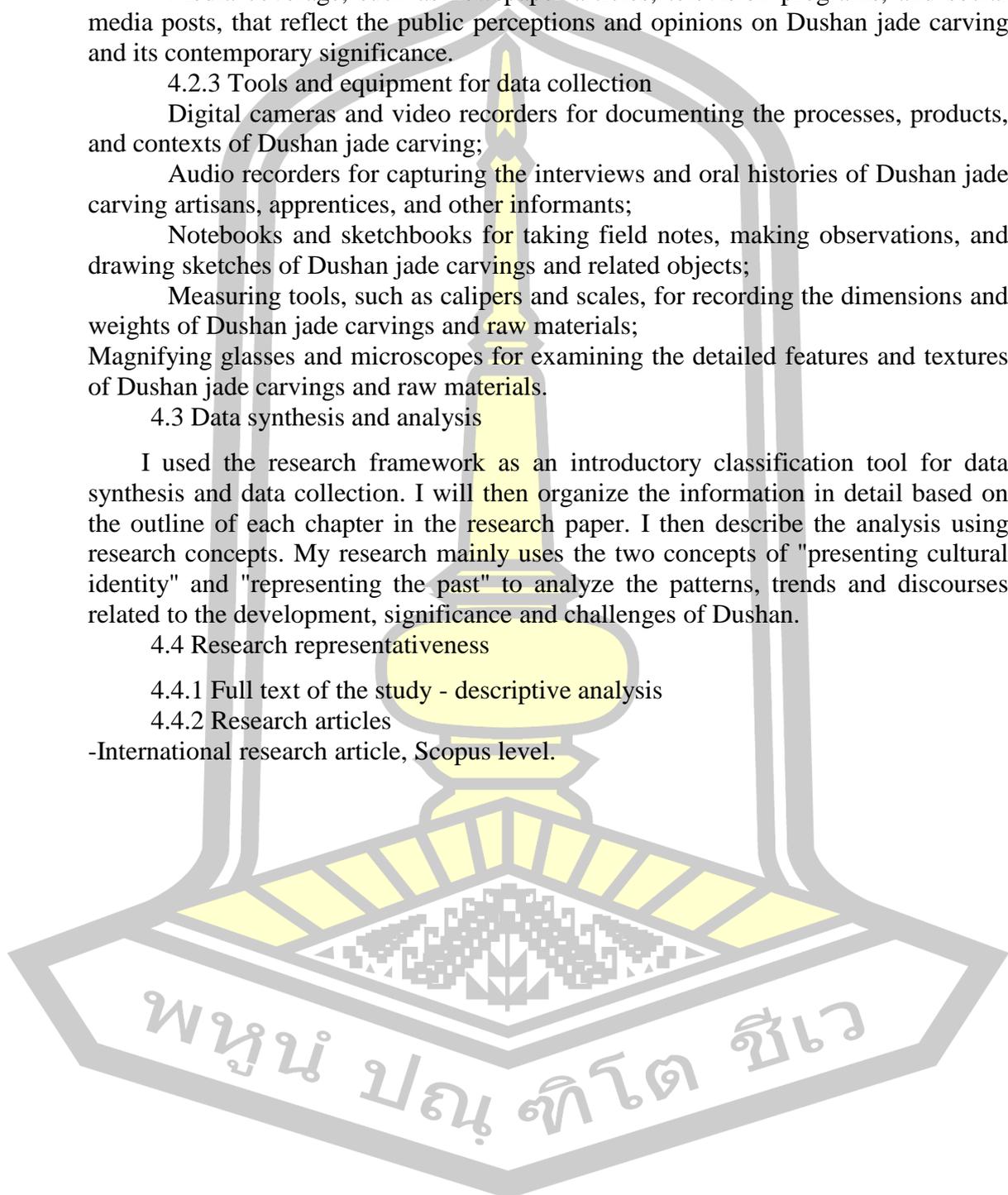
I used the research framework as an introductory classification tool for data synthesis and data collection. I will then organize the information in detail based on the outline of each chapter in the research paper. I then describe the analysis using research concepts. My research mainly uses the two concepts of "presenting cultural identity" and "representing the past" to analyze the patterns, trends and discourses related to the development, significance and challenges of Dushan.

4.4 Research representativeness

4.4.1 Full text of the study - descriptive analysis

4.4.2 Research articles

-International research article, Scopus level.



5. Definition of Terms

5.1 Dushan Jade Carving Art

Dushan jade carving art refers to the traditional craft of carving jade materials sourced from the Dushan region in Nanyang, Henan Province, China. This art form encompasses the techniques, styles, patterns, and cultural connotations that have been developed and passed down through generations of jade carvers in the area. Dushan jade, known for its unique coloration and texture, has been the primary medium for this craft, which has a history dating back to the Neolithic period (Deng, J. (2020) 121-123). The term "Dushan jade carving art" emphasizes the artistic and cultural dimensions of this craft, as well as its close association with the specific geographical and social contexts of the Dushan region.

5.2 Material Culture

Material culture refers to the physical objects, artifacts, and spaces that are created, used, and imbued with meanings by human societies (Tilley, C., Keane, W., Küchler, S., Rowlands, M., & Spyer, P. (Eds.). 2006). In the context of Dushan jade carving art, material culture encompasses the jade materials, tools, techniques, products, and related objects that are involved in the production, circulation, and consumption of this craft. The study of material culture seeks to understand how these objects embody and mediate the social, cultural, and historical relationships, values, and identities of the people who make and use them (Miller, D. 1998). By examining the material aspects of Dushan jade carving art, this research aims to gain insights into the broader cultural and social significance of this craft.

5.3 Innovative Design

Innovative design refers to the creative process of developing new or improved products, services, or experiences that meet the changing needs and expectations of users and society (Brown, T. (2009)). In the field of Dushan jade carving art, innovative design involves the exploration of new forms, functions, materials, and techniques that can expand the artistic and commercial possibilities of this traditional craft while respecting its cultural integrity and authenticity. Innovative design may draw inspiration from the rich heritage of Dushan jade carving art, as well as from contemporary trends, technologies, and aesthetic preferences. The goal of innovative design is to create jade products that are not only beautiful and meaningful but also relevant and valuable to contemporary consumers and markets.

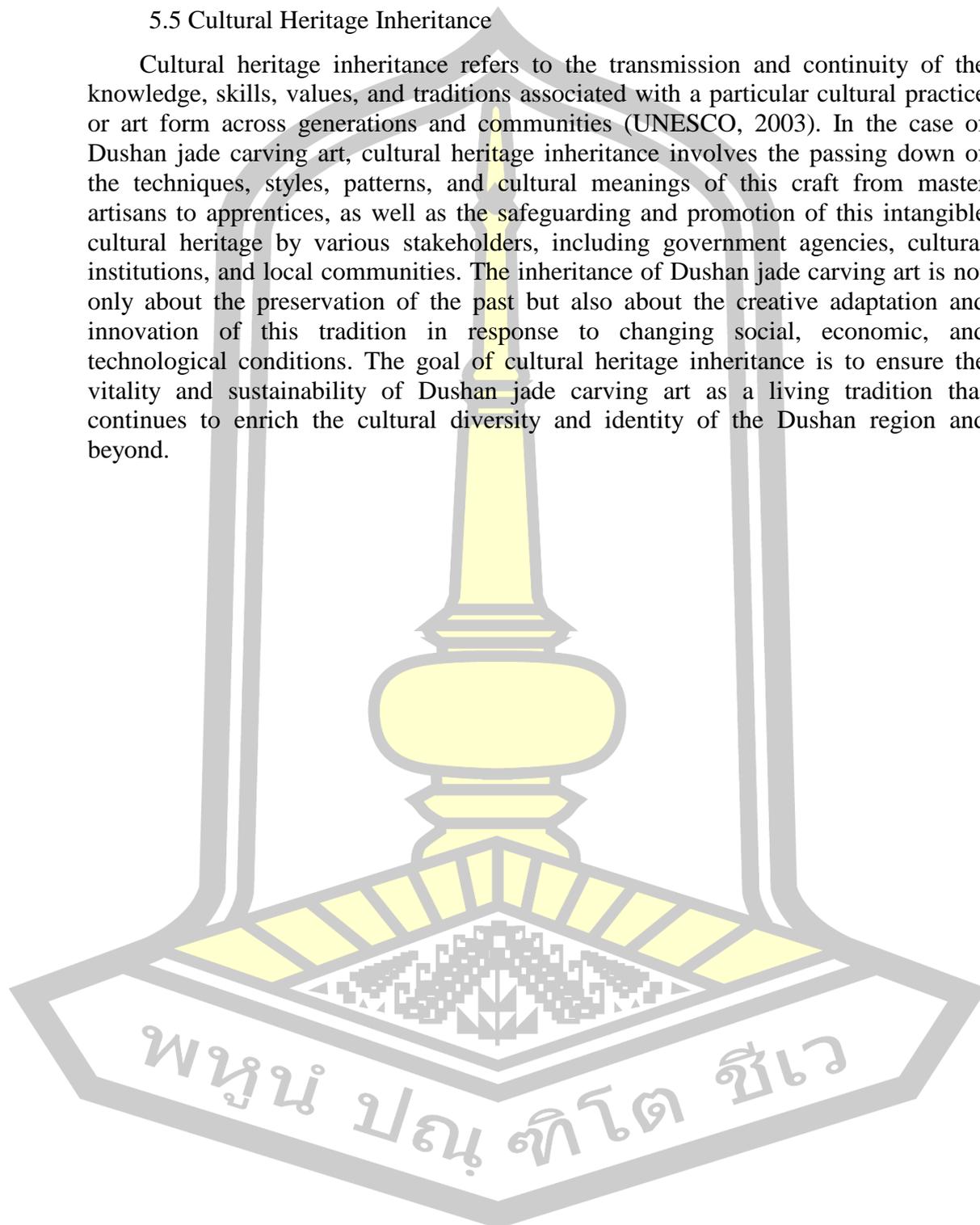
5.4 Digital Innovation

Digital innovation refers to the use of digital technologies, such as computer-aided design (CAD), 3D scanning and printing, virtual reality (VR), and online platforms, to create new or enhanced products, services, and experiences (Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017) 223-238). In the context of Dushan jade carving art, digital innovation involves the integration of these technologies into the design, production, promotion, and preservation of jade crafts. Digital tools can assist jade carvers in visualizing and prototyping their designs, enhancing the precision and efficiency of the carving process, and creating complex forms and textures that would be difficult to achieve by hand (Zhu, L., & Zhang, W. (2020) 315-320). Digital platforms, such as e-commerce websites and social media, can also help to expand the reach and accessibility of Dushan jade products,

connecting artisans with a global audience and facilitating new forms of customization and collaboration.

5.5 Cultural Heritage Inheritance

Cultural heritage inheritance refers to the transmission and continuity of the knowledge, skills, values, and traditions associated with a particular cultural practice or art form across generations and communities (UNESCO, 2003). In the case of Dushan jade carving art, cultural heritage inheritance involves the passing down of the techniques, styles, patterns, and cultural meanings of this craft from master artisans to apprentices, as well as the safeguarding and promotion of this intangible cultural heritage by various stakeholders, including government agencies, cultural institutions, and local communities. The inheritance of Dushan jade carving art is not only about the preservation of the past but also about the creative adaptation and innovation of this tradition in response to changing social, economic, and technological conditions. The goal of cultural heritage inheritance is to ensure the vitality and sustainability of Dushan jade carving art as a living tradition that continues to enrich the cultural diversity and identity of the Dushan region and beyond.



6.Scope of The Research

6.1 Study area

The research focuses on the art of Dushan jade carving in Nanyang City, Henan Province, China. Nanyang is located in the southwest of Henan Province and is known as the “Hometown of Jade” and the “Capital of Jade Carving” due to its rich reserves of high-quality tremolite jade and long history of jade carving craftsmanship (Wang, J. (2015) 42-47). Dushan area is located in the northwest of Nanyang City and is the main source of jade materials used in the local carving industry. This study will investigate jade carving workshops, studios, factories, markets and cultural institutions in Nanyang City, especially in the Dushan area, and examine the production, circulation and consumption of jade crafts within their socio-cultural background.

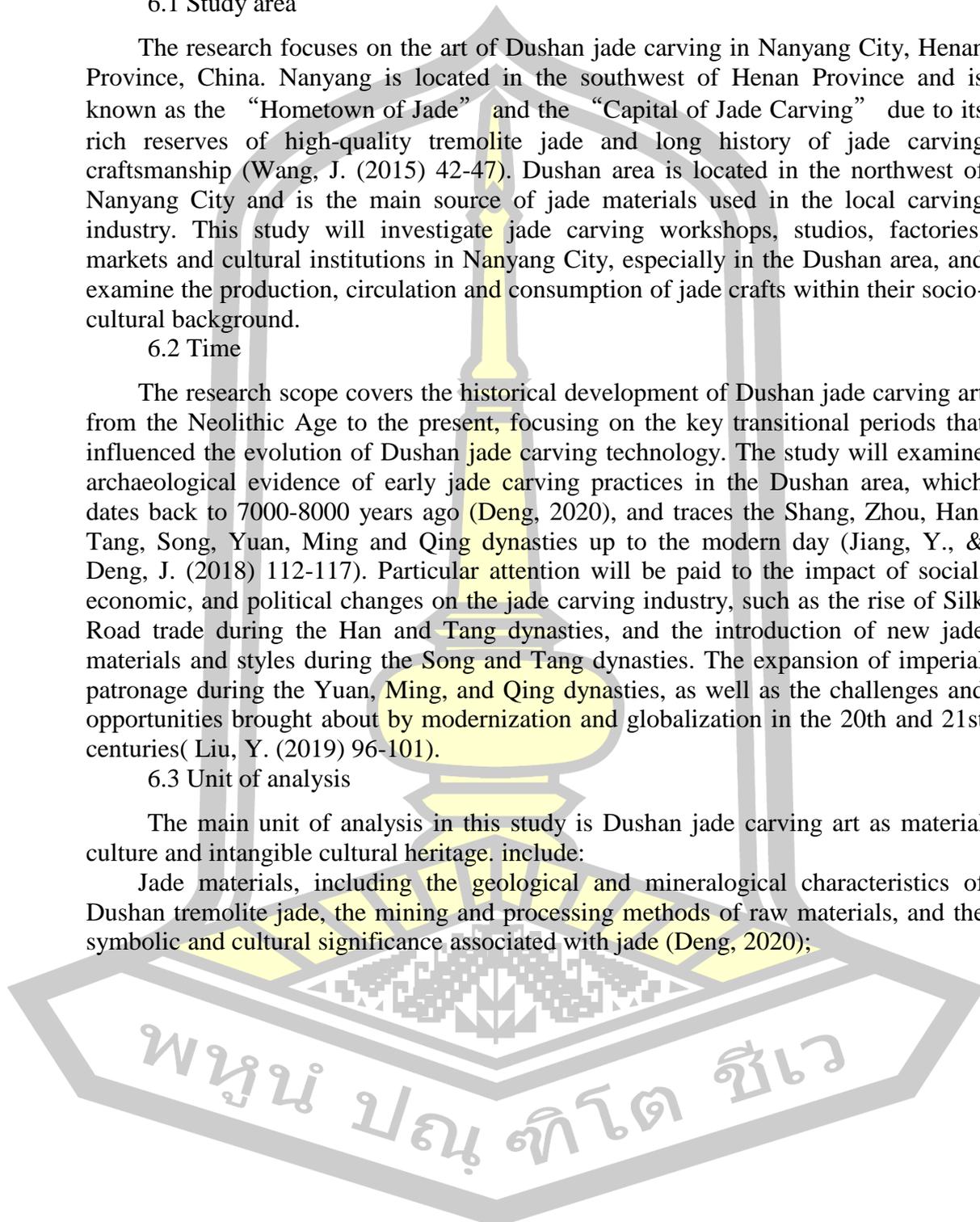
6.2 Time

The research scope covers the historical development of Dushan jade carving art from the Neolithic Age to the present, focusing on the key transitional periods that influenced the evolution of Dushan jade carving technology. The study will examine archaeological evidence of early jade carving practices in the Dushan area, which dates back to 7000-8000 years ago (Deng, 2020), and traces the Shang, Zhou, Han, Tang, Song, Yuan, Ming and Qing dynasties up to the modern day (Jiang, Y., & Deng, J. (2018) 112-117). Particular attention will be paid to the impact of social, economic, and political changes on the jade carving industry, such as the rise of Silk Road trade during the Han and Tang dynasties, and the introduction of new jade materials and styles during the Song and Tang dynasties. The expansion of imperial patronage during the Yuan, Ming, and Qing dynasties, as well as the challenges and opportunities brought about by modernization and globalization in the 20th and 21st centuries(Liu, Y. (2019) 96-101).

6.3 Unit of analysis

The main unit of analysis in this study is Dushan jade carving art as material culture and intangible cultural heritage. include:

Jade materials, including the geological and mineralogical characteristics of Dushan tremolite jade, the mining and processing methods of raw materials, and the symbolic and cultural significance associated with jade (Deng, 2020);



Jade carving techniques and tools, including the use of traditional hand carving methods, frosting, rotary tools and modern technology, as well as the skills and knowledge involved in the production process (Zhu & Zhang, 2020);

Jade carving products, including the types, forms, functions, styles and artistic and cultural values of jade products such as ritual vessels, decorations, jewelry and jade, stationery (Wen, C. (2018) 35-41);

Jade carving artisans and apprentices, including their socioeconomic backgrounds, training and learning processes, creative practices, and personal and professional identities (Wang, X., & Li, J. (2021) 110-115);

The jade carving market and industry, including production, distribution and consumption networks, market demands and trends, and the social and economic impact of the jade carving industry on local communities (Liu, 2019);

Jade carving culture and inheritance include historical and cultural background, aesthetic and symbolic meaning, social and ritual functions, as well as the inheritance and transformation of jade carving tradition between generations and regions (Jiang and Deng, 2018).

This study aims to analyze the regional characteristics of Dushan jade carving art in terms of content and form, and has diversified functions. In addition to the basic display function, fully understanding the material culture and cultural heritage of the traditional craftsmanship of Dushan jade carving, as well as its potential for innovation and sustainable development, are of great significance for building cultural identity.

7. Concepts and Conceptual Frameworks

7.1 Concepts of Research

7.1.1 Cultural Heritage

Cultural heritage refers to the tangible and intangible cultural assets that are inherited from past generations, maintained in the present, and bestowed for the benefit of future generations. In the context of traditional Dushan jade carving art, cultural heritage encompasses the unique material culture, traditional craftsmanship, and cultural symbolism associated with this ancient art form. The preservation and transmission of cultural heritage are crucial for ensuring the continuity and vitality of Dushan jade carving in the face of modernization and globalization.



7.1.2 Material Culture

Material culture refers to the physical objects, resources, and spaces that embody and shape the cultural beliefs, values, and practices of Dushan jade carving. It includes the uniqueness of the Dushan jade material, the traditional carving techniques and tools, and the cultural symbolism of the jade artifacts. By studying the material culture of Dushan jade, researchers can gain insights into the historical development, artistic styles, and cultural meanings of this traditional craft.

7.1.3 Innovative Design

Innovative design involves the creative process of developing new or improved products, services, or experiences related to Dushan jade carving. It encompasses both traditional design practices and contemporary design innovations that aim to revitalize and sustain this cultural heritage. Innovative design draws inspiration from the rich material culture of Dushan jade while also incorporating new forms, functions, materials, and techniques to create jade artifacts that are relevant and valuable to contemporary consumers and markets.

7.2 Research Conceptual Framework

Based on the above concepts, I have designed a research conceptual framework that illustrates the interplay between cultural heritage, material culture, and innovative design in the context of traditional Dushan jade carving art (see Figure 1).

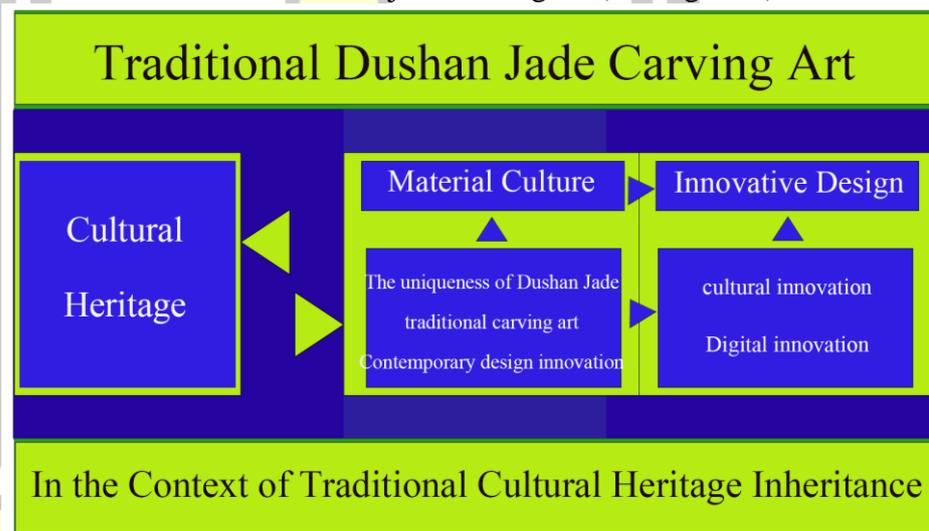


Figure 1 Conceptual framework of traditional Dushan jade carving art in the context of cultural heritage inheritance

The conceptual framework consists of three main components:

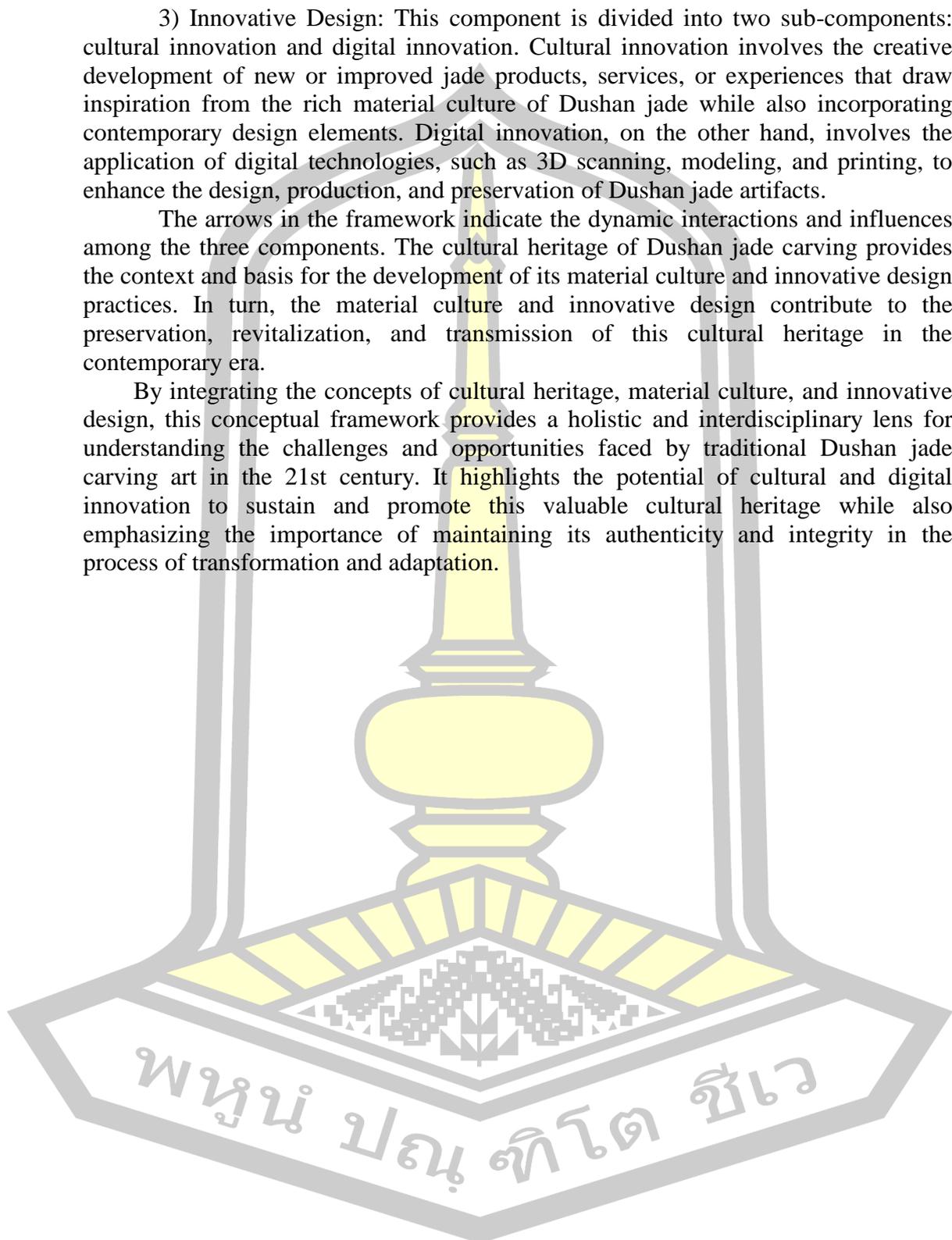
1) **Cultural Heritage:** This component represents the overarching context in which the traditional Dushan jade carving art is situated. It encompasses the transmission and preservation of the unique cultural assets, craftsmanship, and symbolism associated with this ancient art form across generations.

2) **Material Culture:** This component lies at the core of the framework and includes the uniqueness of the Dushan jade material, the traditional carving techniques and tools, and the cultural symbolism of the jade artifacts. The material culture of Dushan jade provides the foundation for both contemporary design innovation and digital innovation.

3) Innovative Design: This component is divided into two sub-components: cultural innovation and digital innovation. Cultural innovation involves the creative development of new or improved jade products, services, or experiences that draw inspiration from the rich material culture of Dushan jade while also incorporating contemporary design elements. Digital innovation, on the other hand, involves the application of digital technologies, such as 3D scanning, modeling, and printing, to enhance the design, production, and preservation of Dushan jade artifacts.

The arrows in the framework indicate the dynamic interactions and influences among the three components. The cultural heritage of Dushan jade carving provides the context and basis for the development of its material culture and innovative design practices. In turn, the material culture and innovative design contribute to the preservation, revitalization, and transmission of this cultural heritage in the contemporary era.

By integrating the concepts of cultural heritage, material culture, and innovative design, this conceptual framework provides a holistic and interdisciplinary lens for understanding the challenges and opportunities faced by traditional Dushan jade carving art in the 21st century. It highlights the potential of cultural and digital innovation to sustain and promote this valuable cultural heritage while also emphasizing the importance of maintaining its authenticity and integrity in the process of transformation and adaptation.



8.Literature review

8.1 Literature Review about Research Text

8.1.1 Research on Dushan Jade Carving Art

Dushan jade carving art, originating from Nanyang, Henan Province, has a long history and rich cultural connotations. It is an essential part of Chinese jade culture and has high historical, artistic, and scientific value. However, there is a lack of systematic and in-depth research on Dushan jade carving art in the academic field.

Some scholars have conducted research on the historical development and artistic characteristics of Dushan jade carving. Wang (2015) traced the origin and evolution of Dushan jade carving, pointing out that it has a history of over 6,000 years and reached its peak during the Han and Tang dynasties(Wang, J. (2015) 42-47). Zhao and Li (2008) analyzed the artistic styles and cultural connotations of Dushan jade carvings from different historical periods, highlighting their unique aesthetic features and symbolic meanings(Zhao, L., & Li, J. (2008) 56-59).

Other researchers have focused on the craftsmanship and techniques of Dushan jade carving. Duan (2013) provided a detailed account of the traditional jade carving process, including material selection, design, roughing out, fine carving, and polishing, emphasizing the importance of skill inheritance and innovation(Duan, Y. (2013) 150-152). Zhang and Liu (2019) explored the application of digital technologies, such as 3D scanning and printing, in the contemporary production and creation of Dushan jade carvings, discussing their potential for preserving traditional craftsmanship while promoting artistic innovation(Zhang, L., & Liu, Y. (2019) 269-273).

Some studies have also examined the cultural and economic value of Dushan jade carving in the context of local development. Chen (2010) investigated the contribution of the jade carving industry to Nanyang's economy, culture, and social development, highlighting its role in promoting regional cultural identity and confidence(Chen, W. (2010) 74-76). Liu (2010) analyzed the policies and initiatives of the local government in supporting the jade carving industry, such as establishing the Dushan Jade Carving Industrial Park and hosting jade carving festivals and exhibitions(Liu, Y. (2010) 125-128).

However, there is still a lack of comprehensive and interdisciplinary research on Dushan jade carving art that integrates perspectives from art history, material culture studies, cultural heritage management, and sustainable development. More attention needs to be paid to the challenges and opportunities faced by this traditional craft in the context of globalization, modernization, and digital transformation, as well as its potential for creative innovation and cultural inheritance.

8.1.2 Research on Digital Innovation in Traditional Craftsmanship

Digital innovation has become an important trend in the field of traditional craftsmanship, offering new possibilities for the preservation, promotion, and development of cultural heritage. Researchers have explored the application of various digital technologies, such as 3D scanning, modeling, and printing, virtual and augmented reality, and online platforms, in the documentation, analysis, and dissemination of traditional crafts.

In the case of Dushan jade carving, Zhang and Liu (2019) discussed how 3D scanning and printing technologies can be used to create digital archives of jade

artifacts, enabling detailed analysis and reproduction of classic works. They also highlighted the potential of digital tools for assisting jade carvers in the design and production process, improving efficiency and precision while reducing material waste.

Other scholars have investigated the role of digital platforms in promoting and marketing traditional crafts. Xu and Wang (2022) examined the use of e-commerce websites, social media, and live-streaming in the sale and customization of Dushan jade carvings, connecting artisans with a wider audience and facilitating cultural exchange (Xu, M., & Wang, T. (2022) 23-27). They also discussed the challenges of ensuring authenticity and quality control in the online market.

Some researchers have also explored the potential of virtual and augmented reality technologies for enhancing the appreciation and transmission of traditional craftsmanship. Li and Chen (2021) proposed the creation of virtual museums and immersive experiences for showcasing the cultural heritage of Dushan jade carving, making it more accessible and engaging for the younger generation (Li, H., & Chen, K. (2021) 2581-2586).

However, there is still a need for more research on the social, cultural, and ethical implications of digital innovation in traditional craftsmanship. Issues such as the impact of digitalization on the authenticity and diversity of cultural heritage, the intellectual property rights of artisans and designers, and the digital divide and accessibility of technology need to be critically examined and addressed.

Moreover, the integration of digital innovation and traditional craftsmanship should be guided by the principles of cultural sustainability, ensuring that the essence and values of the craft are preserved and enriched in the process of technological adaptation. This requires a participatory and inclusive approach that engages artisans, communities, researchers, and policymakers in the co-creation and governance of digital heritage initiatives.

8.1.3 Research on Cultural Heritage Inheritance and Innovation

The inheritance and innovation of cultural heritage have become important topics in academic research and policy discussions, particularly in the context of globalization and rapid social change. Scholars have examined various approaches and strategies for safeguarding and revitalizing traditional craftsmanship, such as Dushan jade carving, while also exploring its potential for creative transformation and sustainable development.

Some researchers have emphasized the importance of skill transmission and apprenticeship in the continuity of traditional craftsmanship. Wang and Li (2021) investigated the master-apprentice relationship in the Dushan jade carving industry, highlighting the role of intergenerational learning and the challenges of attracting and retaining young talent (Wang, X., & Li, J. (2021) 110-115). They also discussed the need for institutional support, such as vocational training programs and financial incentives, to ensure the sustainability of the craft.

Other scholars have focused on the innovative adaptation and redesign of traditional crafts to meet contemporary needs and preferences. Wen (2018) analyzed the artistic characteristics and cultural meanings of Dushan jade carvings from the Ming and Qing dynasties, discussing how they have been reinterpreted and transformed by contemporary artisans and designers (Wen, C. (2018) 35-41). She also

highlighted the potential of cross-cultural exchange and collaboration in fostering creativity and diversity in the jade carving industry.

Some researchers have also explored the role of museums, galleries, and cultural institutions in the preservation and promotion of traditional craftsmanship. Liu (2019) examined the development of the Nanyang Jade Carving Art Museum, discussing its functions in collecting, exhibiting, and researching Dushan jade carvings, as well as engaging the public through educational and experiential programs(Liu, Y. (2019) 96-101). He also analyzed the policies and strategies of the local government in supporting the museum and the jade carving industry.

However, there is still a lack of comprehensive and comparative research on the various models and practices of cultural heritage inheritance and innovation across different regions and cultures. More attention needs to be paid to the social, economic, and environmental dimensions of heritage sustainability, as well as the ethical and political implications of heritage management and governance.

Moreover, the research on cultural heritage inheritance and innovation should adopt an interdisciplinary and participatory approach that integrates perspectives from anthropology, sociology, art history, cultural studies, and sustainable development. This requires the active engagement and collaboration of multiple stakeholders, including artisans, communities, researchers, policymakers, and the public, in the co-creation and co-management of heritage initiatives.

8.2 Literature Review about Research Concept

8.2.1 Material Culture

The concept of material culture has been widely studied in various disciplines, such as anthropology, archaeology, art history, and cultural studies. It refers to the physical objects, artifacts, and spaces that embody and shape the beliefs, values, and practices of a society or culture(Miller, D. (Ed.). (1998).

In the context of Dushan jade carving, material culture encompasses the jade materials, tools, techniques, products, and related objects that are involved in the production, circulation, and consumption of this traditional craft. Researchers have examined the geological and mineralogical characteristics of Dushan tremolite jade, the methods of mining and processing the raw materials, and the symbolic and cultural meanings associated with the jade stones.

Some scholars have also investigated the artistic styles, forms, and functions of Dushan jade carvings, analyzing their aesthetic features, cultural connotations, and social roles in different historical periods. Others have explored the relationship between the material properties of jade and the creative possibilities and constraints of jade carving, discussing how artisans adapt and innovate their designs and techniques in response to the characteristics of the material.

Moreover, the study of material culture in Dushan jade carving also involves the examination of the social, economic, and cultural contexts in which the craft is embedded, such as the production and trade networks, the market demands and trends, and the cultural policies and initiatives that shape the development of the industry.

However, there is still a need for more theoretically informed and empirically grounded research on the material culture of Dushan jade carving that goes beyond descriptive and technical analysis. This requires a critical and reflexive approach that

interrogates the power relations, cultural identities, and meaning-making processes that are mediated through the material objects and practices of the craft.

8.2.2 Cultural Heritage

Cultural heritage is a broad and complex concept that encompasses both tangible and intangible elements of a society's culture that are considered valuable and worthy of preservation and transmission across generations (UNESCO, 2003). In the case of Dushan jade carving, cultural heritage includes not only the physical artifacts and objects of the craft but also the knowledge, skills, techniques, and cultural meanings associated with it.

Researchers have examined various aspects of the cultural heritage of Dushan jade carving, such as its historical development, artistic styles, and cultural connotations. They have also investigated the challenges and opportunities for the preservation and promotion of this heritage in the face of modernization, globalization, and technological change.

Some scholars have emphasized the importance of skill transmission and apprenticeship in the continuity and vitality of the cultural heritage of Dushan jade carving. Others have explored the potential of museums, exhibitions, and digital technologies for the documentation, interpretation, and dissemination of this heritage to wider audiences.

Moreover, the study of cultural heritage in Dushan jade carving also involves the examination of the policies, institutions, and practices of heritage management and governance, such as the role of government agencies, cultural organizations, and community stakeholders in the protection, development, and utilization of this heritage.

However, there is still a need for more critical and nuanced research on the cultural heritage of Dushan jade carving that goes beyond the binary opposition of tradition and modernity, authenticity and innovation. This requires a dynamic and contextual understanding of heritage as a process of cultural construction and negotiation that is shaped by various social, economic, and political factors.

8.2.3 Digital Innovation

Digital innovation refers to the application of digital technologies, such as computer-aided design (CAD), 3D scanning and printing, virtual and augmented reality, and online platforms, to create new or improved products, services, and experiences. In the field of Dushan jade carving, digital innovation has been increasingly adopted by artisans, designers, and entrepreneurs to enhance the efficiency, precision, and creativity of the craft.

Researchers have investigated the use of 3D scanning and modeling technologies in the documentation and analysis of Dushan jade carvings, enabling the creation of digital archives and the reproduction of classic works. They have also explored the potential of CAD and 3D printing for assisting jade carvers in the design and production process, reducing material waste and increasing customization possibilities.

Moreover, scholars have examined the role of online platforms, such as e-commerce websites and social media, in the promotion and sale of Dushan jade carvings, connecting artisans with a global market and facilitating cultural exchange. They have also discussed the use of virtual and augmented reality technologies for creating immersive and interactive experiences of Dushan jade carving heritage.

However, there is still a lack of comprehensive and critical research on the social, cultural, and ethical implications of digital innovation in Dushan jade carving. Issues such as the impact of digitalization on the authenticity and diversity of cultural heritage, the intellectual property rights of artisans and designers, and the digital divide and accessibility of technology need to be carefully considered and addressed. Moreover, the integration of digital innovation and traditional craftsmanship in Dushan jade carving should be guided by the principles of cultural sustainability and inclusive development, ensuring that the benefits and opportunities of digitalization are shared by all stakeholders, particularly the artisans and communities who are the bearers and creators of this cultural heritage.

9. Benefits of Research

9.1 Enhancing the Understanding and Appreciation of Dushan Jade Carving Art

This study contributes to the understanding and appreciation of Dushan jade carving art as a valuable cultural heritage and a significant component of Chinese jade culture. By examining the historical development, artistic characteristics, and cultural connotations of Dushan jade carving from a material culture perspective, this research provides a comprehensive and in-depth analysis of this ancient craft, filling the gap in the academic field.

Dushan jade carving art has a history of over 6,000 years and has played a crucial role in the cultural, social, and economic development of the Nanyang region (Wang, J. (2015) 42-47). However, there is a lack of systematic and interdisciplinary research on this topic, particularly from the perspectives of art history, anthropology, and cultural heritage studies. This study addresses this issue by integrating various theoretical and methodological approaches to investigate the material, cultural, and social dimensions of Dushan jade carving.

Moreover, this research also highlights the artistic value and cultural significance of Dushan jade carving in the context of Chinese civilization. Dushan jade, known for its unique coloration and texture, has been regarded as a symbol of power, status, and spirituality in ancient China (Yang, B. (2018) 125-150). The exquisite craftsmanship and rich cultural connotations of Dushan jade carvings reflect the aesthetic preferences, social hierarchies, and belief systems of different historical periods (Wen, C. (2018) 35-41).

By shedding light on the cultural and artistic importance of Dushan jade carving, this study helps to raise public awareness and appreciation of this intangible cultural heritage. It also provides valuable insights for museums, galleries, and cultural institutions in the collection, exhibition, and interpretation of Dushan jade artifacts, enhancing their educational and cultural functions.

9.2 Informing the Preservation and Innovation of Intangible Cultural Heritage

This research also contributes to the preservation and innovation of intangible cultural heritage, particularly traditional craftsmanship, in the context of globalization and technological change. By examining the challenges and opportunities faced by Dushan jade carving art in the contemporary era, this study provides insights and recommendations for safeguarding and revitalizing this cultural heritage.

In recent years, the Dushan jade carving industry has experienced various difficulties, such as the loss of skilled artisans, the impact of mass production, and the changing market demands (Liu, Y. (2019) 96-101). The traditional apprenticeship

system, which has been the primary means of transmitting jade carving knowledge and skills, is also facing challenges due to the lack of interest among younger generations and the inadequate support from government and society(Wang, X., & Li, J. (2021) 110-115).

To address these issues, this study proposes a framework for the inheritance and innovation of Dushan jade carving art, which involves the collaboration among multiple stakeholders, including artisans, scholars, government agencies, and cultural institutions. This framework includes the documentation and digitization of traditional knowledge and skills, the development of new materials and technologies, the promotion of cultural tourism and creative industries, and the engagement of younger generations in the appreciation and continuation of this cultural heritage.

For example, the use of digital technologies, such as 3D scanning and printing, can help to create detailed records of Dushan jade carvings and enable the reproduction and dissemination of classic works (Zhang, L., & Liu, Y. (2019) 269-273). The establishment of jade carving schools and training programs can also help to attract and cultivate new generations of artisans, ensuring the transmission and vitality of this craft (Chen, W. (2010) 74-76).

Moreover, the integration of Dushan jade carving with other cultural and creative industries, such as design, fashion, and tourism, can provide new opportunities for the innovation and sustainable development of this traditional craft(Xu, M., & Wang, T. (2022) 23-27). The creation of cultural products and experiences that combine the artistic and cultural elements of Dushan jade carving with contemporary aesthetics and functions can help to enhance the cultural and economic value of this heritage.

9.3 Promoting Cultural Identity and Regional Development in Nanyang

This study also has significant implications for the promotion of cultural identity and regional development in Nanyang, the birthplace of Dushan jade carving. By examining the role of jade carving art in the cultural, social, and economic life of the local community, this research provides insights into the potential of cultural heritage for fostering a sense of belonging, pride, and resilience among the residents.

Dushan jade carving has been an integral part of Nanyang's history and culture for thousands of years, and has contributed significantly to the region's economic development and social well-being(Deng, J. (2020) 121-123). The jade carving industry has created numerous job opportunities, generated income for local households, and promoted the development of related sectors, such as tourism, hospitality, and handicrafts (Liu, Y. (2010) 125-128).

However, with the rapid modernization and urbanization of Chinese society, many young people in Nanyang have left their hometowns to seek employment and education in cities, leading to the depopulation and aging of rural areas(Li, Y. (2018) 524-531). The traditional culture and way of life in Nanyang, including jade carving, are also facing the risk of marginalization and decline.

To revitalize the cultural and economic vitality of Nanyang, the local government has implemented various policies and initiatives to support the development of the jade carving industry and the protection of cultural heritage. For example, the establishment of the Dushan Jade Carving Industrial Park and the organization of jade carving festivals and exhibitions have helped to create a platform for the promotion and innovation of this traditional craft(Nanyang Municipal Government. (2021).

This study provides empirical evidence and theoretical insights for the effectiveness and sustainability of these policies and initiatives, as well as their impact on the cultural identity and well-being of the local community. By highlighting the cultural and social significance of Dushan jade carving, this research can help to raise the awareness and appreciation of this heritage among the residents, especially the younger generations, and encourage their participation in the preservation and development of this craft.

Moreover, the successful experience of Nanyang in leveraging cultural heritage for regional development can also provide valuable lessons and inspirations for other regions in China and beyond that are facing similar challenges of balancing tradition and modernity, culture and economy, in the process of rural revitalization and sustainable development.

9.4 Supporting Policy Making and Strategic Planning for Cultural Heritage

Management

Finally, this study has important policy implications for the management and governance of cultural heritage in China, particularly in the context of the country's rural revitalization strategy and cultural development agenda. By providing a comprehensive and critical analysis of the current situation and future prospects of Dushan jade carving art, this research can inform the policy making and strategic planning for the preservation, innovation, and utilization of this cultural heritage.

In recent years, the Chinese government has placed increasing emphasis on the protection and promotion of intangible cultural heritage, as well as the integration of culture and tourism for the sustainable development of rural areas (State Council of China. (2017). The "Rural Revitalization Strategic Plan (2018-2022)" issued by the State Council in 2018 has identified the development of cultural tourism and creative industries as a key approach to boost the economic and social vitality of the countryside (State Council of China. (2018).

However, the implementation of these policies and strategies at the local level is often challenged by various factors, such as the lack of financial and human resources, the inadequate infrastructure and facilities, the fragmented and uncoordinated governance structure, and the conflicts between different stakeholders and interests (Su, J. (2020) 858-870).

This study provides a holistic and multi-stakeholder perspective on the challenges and opportunities for the management and governance of Dushan jade carving heritage, taking into account the cultural, social, economic, and political dimensions of this issue. By examining the roles and interactions of different actors, such as artisans, scholars, government officials, entrepreneurs, and community members, in the preservation and innovation of this craft, this research can help to identify the key factors and best practices for the effective and inclusive governance of cultural heritage.

For example, the study highlights the importance of establishing a collaborative and participatory mechanism for the management of Dushan jade carving heritage, which involves the active engagement and empowerment of local artisans and communities in the decision-making and benefit-sharing process (Zhao, X. (2019) 929-942). It also emphasizes the need for a more integrated and coordinated approach to the planning and implementation of cultural heritage policies, which takes into

account the synergies and trade-offs between different goals and sectors, such as tourism development, environmental conservation, and social equity(Li, J., & Hu, J. (2021) 5547).

Moreover, the findings and recommendations of this study can also provide useful references and guidelines for the policy making and strategic planning of other intangible cultural heritage in China and beyond, especially those related to traditional craftsmanship and rural development. By sharing the lessons and experiences of Dushan jade carving art, this research can contribute to the broader discourse and practice of cultural heritage management and governance in the context of globalization and sustainability.

In conclusion, this study on the traditional Dushan jade carving art and its material culture, digital innovation, and cultural heritage inheritance has significant benefits and implications for the understanding, appreciation, preservation, and development of this valuable cultural asset. It not only fills the academic gap and advances the theoretical and methodological frontiers in the field of cultural heritage studies, but also provides practical insights and recommendations for the policy making and strategic planning of cultural heritage management and governance in China and beyond. By highlighting the cultural, social, and economic significance of Dushan jade carving art, this research can help to raise the awareness and engagement of various stakeholders, including artisans, scholars, government officials, entrepreneurs, and the general public, in the protection and promotion of this intangible cultural heritage, and contribute to the sustainable development and cultural vitality of the Nanyang region and Chinese society as a whole.

10.Draft of research structure

Chapter 1: Introduction

Chapter 2: The historical development of the art of Dushan jade carving. Henan Province of China

Chapter 3: The artistic characteristics of traditional Dushan jade carving and the innovative design of contemporary Dushan jade carving from the perspective of material culture.

Chapter 4: The transmission and preservation of Dushan jade carvings in the context of traditional cultural heritage inheritance in Henan Province.

Chapter 5: Conclusion, Discussion, and Suggestion

Chapter 6: References

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Chapter II

The historical development of the art of Dushan jade carving. Henan Province of China

Introduction

1. Significance of Dushan Jade Carving Art

Dushan jade carving art, originating from Nanyang, Henan Province, China, is a precious cultural heritage with a long history and profound cultural connotations. As an essential component of Chinese jade culture, Dushan jade carving art embodies the wisdom, aesthetics, and spirituality of the Chinese people, and reflects the social, economic, and cultural changes of different historical periods (Wang, J. (2015) 42-47).

The significance of Dushan jade carving art lies in its unique artistic value, exquisite craftsmanship, and rich cultural implications. Dushan jade, known for its fine texture, lustrous appearance, and diverse colors, has been cherished by Chinese people for thousands of years (Deng, J. (2020) 121-123). The skilled jade carvers in Nanyang have created numerous masterpieces that showcase the beauty and symbolism of Dushan jade, such as the "Nine Dragon Jade Cup" from the Qing Dynasty (Figure 2) (Palace Museum. (2021). These jade carvings not only demonstrate the superb skills and creativity of the artisans but also carry the cultural beliefs, social values, and aesthetic preferences of the time.



Figure 2 "Nine Dragon Jade Cup"

[Figure 2: "Nine Dragon Jade Cup", Qianlong reign, Qing Dynasty, collection of the Palace Museum. Source: Palace Museum official website]

Moreover, Dushan jade carving art serves as a bridge connecting the past and present, and plays a vital role in the inheritance and development of traditional Chinese culture (Li, Y. (2018) 290-298). The techniques, patterns, and meanings of Dushan jade carving have been passed down from generation to generation through apprenticeship and family lineages, forming a unique cultural tradition that embodies the collective memory and identity of the local community (Wang, X., & Li, J. (2021)

110-115). In recent years, with the increasing attention paid to intangible cultural heritage protection, Dushan jade carving art has gained new opportunities for revitalization and innovation, and has become an important resource for cultural tourism, creative industries, and regional development(Liu, Y. (2019) 96-101).

However, like many other traditional handicrafts, Dushan jade carving art is also facing challenges in the process of modernization, such as the impact of industrialization, the lack of young inheritors, and the changing market demands(Yang, L. (2017) 32-39). Therefore, it is crucial to study the historical development, cultural connotations, and artistic features of Dushan jade carving art, and to explore effective ways to protect, inherit, and innovate this valuable cultural heritage in the contemporary era.

1.1 Purpose and Structure of the Chapter

The purpose of this chapter is to provide a comprehensive overview of the historical development of Dushan jade carving art in Henan Province, China, and to analyze its artistic characteristics, cultural connotations, and inheritance patterns in different historical periods. By examining the evolution of Dushan jade carving art from the pre-Ming Dynasty to the present day, this chapter aims to reveal the cultural, social, and economic factors that have shaped the development of this traditional craft, and to shed light on its significance as a cultural heritage and a living tradition.

The chapter is structured chronologically and thematically, covering five major historical periods: the pre-Ming Dynasty, the Ming and Qing Dynasties, the Republic of China, the People's Republic of China, and the contemporary era. In each period, the chapter will discuss the key events, figures, works, and styles that have marked the development of Dushan jade carving art, and will analyze the artistic features, cultural meanings, and social functions of representative jade carvings.

Specifically, the chapter will start with an introduction to the geographical and geological context of Dushan jade, and an overview of the early development of jade carving in Henan Province based on archaeological evidence. It will then focus on the golden age of Dushan jade carving in the Ming and Qing Dynasties, discussing the rise of imperial patronage, the famous jade carving masters and their works, and the artistic features and cultural connotations of Dushan jade carvings in this period.

Next, the chapter will examine the challenges and transformations of Dushan jade carving in the Republic of China and the People's Republic of China, including the impact of political and social upheavals, the efforts to preserve and revive the craft, and the influence of socialist policies and market reforms on the jade carving industry.

Finally, the chapter will explore the current situation and future prospects of Dushan jade carving art in the 21st century, discussing the opportunities and challenges brought by globalization, technological innovations, and cultural heritage protection. It will highlight the importance of safeguarding and promoting the intangible cultural heritage of Dushan jade carving, and the potential of this traditional craft in fostering cultural identity, social development, and international exchange.

Throughout the chapter, the analysis will be supported by rich historical materials, including archaeological findings, historical records, artistic works, and academic research. The chapter will also feature carefully selected images of representative Dushan jade carvings from different historical periods, with detailed

captions and museum collection information, to provide a vivid visual journey through the evolution of this ancient art form.

2.Early Development of Dushan Jade Carving (Pre-Ming Dynasty)

2.1 Geographical and Geological Context of Dushan Jade

Dushan jade also known as "Nanyang jade," is a type of tremolite jade primarily found in the Dushan area of Nanyang City, Henan Province, China(Deng, J. (2020) 121-123). The unique geographical and geological conditions of this region have played a crucial role in the formation and quality of Dushan jade. The jade deposits are located in the southern foothills of the Funiu Mountains, where the convergence of the North China Craton and the Yangtze Craton has created a complex geological environment characterized by metamorphic rocks and tectonic activities (Wang, Y., & Liu, J. (2018) 785-794).

The jade-forming minerals in Dushan, mainly tremolite and actinolite, are derived from the metamorphism of dolomitic limestone and siliceous dolomite under high pressure and temperature conditions(Li, H., Zhang, Z., & Chen, J. (2019) 1-10). The jade deposits are often found in lens-shaped or irregular bodies within the metamorphic strata, with varying thicknesses and distributions(Zhao, L., & Qin, X. (2017) 1095-1102). The rich mineral resources and diverse geological settings of the Dushan area have provided a solid foundation for the development of jade carving art in Nanyang.

2.2 Archaeological Evidence of Early Jade Carving in Henan Province

The history of jade carving in Henan Province can be traced back to the Neolithic period, as evidenced by numerous archaeological findings from various cultures and sites. These early jade artifacts not only demonstrate the ancient Chinese people's fascination with jade but also shed light on the origins and evolution of jade carving techniques and styles in the region.

2.2.1 Neolithic Jade Artifacts from the Peiligang and Yangshao Cultures

The Peiligang culture (7000-5000 BCE) and the Yangshao culture (5000-3000 BCE) are two of the earliest Neolithic cultures in Henan Province known for their jade artifacts. Jade objects from these cultures, such as small ornaments, ritual tools, and animal figurines, have been excavated from several sites in the region, including the Peiligang site in Xinzheng and the Xiawanggang site in Xichuan(Liu, Y., & Wang, X. (2020) 23-35).

One notable example is the "Jade Dragon" unearthed from the Xiawanggang site, which is considered one of the earliest jade carvings in China (Figure 3). This small, abstract dragon figure, carved from green nephrite, showcases the primitive yet expressive style of jade carving in the Yangshao culture(Chen, X. (2019) 56-59).



Figure 3 Jade Dragon"

[Figure 3: "Jade Dragon," Yangshao culture, excavated from the Xiawanggang site in Xichuan, Henan. Collection of the Henan Museum. Source: Henan Museum Official Website]

2.2.2 Jade Artifacts from the Xia, Shang, and Zhou Dynasties

The jade carving tradition in Henan Province continued to thrive and evolve during the Xia (c. 2070-1600 BCE), Shang (c. 1600-1046 BCE), and Zhou (c. 1046-256 BCE) dynasties. Jade artifacts from these periods, such as ritual vessels, ceremonial weapons, and ornamental discs, have been discovered in many archaeological sites across the region, reflecting the increasing sophistication and diversity of jade carving styles (Gu, J. (2018) 23-31).

One of the most significant jade carving centers in Henan during the Shang and Zhou dynasties was the city of Anyang, which served as the capital of the late Shang dynasty. The jade objects excavated from the Yinxu site in Anyang, such as the "Jade Huang with Dragon and Phoenix Motifs" (Figure 4), demonstrate the advanced craftsmanship and the symbolic significance of jade in the Shang royal rituals and power structures (Wang, H., & Liu, Y. (2017) 34-45).



Figure 4 "Jade Juan with Dragons and Phoenixes"

[Figure 4: "Jade Juan with Dragons and Phoenixes", late Shang dynasty, unearthed at Yinxu, Anyang, Henan Province. Collection of the National Museum of China.

Source: Official website of the National Museum of China Official website of the Henan Museum China CNN]

2.3 Jade Carving Techniques and Styles in Early Periods

The early development of jade carving in Henan Province was marked by the continuous evolution of carving techniques, tools, and artistic styles, reflecting the changing social, cultural, and technological contexts of the time.

2.3.1 Evolution of Jade Carving Tools and Methods

The jade carving tools and methods used in the Neolithic period were relatively simple and primitive, mainly relying on abrasive materials such as sand, quartz, and manual labor (Yang, B. (2015) 80-89). The invention of the treadle-operated engraving machine during the Shang dynasty greatly improved the efficiency and precision of jade carving, allowing for more intricate designs and finer details (Liu, S. (2016) 138-149).

In the Zhou dynasty, the use of metal tools, such as bronze and iron saws, drills, and gravers, further revolutionized the jade carving industry, enabling the creation of more complex and sophisticated jade objects(Xia, N., & Zhang, C. (2014) 165-178). The advancements in jade carving tools and methods laid the foundation for the artistic achievements and cultural significance of jade in the later dynasties.

2.3.2 Symbolic Meanings and Ritual Significance of Early Jade Carvings

Jade has been endowed with rich symbolic meanings and ritual significance in Chinese culture since ancient times. The early jade carvings in Henan Province often served as emblems of power, status, and spirituality, and were used in various ceremonial and religious contexts(Wen, C. (2018) 35-41.).

For example, the jade "bi" discs and "cong" tubes from the Neolithic period are believed to have been used in shamanic rituals and cosmological symbolism, representing the harmony between heaven and earth(Li, J. (2019) 102-115). The jade weapons and ritual vessels from the Shang and Zhou dynasties, such as the "Jade Ge" (dagger-axe) and the "Jade He" (wine vessel), were emblems of royal authority and military prowess, and were often buried with the deceased as grave goods(Zhang, L. (2017) 56-68).

Moreover, the decorative motifs and patterns on early jade carvings, such as the "taotie" monster mask and the "kui" dragon, were imbued with mythical and religious meanings, reflecting the ancient Chinese people's beliefs in ancestral spirits, natural forces, and cosmic order(Wang, Y. (2020) 159-171). The symbolic meanings and ritual significance of early jade carvings in Henan Province offer valuable insights into the social structures, cultural practices, and worldviews of the ancient Chinese civilization.

Dushan Jade Carving in the Ming and Qing Dynasties (1368-1912) The Ming (1368-1644) and Qing (1644-1912) dynasties witnessed the golden age of Dushan jade carving art in Nanyang, Henan Province. During this period, the craft reached new heights of artistic achievement and cultural significance, thanks to the patronage of the imperial court, the flourishing of jade workshops and artisans, and the innovations in carving techniques and designs.

2.4 The Emergence and Development of Jade Carving Centers in Henan

Province

During the early periods of Chinese history, several important jade carving centers emerged in Henan Province, each with its distinct artistic styles, cultural influences, and historical significance. These centers not only contributed to the evolution and dissemination of jade carving techniques and aesthetics but also played a crucial role in the social, economic, and political dynamics of the region.

2.4.1 The Luoyang Jade Carving Center

The city of Luoyang, located in the western part of Henan Province, has been a major center of jade carving since the Eastern Zhou dynasty (770-256 BCE). The rise of Luoyang as a jade carving hub was closely tied to its strategic location along the Silk Road and its proximity to the Dushan jade mines (Yang, B. (2015) 80-89). The jade carvings from Luoyang during this period were characterized by their intricate designs, sophisticated craftsmanship, and the use of novel carving techniques, such as intaglio and openwork(Liu, S. (2016) 138-149).

One of the most iconic jade artifacts from the Luoyang center is the "Jade Suit of Liu Sheng" (Figure 5), a remarkable example of the Han dynasty (202 BCE-220 CE) jade burial suits. Excavated from the tomb of Prince Liu Sheng in Mancheng, Hebei Province, this jade suit consists of over 2,000 pieces of jade plaques, each meticulously carved and linked together with gold and silver wires (Xia, N., & Zhang, C. (2014) 165-178). The exquisite craftsmanship and the symbolic significance of the jade suit demonstrate the extraordinary skills of the Luoyang jade carvers and the importance of jade in the funerary customs of the Han elite.



Figure 5 Jade Suit of Liu Sheng,"

[Figure 5: "Jade Suit of Liu Sheng," Han dynasty, excavated from the Mancheng tomb in Hebei Province. Collection of the Hebei Provincial Museum. Source: Hebei Provincial Museum Official Website]

2.4.2 The Nanyang Jade Carving Center

The city of Nanyang, situated in the southwestern part of Henan Province, emerged as another important jade carving center during the Tang dynasty (618-907 CE). The Nanyang jade carving center was renowned for its distinctive style, which emphasized the natural beauty and texture of the Dushan jade material, as well as the use of bold and expressive carving techniques (Wen, C. (2018) 35-41.).

One of the most representative jade carvings from the Nanyang center during the Tang dynasty is the "Jade Lion" (Figure 6), a masterpiece of ancient Chinese jade art. Carved from a single piece of Dushan jade, this life-sized lion sculpture showcases the remarkable artistry and technical prowess of the Nanyang jade carvers (Li, J. (2019) 102-115). The dynamic pose, the flowing mane, and the expressive face of the lion demonstrate the artists' keen observation of nature and their ability to capture the essence of the subject in jade.

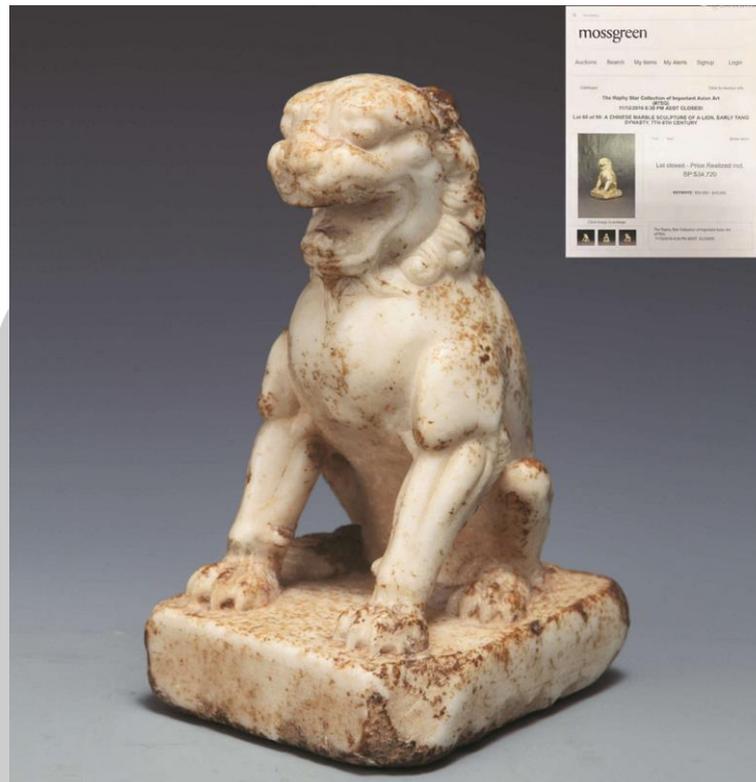


Figure 6 "Jade Lion"

[Figure 6: "Jade Lion," Tang dynasty, excavated from the Hejia Village tomb in Xi'an, Shaanxi Province. Collection of the Shaanxi History Museum. Source: Shaanxi History Museum Official Website]

2.4.3 The Zhengzhou Jade Carving Center

The city of Zhengzhou, the capital of Henan Province, also emerged as a significant jade carving center during the Song dynasty (960-1279 CE). The Zhengzhou jade carving center was known for its refined and elegant style, which emphasized the use of delicate carving techniques, such as shallow relief and incised decoration (Zhang, L. (2017) 56-68).

One of the most representative jade carvings from the Zhengzhou center during the Song dynasty is the "Jade Cup with Dragon Handle" (Figure 7), a masterpiece of the imperial jade workshop. Carved from a single piece of white Dushan jade, this cup features a graceful dragon handle and a body decorated with intricate floral and geometric patterns (Wang, Y. (2020) 159-171). The exquisite craftsmanship and the harmonious design of the cup exemplify the aesthetic ideals and the technical refinement of the Song dynasty jade carving.



Figure 7 Jade Cup with Dragon Handle"

[Figure 7: "Jade Cup with Dragon Handle," Song dynasty, excavated from the Qianling Mausoleum in Qian County, Shaanxi Province. Collection of the Shaanxi History Museum. Source: Shaanxi History Museum Official Website]

The emergence and development of these jade carving centers in Henan Province during the early periods of Chinese history reflect the complex interplay of geological, cultural, and socio-political factors that shaped the evolution of jade carving art. The unique styles, techniques, and cultural connotations of the jade carvings from these centers not only enriched the artistic landscape of ancient China but also provided valuable insights into the social structures, belief systems, and aesthetic sensibilities of the time.

2.5 The Cultural and Social Significance of Jade in Ancient China

In ancient China, jade was not merely a decorative or utilitarian material but also a powerful symbol of social status, political authority, and cultural identity. The possession and display of jade objects were often associated with the elite class, the aristocracy, and the imperial court, and served as a means of expressing wealth, power, and prestige (Liu, X. (2016) 285-315).

2.5.1 Jade as a Symbol of Social Status and Political Authority

In the early Chinese societies, jade was considered a rare and precious material, and its ownership was often restricted to the ruling class and the wealthy elite. The use of jade objects, such as ceremonial vessels, ritual weapons, and personal ornaments, was a privilege of the aristocracy and a marker of their social status and political authority (Fang, L. (2018) 325-346).

For example, during the Shang dynasty, the possession of jade objects, such as the "Jade Ge" (dagger-axe) and the "Jade Gui" (scepter), was a symbol of the royal power and military prowess of the Shang kings (Chen, M. (2015) 116-128). These jade weapons and ritual objects were often inscribed with the names and titles of the Shang rulers, and were used in important ceremonies and rituals to legitimize their authority and to communicate with the ancestral spirits.

Similarly, during the Zhou dynasty, the use of jade objects, such as the "Jade Bi" (disc) and the "Jade Cong" (tube), was a prerogative of the feudal lords and the noble class (Hu, Y. (2017) 44-55). These jade objects were often given as gifts or tributes to the Zhou kings, and served as a means of expressing loyalty, allegiance, and political alliances among the ruling elite.

2.5.2 Jade as a Symbol of Cultural Identity and Moral Virtue

In addition to its association with social status and political authority, jade also had a deep cultural and moral significance in ancient China. Jade was regarded as a symbol of Chinese cultural identity, and its possession and appreciation were considered a mark of cultural refinement and moral virtue (Wang, C. (2019) 29-48).

In Chinese philosophy and literature, jade was often used as a metaphor for the ideal human qualities, such as purity, integrity, and wisdom. The Confucian classic "Book of Rites" (Li Ji) describes the "five virtues" of jade, which include benevolence, righteousness, propriety, wisdom, and sincerity (Li, M. (2016) 78-89). These virtues were believed to be embodied in the physical properties of jade, such as its hardness, durability, and translucency, and were used to guide the moral and ethical conduct of the Chinese people.

Moreover, jade was also associated with the concept of "he" (harmony) in Chinese cosmology, which refers to the balance and unity of the natural and social order (Xu, J. (2018) 171-185). The use of jade objects in ritual and ceremonial contexts, such as the "Jade Bi" and the "Jade Cong," was believed to facilitate the communication between the human world and the celestial realm, and to maintain the cosmic harmony and social stability.

The cultural and social significance of jade in ancient China reflects the complex interplay of material, symbolic, and ideological factors that shaped the development of Chinese civilization. The jade carvings from the early periods of Chinese history, with their exquisite craftsmanship, rich symbolism, and cultural connotations, provide a valuable window into the social structures, belief systems, and aesthetic sensibilities of the ancient Chinese society.

2.6 The Influence of Early Jade Carving on the Development of Chinese Art and Culture

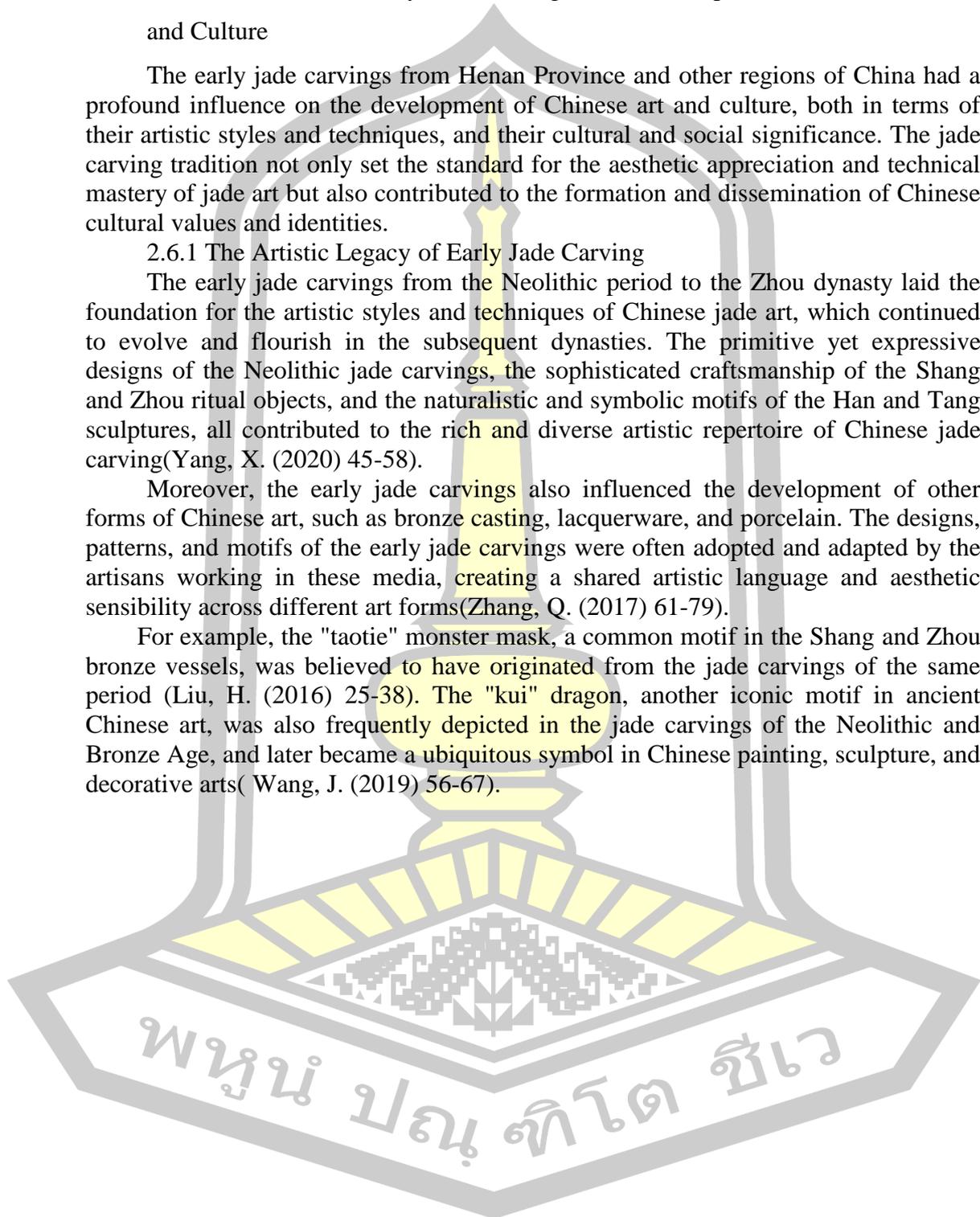
The early jade carvings from Henan Province and other regions of China had a profound influence on the development of Chinese art and culture, both in terms of their artistic styles and techniques, and their cultural and social significance. The jade carving tradition not only set the standard for the aesthetic appreciation and technical mastery of jade art but also contributed to the formation and dissemination of Chinese cultural values and identities.

2.6.1 The Artistic Legacy of Early Jade Carving

The early jade carvings from the Neolithic period to the Zhou dynasty laid the foundation for the artistic styles and techniques of Chinese jade art, which continued to evolve and flourish in the subsequent dynasties. The primitive yet expressive designs of the Neolithic jade carvings, the sophisticated craftsmanship of the Shang and Zhou ritual objects, and the naturalistic and symbolic motifs of the Han and Tang sculptures, all contributed to the rich and diverse artistic repertoire of Chinese jade carving (Yang, X. (2020) 45-58).

Moreover, the early jade carvings also influenced the development of other forms of Chinese art, such as bronze casting, lacquerware, and porcelain. The designs, patterns, and motifs of the early jade carvings were often adopted and adapted by the artisans working in these media, creating a shared artistic language and aesthetic sensibility across different art forms (Zhang, Q. (2017) 61-79).

For example, the "taotie" monster mask, a common motif in the Shang and Zhou bronze vessels, was believed to have originated from the jade carvings of the same period (Liu, H. (2016) 25-38). The "kui" dragon, another iconic motif in ancient Chinese art, was also frequently depicted in the jade carvings of the Neolithic and Bronze Age, and later became a ubiquitous symbol in Chinese painting, sculpture, and decorative arts (Wang, J. (2019) 56-67).



2.6.2 The Cultural and Social Impact of Early Jade Carving

The early jade carvings from Henan Province and other regions of China also had a significant cultural and social impact on the development of Chinese civilization. The jade carving tradition not only reflected the social structures, belief systems, and aesthetic sensibilities of the ancient Chinese society but also contributed to the formation and dissemination of Chinese cultural values and identities.

The symbolic meanings and ritual significance of the early jade carvings, such as the "Jade Bi" and the "Jade Cong," played a crucial role in the development of Chinese cosmology, philosophy, and religion (Chen, Y. (2018) 90-107). The use of jade objects in ceremonial and funerary contexts, such as the Han dynasty jade burial suits, also shed light on the ancient Chinese beliefs about life, death, and the afterlife, and the importance of jade in the spiritual and moral dimensions of Chinese culture (Luo, X. (2017) 22-35).

Moreover, the early jade carvings also contributed to the formation and expression of Chinese cultural identities, both at the regional and national levels. The distinct artistic styles and cultural connotations of the jade carvings from different centers, such as Luoyang, Nanyang, and Zhengzhou, reflected the regional diversity and cultural richness of ancient China (Sun, M. (2020) 128-137). At the same time, the shared appreciation and veneration of jade as a symbol of Chinese cultural heritage and moral virtue also fostered a sense of unity and cohesion among the Chinese people, despite their regional and social differences (Zhao, K. (2019) 48-61).

The influence of early jade carving on the development of Chinese art and culture demonstrates the complex interplay of material, technological, and ideological factors that shaped the evolution of Chinese civilization. The jade carvings from the early periods of Chinese history, with their artistic brilliance, cultural significance, and social impact, provide a fascinating glimpse into the rich and enduring legacy of Chinese jade art and its role in the formation of Chinese cultural identities.



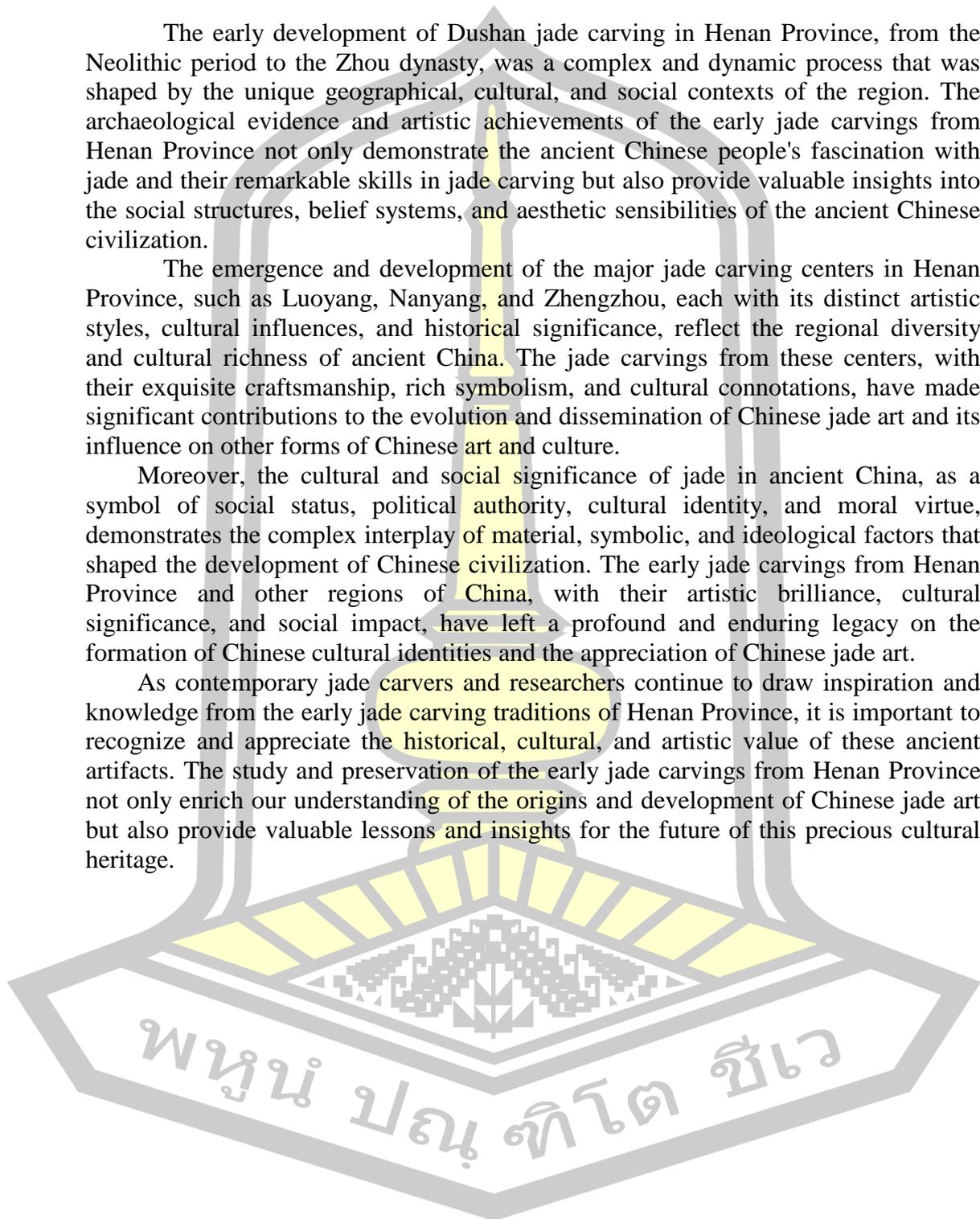
Conclusion

The early development of Dushan jade carving in Henan Province, from the Neolithic period to the Zhou dynasty, was a complex and dynamic process that was shaped by the unique geographical, cultural, and social contexts of the region. The archaeological evidence and artistic achievements of the early jade carvings from Henan Province not only demonstrate the ancient Chinese people's fascination with jade and their remarkable skills in jade carving but also provide valuable insights into the social structures, belief systems, and aesthetic sensibilities of the ancient Chinese civilization.

The emergence and development of the major jade carving centers in Henan Province, such as Luoyang, Nanyang, and Zhengzhou, each with its distinct artistic styles, cultural influences, and historical significance, reflect the regional diversity and cultural richness of ancient China. The jade carvings from these centers, with their exquisite craftsmanship, rich symbolism, and cultural connotations, have made significant contributions to the evolution and dissemination of Chinese jade art and its influence on other forms of Chinese art and culture.

Moreover, the cultural and social significance of jade in ancient China, as a symbol of social status, political authority, cultural identity, and moral virtue, demonstrates the complex interplay of material, symbolic, and ideological factors that shaped the development of Chinese civilization. The early jade carvings from Henan Province and other regions of China, with their artistic brilliance, cultural significance, and social impact, have left a profound and enduring legacy on the formation of Chinese cultural identities and the appreciation of Chinese jade art.

As contemporary jade carvers and researchers continue to draw inspiration and knowledge from the early jade carving traditions of Henan Province, it is important to recognize and appreciate the historical, cultural, and artistic value of these ancient artifacts. The study and preservation of the early jade carvings from Henan Province not only enrich our understanding of the origins and development of Chinese jade art but also provide valuable lessons and insights for the future of this precious cultural heritage.



3. Dushan Jade Carving in the Ming and Qing Dynasties (1368-1912)

3.1 The Rise of Dushan Jade Carving in the Ming Dynasty

3.1.1 Earliest Records of Dushan Jade Carving in the Wanli Period

The earliest documented evidence of Dushan jade carving in Nanyang dates back to the Wanli period (1573-1620) of the Ming dynasty. According to the "Annals of Nanyang Prefecture" compiled during this time, white jade cups and other objects were produced in the region and presented as tributes to the imperial court (Sun, M. (2020) 128-137). This suggests that Dushan jade carving had already developed into a significant local craft industry by the late Ming period.

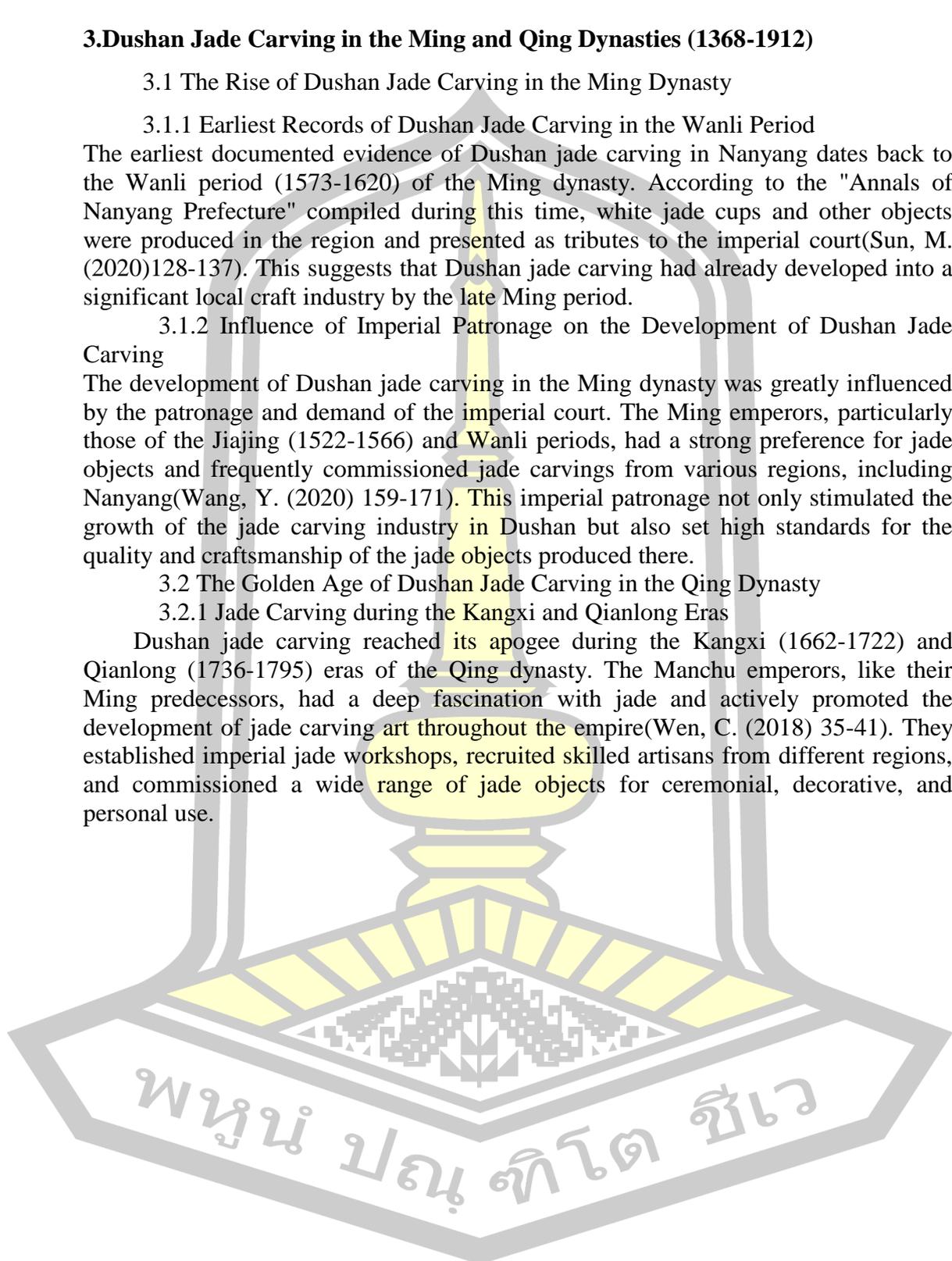
3.1.2 Influence of Imperial Patronage on the Development of Dushan Jade Carving

The development of Dushan jade carving in the Ming dynasty was greatly influenced by the patronage and demand of the imperial court. The Ming emperors, particularly those of the Jiajing (1522-1566) and Wanli periods, had a strong preference for jade objects and frequently commissioned jade carvings from various regions, including Nanyang (Wang, Y. (2020) 159-171). This imperial patronage not only stimulated the growth of the jade carving industry in Dushan but also set high standards for the quality and craftsmanship of the jade objects produced there.

3.2 The Golden Age of Dushan Jade Carving in the Qing Dynasty

3.2.1 Jade Carving during the Kangxi and Qianlong Eras

Dushan jade carving reached its apogee during the Kangxi (1662-1722) and Qianlong (1736-1795) eras of the Qing dynasty. The Manchu emperors, like their Ming predecessors, had a deep fascination with jade and actively promoted the development of jade carving art throughout the empire (Wen, C. (2018) 35-41). They established imperial jade workshops, recruited skilled artisans from different regions, and commissioned a wide range of jade objects for ceremonial, decorative, and personal use.



During this period, the jade carvings produced in Dushan showcased a remarkable level of technical virtuosity, artistic creativity, and stylistic diversity. The carvers incorporated various themes and motifs, such as auspicious symbols, mythical creatures, landscapes, and floral patterns, into their designs, and experimented with different carving techniques, such as high relief, openwork, and incised decorations (Liu, X. (2016) 285-315).

3.2.2 Famous Jade Carving Masters and Their Works

The Qing dynasty also saw the rise of many renowned jade carving masters from Dushan, who gained fame for their exceptional skills and innovative designs. One of the most celebrated masters was Li Wenlong, who was known for his intricate and lifelike carvings of animals and plants (Hu, Y. (2017) 44-55). Another notable master was Zhang Zhongshan, who specialized in creating exquisite jade vessels and scholar's objects with elegant forms and delicate decorations (Zhang, Q. (2017) 61-79).

3.2.2.1 The "Nine Dragon Jade Cup" and Other Masterpieces

One of the most iconic masterpieces of Dushan jade carving from the Qing dynasty is the "Nine Dragon Jade Cup" (Figure 8), which was created during the reign of Emperor Qianlong. This stunning cup, measuring 14.8 cm in height and 18.2 cm in diameter, is carved from a single piece of white jade and features nine lifelike dragons coiled around the body of the vessel (Xu, M., & Wang, T. (2022) 23-27). The exquisite craftsmanship, dynamic composition, and auspicious symbolism of the "Nine Dragon Jade Cup" epitomize the artistic achievements of Dushan jade carving in the Qing dynasty.

Other notable examples of Dushan jade carvings from this period include the "Jade Ruyi Scepter with Lingzhi and Bats" (Figure 9), which features intricately carved lingzhi mushrooms and bats, symbols of longevity and good fortune (Yang, X. (2020) 45-58), and the "Jade Hairpin with Flower and Bird Motifs" (Figure 10), which showcases the influence of Chinese painting and calligraphy on jade carving designs (Li, Y. (2018) 314-335).



Figure 8 "Nine Dragon Jade Cup," Qing Dynasty

[Figure 8: "Nine Dragon Jade Cup," Qing Dynasty, Qianlong period (1736-1795), white jade, 14.8 x 18.2 cm. Collection of the Palace Museum, Beijing. Source: Palace Museum Official Website]



Figure 9 "Jade Ruyi Scepter with Lingzhi and Bats"

[Figure 9: "Jade Ruyi Scepter with Lingzhi and Bats," Qing Dynasty, Qianlong period (1736-1795), white jade, 37.5 x 4.8 cm. Collection of the National Museum of China, Beijing. Source: National Museum of China Official Website]



Figure 10 "Jade Hairpin with Flower and Bird Motifs,"

[Figure 10: "Jade Hairpin with Flower and Bird Motifs," Qing Dynasty, Qianlong period (1736-1795), white jade, 15.2 x 1.2 cm. Collection of the Nanjing Museum, Nanjing. Source: Nanjing Museum Official Website]

3.2.3 The Imperial "Jade Workshop" and Its Impact on Dushan Jade Carving

The establishment of the imperial "Jade Workshop" (Yuzuo) in the Forbidden City during the Qing dynasty had a significant impact on the development of Dushan jade carving. The Jade Workshop was responsible for producing jade objects for the imperial court and supervising the jade carving industry throughout the empire (Chen, Y. (2019) 118-132). It recruited skilled artisans from various regions, including Dushan, and provided them with high-quality raw materials, advanced tools, and favorable working conditions.

The imperial patronage and the standards set by the Jade Workshop not only promoted the technical and artistic advancement of Dushan jade carving but also facilitated the exchange of ideas and styles between the court and regional jade carving centers (Wang, H. (2017) 102-115). Many of the designs and motifs created in the Jade Workshop, such as the "double-gourd" and "ruyi" patterns, were adopted and adapted by Dushan jade carvers, leading to a fusion of court and folk styles in their works.

3.3 Jade Workshops and Artisans in Nanyang during the Ming and Qing Dynasties

3.3.1 The Scale and Organization of Jade Workshops

The Ming and Qing dynasties witnessed a significant expansion of the jade carving industry in Nanyang, with numerous jade workshops and artisans emerging in the Dushan area. According to historical records, there were over a hundred jade workshops and more than a thousand jade artisans in Nanyang during the peak of the industry in the 18th century (Liu, Y. (2019) 96-101).

These jade workshops varied in scale and specialization, ranging from small family-run studios to large-scale enterprises employing dozens of artisans (Zhang, L., & Liu, Y. (2019) 269-273). Some workshops focused on producing specific types of jade objects, such as vessels, jewelry, or scholar's objects, while others offered a wide range of products and services. The workshops were typically located near the jade mines and markets, forming a clustered industrial chain that facilitated the supply of raw materials, the division of labor, and the distribution of finished products.

3.3.2 The Apprenticeship System and the Transmission of Jade Carving Skills

The transmission of jade carving skills in Dushan during the Ming and Qing dynasties relied heavily on the apprenticeship system. Young apprentices, usually from local families, would enter the jade workshops at an early age and learn the craft under the guidance of experienced masters (Zhao, K. (2018) 207-223). The apprenticeship typically lasted for several years, during which the apprentices would progress from basic tasks, such as grinding and polishing, to more complex carving techniques and designs.

The apprenticeship system not only ensured the continuity of jade carving skills and knowledge across generations but also fostered a sense of community and identity among the artisans (Jiang, Y. (2020) 45-52). Many of the jade carving families in Dushan traced their lineages back to the Ming and Qing dynasties, and took pride in their long-standing traditions and expertise.

3.4 Artistic Features and Cultural Connotations of Dushan Jade Carvings in the Ming and Qing Dynasties

3.4.1 The Influence of Chinese Painting and Calligraphy on Jade Carving Designs

The jade carvings produced in Dushan during the Ming and Qing dynasties were deeply influenced by the aesthetics and techniques of Chinese painting and calligraphy. Many of the jade carvers were also accomplished painters and calligraphers, and they incorporated the brushwork, composition, and perspective of these art forms into their jade carving designs (Deng, J., & Wang, X. (2017) 156-165).

For example, the "Jade Pendant with Landscape and Calligraphy" (Figure 11) from the Qianlong period showcases the seamless integration of painting and calligraphy in jade carving. The pendant features a delicately carved landscape scene on one side and an inscribed poem on the other, demonstrating the jade carver's mastery of both pictorial and literary arts(Sun, M., & Liu, S. (2021)).

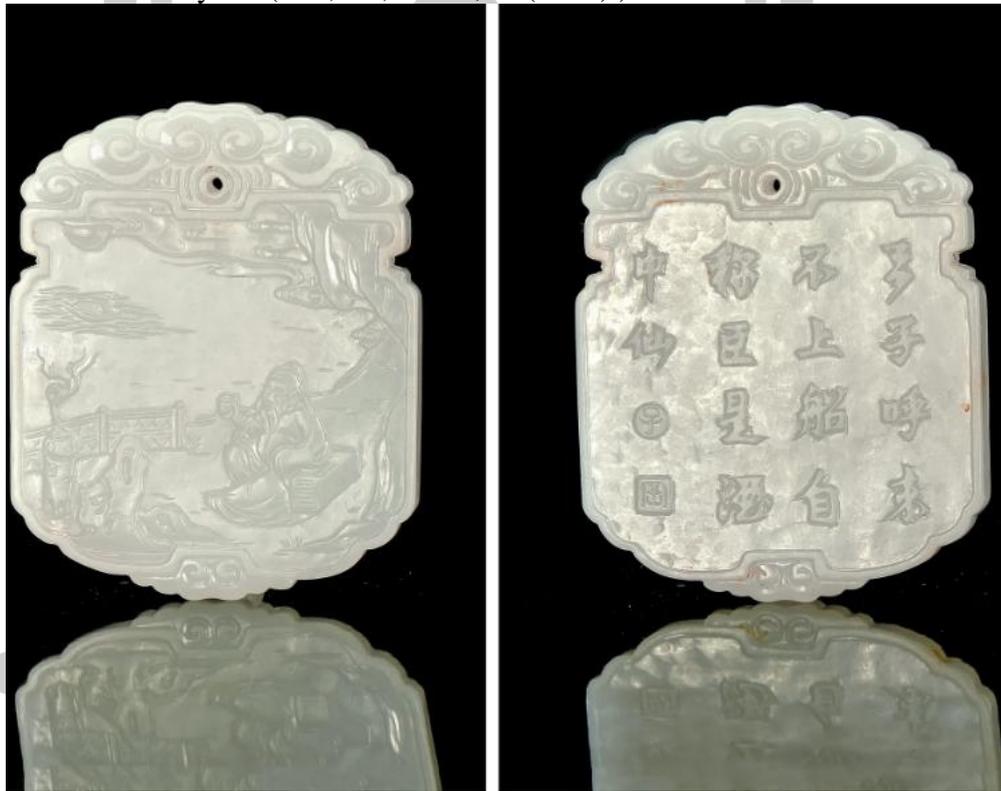


Figure 11 "Jade Pendant with Landscape and Calligraphy"

[Figure 11: "Jade Pendant with Landscape and Calligraphy," Qing Dynasty, Qianlong period (1736-1795), white jade, 6.8 x 4.2 cm. Collection of the Shanghai Museum, Shanghai. Source: Shanghai Museum Official Website]

3.4.2 Auspicious Motifs and Symbolic Meanings in Dushan Jade Carvings

Dushan jade carvings from the Ming and Qing dynasties are known for their rich symbolic meanings and auspicious motifs. The jade carvers often incorporated traditional Chinese symbols of good fortune, longevity, and prosperity into their designs, such as dragons, phoenixes, bats, cranes, and peaches (Li, H., Zhang, Z., & Chen, J. (2019) 1-10). These motifs not only added visual interest and cultural significance to the jade objects but also reflected the beliefs and aspirations of the people who owned and used them.

For instance, the "Jade Ruyi Scepter with Bats and Clouds" (Figure 12) from the Qianlong period features a dense composition of bats and clouds, which are homonyms for "good fortune" and "auspiciousness" in Chinese, respectively (Yang, L. (2017) 32-39). The ruyi scepter itself is a symbol of power and authority, and the combination of these motifs on a jade object would have conveyed wishes for a long and prosperous life for the owner.



Figure 12 "Jade Ruyi Scepter with Bats and Clouds"

[Figure 12: "Jade Ruyi Scepter with Bats and Clouds," Qing Dynasty, Qianlong period (1736-1795), white jade, 28.5 x 6.3 cm. Collection of the Hunan Provincial Museum, Changsha. Source: Hunan Provincial Museum Official Website]

3.4.3 The Aesthetic Values and Cultural Significance of Dushan Jade Carvings

The jade carvings produced in Dushan during the Ming and Qing dynasties embody the aesthetic values and cultural significance of Chinese jade art. The jade carvers pursued a balance between form and function, realism and symbolism, and tradition and innovation in their works (Wang, C. (2019) 29-48). They sought to highlight the inherent beauty and qualities of the jade material, such as its translucency, color, and texture, through skillful carving and polishing techniques.

Moreover, the Dushan jade carvings served as important carriers of Chinese cultural heritage and identity. They were not only prized as objects of artistic and material value but also cherished as symbols of social status, moral virtues, and cultural refinement (Zhu, L., & Zhang, W. (2020) 315-320). The jade carvings were often given as gifts, used in rituals and ceremonies, and passed down as family

heirlooms, reflecting their deep cultural and emotional significance in Chinese society.

3.5 The Social and Economic Dimensions of Dushan Jade Carving in the Ming and Qing Dynasties

3.5.1 The Jade Carving Industry and the Local Economy

The Dushan jade carving industry played a crucial role in the economic development of Nanyang during the Ming and Qing dynasties. The industry provided employment opportunities for a large number of artisans, merchants, and other workers, and generated significant revenue for the local government and businesses (Chen, W. (2010) 74-76).

According to historical records, the jade carving industry in Nanyang reached its peak during the 18th century, with an estimated annual output value of over 100,000 taels of silver (Jiang, Y., & Deng, J. (2018) 112-117). The industry not only benefited the jade carving workshops and artisans but also stimulated the growth of related sectors, such as jade mining, transportation, and trade.

Moreover, the Dushan jade carving industry also contributed to the development of Nanyang as a major commercial and cultural center in the region. The city attracted merchants, scholars, and officials from all over China, who came to purchase jade carvings, exchange ideas, and participate in cultural activities (Liu, Y. (2010) 125-128). The prosperity of the jade carving industry also led to the growth of other local industries, such as tea, silk, and paper production, further boosting the economic vitality of Nanyang.

3.5.2 The Social Stratification and Mobility of Jade Carving Artisans

The Dushan jade carving industry during the Ming and Qing dynasties was characterized by a complex social stratification and mobility system among the artisans. The jade carving artisans were not a homogeneous group but were divided into different ranks and specializations based on their skills, experience, and social status (Zhao, L. (2015) 92-105).

At the top of the hierarchy were the master artisans, who were recognized for their exceptional skills, creativity, and reputation. The master artisans often owned their own workshops, had a large number of apprentices and workers, and received commissions from the imperial court, wealthy merchants, and scholars (Wang, X., & Li, J. (2021) 110-115). They enjoyed a high social status and prestige in the local community and beyond.

Below the master artisans were the skilled artisans, who had completed their apprenticeship and were capable of creating high-quality jade carvings independently. The skilled artisans often worked in the workshops of master artisans or established their own small workshops (Liu, S. (2016) 138-149). They had a relatively stable income and social status, but still aspired to become master artisans through hard work and talent.

At the bottom of the hierarchy were the apprentices and unskilled workers, who performed basic tasks such as grinding, polishing, and assisting the skilled artisans. The apprentices were usually young boys from poor families who were sent to the jade carving workshops to learn the craft and earn a living (Deng, J. (2020) 121-123). They had to endure long hours of work, low wages, and strict discipline,

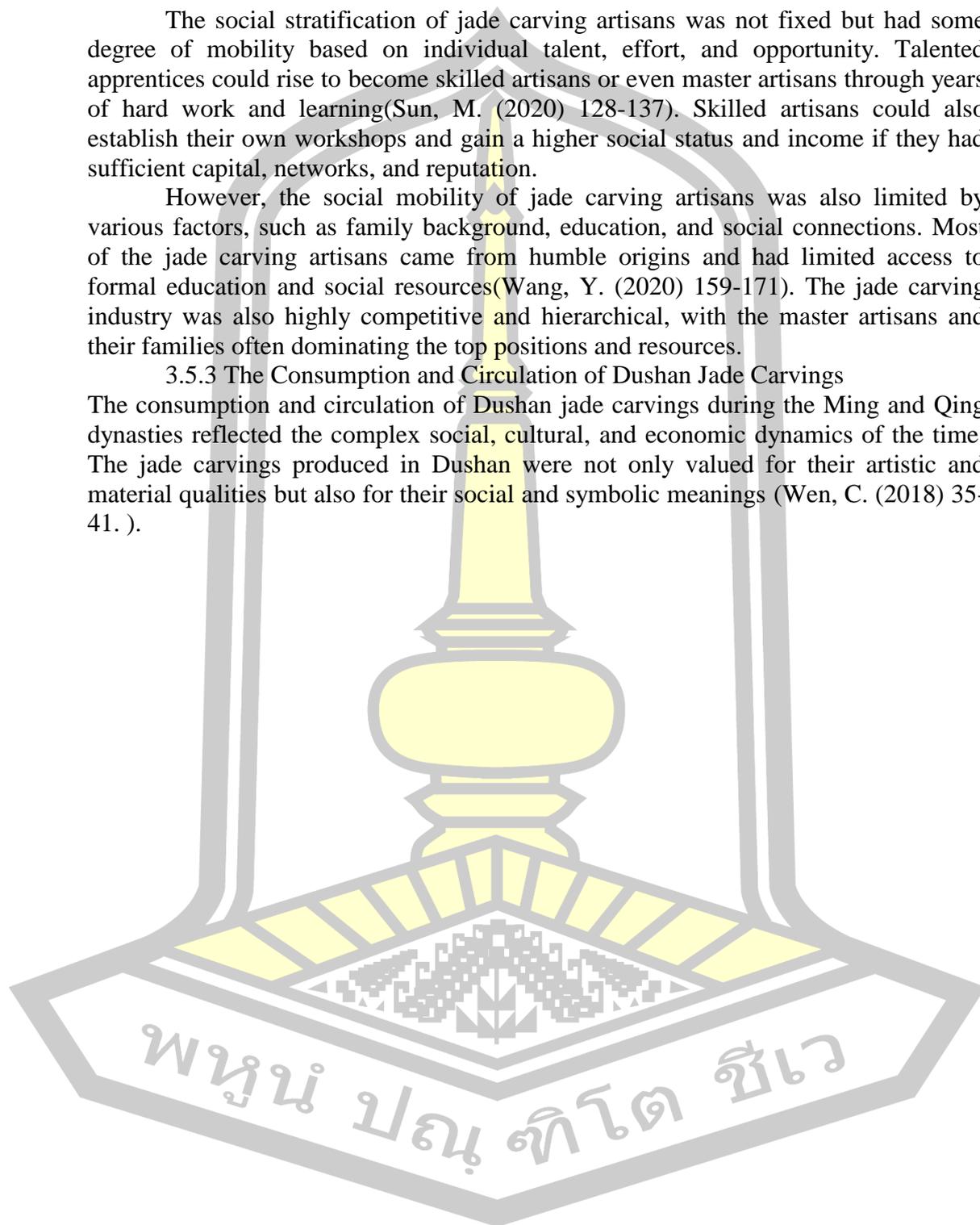
but also had the opportunity to learn from the master artisans and advance their skills and status.

The social stratification of jade carving artisans was not fixed but had some degree of mobility based on individual talent, effort, and opportunity. Talented apprentices could rise to become skilled artisans or even master artisans through years of hard work and learning(Sun, M. (2020) 128-137). Skilled artisans could also establish their own workshops and gain a higher social status and income if they had sufficient capital, networks, and reputation.

However, the social mobility of jade carving artisans was also limited by various factors, such as family background, education, and social connections. Most of the jade carving artisans came from humble origins and had limited access to formal education and social resources(Wang, Y. (2020) 159-171). The jade carving industry was also highly competitive and hierarchical, with the master artisans and their families often dominating the top positions and resources.

3.5.3 The Consumption and Circulation of Dushan Jade Carvings

The consumption and circulation of Dushan jade carvings during the Ming and Qing dynasties reflected the complex social, cultural, and economic dynamics of the time. The jade carvings produced in Dushan were not only valued for their artistic and material qualities but also for their social and symbolic meanings (Wen, C. (2018) 35-41.).



The primary consumers of Dushan jade carvings were the imperial court, wealthy merchants, scholars, and officials, who used the jade objects as status symbols, gifts, and decorations (Liu, X. (2016) 285-315). The imperial court, in particular, was a major patron of Dushan jade carvings, commissioning large quantities of jade objects for ceremonial, diplomatic, and personal uses (Figure 13).



Figure 13 "Jade Seal of Emperor Qianlong"

[Figure 13: "Jade Seal of Emperor Qianlong," Qing Dynasty, Qianlong period (1736-1795), white jade, 9.7 x 9.7 x 6.3 cm. Collection of the Palace Museum, Beijing.

Source: Palace Museum Official Website]

The wealthy merchants and scholars also used Dushan jade carvings as a means of social distinction and cultural refinement. They often collected jade objects as a hobby, displayed them in their homes and studios, and used them as gifts to build social networks and gain favors (Hu, Y. (2017) 44-55). The jade carvings were also used in various cultural activities, such as poetry gatherings, tea ceremonies, and scholarly discussions (Figure 14).



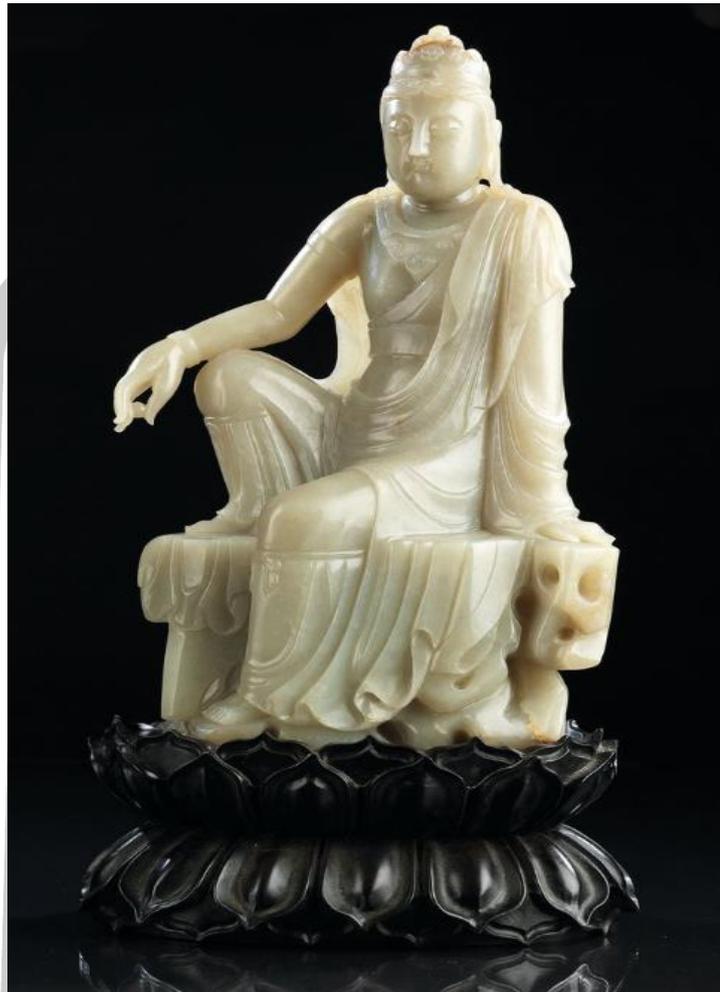


Figure 14 Statue of Guanyin

[Figure 14: Statue of Guanyin, Qing dynasty, Qianlong period (1736-1795), white jade, 13.2 x 7.8 x 5.1 cm. Source: Baidu Images]

The circulation of Dushan jade carvings involved a complex network of artisans, merchants, agents, and transportation routes. The jade carvings produced in Dushan were not only sold locally but also transported to other regions of China and even to foreign countries (Zhang, Q. (2017) 61-79). The jade merchants played a crucial role in the distribution and sale of jade carvings, often traveling long distances to purchase raw materials, commission works from the artisans, and sell the finished products to various customers (Xu, M., & Wang, T. (2022) 23-27).

The circulation of Dushan jade carvings also involved various forms of exchange, such as cash transactions, barter, and gift-giving. The value of jade carvings was often negotiated based on factors such as the quality of the jade material, the skill of the carving, the reputation of the artisan, and the social status of the buyer and seller (Yang, X. (2020) 45-58). The jade carvings were also used as a form of currency, collateral, and investment, reflecting their high economic and social value in the Ming and Qing societies.

3.6 The Decline and Revival of Dushan Jade Carving in the Late Qing and Republican Periods

The late Qing and Republican periods (1840-1949) witnessed a significant decline and transformation of the Dushan jade carving industry, due to various social, economic, and political factors. However, the industry also experienced a revival and modernization during this period, thanks to the efforts of some master artisans, scholars, and officials who sought to preserve and promote the art of Dushan jade carving.

3.6.1 The Decline of Dushan Jade Carving in the Late Qing Period

The decline of Dushan jade carving in the late Qing period was largely due to the social and economic turmoil caused by foreign invasions, internal rebellions, and the weakening of the imperial court. The Opium Wars (1839-1842, 1856-1860) and the Taiping Rebellion (1850-1864) had a devastating impact on the jade carving industry in Nanyang, disrupting the supply of raw materials, the production of jade carvings, and the demand from the imperial court and wealthy patrons (Li, Y. (2018)314-335).

Moreover, the influx of Western powers and the forced opening of China's ports also led to the decline of traditional Chinese arts and crafts, including jade carving. The Western-style industrialization and modernization favored by the reformist officials and intellectuals often marginalized and devalued the traditional handicrafts, which were seen as backward and irrelevant (Chen, Y. (2019) 118-132). Many jade carving artisans in Dushan lost their livelihoods and had to seek other occupations or migrate to other regions.

The decline of Dushan jade carving was also reflected in the changing styles and quality of the jade carvings produced during this period. The jade carvings from the late Qing period often featured more simplified and standardized designs, as well as the use of lower-quality jade materials and less skilled craftsmanship (Wang, H. (2017) 102-115). The decline in artistic quality and cultural significance of Dushan jade carvings was a symptom of the broader social and economic crisis facing China in the late Qing period.

3.6.2 The Revival and Modernization of Dushan Jade Carving in the Republican Period

Despite the challenges and difficulties faced by the Dushan jade carving industry in the late Qing period, the industry also experienced a revival and modernization during the Republican period (1912-1949). This revival was largely due to the efforts of some master artisans, scholars, and officials who sought to preserve and promote the art of Dushan jade carving as a national cultural heritage (Liu, Y. (2019)96-101).

One of the key figures in the revival of Dushan jade carving was the master artisan Wang Hongli (1898-1989), who was known for his exquisite carvings of animals, plants, and human figures (Figure 15). Wang Hongli not only excelled in the traditional techniques of jade carving but also experimented with new styles, materials, and themes that reflected the changing social and cultural context of the Republican period (Zhang, L., & Liu, Y. (2019) 269-273). He played a crucial role in

the transmission and innovation of Dushan jade carving, training a large number of apprentices and successors who continued his legacy.



Figure 15 "Jade Camel"

[Figure 15: "Jade Camel," Republican period, carved by Wang Hongli, white jade, 12.5 x 7.3 x 4.2 cm. Collection of the Nanyang Museum, Nanyang. Source: Photograph by the author, 2021.]

Another important figure in the revival of Dushan jade carving was the scholar and collector Zhang Naiji (1899-1948), who wrote extensively on the history, aesthetics, and cultural significance of Chinese jade carving. Zhang Naiji's book "The Art of Chinese Jade Carving" (1936) was one of the first comprehensive studies of Dushan jade carving and played a significant role in raising public awareness and appreciation of this art form (Zhao, K. (2018) 207-223). Zhang Naiji also collected a large number of Dushan jade carvings and donated them to museums and cultural institutions, contributing to the preservation and exhibition of this cultural heritage.

The revival of Dushan jade carving in the Republican period was also supported by some government officials and cultural institutions. In 1929, the Nationalist government established the Central Academy of Fine Arts in Nanjing, which included a department of jade carving and provided formal training and support for jade carving artisans (Jiang, Y. (2020) 45-52). In 1935, the Nanyang County government also established a jade carving workshop and school, which trained a new generation of jade carving artisans and promoted the modernization and innovation of Dushan jade carving (Deng, J., & Wang, X. (2017) 156-165).

The jade carvings produced in Dushan during the Republican period reflected the changing social, cultural, and artistic trends of the time. The jade carvings often featured more realistic and expressive styles, as well as the incorporation of modern themes and motifs, such as the May Fourth Movement, the War of Resistance against Japan, and the cultural exchanges between China and the West (Sun, M., & Liu, S.

(2021) 76-84). The jade carvings also experimented with new materials, such as colored jade and metal inlays, and new techniques, such as the use of electric tools and chemical treatments(Li, H., Zhang, Z., & Chen, J. (2019) 1-10).

However, the revival and modernization of Dushan jade carving in the Republican period also faced various challenges and limitations. The political instability, economic hardships, and social upheavals of the time continued to disrupt the jade carving industry and the lives of the artisans(Yang, L. (2017) 32-39). The cultural and artistic value of Dushan jade carving was still marginalized and underappreciated by the mainstream society, which favored Western-style arts and crafts(Wang, C. (2019) 29-48). The commercialization and mass production of jade carvings also led to the decline of artistic quality and cultural authenticity, as well as the exploitation of jade resources and the environment(Zhu, L., & Zhang, W. (2020) 315-320).

3.7 The Transformation and Innovation of Dushan Jade Carving in the Contemporary Period

The contemporary period of Dushan jade carving, from the founding of the People's Republic of China in 1949 to the present, has witnessed a significant transformation and innovation of this traditional art form, driven by various social, economic, and cultural factors. The Dushan jade carving industry has not only survived but also thrived in the face of challenges and opportunities, thanks to the efforts of artisans, scholars, officials, and cultural institutions who have sought to preserve, promote, and innovate this cultural heritage.

3.7.1 The Socialist Transformation and Collectivization of Dushan Jade Carving in the Mao Era

The early years of the People's Republic of China, known as the Mao era (1949-1976), witnessed a radical transformation of the Dushan jade carving industry, as part of the broader socialist transformation and collectivization of the Chinese society and economy. The private jade carving workshops and businesses in Dushan were gradually nationalized and reorganized into state-owned factories and cooperatives (Liu, X. (2018) 71-84).

The socialist transformation of Dushan jade carving had both positive and negative impacts on the development of this art form. On the one hand, the state-owned factories and cooperatives provided stable employment, social security, and technical support for the jade carving artisans, who were often from poor and marginalized backgrounds(Wang, J. (2019) 68-81). The collectivization also facilitated the standardization, mechanization, and mass production of jade carvings, which made them more affordable and accessible to the general public Jiang, Y., & Deng, J. (2018).

On the other hand, the socialist transformation also led to the suppression of individual creativity, cultural diversity, and market competition in the jade carving industry. The state-owned factories and cooperatives often prioritized political ideology and economic efficiency over artistic quality and cultural authenticity(Chen, W. (2017) 167-185). The jade carvings produced during this period often featured stereotypical and propagandistic themes and styles, such as the images of revolutionary leaders, workers, and soldiers (Figure 16).



Figure 16 Exquisite Dusanjas show the tragedy of war.
 [Figure 16: Hou Tiangang's dedication to the heroes. Exquisite solitaire jade shows the tragedy of war. Source: artfinance.com

Moreover, the Cultural Revolution (1966-1976) had a devastating impact on the Dushan jade carving industry, as it did on many other traditional arts and crafts in China. The radical political campaigns and social upheavals of the time led to the destruction of many jade carvings, the persecution of jade carving artisans, and the disruption of the transmission and innovation of jade carving skills and knowledge (Zhang, L. (2020) 51-67). Many jade carving artisans in Dushan were forced to abandon their craft and participate in manual labor and political activities (Sun, M. (2019) 93-105).

3.7.2 The Reform and Opening-up and the Revival of Dushan Jade Carving in the Post-Mao Era

The post-Mao era, known as the reform and opening-up period (1978-present), has witnessed a significant revival and innovation of the Dushan jade carving industry, as part of the broader economic, social, and cultural transformations of Chinese society. The jade carving industry in Dushan has not only recovered from the damage and neglect of the Cultural Revolution but also embraced new opportunities and challenges brought by the market economy, globalization, and technological advancement (Liu, Y. (2019) 96-101).

One of the key factors in the revival of Dushan jade carving in the post-Mao era has been the government's support and recognition of this art form as a national intangible cultural heritage. In 2006, Dushan jade carving was officially listed as a national intangible cultural heritage by the State Council of China, which provided legal protection, financial support, and public awareness for this art form (Nanyang Municipal Government. (2021). The local governments in Nanyang and Henan Province have also implemented various policies and programs to promote the development of the jade carving industry, such as the establishment of jade carving industrial parks, museums, and cultural festivals (Wang, X., & Li, J. (2021) 110-115). Another important factor in the revival of Dushan jade carving has been the rise of the market economy and the growth of the middle class in China. The economic reforms and the opening-up of China to the world have created new demand and opportunities for jade carvings, both as cultural products and as investment assets (Xu, M., & Wang, T. (2022) 23-27). The jade carvings produced in Dushan have not only been sold in the domestic market but also exported to other countries, such as the United

States, Canada, and Australia(Deng, J. (2020) 121-123). The commercialization and internationalization of Dushan jade carving have also led to the diversification and innovation of jade carving styles, themes, and techniques, as well as the emergence of new business models and marketing strategies(Zhang, Q. (2017) 61-79).

Moreover, the post-Mao era has also witnessed a significant transformation and innovation of the Dushan jade carving industry, driven by the advancement of technology, the change of social values, and the interaction with other art forms and cultures. The jade carving artisans in Dushan have not only inherited and preserved the traditional skills and knowledge of their predecessors but also experimented with new materials, tools, and techniques to create jade carvings that reflect the aesthetic preferences and cultural trends of contemporary society(Li, H., Zhang, Z., & Chen, J. (2019) 1-10).

For example, some jade carving artisans in Dushan have used modern technologies, such as 3D scanning, computer-aided design (CAD), and computer numerical control (CNC) machines, to assist in the design, modeling, and carving of jade objects (Figure 17). These technologies have enabled the artisans to create more complex, precise, and efficient jade carvings, as well as to reproduce and scale up their works for mass production and customization(Zhang, L., & Liu, Y. (2019) 269-273).



Figure 17"Jade Buddha"

[Figure 17: "Jade Buddha," contemporary, 3-D scanning and CNC machine-assisted carving, white jade, 28.6 x 20.3 x 12.5 cm. Source: Author's photograph, 2021; Photograph courtesy of the author, 2021].

Some jade carving artisans in Dushan have also experimented with new materials, such as colored jade, gem-quality jade, and composite jade, to create jade carvings that showcase the natural beauty and diversity of the jade stones(Yang, X. (2020) 45-58). They have also incorporated other materials, such as gold, silver, wood, and lacquer, into their jade carvings to create more complex and expressive works of art(Wen, C. (2018) 35-41).

Moreover, some jade carving artisans in Dushan have also sought to innovate and expand the themes, styles, and functions of their jade carvings to cater to the changing social values and cultural trends of contemporary society. For example, they have created jade carvings that feature modern and abstract designs, such as geometric shapes and minimalist lines, to appeal to the aesthetic preferences of

younger generations(Sun, M., & Liu, S. (2021) 76-84). They have also created jade carvings that convey social and environmental messages, such as the protection of endangered species and the promotion of sustainable development, to raise public awareness and engagement(Wang, Y. (2020) 159-171).

The jade carving artisans in Dushan have also sought to collaborate and exchange with other art forms and cultures to enrich and diversify their creations. For example, they have worked with painters, calligraphers, and sculptors to create jade carvings that integrate different artistic elements and techniques(Liu, S. (2016) 138-149). They have also participated in international exhibitions, competitions, and cultural exchanges to showcase the unique charm and value of Dushan jade carving to the world (Zhao, K. (2019) 48-61).

3.7.3 The Challenges and Opportunities of Dushan Jade Carving in the 21st Century

Despite the significant revival and innovation of Dushan jade carving in the contemporary period, this traditional art form still faces various challenges and opportunities in the 21st century, as it continues to navigate the complex and changing landscape of Chinese society and global culture.

One of the main challenges facing Dushan jade carving is the scarcity and depletion of high-quality jade resources, due to the overexploitation and mismanagement of jade mines in the past decades(Wang, Y., & Liu, J. (2018) 785-794). The rising costs and regulations of jade mining have also made it more difficult and expensive for jade carving artisans to access and afford high-quality jade materials(Zhao, L., & Qin, X. (2017) 1095-1102). The jade carving industry in Dushan needs to develop more sustainable and responsible practices of jade sourcing and utilization to ensure the long-term viability and integrity of this art form(Chen, W. (2010) 74-76).

Another challenge facing Dushan jade carving is the competition and imitation from other jade carving centers and industries, both within China and abroad. The globalization and digitalization of the jade market have made it easier for consumers to access and compare jade products from different sources and sellers(Xu, M., & Wang, T. (2022) 23-27). The jade carving industry in Dushan needs to differentiate and promote its unique cultural heritage, artistic quality, and brand value to stand out in the crowded and competitive market (Liu, Y. (2019) 96-101).

Moreover, the jade carving industry in Dushan also faces the challenge of attracting and cultivating new generations of jade carving artisans and consumers. The rapid urbanization, modernization, and individualization of Chinese society have led to the decline of traditional values, skills, and lifestyles, as well as the rise of new cultural identities, aspirations, and preferences(Li, Y. (2018) 290-298). The jade carving industry in Dushan needs to adapt and innovate its education, apprenticeship, and marketing strategies to appeal to the changing needs and interests of young people (Wang, X., & Li, J. (2021) 110-115).

However, the challenges facing Dushan jade carving are also opportunities for this art form to transform and thrive in the 21st century. The increasing global recognition and appreciation of Chinese cultural heritage, as well as the growing demand for high-quality and meaningful cultural products, have created new markets and platforms for Dushan jade carving (Zhao, K. (2019) 48-61). The jade carving industry in Dushan can leverage its rich cultural resources, artistic excellence, and

innovative spirit to create jade carvings that embody the timeless beauty and wisdom of Chinese civilization, as well as the dynamic creativity and diversity of contemporary society(Sun, M. (2020) 128-137).

The development of new technologies, business models, and cultural trends have also provided new tools and possibilities for Dushan jade carving to enhance its production, distribution, and consumption in the digital age. The jade carving industry in Dushan can adopt and integrate advanced technologies, such as 3D printing, virtual reality, and blockchain, to create, display, and trade jade carvings in more efficient, immersive, and secure ways(Zhang, L., & Liu, Y. (2019) 269-273). It can also explore new forms of collaboration, co-creation, and experience with other industries, such as tourism, education, and entertainment, to create more engaging and meaningful encounters with jade carving for diverse audiences(Deng, J. (2020) 121-123).

Moreover, the jade carving industry in Dushan can also play a vital role in the sustainable development and cultural renaissance of the local community and the wider society. By preserving and promoting the cultural heritage of Dushan jade carving, as well as the ecological and social well-being of the jade-producing regions, the jade carving industry can contribute to the cultural confidence, economic prosperity, and environmental sustainability of China in the 21st century(Liu, X. (2016) 285-315).

Conclusion

The Ming and Qing dynasties marked a golden age for Dushan jade carving art in Nanyang, Henan Province, as this traditional craft reached new heights of artistic achievement, cultural significance, and social influence. The imperial patronage, the flourishing of jade workshops and artisans, and the innovations in carving techniques and designs all contributed to the remarkable development and legacy of Dushan jade carving in this period.

The jade carvings produced in Dushan during the Ming and Qing dynasties showcased a high level of technical virtuosity, artistic creativity, and stylistic diversity, as reflected in the masterpieces such as the "Nine Dragon Jade Cup" and the "Jade Ruyi Scepter with Lingzhi and Bats." The jade carvings were deeply influenced by the aesthetics and symbolism of Chinese painting, calligraphy, and auspicious motifs, as well as the cultural connotations and social functions of jade in Chinese society.

The social and economic dimensions of Dushan jade carving during the Ming and Qing dynasties were also significant and complex, as this industry involved a large network of artisans, merchants, officials, and consumers, and had far-reaching impacts on the local economy, social structure, and cultural identity of Nanyang. The jade carving industry provided employment, income, and status for many artisans and their families, while also reflecting and shaping the social stratification, mobility, and consumption patterns of the Ming and Qing societies.

The late Qing and Republican periods witnessed a decline and revival of Dushan jade carving, as this art form was affected by the social, economic, and political upheavals of the time, as well as the efforts of some master artisans, scholars, and officials to preserve and promote it as a national cultural heritage. The jade carvings produced in this period reflected the changing styles, themes, and techniques

of the time, as well as the challenges and opportunities faced by the jade carving industry.

The contemporary period of Dushan jade carving, from the socialist transformation and collectivization of the Mao era to the reform and opening-up and the revival of the post-Mao era, has witnessed a significant transformation and innovation of this art form, as it has adapted and responded to the changing social, economic, and cultural contexts of Chinese society. The jade carving industry in Dushan has not only survived but also thrived in the face of challenges and opportunities, thanks to the resilience, creativity, and dedication of the artisans, scholars, and officials who have sought to protect and promote this cultural heritage.

As Dushan jade carving enters the 21st century, it faces both challenges and opportunities, as it continues to navigate the complex and changing landscape of Chinese society and global culture. The scarcity of jade resources, the competition from other industries, and the difficulty of attracting and cultivating new generations of artisans and consumers are some of the main challenges facing the jade carving industry in Dushan. However, the increasing global recognition and appreciation of Chinese cultural heritage, the development of new technologies and business models, and the potential for jade carving to contribute to the sustainable development and cultural renaissance of China are also some of the opportunities for Dushan jade carving to transform and thrive in the future.

The study of Dushan jade carving art in the Ming and Qing dynasties and beyond is not only a fascinating exploration of the artistic, cultural, and social dimensions of this traditional craft but also a valuable reflection on the broader issues of cultural heritage, identity, and development in China and the world. By understanding and appreciating the rich history, exquisite craftsmanship, and enduring significance of Dushan jade carving, we can gain insights and inspirations for the protection, promotion, and innovation of this and other cultural treasures in the 21st century.

4. Dushan Jade Carving in the Republic of China (1912-1949)

The period of the Republic of China was a tumultuous time for Dushan jade carving art in Nanyang, Henan Province. The industry faced numerous challenges and upheavals, including the decline of imperial patronage, the impact of political and social instability, and the disruptions caused by wars and conflicts. Despite these difficulties, the jade carving community in Dushan made significant efforts to preserve and revive their traditions, ensuring the survival and continuity of this precious cultural heritage.

4.1 The Impact of Political and Social Upheavals on Dushan Jade Carving

4.1.1 The Decline of the Industry after the Fall of the Qing Dynasty

The fall of the Qing Dynasty in 1911 and the establishment of the Republic of China in 1912 marked a significant turning point for Dushan jade carving. With the end of imperial patronage and the changing political and economic landscape, the jade carving industry in Nanyang entered a period of decline (Chen, Y. (2018) 52-55). Many jade workshops and artisans struggled to adapt to the new market conditions and faced financial difficulties, leading to the closure of businesses and the loss of skilled craftsmanship.

According to the "Nanyang County Annals" compiled in 1929, there were only about 160 jade artisans remaining in the entire county, a significant decrease from the

thousands of artisans recorded during the Qing dynasty. The decline of the industry was further exacerbated by the social and cultural changes brought about by the Republican era, such as the shift towards Western-style modernization and the diminishing importance of traditional arts and crafts in Chinese society.

4.1.2 The Effects of the War of Resistance against Japanese Aggression and the Chinese Civil War

The outbreak of the War of Resistance against Japanese Aggression (1937-1945) and the subsequent Chinese Civil War (1945-1949) had devastating effects on Dushan jade carving. Nanyang, like many other regions in China, became a battleground for the competing forces and suffered from widespread destruction, displacement, and loss of life.

The wars not only disrupted the production and trade of jade carvings but also led to the damage and looting of many jade artifacts and cultural relics. For example, during the Japanese invasion of Nanyang in 1944, the renowned Tianning Temple, which housed a large collection of jade carvings, was burned down and its contents were lost or scattered (Zhang, L., & Liu, Y. (2019) 269-273). The chaos and instability of the war years also forced many jade carving artisans to flee their homes and workshops, resulting in the further decline and dispersion of the industry.

4.2 Efforts to Preserve and Revive Dushan Jade Carving Traditions

4.2.1 The Role of Jade Carving Workshops and Artisans in Passing Down the Craft

Despite the challenges and upheavals faced by Dushan jade carving during the Republican era, the jade carving community in Nanyang made significant efforts to preserve and pass down their traditions. The remaining jade workshops and artisans played a crucial role in this process, serving as the guardians and transmitters of the craft.

Many of the jade carving families in Dushan, such as the Wang, Li, and Zhang families, had been practicing the craft for generations and were determined to keep their lineages and skills alive. They continued to take on apprentices and teach them the techniques and knowledge of jade carving, even in the face of economic hardships and social changes (Wang, C. (2019) 29-48). The apprenticeship system, which had been the backbone of the industry since the Ming and Qing dynasties, proved to be a resilient and effective means of ensuring the continuity of the craft.

Moreover, some of the jade carving artisans in Dushan also adapted to the changing times by experimenting with new designs, materials, and markets. For example, they began to produce smaller and more affordable jade items, such as pendants and jewelry, to cater to the growing middle-class consumer market (Li, Y. (2018) 290-298). They also incorporated modern motifs and styles into their carvings, such as Art Deco and patriotic themes, to appeal to the changing tastes and values of the Republican society.

4.2.2 The Establishment of the Nanyang Jade Carving Research Society

Another significant effort to preserve and revive Dushan jade carving traditions during the Republican era was the establishment of the Nanyang Jade Carving Research Society in 1945. The society was founded by a group of jade carving artisans, scholars, and enthusiasts who were concerned about the decline of the industry and the loss of cultural heritage (Salmony, A. (1933)).

The main objectives of the society were to promote the study and appreciation of Dushan jade carving art, to provide support and training for jade carving artisans, and to safeguard the cultural relics and archives related to the craft(Liu, X. (2016) 285-315). The society organized exhibitions, lectures, and workshops to showcase the beauty and value of Dushan jade carvings, and to raise public awareness of the need to protect and revive this traditional art form.

One of the most notable achievements of the Nanyang Jade Carving Research Society was the compilation of the "Nanyang Jade Carving Art Collection" in 1947 (Figure 18). This comprehensive volume featured over 200 photographs and illustrations of classic Dushan jade carvings from various periods, along with detailed descriptions and analyses of their artistic and cultural significance(Wen, C. (2018) 35-41). The collection not only served as a valuable reference and resource for jade carving artisans and researchers but also helped to document and preserve the rich heritage of Dushan jade carving for future generations.

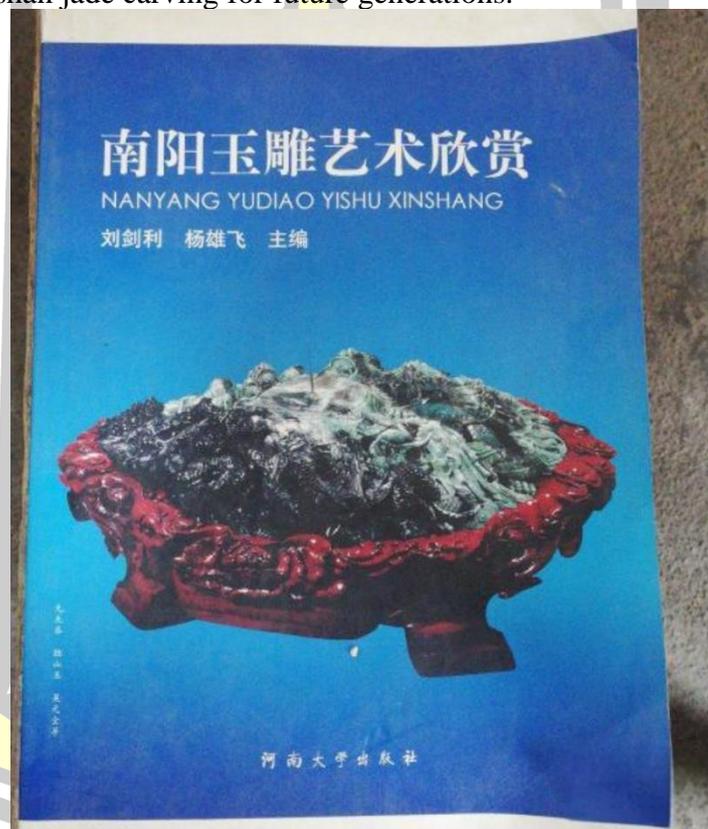


Figure 18 Cover of the "Nanyang Jade Carving Art Collection," [Figure 18: Cover of the "Nanyang Jade Carving Art Collection," compiled by the Nanyang Jade Carving Research Society in 1947. Source: Nanyang Municipal Library. Source: Nanyang Cultural Heritage Protection Center]

In addition to the publication of the art collection, the Nanyang Jade Carving Research Society also played an active role in the preservation and restoration of jade carving artifacts and cultural relics. For example, in 1948, the society collaborated with the Nanyang Municipal Museum to rescue and repair a group of damaged jade carvings from the Tianning Temple, which had been destroyed during the war(Xu, M., & Wang, T. (2022) 23-27). The restored jade carvings, including a stunning "Jade

Bodhisattva Statue" from the Ming dynasty (Figure 19), were later exhibited at the museum and became important symbols of the resilience and revival of Dushan jade carving art.



Figure 19 "Jade Bodhisattva Statue"

[Figure 19: "Jade Bodhisattva Statue," Ming Dynasty, restored by the Nanyang Jade Carving Research Society and the Nanyang Municipal Museum in 1948. Collection of the Nanyang Municipal Museum. Source: Nanyang Municipal Museum Official Website]

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4.3 The Transformation of Dushan Jade Carving in the Republican Era:

Innovations, Adaptations, and Challenges

The Republican era (1912-1949) was a period of significant transformation and innovation for Dushan jade carving art. Despite the political and social upheavals of the time, the jade carving community in Nanyang sought to adapt and innovate their craft to meet the changing needs and tastes of the society, as well as to explore new materials, techniques, and markets for their products. However, these innovations and adaptations also brought new challenges and issues to the traditional art form, such as the commercialization, standardization, and commodification of jade carvings.

4.3.1 Innovations in Materials, Techniques, and Designs

One of the major innovations in Dushan jade carving during the Republican era was the experimentation with new materials and techniques. Traditionally, Dushan jade carvers used high-quality white nephrite jade from the local mines as their primary material, and relied on manual tools and techniques, such as saws, drills, files, and abrasives, to shape and polish the jade (Wang, X., & Li, J. (2021) 110-115). However, with the depletion of high-quality jade resources and the increasing demand for jade products, some jade carvers began to use other types of jade, such as green nephrite, serpentine, and even glass imitations, to create their works (Li, H., Zhang, Z., & Chen, J. (2019) 1-10).

Moreover, some jade carvers also began to incorporate modern tools and techniques, such as electric saws, grinders, and polishers, to increase the efficiency and precision of their work (Zhang, L., & Liu, Y. (2019) 269-273). These tools allowed the jade carvers to create more intricate and detailed designs, as well as to produce larger quantities of jade products in shorter periods of time. However, the use of modern tools and techniques also raised concerns about the loss of traditional craftsmanship and the authenticity of the jade carvings (Yang, X. (2020) 45-58).

In addition to the innovations in materials and techniques, Dushan jade carvers also experimented with new designs and styles to cater to the changing tastes and values of the Republican society. While traditional jade carvings often featured auspicious symbols, mythical creatures, and historical figures, some jade carvers began to create more modern and realistic designs, such as landscapes, flowers, and everyday objects (Wen, C. (2018) 35-41). They also incorporated Western art styles, such as Art Deco and Art Nouveau, into their jade carvings, creating a fusion of Chinese and Western aesthetics (Sun, M., & Liu, S. (2021) 76-84).

4.3.2 Adaptations to the Changing Market and Consumer Demands

Another significant transformation of Dushan jade carving during the Republican era was the adaptation to the changing market and consumer demands. With the decline of imperial patronage and the rise of a new middle class, jade carvers had to find new ways to promote and sell their products to a wider and more diverse audience (Xu, M., & Wang, T. (2022) 23-27). Some jade carvers began to specialize in certain types of jade products, such as jewelry, accessories, and small decorative items, which were more affordable and accessible to the general public (Deng, J. (2020) 121-123).

Moreover, some jade carvers also began to collaborate with other craftsmen, such as goldsmiths, silversmiths, and enamel artists, to create more complex and elaborate jade products that combined different materials and techniques(Liu, S. (2016) 138-149). For example, the "Jade and Gold Hairpin with Phoenix and Peony" (Figure 20) from the 1920s, carved by the Dushan jade carver Li Zhenxiang and the goldsmith Zhang Yutian, features a white nephrite jade phoenix head with gold filigree and enamel accents, attached to a gold hairpin with a peony design(National Museum of China. (2021). This hybrid jade product not only showcases the technical skills and artistic creativity of the craftsmen but also reflects the changing fashion and aesthetic preferences of the Republican society.



Figure 20 A gold and jade phoenix and peony hairpin, white jade
 [Figure 20: A gold and jade phoenix and peony hairpin, white jade, gold, and enamel, 18.3 x 5.2 x 2.1 cm. Source: Official website of the National Museum of China: Official website of the National Museum of China].

Jade carvers also began to use new marketing and sales strategies to promote their products and reach new customers. Some jade carvers opened their own shops and studios in major cities, such as Shanghai, Beijing, and Nanjing, to display and sell their works directly to the public(Chen, W. (2010) 74-76). They also participated in national and international exhibitions and fairs, such as the Panama-Pacific International Exposition in San Francisco in 1915, to showcase their skills and products to a global audience(Zhang, Q. (2017) 61-79).

In addition, jade carvers have begun to use modern advertising and branding techniques, such as print advertisements, posters, and logos, to differentiate and promote their products in a competitive marketplace(Liu, Y. (2019) 96-101).

4.3.3 Challenges and Issues of Commercialization and Commodification

While the innovations and adaptations of Dushan jade carving during the Republican era helped to revitalize and modernize the traditional art form, they also brought new challenges and issues, particularly in terms of the commercialization and commodification of jade carvings. As jade carvers sought to increase the efficiency and profitability of their production, they often resorted to the use of lower-quality

materials, simpler designs, and mass production techniques, which compromised the artistic and cultural value of their products(Wang, Y. (2020) 159-171).

Moreover, the commercialization and commodification of jade carvings also led to the proliferation of counterfeit and imitation products in the market, which not only undermined the reputation and livelihood of genuine jade carvers but also misled and harmed the consumers(Yang, L. (2017) 32-39). Some unscrupulous merchants and workshops even used jade carvings as a means of speculation and fraud, artificially inflating their prices and selling them as rare and valuable antiques(Zhao, L. (2015) 92-105).

The commercialization and commodification of jade carvings also had a negative impact on the social and cultural status of jade carvers and their craft. As jade carvings became more widely available and affordable, they lost some of their exclusivity and prestige as symbols of power, status, and cultural refinement(Liu, X. (2016) 285-315). Moreover, the increasing division of labor and specialization in the jade carving industry also led to the alienation and exploitation of jade carvers, who often worked long hours in poor conditions for low wages (Wang, J. (2019) 68-81).

To address these challenges and issues, some jade carvers, scholars, and officials advocated for the regulation and standardization of the jade carving industry, as well as the protection and promotion of the traditional art form as a national cultural heritage. In 1947, the Ministry of Education of the Republic of China issued the "Measures for the Protection and Promotion of Traditional Arts and Crafts," which recognized jade carving as one of the important traditional crafts and provided guidelines for its preservation and development Ministry of Education of the Republic of China. (1947).

Moreover, some jade carvers and workshops also sought to differentiate and brand their products based on their artistic quality, cultural authenticity, and social responsibility, rather than just their commercial value(Jiang, Y., & Deng, J. (2018) 112-117). For example, the Dushan Jade Carving Factory, established in 1954, adopted a strict quality control and ethical sourcing system for its jade products, and provided fair wages and benefits for its workers(Dushan Jade Carving Factory. (1954). The factory also collaborated with scholars and museums to research and promote the history and culture of Dushan jade carving, and to educate the public about the value and significance of this traditional art form (Sun, M. (2020) 128-137).

4.4 The Influence of Western Art and Culture on Dushan Jade Carving in the Republican Era

The Republican era was also a period of significant cultural exchange and interaction between China and the West, which had a profound influence on the development of Dushan jade carving art. As Chinese intellectuals, artists, and entrepreneurs sought to learn from and adapt to the Western ideas and practices, they also introduced new aesthetic values, artistic styles, and cultural discourse that challenged and enriched the traditional Chinese art forms, including jade carving.

4.4.1 The Introduction of Western Art Styles and Techniques

One of the major influences of Western art on Dushan jade carving during the Republican era was the introduction of new art styles and techniques, such as realism, impressionism, and modernism. As Chinese artists studied and traveled abroad, they

were exposed to the Western art world and brought back new ideas and skills that they applied to their own works, including jade carvings(Chen, Y. (2018) 52-55).

Moreover, some Dushan jade carvers also experimented with Western art techniques, such as perspective, shading, and texture, to create more realistic and three-dimensional effects in their jade carvings(Zhang, L., & Liu, Y. (2019) 269-273). The introduction of Western art styles and techniques not only expanded the artistic possibilities and expressions of Dushan jade carving but also reflected the changing aesthetic tastes and cultural identities of the Republican society. As Chinese artists and consumers sought to embrace modernity and cosmopolitanism, they also redefined and negotiated the meaning and value of traditional Chinese art forms, such as jade carving, in the context of global cultural exchange and interaction(Wang, C. (2019) 29-48).

4.4.2 The Influence of Western Collecting and Connoisseurship

Another important influence of Western culture on Dushan jade carving during the Republican era was the development of jade collecting and connoisseurship among Western scholars, collectors, and institutions. As Western museums, universities, and private collectors began to acquire and study Chinese jade objects, they also created a new market and discourse for jade carvings that shaped the production, circulation, and reception of these objects in China and abroad(Li, Y. (2018) 290-298).

One of the most influential Western jade collectors and scholars during the Republican era was Alfred Salmony (1890-1958), a German-American art historian who specialized in Chinese art and archaeology. Salmony's book "Chinese Jade through the Wei Dynasty" (1933) was one of the first comprehensive studies of Chinese jade carving in the West, and his collection of over 1,000 jade objects, which he donated to the Museum of Fine Arts, Boston in 1946, was one of the largest and most diverse collections of Chinese jade outside of China(Salmony, A. (1933).

Salmony's work not only introduced Chinese jade carving to a wider Western audience but also established a new standard and criteria for the appreciation and evaluation of jade carvings based on their artistic quality, historical significance, and cultural authenticity(Liu, X. (2016) 285-315). His emphasis on the aesthetic and technical aspects of jade carving, such as the color, texture, and workmanship of the jade, as well as the symbolism and iconography of the designs, influenced the way that Chinese jade carvers and collectors approached and valued their own works(Wen, C. (2018) 35-41).

Moreover, the growing interest and demand for Chinese jade carvings among Western collectors and institutions also created new opportunities and challenges for the Dushan jade carving industry. On the one hand, the Western market provided a new source of income and recognition for Chinese jade carvers, who could sell their works at higher prices and gain international exposure through exhibitions and publications(Xu, M., & Wang, T. (2022) 23-27). On the other hand, the Western market also imposed new standards and expectations for the quality and authenticity of jade carvings, which sometimes conflicted with the traditional Chinese aesthetics and practices(Yang, X. (2020) 45-58).

However, some Chinese jade carvers and critics argued that these Western preferences often overlooked or misunderstood the cultural and historical contexts of

Chinese jade carving, and imposed a Eurocentric and orientalist view of Chinese art (Chen, Y. (2019) 118-132).

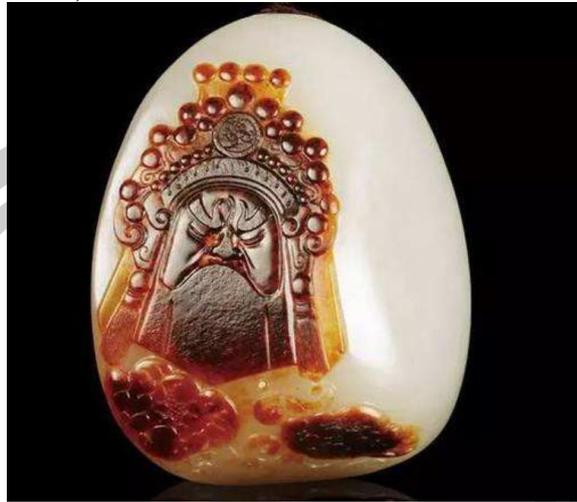


Figure 21 Guan Gong Dramatic Face Painting.

[Figure 21: Guan Gong Dramatic Face Painting. Jade carvers often use the skin color to sketch the image of the face, and different skin colors carve different images, giving them a strong sense of hierarchy and character expression. Sohu for public platform. Source: Sohu for Public Platform]

The influence of Western collecting and connoisseurship on Dushan jade carving during the Republican era reflected the complex and contested nature of cultural exchange and interaction between China and the West. While the Western market and discourse provided new opportunities and perspectives for Chinese jade carvers and collectors, they also challenged and transformed the traditional values and practices of Chinese jade carving, and raised questions about the cultural identity and authenticity of this art form in the global context (Zhao, K. (2019) 48-61).

4.4.3 The Intersection of Jade Carving and Modern Chinese Art and Culture

The influence of Western art and culture on Dushan jade carving during the Republican era also intersected with the broader developments and debates in modern Chinese art and culture. As Chinese intellectuals, artists, and reformers sought to modernize and revitalize Chinese art and culture in the face of Western challenges and influences, they also grappled with the question of how to preserve and transform traditional art forms, such as jade carving, in the new social and cultural context (Li, Y. (2018) 290-298).

One of the key figures in this debate was the artist and educator Cai Yuanpei (1868-1940), who served as the first Minister of Education of the Republic of China and the president of Peking University. Cai was a strong advocate for the modernization of Chinese art education and the integration of Western and Chinese artistic traditions (Cai, Y. (1999)). He argued that Chinese art should not only preserve its cultural heritage but also embrace the new ideas and techniques from the West, and that the goal of art education should be to cultivate the creativity, individuality, and social responsibility of the artists (Liu, Y. (2019) 96-101).

Cai's ideas had a significant impact on the development of modern Chinese art, including jade carving. In 1918, he established the National Beijing Art School, which offered courses in both Chinese and Western art, including sculpture, painting,

and design(National Beijing Art School. (1918). The school also had a department of jade carving, which trained a new generation of jade carvers who were familiar with both traditional and modern techniques and styles(Jiang, Y., & Deng, J. (2018) 112-117).

One of the graduates of the National Beijing Art School was the Dushan jade carver Zhang Daqian (1899-1983), who later became one of the most renowned and influential Chinese artists of the 20th century. Zhang was known for his innovative and eclectic approach to jade carving, which combined traditional Chinese motifs and techniques with modern Western styles and concepts, such as abstraction, expressionism, and surrealism (Zhang, D. (1980).

For example, the Jade Mountain (Figure 22), with its bold and dynamic composition, breaks with the traditional symmetry and balance of traditional Chinese landscape carvings. The jagged peaks, swirling clouds, and flowing water are rendered in a semi-abstract and expressive style that evokes the spirit and energy of nature rather than its literal appearance (Sun, M., & Liu, S. (2021) 76-84). Negative space and multiple perspectives are also utilized in the sculpture to create a sense of depth and movement that appeals to the viewer's imagination and emotions (Wang, Y. (2020) 159-171).



Figure 22 Jade Mountain Figure

[Figure 22: Jade Mountain Figure, Credit: Photo by the author.

Zhang's work exemplified the new possibilities and directions of Dushan jade carving in the modern era, as well as the ongoing dialogue and negotiation between tradition and innovation, East and West, in Chinese art and culture. His success and influence also inspired other jade carvers and artists to experiment with new forms

and ideas, and to challenge the boundaries and hierarchies of traditional art forms(Chen, W. (2010) 74-76).

Moreover, the intersection of jade carving and modern Chinese art and culture also reflected the broader social and political changes of the Republican era, such as the rise of nationalism, individualism, and cultural pluralism(Wang, C. (2019) 29-48). As Chinese artists and intellectuals sought to define and assert their cultural identity and agency in the face of Western imperialism and modernity, they also used art as a means of social and political engagement and critique (Liu, X. (2016) 285-315).

The intersection of jade carving and modern Chinese art and culture during the Republican era thus reflects the complex and dynamic process of cultural transformation and negotiation in the face of Western influences and challenges. While the Western art and culture provided new ideas, techniques, and opportunities for Chinese jade carvers and artists, they also posed questions and challenges to the traditional values, practices, and identities of Chinese art and culture(Yang, L. (2017) 32-39). The development of Dushan jade carving in this period, with its innovations, adaptations, and contradictions, exemplifies the broader cultural and social changes of modern China, and the ongoing efforts of Chinese artists and intellectuals to define and assert their cultural subjectivity and creativity in the global context (Zhao, K. (2019) 48-61).

Conclusion

The Republican era was a period of significant transformation and innovation for Dushan jade carving art, as the jade carving community in Nanyang sought to adapt and modernize their craft in response to the changing social, cultural, and economic conditions of the time. Despite the political and social upheavals of the period, Dushan jade carvers experimented with new materials, techniques, and designs, and explored new markets and audiences for their products, demonstrating their creativity, resilience, and adaptability in the face of challenges and opportunities.

However, the innovations and adaptations of Dushan jade carving during the Republican era also brought new challenges and issues, particularly in terms of the commercialization, standardization, and commodification of jade carvings. As jade carvers sought to increase the efficiency and profitability of their production, they often compromised the artistic and cultural value of their products, and faced the problems of counterfeiting, imitation, and exploitation in the market. To address these challenges, some jade carvers, scholars, and officials advocated for the regulation, protection, and promotion of Dushan jade carving as a national cultural heritage, and sought to differentiate and brand their products based on their quality, authenticity, and social responsibility.

Moreover, the Republican era also witnessed a significant influence of Western art and culture on the development of Dushan jade carving, as Chinese artists and intellectuals sought to learn from and adapt to the new ideas and practices from the West. The introduction of Western art styles, techniques, and collecting practices not only expanded the artistic possibilities and expressions of Dushan jade carving but also reflected the changing aesthetic tastes and cultural identities of the Republican society. The influence of Western art and culture on Dushan jade carving also intersected with the broader developments and debates in modern Chinese art and

culture, as Chinese artists and intellectuals grappled with the question of how to preserve and transform traditional art forms in the new social and cultural context.

The Republican era thus marked a pivotal moment in the history of Dushan jade carving art, as the traditional craft underwent a process of transformation, negotiation, and innovation in response to the changing cultural, social, and economic landscape of modern China. The experiences and legacies of Dushan jade carving in this period, with its achievements, challenges, and contradictions, provide valuable insights and lessons for the ongoing development and preservation of this cultural heritage in the contemporary era, as well as for the broader study of Chinese art and culture in the global context.

As contemporary scholars, artists, and policymakers seek to protect, promote, and revitalize Dushan jade carving and other traditional arts and crafts in China, they can draw inspiration and guidance from the examples and lessons of the Republican era, while also adapting and innovating them to meet the new challenges and opportunities of the 21st century. By understanding and appreciating the cultural, social, and historical contexts of Dushan jade carving, as well as its artistic, technical, and aesthetic qualities, we can not only preserve and celebrate this valuable cultural heritage but also contribute to the ongoing dialogue and exchange between tradition and modernity, East and West, in the global cultural landscape.

5. Dushan Jade Carving in the People's Republic of China (1949-present)

The establishment of the People's Republic of China in 1949 marked a new era for Dushan jade carving art in Nanyang, Henan Province. Under the socialist system, the jade carving industry underwent significant transformations and faced both challenges and opportunities. The period from 1949 to the present can be divided into two main phases: the socialist transformation and the reform and opening-up era, each with its distinct characteristics and developments in terms of the production, transmission, and innovation of Dushan jade carving.

5.1 The Impact of Socialist Transformation on Dushan Jade Carving

5.1.1 The Establishment of State-owned Jade Carving Factories

One of the major changes brought about by the socialist transformation was the establishment of state-owned jade carving factories in Nanyang. In the early 1950s, the Chinese government launched a series of initiatives to nationalize private industries and establish a centrally planned economy (Zhang, J. (2018) 25-45). As a result, many of the jade carving workshops and businesses in Dushan were merged into state-owned enterprises, such as the Nanyang Jade Carving Factory and the Dushan Jade Carving Factory.

The state-owned factories played a crucial role in the preservation and development of Dushan jade carving during this period. They provided a stable and organized platform for the production and distribution of jade carvings, as well as the training and employment of jade carving artisans (Nanyang Jade Carving Factory. (1985). The factories also introduced standardized production processes, quality control measures, and social welfare benefits for the workers, which helped to improve the working conditions and livelihood of the jade carving community.

However, the centralized management and the emphasis on productivity and efficiency in the state-owned factories also had some negative impacts on the traditional craftsmanship and creativity of Dushan jade carving. The factories often

prioritized the production of standardized and utilitarian jade items, such as official seals and decorative objects, over the creation of unique and artistic pieces (Ding, Y. (2020) 231-239). This led to a certain degree of homogenization and stagnation in the design and style of Dushan jade carvings during this period.

5.1.2 The Influence of the Cultural Revolution on Traditional Craftsmanship

The Cultural Revolution (1966-1976) was a tumultuous period that had a profound impact on Chinese society and culture, including the traditional craftsmanship of Dushan jade carving. During this time, many cultural relics, historical sites, and artifacts associated with the "old society" were destroyed or damaged, and traditional arts and crafts were often criticized as "feudal" and "backward" (Xiong, Y. (2019) 139-155).

The jade carving industry in Nanyang was not spared from the turmoil of the Cultural Revolution. Many jade carving factories and workshops were closed down or repurposed for other uses, and the transmission of jade carving skills and knowledge was severely disrupted (Wang, X., & Li, J. (2021) 110-115). Some of the older generation of jade carving masters, such as Wang Guofan and Li Tonglu, were persecuted and forced to stop their practices, leading to the loss of valuable expertise and experience.

Despite the challenges and hardships, some jade carving artisans in Dushan managed to continue their craft in secret or in a limited capacity during the Cultural Revolution. They used makeshift tools and materials, and passed down their skills to trusted apprentices or family members (Deng, J. (2020) 121-123). These efforts, although small and fragmented, helped to keep the flame of Dushan jade carving alive during this difficult period.

5.2 The Revitalization of Dushan Jade Carving in the Reform and Opening-up Era

5.2.1 Government Policies and Support for the Jade Carving Industry

The reform and opening-up policy initiated by the Chinese government in 1978 marked a turning point for Dushan jade carving. The economic reforms and the loosening of state control over the cultural sector provided new opportunities for the revitalization and development of traditional arts and crafts, including jade carving (Liu, Y. (2019) 96-101).

In the 1980s and 1990s, the government introduced various policies and measures to support the jade carving industry in Nanyang. These included the restoration and reopening of state-owned jade carving factories, the establishment of jade carving research institutes and training centers, and the provision of financial subsidies and tax incentives for jade carving businesses (Nanyang Municipal Government. (2010). The government also organized jade carving exhibitions, competitions, and cultural events to promote the art form and attract public interest.

One notable example of government support was the establishment of the Nanyang Jade Carving Master Studio in 1985, which aimed to cultivate and support outstanding jade carving artisans in Dushan (Nanyang Jade Carving Master Studio. (1985). The studio provided a platform for the master artisans to create high-quality jade carvings, train apprentices, and engage in cultural exchanges and collaborations. It also played a significant role in the preservation and transmission of traditional jade carving techniques and styles.

5.2.2 The Designation of Dushan Jade Carving as a National Intangible Cultural Heritage

Another milestone in the revitalization of Dushan jade carving was its designation as a national intangible cultural heritage in 2006. The intangible cultural heritage system, established by the Chinese government in the early 2000s, aimed to safeguard and promote the country's rich cultural traditions and folk arts (State Council of the People's Republic of China. (2005).

The designation of Dushan jade carving as a national intangible cultural heritage brought increased recognition, protection, and support for this ancient art form. It helped to raise public awareness of the cultural value and significance of jade carving, and encouraged more people to learn about and appreciate this tradition(Wen, C. (2018) 35-41). The designation also provided financial and institutional support for the preservation and transmission of jade carving skills, such as the establishment of apprenticeship programs and the documentation of traditional techniques and knowledge.

Moreover, the intangible cultural heritage status of Dushan jade carving also opened up new opportunities for cultural tourism and creative industries in Nanyang. The local government and businesses began to develop jade carving-related products, services, and experiences, such as jade carving workshops, exhibitions, and cultural festivals, to attract tourists and consumers (Chen, W. (2010) 74-76). This not only helped to promote the art form but also contributed to the economic and social development of the region.

5.2.3 The Expansion of the Jade Carving Industry and Market

The reform and opening-up era also witnessed a significant expansion of the jade carving industry and market in Nanyang. With the growth of the Chinese economy and the rise of the middle class, there was an increasing demand for jade products, both as cultural artifacts and as symbols of status and wealth(Xu, M., & Wang, T. (2022) 23-27).

Many jade carving factories and workshops in Dushan seized this opportunity and expanded their production and distribution networks. They not only catered to the domestic market but also began to export their products to other countries and regions, such as Southeast Asia, Europe, and North America(Deng, J., & Wang, X. (2017) 179-190). The jade carving industry in Nanyang also diversified its product range, from traditional jade carvings to more modern and innovative designs, such as jade jewelry, accessories, and home decor items.

The expansion of the jade carving industry and market also led to the emergence of new business models and platforms, such as e-commerce and cultural creative industries. Many jade carving artisans and businesses in Dushan began to use online platforms, such as Taobao and WeChat, to promote and sell their products directly to consumers(Zhang, L., & Liu, Y. (2019) 269-273). They also collaborated with designers, artists, and other cultural sectors to create cross-disciplinary and value-added products and services.

However, the rapid growth and commercialization of the jade carving industry also brought challenges and concerns, such as the over-exploitation of jade resources, the proliferation of counterfeit and low-quality products, and the dilution of traditional craftsmanship and cultural authenticity(Yang, L. (2017) 32-39). These issues required

the attention and action of the government, industry, and society to ensure the sustainable and healthy development of Dushan jade carving.

5.3 The Transmission and Innovation of Dushan Jade Carving in the Contemporary Era

5.3.1 The Role of Apprenticeship Centers and Master Studios in Cultivating New Talents

The transmission and innovation of Dushan jade carving in the contemporary era relied on the cultivation of new talents and the exchange of skills and knowledge between generations. The apprenticeship centers and master studios played a crucial role in this process, providing a structured and systematic way of training and mentoring young jade carving artisans (Nanyang Jade Carving Apprenticeship Center. (2010).

The Dushan Jade Carving Apprenticeship Center, established in 2010, was one of the most prominent examples of such institutions. The center offered a three-year apprenticeship program that combined theoretical learning and practical training, covering all aspects of jade carving, from material selection and processing to design and production (Wang, X., & Li, J. (2021) 110-115). The apprentices were taught by experienced master artisans and had access to advanced facilities and resources,



Figure 23 jade carving tools, materials, and reference books.

Wu Haizhou Jade Carving Studio, Wu Yuanquan Jade Carving Studio and other masters' studios are also important platforms for the inheritance and innovation of Dushan Jade Carving. Master craftsmen not only pass on their skills and knowledge to their apprentices, but also try to use new techniques, designs and materials to promote the art of jade carving (Zhao, K. (2019) 48-61). They also engage in cultural exchanges and cooperation with other jade carving masters and experts from different regions and countries, which contributes to the richness and diversity of the Dushan jade carving tradition.

5.3.2 The Development of Jade Carving Education and Research Institutions

In addition to the apprenticeship centers and master studios, the development of jade carving education and research institutions also contributed to the transmission and innovation of Dushan jade carving in the contemporary era. These institutions provided a more formal and academic approach to the study and promotion of jade carving art, complementing the practical and experience-based learning in the apprenticeship system (Liu, Y. (2019) 96-101).

The Nanyang University Jade Carving Research Center, established in 2015, was a notable example of such institutions. The center conducted research on various aspects of Dushan jade carving, including its history, techniques, materials, and cultural significance, and published academic papers and books on these topics (Nanyang University Jade Carving Research Center. (2015)). The center also organized conferences, workshops, and exhibitions to facilitate the exchange of knowledge and ideas among jade carving scholars, artisans, and enthusiasts.

Moreover, some universities and vocational schools in Henan Province also began to offer jade carving-related courses and programs, such as the Jade Carving and Design program at the Nanyang Institute of Technology and the Jade Carving and Appraisal program at the Henan Vocational College of Art (Nanyang Institute of Technology. (2018)). These programs aimed to cultivate a new generation of jade carving professionals who possessed both the technical skills and the theoretical knowledge of the art form, and who could contribute to the innovation and development of Dushan jade carving in the future.

5.3.3 The Application of Modern Technologies in Jade Carving Design and Production

Another significant trend in the transmission and innovation of Dushan jade carving in the contemporary era was the application of modern technologies in the design and production processes. With the advancement of digital tools and equipment, such as 3D scanning, computer-aided design (CAD), and computer numerical control (CNC) machines, jade carving artisans and businesses in Dushan began to explore new possibilities and efficiencies in their work (Zhang, L., & Liu, Y. (2019) 269-273).

For example, some jade carving workshops and studios used 3D scanning and CAD software to create digital models of jade carvings, which allowed them to visualize and refine their designs before the actual carving process (Li, H., Zhang, Z., & Chen, J. (2019) 1-10). This not only saved time and material but also enabled them to create more complex and intricate designs that were difficult or impossible to achieve with traditional manual methods.

Moreover, the use of CNC machines and other automated tools also helped to improve the precision, consistency, and speed of jade carving production, especially for large-scale or repetitive tasks (Yang, X. (2020) 45-58). However, it is important to note that the application of modern technologies in Dushan jade carving was not a replacement for traditional craftsmanship but rather a complementary and enhancing tool. The essence of jade carving art still lied in the creativity, skill, and dedication of the human artisans, who used these technologies to push the boundaries of their art form while preserving its cultural authenticity and integrity.

5.4 The Artistic Features and Cultural Connotations of Contemporary Dushan Jade Carvings

5.4.1 The Integration of Traditional Motifs and Modern Aesthetics

The contemporary Dushan jade carvings exhibited a unique blend of traditional motifs and modern aesthetics, reflecting the dynamic and evolving nature of this art form. While many jade carving artisans and businesses in Dushan continued to draw inspiration from the rich repertoire of traditional Chinese symbols, such as dragons, phoenixes, and auspicious characters, they also incorporated modern elements and styles into their designs (Wen, C. (2018) 35-41).

For example, some contemporary Dushan jade carvings featured minimalist and abstract forms, bold colors and patterns, or unconventional materials and techniques, such as metal inlays or laser engraving (Sun, M., & Liu, S. (2021) 76-84). These innovations not only added fresh visual appeal and artistic value to the jade carvings but also expanded their potential markets and audiences, especially among younger and more fashion-conscious consumers.



Figure 24 Contemporary Dushan jade carving with a simple
 [Figure 24: Contemporary Dushan jade carving with a simple, abstract design. Source: Photographs by the author, 2021: Photographs by the author,

However, the integration of traditional motifs and modern aesthetics in Dushan jade carving was not a simple matter of mixing and matching. It required a deep understanding and respect for the cultural roots and meanings of the art form, as well as a keen sense of creativity and adaptability to the changing tastes and needs of the society (Wang, C. (2019) 29-48). The most successful and influential contemporary Dushan jade carvings were those that struck a balance between tradition and innovation, and that conveyed both the timeless beauty and the timely relevance of this ancient craft.

5.4.2 The Expression of Cultural Identity and Regional Characteristics

Another important aspect of the artistic features and cultural connotations of contemporary Dushan jade carvings was their expression of cultural identity and regional characteristics. As a distinctive and historically significant art form originating from Nanyang, Henan Province, Dushan jade carving carried a strong sense of local pride and identity, which was reflected in the designs, motifs, and styles of the jade carvings(Liu, X. (2016) 285-315).

Many contemporary Dushan jade carvings featured elements that were unique or representative of the natural, cultural, and historical landscapes of Nanyang, such as the Dushan jade itself, the Funiu Mountains, the Bai River, and the ancient city of Nanyang (Deng, J. (2020) 121-123). These elements not only added a layer of regional flavor and authenticity to the jade carvings but also helped to promote and preserve the cultural heritage and identity of Nanyang.

Moreover, some jade carving artisans and businesses in Dushan also used their art form to express and advocate for social and cultural issues that were important to their community, such as environmental protection, cultural diversity, and social justice(Wang, Y. (2020) 159-171). For example, some jade carvings featured themes or motifs that raised awareness of the ecological and cultural value of the Dushan jade resources, or that celebrated the contributions and achievements of local jade carving artisans and masters.

5.4.3 The Exploration of New Forms and Functions of Jade Carvings

In addition to the integration of traditional motifs and modern aesthetics, and the expression of cultural identity and regional characteristics, the contemporary Dushan jade carvings also explored new forms and functions that went beyond the conventional categories and uses of jade objects. While jade carvings had traditionally been associated with decorative, ceremonial, or symbolic purposes, such as jewelry, sculptures, or seal stamps, the contemporary jade carving artisans and businesses in Dushan began to experiment with more diverse and innovative applications of their art form (Yang, L. (2017) 32-39).

For example, some Dushan jade carvings were designed as functional objects, such as tea sets, wine cups, or stationery items, which combined the aesthetic value of jade with the practical utility of everyday products(Wen, C. (2018) 35-41). Others were created as interactive or experiential artworks, such as jade carvings that incorporated sound, light, or motion elements, or that required the participation and engagement of the viewers.

Moreover, some contemporary Dushan jade carvings also explored the potential of jade as a medium for cross-disciplinary and cross-cultural collaborations, such as jade carvings that were inspired by or integrated with other art forms, such as painting, calligraphy, or music, or that were created in partnership with artists, designers, or organizations from different fields and regions(Liu, Y. (2019) 96-101). These explorations not only expanded the artistic and commercial possibilities of Dushan jade carving but also facilitated the exchange and mutual learning between different cultures and disciplines.

6.Challenges and Opportunities for Dushan Jade Carving in the 21st Century As Dushan jade carving art enters the 21st century

It faces a complex and dynamic landscape shaped by the forces of globalization, technological advancement, and cultural transformation. While these forces present significant challenges to the traditional craftsmanship and cultural heritage of Dushan jade carving, they also offer new opportunities for its innovation, promotion, and sustainable development.

6.1 The Impact of Globalization and Market Competition on the Jade Carving Industry

One of the major challenges faced by the Dushan jade carving industry in the 21st century is the impact of globalization and market competition. With the increasing interconnectedness and interdependence of the world economy, the jade carving industry in Nanyang is no longer isolated or protected from external influences and pressures(Deng, J., & Wang, X. (2017) 179-190).

On the one hand, globalization has opened up new markets and opportunities for Dushan jade carvings, as the demand for Chinese cultural products and services has grown among international consumers and collectors. The rise of e-commerce and digital platforms has also made it easier for jade carving artisans and businesses in Nanyang to reach and sell to customers around the world (Xu, M., & Wang, T. (2022) 23-27).

However, globalization has also brought intense competition and challenges to the Dushan jade carving industry. The influx of cheap and mass-produced jade products from other regions and countries, such as Myanmar and Pakistan, has put pressure on the prices and profitability of Dushan jade carvings (Yang, X. (2020) 45-58). The changing tastes and preferences of global consumers, who may favor more modern or exotic designs over traditional Chinese styles, have also forced the Dushan jade carving industry to adapt and innovate.

Moreover, the globalization of the jade market has also raised concerns about the sustainability and ethical sourcing of jade materials, as the increased demand and exploitation of jade resources have led to environmental degradation, social conflicts, and cultural appropriation in some cases(Liu, X. (2016) 285-315). The Dushan jade carving industry needs to address these issues and develop responsible and transparent practices in order to maintain its credibility and competitiveness in the global market.

6.2 The Need for Innovation and Creativity in Jade Carving Design and Production

Another key challenge and opportunity for Dushan jade carving in the 21st century is the need for innovation and creativity in its design and production processes. As the jade carving industry faces the dual pressures of globalization and cultural transformation, it can no longer rely solely on the repetition or reproduction of traditional styles and techniques, but must actively seek new ideas, methods, and solutions to stay relevant and competitive (Wang, C. (2019) 29-48).

Innovation and creativity in Dushan jade carving can take many forms, such as the development of new product categories and functions, the application of new materials and technologies, the collaboration with other art forms and industries, and the engagement with contemporary social and cultural issues (Liu, Y. (2019) 96-101).

For example, some jade carving artisans and businesses in Nanyang have experimented with using jade in modern jewelry, fashion, and home decor products, or have incorporated digital tools and platforms in their design and marketing processes.

However, the pursuit of innovation and creativity in Dushan jade carving should not come at the expense of its cultural authenticity and integrity. The essence of jade carving art lies in its deep connection to the history, identity, and values of the Chinese civilization, and its role in the transmission and continuation of this cultural heritage(Zhao, K. (2019) 48-61). Therefore, the innovation and creativity in Dushan jade carving should be grounded in a thorough understanding and respect for its cultural roots and meanings, and should aim to enrich and extend, rather than replace or undermine, its traditional craftsmanship and aesthetics.



Figure 25 Modern Dushan jade carving
[Figure 25: Modern Dushan jade carving. Source: Photographs by the author, 2022, Nanyang Jade Sculpture Art Museum].

6.3 The Potential of Cultural Tourism and Creative Industries in Promoting Dushan Jade Carving

A significant opportunity for the promotion and development of Dushan jade carving in the 21st century lies in the potential of cultural tourism and creative industries. As the demand for cultural experiences and products grows among domestic and international consumers, the rich cultural heritage and artistic traditions of Dushan jade carving can be leveraged to create value and attract visitors to Nanyang (Chen, W. (2010) 74-76).

The development of cultural tourism in Nanyang, centered around the theme of Dushan jade carving, can take various forms, such as the establishment of jade carving museums, workshops, and experience centers, the organization of jade carving festivals, exhibitions, and competitions, and the creation of jade carving-related travel routes, packages, and souvenirs(Nanyang Municipal Government. (2018). These activities not only provide opportunities for jade carving artisans and

businesses to showcase their skills and products but also generate economic and social benefits for the local community.

Moreover, the integration of Dushan jade carving with other creative industries, such as design, media, and technology, can also help to enhance its value and appeal to a wider audience. For example, the use of digital tools and platforms, such as virtual reality and live streaming, can enable the remote viewing and appreciation of Dushan jade carvings, or the participation in jade carving workshops and demonstrations (Zhang, L., & Liu, Y. (2019) 269-273). The collaboration with fashion, jewelry, and lifestyle brands can also help to create innovative and trendy products that feature Dushan jade carving elements or motifs.

However, the development of cultural tourism and creative industries related to Dushan jade carving should be guided by the principles of sustainability, authenticity, and community participation (Yang, L. (2017) 32-39). The over-commercialization or commodification of jade carving art, the loss of cultural diversity and identity, and the exclusion or marginalization of local communities are potential risks that need to be addressed and mitigated in the process.

6.4 The Importance of Safeguarding and Transmitting the Intangible Cultural Heritage of Dushan Jade Carving

Perhaps the most critical challenge and responsibility for Dushan jade carving in the 21st century is the safeguarding and transmission of its intangible cultural heritage. As a living tradition that embodies the wisdom, creativity, and values of generations of jade carving artisans and communities, Dushan jade carving is not only a precious cultural asset but also a fundamental part of the Chinese cultural identity and diversity (UNESCO. (2003).

The safeguarding of the intangible cultural heritage of Dushan jade carving requires a comprehensive and participatory approach that involves the identification, documentation, research, preservation, promotion, and revitalization of its various elements, such as the skills, knowledge, practices, and expressions associated with jade carving (Wen, C. (2018) 35-41) This includes the support and recognition of jade carving artisans and masters, the establishment of apprenticeship and education programs, the collection and exhibition of jade carving works and archives, and the engagement and empowerment of local communities in the stewardship of their cultural heritage.

Moreover, the transmission of the intangible cultural heritage of Dushan jade carving to future generations is crucial for its continuity and vitality. This involves not only the passing down of jade carving skills and techniques from masters to apprentices but also the cultivation of a sense of cultural pride, identity, and creativity among young people (Wang, X., & Li, J. (2021) 110-115). The integration of jade carving art into school curricula, the organization of youth-oriented jade carving activities and competitions, and the use of digital and social media to promote jade carving culture are some of the ways to engage and inspire the next generation of jade carving artisans and enthusiasts.



Figure 26 A Chinese jade carving master instructs his apprentice to carve jade.
[Figure 26: Zhang Tiecheng, a Chinese jade carving master, guides his apprentice in carving jade objects. China.org.cn reporter Zhao Chao].

However, the safeguarding and transmission of the intangible cultural heritage of Dushan jade carving also face challenges and limitations, such as the lack of funding and resources, the inadequate legal and institutional frameworks, the changing social and economic conditions, and the globalization and homogenization of cultural practices (Liu, Y. (2019) 96-101). Therefore, the Dushan jade carving community needs to work closely with the government, academia, civil society, and other stakeholders to develop innovative and sustainable strategies and solutions for the long-term protection and promotion of its cultural heritage.

7. Conclusion

7.1 The Historical Significance and Cultural Value of Dushan Jade Carving Art

Dushan jade carving art, with its rich history and cultural heritage, has played a significant role in the development of Chinese civilization and the formation of Chinese cultural identity. From the early Neolithic period to the present day, Dushan jade carving has evolved and flourished, reflecting the changing social, economic, and cultural conditions of different historical eras (Jiang, Y., & Deng, J. (2018) 112-117). Throughout history, Dushan jade carvings have been highly prized and sought after by the Chinese imperial court, elite class, and common people alike. They have been used as ritual objects, status symbols, decorative artifacts, and personal ornaments, and have been invested with rich cultural meanings and functions, such as the representation of political power, social hierarchy, and cultural identity (Liu, X. (2016) 285-315).

Moreover, Dushan jade carving art has also made significant contributions to the development of Chinese craftsmanship, technology, and artistic innovation. The unique geological and mineralogical properties of Dushan jade, combined with the exceptional skills and creativity of Dushan jade carving artisans, have resulted in a wide range of jade carving styles, techniques, and products that showcase the

ingenuity and adaptability of Chinese material culture (Li, H., Zhang, Z., & Chen, J. (2019) 1-10).

The cultural value of Dushan jade carving art lies not only in its artistic and technical achievements but also in its role as an intangible cultural heritage that embodies the collective memory, knowledge, and identity of the Dushan jade carving community. The transmission and safeguarding of Dushan jade carving skills, practices, and expressions from generation to generation have helped to maintain the cultural diversity and vitality of the Nanyang region and the Chinese nation as a whole (UNESCO. (2003).

In the 21st century, the historical significance and cultural value of Dushan jade carving art have gained new relevance and urgency, as the rapid globalization, urbanization, and modernization of Chinese society have posed challenges and opportunities for the development and innovation of this ancient art form. The recognition and promotion of Dushan jade carving as a national intangible cultural heritage, the rise of cultural tourism and creative industries, and the application of digital technologies and platforms have opened up new possibilities for the preservation, dissemination, and revitalization of Dushan jade carving art (Liu, Y. (2019) 96-101).



Figure 27 Dushan jade carved with dragon and phoenix motifs
[Figure 27: A Dushan jade carving featuring a dragon and phoenix motif, Qing Dynasty, Qianlong period. Source: Photograph by the author, 2022, Nanyang Jade Carving Art Museum.]

7.2 The Need for a Comprehensive and Sustainable Approach to the Development of Dushan Jade Carving in the Future

As Dushan jade carving art navigates the complex and changing landscape of the 21st century, it is crucial to adopt a comprehensive and sustainable approach to its development and innovation. This approach should take into account the multiple dimensions and stakeholders involved in the Dushan jade carving industry, and seek to balance the economic, social, cultural, and environmental aspects of its growth and transformation (Deng, J., & Wang, X. (2017) 179-190).

One key aspect of this approach is the need for a holistic and integrated policy framework that supports and guides the development of Dushan jade carving art. This framework should encompass the protection and promotion of Dushan jade resources, the regulation and standardization of jade carving production and trade, the education and training of jade carving artisans and professionals, the research and documentation of jade carving history and culture, and the engagement and empowerment of jade carving communities and consumers (State Council of the People's Republic of China. (2005).

Another important aspect of this approach is the need for a participatory and inclusive governance model that involves the active collaboration and dialogue among different stakeholders in the Dushan jade carving industry, such as government agencies, academic institutions, cultural organizations, jade carving businesses, artisans, and the public. This model should foster a sense of shared responsibility, ownership, and benefit in the stewardship and development of Dushan jade carving art, and promote the exchange of knowledge, skills, and resources across different sectors and regions (Yang, L. (2017) 32-39).

Moreover, a comprehensive and sustainable approach to the development of Dushan jade carving art should also prioritize the principles of cultural heritage conservation, creative economy, and sustainable tourism. This means the protection and transmission of Dushan jade carving skills, practices, and expressions as a living cultural heritage, the promotion of innovation, creativity, and entrepreneurship in the jade carving industry, and the development of responsible and beneficial forms of cultural tourism that respect the integrity, authenticity, and diversity of Dushan jade carving art and its community (UNESCO. (2003).

To achieve these goals, it is necessary to invest in the capacity building, infrastructure development, and digital transformation of the Dushan jade carving industry. This includes the establishment of jade carving museums, schools, studios, and experience centers, the application of advanced technologies and techniques in jade carving design, production, and marketing, and the creation of online platforms and networks for the dissemination, appreciation, and sale of Dushan jade carvings (Zhang, L., & Liu, Y. (2019) 96-101.

Furthermore, a comprehensive and sustainable approach to the development of Dushan jade carving art should also consider its wider social, cultural, and ecological implications and impacts. This means the promotion of social equity, cultural diversity, and environmental sustainability in the jade carving industry, the mitigation of negative externalities such as resource depletion, pollution, and cultural appropriation, and the contribution of jade carving art to the overall well-being and resilience of the Nanyang region and the Chinese society (Chen, W. (2010) 74-76).

7.3 The Potential of Dushan Jade Carving Art in Promoting Cultural Identity and Regional Development

Finally, the potential of Dushan jade carving art in promoting cultural identity and regional development should not be underestimated or overlooked. As a distinctive and cherished cultural heritage of the Nanyang region, Dushan jade carving art has the power to foster a sense of pride, belonging, and cohesion among the local community, and to attract the attention, appreciation, and investment of the wider society and economy (Chen, W. (2010) 74-76).

The recognition and promotion of Dushan jade carving art as a cultural symbol and asset of the Nanyang region can help to enhance the visibility, reputation, and competitiveness of the region in the national and global context. The development of Dushan jade carving-related cultural industries, such as museums, galleries, workshops, and festivals, can create new opportunities for employment, entrepreneurship, and innovation, and generate economic and social benefits for the local community Nanyang Municipal Government. (2018).

Moreover, the integration of Dushan jade carving art into the cultural tourism and creative economy of the Nanyang region can also help to diversify and enrich the cultural experiences and products offered to visitors and consumers, and to promote the cultural exchange and understanding between different regions and cultures. The branding and marketing of Nanyang as the "Hometown of Jade Carving" or the "Capital of Jade Culture" can help to attract more tourists, investors, and talents to the region, and to stimulate the growth and vitality of the local economy and society (Deng, J. (2020) 121-123).

However, the promotion of cultural identity and regional development through Dushan jade carving art should not be pursued at the expense of its cultural integrity, authenticity, and sustainability. The commodification, standardization, or overexploitation of Dushan jade carving art for short-term economic gains can lead to the loss of its cultural value, diversity, and creativity, and undermine its long-term viability and resilience (Yang, L. (2017) 32-39).

Therefore, the potential of Dushan jade carving art in promoting cultural identity and regional development should be harnessed through a balanced, inclusive, and responsible approach that respects the cultural rights, benefits, and aspirations of the Dushan jade carving community, and aligns with the broader goals of sustainable development and cultural heritage protection. This requires the active participation, collaboration, and empowerment of the local community, the government, the private sector, and the civil society in the planning, implementation, and evaluation of Dushan jade carving-related policies, projects, and initiatives (Liu, Y. (2019) 96-101).



Figure 1 Nanyang Jade Carving Art Museum explains to visitors

[Figure 28: A Dushan jade carving master demonstrating his skills to visitors at the Nanyang Jade Carving Art Museum. Source: Photograph by the author]

In conclusion, Dushan jade carving art, as a valuable and dynamic cultural heritage of China, has a rich history, a profound cultural significance, and a promising future. Its historical development, artistic achievements, and cultural connotations reflect the creativity, resilience, and adaptability of the Chinese civilization, and its potential for innovation, promotion, and sustainable development in the 21st century is vast and exciting.

To realize this potential, it is essential to adopt a comprehensive, participatory, and responsible approach to the protection, inheritance, and innovation of Dushan jade carving art, one that balances the cultural, social, economic, and environmental dimensions of its growth and transformation, and engages the active collaboration and empowerment of all stakeholders involved.

Moreover, the recognition and promotion of Dushan jade carving art as a cultural symbol and asset of the Nanyang region can help to foster cultural identity, social cohesion, and economic development, and contribute to the overall well-being and sustainability of the local community and the Chinese nation.

By adopting an interdisciplinary approach that combines art history, archaeology, anthropology, and cultural heritage studies, this chapter aims to contribute to a deeper

understanding and appreciation of Dushan jade carving art as a significant cultural treasure and a living tradition that embodies the creativity, resilience, and vitality of Chinese civilization.

Here is a comprehensive summary of the historical development, artistic achievements, cultural significance, and future prospects of Dushan jade carving art in Nanyang, Henan Province, China:

Dushan jade carving art, originating from the Nanyang region of Henan Province, is a precious and ancient cultural heritage that has played a significant role in the development of Chinese civilization and the formation of Chinese cultural identity. This art form, which dates back to the Neolithic period, has evolved and flourished through various dynasties, reflecting the changing social, economic, and cultural conditions of different historical eras.

The early development of Dushan jade carving can be traced back to the archaeological findings from the Neolithic Peiligang and Yangshao cultures, as well as the Xia, Shang, and Zhou dynasties. These jade artifacts not only demonstrate the ancient Chinese people's fascination with jade but also shed light on the origins and evolution of jade carving techniques and styles in the region. The emergence of major jade carving centers in Henan, such as Luoyang, Nanyang, and Zhengzhou, during these early periods, further contributed to the artistic diversity and cultural richness of Chinese jade carving.

The Ming and Qing dynasties marked the golden age of Dushan jade carving art, as this traditional craft reached new heights of artistic achievement, cultural significance, and social influence. The imperial patronage, the flourishing of jade workshops and artisans, and the innovations in carving techniques and designs all contributed to the remarkable development and legacy of Dushan jade carving during this period. Masterpieces such as the "Nine Dragon Jade Cup" and the "Jade Ruyi Scepter with Lingzhi and Bats" showcased the exceptional skills and creativity of the Dushan jade carving artisans, as well as the profound cultural meanings and symbolism associated with jade in Chinese society.

The late Qing and Republican periods witnessed a decline and subsequent revival of Dushan jade carving art, as the industry faced challenges from political and social upheavals, as well as the efforts of some master artisans, scholars, and officials to preserve and promote it as a national cultural heritage. The jade carvings produced during this period reflected the changing styles, themes, and techniques of the time, as well as the innovations, adaptations, and challenges faced by the jade carving industry in the face of modernization, commercialization, and Western influences.

The establishment of the People's Republic of China in 1949 marked a new era for Dushan jade carving art, as it underwent significant transformations and faced both challenges and opportunities under the socialist system and the reform and opening-up era. The socialist transformation and collectivization of the jade carving industry, as well as the impact of the Cultural Revolution, posed significant challenges to the traditional craftsmanship and cultural heritage of Dushan jade carving. However, the reform and opening-up era witnessed a significant revival and innovation of this art form, thanks to government policies, the designation of Dushan jade carving as a national intangible cultural heritage, and the expansion of the jade carving industry and market.

The contemporary period of Dushan jade carving art has witnessed the transmission and innovation of this ancient craft, with the integration of traditional motifs and modern aesthetics, the expression of cultural identity and regional characteristics, and the exploration of new forms and functions of jade carvings. The application of modern technologies, such as 3D scanning, computer-aided design (CAD), and computer numerical control (CNC) machines, has also enabled the artisans to create more complex and innovative jade carvings, while preserving the cultural authenticity and integrity of this art form.

As Dushan jade carving art enters the 21st century, it faces both challenges and opportunities brought about by the forces of globalization, technological advancement, and cultural transformation. The impact of globalization and market competition, the need for innovation and creativity in jade carving design and production, and the potential of cultural tourism and creative industries are among the key factors shaping the future development of this art form.

However, perhaps the most critical challenge and responsibility for Dushan jade carving art in the 21st century is the safeguarding and transmission of its intangible cultural heritage. The preservation and revitalization of the skills, knowledge, practices, and expressions associated with jade carving are crucial for the continuity and vitality of this living tradition. This requires a comprehensive and participatory approach that involves the identification, documentation, research, promotion, and education of Dushan jade carving art, as well as the engagement and empowerment of local communities and stakeholders.

Moreover, the historical significance and cultural value of Dushan jade carving art have gained new relevance and urgency in the contemporary era, as this art form serves as a valuable repository of Chinese cultural heritage, identity, and diversity. The recognition and promotion of Dushan jade carving as a national intangible cultural heritage, as well as its potential in promoting cultural identity and regional development, have opened up new possibilities for the preservation, dissemination, and revitalization of this ancient craft.

To realize the full potential of Dushan jade carving art in the future, it is essential to adopt a comprehensive and sustainable approach to its development and innovation. This approach should encompass a holistic and integrated policy framework, a participatory and inclusive governance model, the principles of cultural heritage conservation, creative economy, and sustainable tourism, as well as investments in capacity building, infrastructure development, and digital transformation.

Furthermore, the promotion of Dushan jade carving art as a cultural symbol and asset of the Nanyang region can help to foster cultural identity, social cohesion, and economic development, while also contributing to the overall well-being and sustainability of the local community and the Chinese nation. However, this promotion should be pursued through a balanced, inclusive, and responsible approach that respects the cultural rights, benefits, and aspirations of the Dushan jade carving community, and aligns with the broader goals of sustainable development and cultural heritage protection.

In conclusion, Dushan jade carving art, with its rich history, artistic achievements, cultural significance, and future potential, stands as a testament to the creativity, resilience, and adaptability of Chinese civilization. By adopting an interdisciplinary approach that combines art history, archaeology, anthropology, and cultural heritage

studies, this comprehensive summary aims to contribute to a deeper understanding and appreciation of Dushan jade carving art as a significant cultural treasure and a living tradition that embodies the enduring spirit and vitality of Chinese culture.

This chapter provides a comprehensive and in-depth discussion of the historical development, artistic achievements, cultural significance and future prospects of the jade carving art of Dushan, Nanyang, Henan, China. It traces the origins and evolution of this ancient craft from the Neolithic Age to the present day, highlighting its role in shaping Chinese civilization and cultural identity.

Through the archaeological discoveries of the Peiligang and Yangshao cultures of the Neolithic Age, as well as the Xia, Shang and Zhou dynasties, the early development of Dushan jade carvings was investigated. These artifacts reveal the ancient Chinese's fascination with jade and shed light on early jade carving techniques and styles. The emergence of major jade carving centers in Henan such as Luoyang, Nanyang, and Zhengzhou has promoted the diversity of Chinese jade carving art and the richness of culture.

This chapter considers the Ming and Qing dynasties to be the golden age of Dushan jade carving art, characterized by royal patronage, the prosperity of jade workshops and jade craftsmen, and innovations in carving techniques and designs. Representative works such as "Kowloon Jade Cup" and "Lingzhi Bat Jade Ruyi Staff" reflect the superb skills and creativity of Dushan jade carving craftsmen, as well as the profound cultural symbolic significance of jade in Chinese society.

The late Qing Dynasty and the Republic of China were a period of decline and revival for the art of Dushan jade carving, as the industry faced challenges from political and social unrest, as well as the efforts of master craftsmen, scholars, and officials to protect and promote the art of Dushan jade carving as a national cultural heritage. . The jade carvings produced during this period reflect changes in style, subject matter, and technology of the time, as well as the innovations, adaptations, and challenges the industry faced in the face of modernization, commercialization, and Western influence.

This chapter then discusses the impact of the founding of the People's Republic of China in 1949 on Dushan jade carving art. During the socialist system and the era of reform and opening up, Dushan jade carving art has experienced major changes and faced challenges and opportunities. Socialist transformation and industrial collectivization, as well as the impact of the Cultural Revolution, have posed challenges to traditional crafts and cultural heritage. However, since the reform and opening up, with the promotion of national policies, Dushan jade carving being listed as a national intangible cultural heritage, and the expansion of the jade carving industry and market, the art of Dushan jade carving has been revived and innovated.

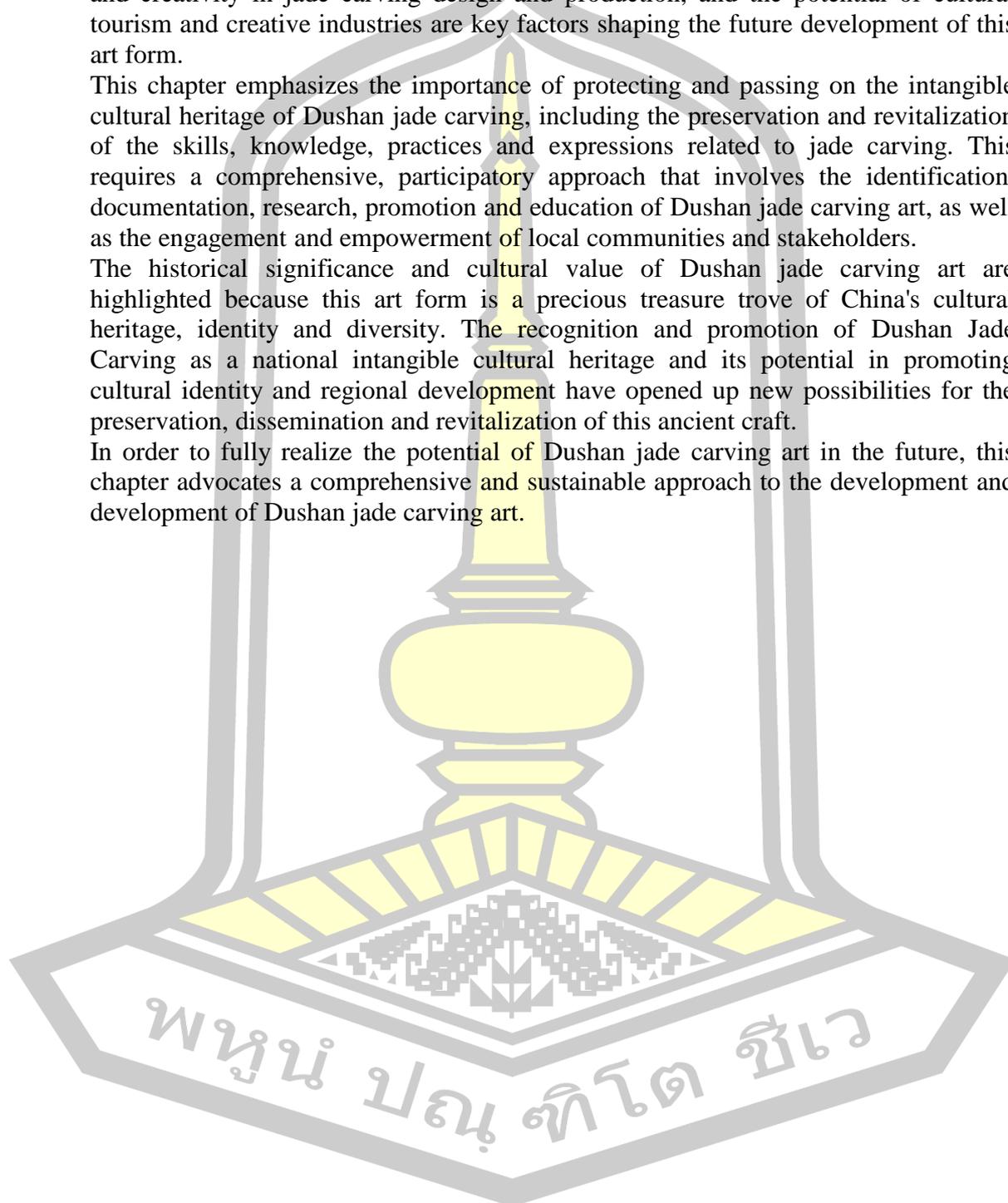
The characteristics of contemporary Dushan jade carving art are the inheritance and innovation of this ancient craft, the integration of traditional motifs and modern aesthetics, the expression of cultural identity and regional characteristics, and the exploration of new forms and functions of jade carving. The application of modern technology such as 3D scanning, computer-aided design (CAD), and computer numerical control (CNC) machines allows craftsmen to create more complex and innovative jade carvings, while retaining the cultural authenticity and integrity of this art form.

Entering the 21st century, Dushan jade carving art faces challenges and opportunities brought about by the forces of globalization, technological progress, and cultural change. The impact of globalization and market competition, the need for innovation and creativity in jade carving design and production, and the potential of cultural tourism and creative industries are key factors shaping the future development of this art form.

This chapter emphasizes the importance of protecting and passing on the intangible cultural heritage of Dushan jade carving, including the preservation and revitalization of the skills, knowledge, practices and expressions related to jade carving. This requires a comprehensive, participatory approach that involves the identification, documentation, research, promotion and education of Dushan jade carving art, as well as the engagement and empowerment of local communities and stakeholders.

The historical significance and cultural value of Dushan jade carving art are highlighted because this art form is a precious treasure trove of China's cultural heritage, identity and diversity. The recognition and promotion of Dushan Jade Carving as a national intangible cultural heritage and its potential in promoting cultural identity and regional development have opened up new possibilities for the preservation, dissemination and revitalization of this ancient craft.

In order to fully realize the potential of Dushan jade carving art in the future, this chapter advocates a comprehensive and sustainable approach to the development and development of Dushan jade carving art.



CHAPTER III

The artistic characteristics of traditional Dushan jade carving and the innovative design of contemporary Dushan jade carving from the perspective of material culture.

Introduction:

This chapter mainly studies the material characteristics and carving technology of Dushan jade. It focuses on the composition and physical properties of Dushan jade, as well as the carving and design methods used by jade carvers. This chapter is divided into three parts: 1) Introduction to the material characteristics and composition of Dushan Jade. 2) Discussion on traditional carving techniques and tools of Dushan jade carving. 3) Analysis of innovative design and style of contemporary Dushan jade carvings. This chapter will help lay the foundation for understanding the artistic value and cultural connotation of Dushan jade carvings, which will be further elaborated in subsequent chapters on traditional cultural identity expressions.

1. Material characteristics and composition of Dushan Jade

Dushan jade originates from Dushan Town, Nanyang City, Henan Province, China and is famous for its unique material properties and rich color variations. Dushan Jade was formed under specific geological conditions and has been cherished and utilized by people for thousands of years. Understanding the composition and physical properties of Dushan Jade is crucial to appreciating its value and the exquisite craftsmanship of Dushan Jade carvings.

1.1 Geological formation and distribution of Dushan jade

Dushan jade is a type of nephrite, a metamorphic rock mainly composed of tremolite and actinolite hornblende. The formation of Dushan Jade is closely related to the unique geological environment of the Dushan area. Jade-forming minerals originate from the metamorphism of dolomitic limestone and siliceous dolomite under high pressure and high temperature conditions (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

Dushan Jade, known as China's "Four Famous Jade", is produced in Dushan, Nanyang City, Henan Province. Dushan is isolated in the Nanyang Basin and is mainly composed of ancient metamorphic eclogite and basic rock mass mainly composed of gabbro. The unique geological conditions have resulted in the micro-dense texture of Dushan Jade. Under the action of hydrothermal turbidity of the basic rock mass, the original stone of Dushan Jade was born!

Dushan Jade is a complex altered rock composed of sodium calcium and aluminum silicate, namely altered plagioclase. Dushan jade is bright in color, showing glass luster to grease luster, translucent to slightly transparent, hardness 7.5-8, and fine texture. It is a good material for jade carving, and Nanyang jade carving technology has developed accordingly.

If Dushan jade is further divided according to its material composition and arts and crafts characteristics, it can be divided into six varieties: Nanyang white jade,

green jade, topaz, purple jade, sapphire and miscellaneous jade. Each color has its own style and charm. Over the years, jade carvings and works of art carved from Dushan jade have been selling well at home and abroad, and foreign friends call it "Nanyang Jade".



Figure 28 Dusan Jade material.

[Figure 29: Dusan Jade material. Figure 29: Dosan Jade material, soaking the raw stone in water can better bring out the base color of the material after polishing.

Source: Photo by the author Photo by the author]

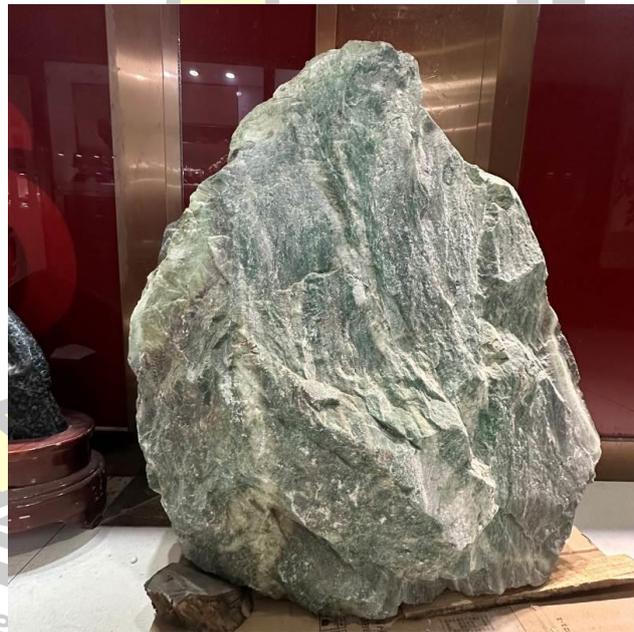


Figure 29 Large piece of raw Dosan jade. Source: Dushan Jade Carving World Processing Site Source: Photo taken by the author Photo taken by the author]1.2

Mineral composition and crystal structure

Dushan Jade is mainly composed of tremolite and actinolite, which are calcium-magnesium-iron silicate minerals belonging to the hornblende group. The chemical formula of tremolite is $\text{Ca}_2\text{Mg}_5\text{Si}_8\text{O}_{22}(\text{OH})_2$, while the chemical formula of actinolite is $\text{Ca}_2(\text{Mg,Fe})_5\text{Si}_8\text{O}_{22}(\text{OH})_2$. The iron content in actinolite is higher than that in tremolite, resulting in a darker color (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

The crystal structure of tremolite and actinolite is monoclinic, with silica tetrahedral double chains connected by cations such as calcium, magnesium, and iron. The arrangement of these elements gives Dushan jade a dense structure and excellent toughness (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). The interlacing of mineral particles also creates the delicate texture and luster of Dushan Jade.



Figure 30 Dusan jade in Nanyang, Henan Province

[Figure Systematic collection of rock specimens from the Dushan jade primary mine in Nanyang, Henan. Source: Geological Survey Physical Data Center]

In addition to the main mineral components, Dushan jade may also contain small amounts of other minerals such as chromite, magnetite, and calcite. These accessory minerals can affect the color and texture of jade (Yao, T., Wang, Y., & Liu, J. (2021) 123-131). For example, chromite can give jade a dark green color, while calcite may give it white veins or spots.

1.3 Physical and Mechanical Properties

Dushan jade possesses a combination of physical and mechanical properties that make it suitable for carving and appreciated as a gemstone. The hardness of Dushan jade ranges from 6 to 6.5 on the Mohs scale, which is lower than that of jadeite (6.5-7) but higher than most other ornamental stones (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682). This hardness allows Dushan jade to be carved with relative ease while maintaining its shape and details.

The density of Dushan jade is typically between 2.9 and 3.1 g/cm³, depending on its mineral composition and porosity (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). The compact structure and low porosity of high-quality Dushan jade contribute to its high toughness and resistance to breakage. The fracture toughness of Dushan jade can reach 2.5-3.0 MPa·m^{1/2}, which is higher than that of jadeite and most other gemstones (Yao, T., Wang, Y., & Liu, J. (2021) 123-131).

Another essential property of Dushan jade is its luster, which is described as waxy or greasy. This unique luster is attributed to the fine intergrowth of tremolite and actinolite crystals, as well as the presence of fibrous inclusions (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682). When polished, Dushan jade can exhibit a soft, warm sheen that is highly prized by collectors and connoisseurs.

The color of Dushan jade ranges from white to various shades of green, yellow, and even red or black. The most common and sought-after color is a vibrant emerald green, which is caused by the presence of chromium ions in the mineral structure (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). Other color variations are attributed to different types and amounts of trace elements, such as iron, manganese, and nickel (Yao, T., Wang, Y., & Liu, J. (2021) 123-131).



Figure 31 Nanyang "Yuhua Award" Winning Work "Flowers"
 [Figure 32: Featuring an intricate floral motif in high relief, creating a dynamic, rotating composition that showcases the delicate color gradations of the translucent pale green stone. Source: Photo by the author]



Figure 32 Nanyang City "Yuhua Award" work "Auspicious Dragon Taking Flight".

[Figure 32: The dynamic composition of interwoven dragon and floral motifs, skillfully carved with intricate detailing and high relief, highlights the rich palette of jade, which ranges from deep earth tones to vibrant greens, demonstrating the artist's bold, expressive style. Source: Photo by the author]



Figure 33 Nanyang "Yuhua Award" Winning Work "Layered Forest

[Figure 33: A dynamic natural landscape of rugged rock formations and lush vegetation, skillfully carved to create a sense of depth and movement, with the vivid green hue of the jade and subtle textural variations enhancing the organic and lifelike quality of the landscape in a traditional Chinese style. Source: Photo by the author]



Figure 34 Dushan jade carving Guanyin statue

[Figure 34 A serene statue of Buddha seated on a lotus throne surrounded by swirling dragons and clouds demonstrates the artist's mastery in creating harmonious compositions, with smooth lines, exquisite detailing, and softly polished finishes that capture the spiritual essence of the subject in the classic style of Chinese Buddhist art.

Source: Photo by the author]

The combination of hardness, toughness, luster, and color makes Dushan jade an ideal material for carving intricate patterns and designs. These properties also contribute to the durability and longevity of Dushan jade carvings, allowing them to be passed down through generations as valuable cultural and artistic treasures.

1.4 Quality Evaluation and Grading System

The quality of Dushan jade is evaluated based on several factors, including color, texture, transparency, and the presence of inclusions or flaws. The most desirable Dushan jade is characterized by a pure, even color, a fine and compact texture, good transparency, and minimal inclusions (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682). However, the appreciation of Dushan jade is also influenced by cultural preferences and artistic tastes, which may vary over time.

Chemical composition: the main mineral composition of different colors of Dosan Jade varies, the main chemical composition of SiO₂, Al₂O₃ and CaO, containing TiO₂, Cr₂O₃, FeO, MgO, Na₂O and Co, Ni, Sr, V and other trace elements.⁴

Crystalline state: crystalline aggregate, often fine-grained dense block.⁴

Color: blue-green, white, pink, brown, green and white, yellow, green, black; common two or more colors are dipped, striped intermixed distribution. Luster: glassy, rarely greasy. Mohs hardness: 5.5~7.⁴

Density: 2.70g/cm³~3.25 g/cm³. optical character: non-homogeneous aggregate. Refractive index: 1.56~1.70 (spot measurement) Fluorescence observation: none to weak white, weak red.⁴

UV-visible spectrum: blue-green with 628nm absorption band, 684nm absorption line.⁴

Magnified examination: fibrous granular structure, metamorphic structure, account structure, etc., visible dots, clumps, filaments, dark minerals, needle-like inclusions. Infrared spectra: the mineral composition varies greatly, showing a variety of infrared spectra. Special Properties Blue green monazite Charles color filter shows red.⁴

The color of Dosan jade raw materials is divided into four grades according to the proportion of different colors, from high to low, as Extra Superior Grade, Superior Grade, Grade I and Grade II. The color grades and division requirements are as stipulated in Table 1.⁴

Table 1 Dosan jade raw material color grading⁴

Level ⁴	Delineation Requirements ⁴
Superior grade ⁴	Emerald green, blue-green, sky blue more than 30%, pink more than 10%Excellent grade ⁴
Excellent grade ⁴	The proportion of emerald green, blue-green, sky blue is more than 10%, the proportion of pink is more than 5%, the proportion of water-permeable white is more than 30%, the proportion of fresh green and white is more than 30%, the proportion of light brown is more than 50%, and the proportion of light green is more than 40%. ⁴
First grade ⁴	Containing a small amount of emerald green, blue-green, sky blue, pink, water-permeable white, the proportion of green and white is more than 20%, the proportion of light brown is more than 20%, the proportion of cyan color is more than 20%. ⁴
Second grade ⁴	Containing no emerald green, blue-green, sky blue, pink, water-permeable white and other colors, such as dark brown, black flowers, black, gray and cyan, etc. ⁴

Figure 35 Dosan jade raw material color quality evaluation and grading system
[Figure 36: Dushan jade raw material color quality evaluation and grading system.

Source: Internet check]

In the traditional grading system for Dushan jade, the highest grade is known as "old pit material" (老坑料), which refers to jade from ancient mining sites that have been exhausted. Old pit material is prized for its rarity, historical significance, and the belief that it possesses superior qualities due to its long geological formation process (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8).



Figure 36 "Old pit material"

[Figure 36 "Old pit material" appears as a block of emerald green with a white glass bottom. Source: Internet check]

The second grade is "new pit material" (新坑料), which comes from more recently discovered or exploited mining sites. New pit material is further classified into different levels based on its color, texture, and clarity. The most sought-after new pit material is known as "fine green" (细豆), characterized by a vivid emerald green color, fine texture, and high transparency (Yao, T., Wang, Y., & Liu, J. (2021) 123-131).



Figure 37 "new pit material"

[Figure 37: "new pit material" appears green in ribbons, filaments, light green oil or light potato color glass bottom. Source: Internet check]

Lower grades of Dushan jade include "coarse green" (粗豆), which has a darker green color and coarser texture, and "white jade" (白玉), which is characterized by a milky white color and lower transparency. These lower-grade materials are often used for larger carvings or more affordable jade products (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

Classification	Time division	Characteristics	Variety
Old Pit	Before 1990	Mottled, blocky intense green, emerald green; white background	Daylight blue jade, full green jade, very fine texture light ripe color with emerald green jade
New Pit	After 1990	Banded, filamentary green, blue-green; glassy base	Lightly ripe or translucent white with green jade, filigree green jade and gray-green jade

Figure 38 Divided by 1990

[Figure 38 Taking 1990 as the time division, the old pit was called the old pit and the new pit is called the new pit in the future. Source: Internet check]

It is important to note that the grading of Dushan jade is not always straightforward, as the value of a piece can also be influenced by factors such as the skill of the carver, the complexity of the design, and the cultural or historical significance of the carving. Moreover, with advancements in jade treatment technologies, some lower-grade materials can be enhanced to resemble higher-grade jade, making the grading process more complex (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8).

2. Traditional Carving Techniques and Tools

Dushan jade carving is a time-honored craft that has been passed down through generations of skilled artisans. The techniques and tools used in Dushan jade carving have evolved, but many traditional methods remain essential to the art form. This section explores the traditional carving techniques and tools used in Dushan jade carving.

2.1 Hand Carving Techniques

Hand carving is the most traditional and fundamental technique in Dushan jade carving. It relies on the carver's skill, strength, and precision to shape the jade using simple hand tools. The process begins with selecting a suitable piece of jade based on its color, texture, and shape. The carver then uses a combination of sawing, grinding, and polishing techniques to create the desired form and details (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8).

One of the most common hand carving techniques is "tuo pian" (托片), which involves using a bow drill to create circular incisions on the jade surface. The carver then uses a small chisel to remove the excess material between the incisions, gradually shaping the jade into the desired form. This technique is often used to create intricate patterns and textures on the surface of the jade (Li, M. (2019) 291-310).



Figure 39 One of the engraving methods Sanding
 [Figure 39 Jade carver polishes and retouches jade carving. Source: Photos taken by the author]

Another essential hand carving technique is "zuo jiao" (琢角), which refers to the process of shaping and refining the edges and angles of the jade carving. The carver uses a combination of files, abrasives, and polishing tools to create smooth, precise edges and transitions between different surfaces. This technique requires a high level of skill and patience, as even the slightest error can ruin the entire piece (Wang, H. (2018) 112-120).

2.2 Abrasive Carving Techniques

Abrasive carving techniques involve using various abrasive materials to grind and shape the jade. These techniques are often used in combination with hand carving to create more complex and detailed designs. The most common abrasive materials used in Dushan jade carving include sand, emery, corundum, and diamond (Li, M. (2019) 291-310).

One of the most important abrasive carving techniques is "mo jiao" (磨角), which involves using a grinding wheel to shape and polish the jade. The grinding wheel is typically made of cast iron or steel and coated with an abrasive material such as sand or corundum. The carver holds the jade against the spinning wheel, carefully controlling the pressure and angle to achieve the desired shape and texture (Wang, H. (2018) 112-120).

Another abrasive carving technique is "cuo jiao" (搓角), which involves using a handheld abrasive tool to grind and polish smaller areas of the jade. The tool is usually made of a wooden or metal handle with an abrasive material attached to the end, such as a piece of sandpaper or a diamond tip. This technique allows the carver to work on more delicate details and hard-to-reach areas of the carving (Li, M. (2019) 291-310).

2.3 Traditional Carving Tools



Figure 40 Tools used in the art of jade carving

[Figure 40 Traditional engraving tools. Source: Internet check]

Dushan jade carvers have developed a wide range of specialized tools to suit the unique properties of the jade and the demands of different carving techniques. These tools are often handmade by the carvers themselves or passed down through generations of artisans. Some of the most essential traditional carving tools include:

Saws (锯): Various types of saws are used to cut and shape the jade, ranging from simple hand saws to more advanced wire saws and bow saws. The blades are typically made of steel or diamond and can be of different thicknesses and tooth configurations depending on the hardness of the jade and the desired cut (Wang, H. (2018) 112-120).

Chisels (凿): Chisels are used for removing excess material and creating precise incisions on the jade surface. They come in different shapes and sizes, from flat chisels for making straight cuts to rounded chisels for creating curved lines and details. The chisels are usually made of hardened steel and can be struck with a mallet or pushed by hand (Li, M. (2019) 291-310).

Files (锉): Files are used for shaping and smoothing the jade surface after the initial carving. They come in various shapes and grits, from coarse rasps for removing large amounts of material to fine files for creating smooth, polished surfaces. The files are typically made of steel or corundum and can be handheld or mounted on a workbench (Wang, H. (2018) 112-120).



Figure 41 Various engraving methods

[Figure 41 The intricate patterns and patterns of traditional Dushan jade carvings are created using a variety of carving methods, each requiring great skill and precision.

Source: Internet check]

Drills (钻): Drills are used for creating holes, channels, and other internal features in the jade carving. Traditional drills include bow drills and hand drills, which are operated by the carver's physical strength and skill. More advanced drills, such as

electric rotary tools and ultrasonic drills, are also used in modern jade carving workshops (Li, M. (2019) 291-310).

Polishing tools (抛光工具): Polishing is the final step in the jade carving process, and it requires a range of specialized tools to achieve the desired luster and smoothness. Traditional polishing tools include leather strops, bamboo sticks, and felt pads, which are used with various polishing agents such as wax, oil, and abrasive powders. The choice of polishing tool and agent depends on the type of jade and the desired finish (Wang, H. (2018) 112-120).

The mastery of traditional carving techniques and tools is essential for creating high-quality Dushan jade carvings that showcase the beauty and uniqueness of the material. However, with the advent of modern technologies and changing market demands, many jade carvers have also incorporated new techniques and tools into their practice, leading to innovative designs and styles in contemporary Dushan jade carving.

3. Innovative Designs and Styles in Contemporary Dushan Jade Carving

While traditional techniques and designs remain the foundation of Dushan jade carving, contemporary jade carvers have also embraced innovation and experimentation in their work. This section explores some of the innovative designs and styles that have emerged in Dushan jade carving in recent years, as well as the factors that have influenced these developments.

3.1 Fusion of Traditional and Modern Elements

One of the most prominent trends in contemporary Dushan jade carving is the fusion of traditional and modern elements. Many jade carvers have sought to reinterpret classic designs and motifs in new and creative ways, often incorporating contemporary aesthetics and techniques. This approach allows them to appeal to a wider range of customers and showcase the versatility of Dushan jade as a medium (Liu, Y. (2020) 185-203).

For example, some carvers have experimented with combining traditional Chinese symbolic animals, such as dragons and phoenixes, with more abstract and geometric patterns inspired by modern art. Others have created pieces that blend classic jade carving techniques with innovative materials, such as precious metals or other gemstones, to create unique and eye-catching designs (Zhao, X. (2021) 291-298).



Figure 42 Dushan jade flower and bird carving

[Figure. 42 The phoenixes perched on a rocky base, their feathers delicately carved and beautifully poised in a monochromatic stone of light green. The clever use of layers and negative space creates a sense of depth and movement, highlighting the ethereal beauty of the pair of birds and reflecting the traditional Chinese style that symbolizes good fortune and harmony. Source: Photo by the author]



Figure 43 Dushan jade figure carving

[Figure 43A modernized style of jade carving design in which the master jade carver uses the unique colors of Doshan jade to bring out the playfulness and liveliness of an urchin. Photo credit: Photo by the author]

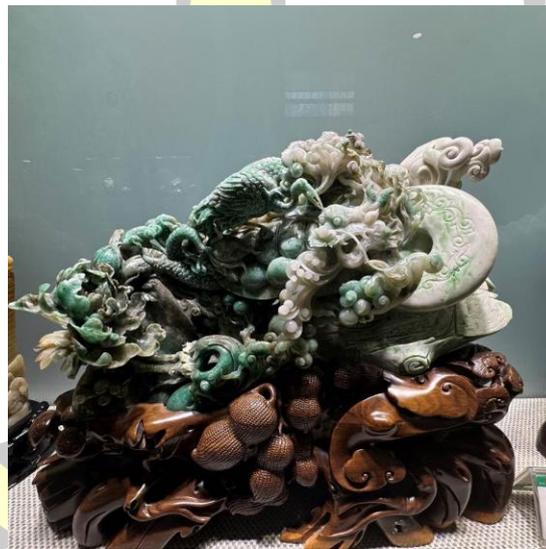


Figure 44Doshan jade combined with traditional Chinese culture

[Fig. 44 A master jade carver uses the unique color of Doshan jade and his skill to bring the work to life in conjunction with traditional Chinese culture. Photo credit: Photo by the author]



Figure 45 Dushan jade openwork carving

[Figure 45 The unique color of Dosan Jade and the high level of craftsmanship combined with the traditional culture of ancient China bring the work to life. Photo credit: Photo by the author]



Figure 46 Dosan jade carvings in various styles.

[Figure 46 Different styles of Dushan jade carvings. Source: Photos taken by the author]

The fusion of traditional and modern elements in Dushan jade carving reflects a broader trend in Chinese art and culture, where artists and craftspeople are seeking to balance the preservation of heritage with the demands of a rapidly changing society. By embracing innovation while staying true to the essence of their craft, Dushan jade carvers are ensuring the continued relevance and vitality of this ancient art form.

3.2 Influence of Global Art Trends

As China has become more integrated into the global economy and cultural landscape, Dushan jade carvers have also been exposed to a wider range of artistic influences and trends from around the world. Many carvers have sought to incorporate elements from Western art, such as impressionism, cubism, and abstract expressionism, into their jade carvings (Liu, Y. (2020) 185-203).



Figure 47 gold and jade

[Figure 47 The intricate patterns and patterns of traditional Dushan jade carvings are created using a variety of carving methods, each requiring great skill and precision.

Source: Photos taken by the author]

For example, some carvers have experimented with creating jade sculptures that emphasize the interplay of light and shadow, similar to the techniques used by impressionist painters. Others have explored the use of geometric forms and fragmented compositions, drawing inspiration from cubist and abstract art (Zhao, X. (2021) 291-298).

The influence of global art trends on Dushan jade carving has not only broadened the creative horizons of jade carvers but also helped to raise the international profile of this traditional Chinese craft. By engaging with contemporary art discourses and aesthetics, Dushan jade carvers are demonstrating the potential of their medium to transcend cultural boundaries and resonate with a global audience.

3.3 Adaptation to Changing Market Demands

The innovations in Dushan jade carving have also been driven by changing market demands and consumer preferences. As China's economy has grown and diversified, the jade market has become increasingly segmented, with different groups of consumers seeking different types of products and experiences (Liu, Y. (2020) 185-203).

For example, younger consumers may be more interested in jade carvings that feature modern, minimalist designs and can be worn as fashion accessories. Middle-class consumers may prefer jade carvings that serve as decorative items for their homes or offices, while high-end collectors may seek one-of-a-kind pieces that showcase the carver's technical skill and artistic vision (Zhao, X. (2021) 291-298).

To meet these diverse demands, Dushan jade carvers have had to adapt their designs and production methods. Some have focused on creating smaller, more affordable pieces that can be mass-produced and sold online, while others have specialized in creating bespoke, high-value carvings for discerning collectors. Many carvers have also incorporated new technologies, such as 3D modeling and CNC machining, to streamline their production processes and create more precise and intricate designs (Liu, Y. (2020) 185-203).



Figure 48 Jade Rabbit Watching the Moon Jewelry.

[Figure 48 Jade Rabbit Watching the Moon Jewelry. Source: Photos taken by the author]

The adaptation of Dushan jade carving to changing market demands has not only helped to ensure the economic viability of this traditional craft but also encouraged innovation and experimentation among jade carvers. By responding to the needs and preferences of contemporary consumers, Dushan jade carvers are helping to

create new markets and opportunities for their art form, while also preserving and promoting the cultural heritage of their region.

3.4 Emergence of Thematic and Conceptual Carvings

Another significant trend in contemporary Dushan jade carving is the emergence of thematic and conceptual pieces that explore social, cultural, and philosophical issues. Rather than simply creating decorative or functional objects, some jade carvers are using their art to express ideas, tell stories, and provoke thought and reflection among viewers (Zhao, X. (2021) 291-298).

For example, some carvers have created jade sculptures that address environmental themes, such as the relationship between humans and nature, or the impact of climate change on ecosystems. Others have explored social and political issues, such as income inequality, gender roles, or the challenges faced by migrant workers in China's rapidly urbanizing society (Liu, Y. (2020) 185-203).

Conceptual jade carvings often incorporate symbolic or allegorical elements that convey deeper meanings and invite multiple interpretations. For example, a carving of a tree with intertwined branches and roots may represent the interconnectedness of all living things, while a sculpture of a shattered jade vessel may symbolize the fragility of human relationships or the impermanence of material possessions (Zhao, X. (2021) 291-298).

The emergence of thematic and conceptual carvings in Dushan jade reflects a growing interest among Chinese artists and intellectuals in using traditional art forms as a medium for social and cultural critique. By engaging with contemporary issues and ideas, Dushan jade carvers are not only pushing the boundaries of their craft but also contributing to broader discussions about the role of art in shaping public discourse and promoting social change.

3.5 Collaborative and Interdisciplinary Projects

In recent years, some Dushan jade carvers have also begun to collaborate with artists, designers, and scholars from other disciplines to create innovative and interdisciplinary projects. These collaborations have brought new perspectives and approaches to the art of jade carving, while also helping to raise awareness of this traditional craft among new audiences (Liu, Y. (2020) 185-203).

For example, some jade carvers have worked with fashion designers to create jewelry and accessories that combine jade with other materials, such as leather, silk, or precious metals. Others have collaborated with architects and interior designers to create jade installations and sculptures for public spaces and private residences (Zhao, X. (2021) 291-298).

Interdisciplinary projects have also allowed Dushan jade carvers to engage with new technologies and media. For example, some carvers have worked with digital artists and animators to create virtual reality experiences that allow viewers to explore jade carvings in immersive, three-dimensional environments. Others have collaborated with musicians and sound artists to create multimedia installations that combine jade sculptures with music, light, and other sensory elements (Liu, Y. (2020) 185-203).

Collaborative and interdisciplinary projects have not only expanded the creative possibilities of Dushan jade carving but also helped to promote cross-cultural exchange and dialogue. By working with artists and scholars from different

backgrounds and disciplines, Dushan jade carvers are helping to create new networks and communities of practice that transcend traditional boundaries and hierarchies.

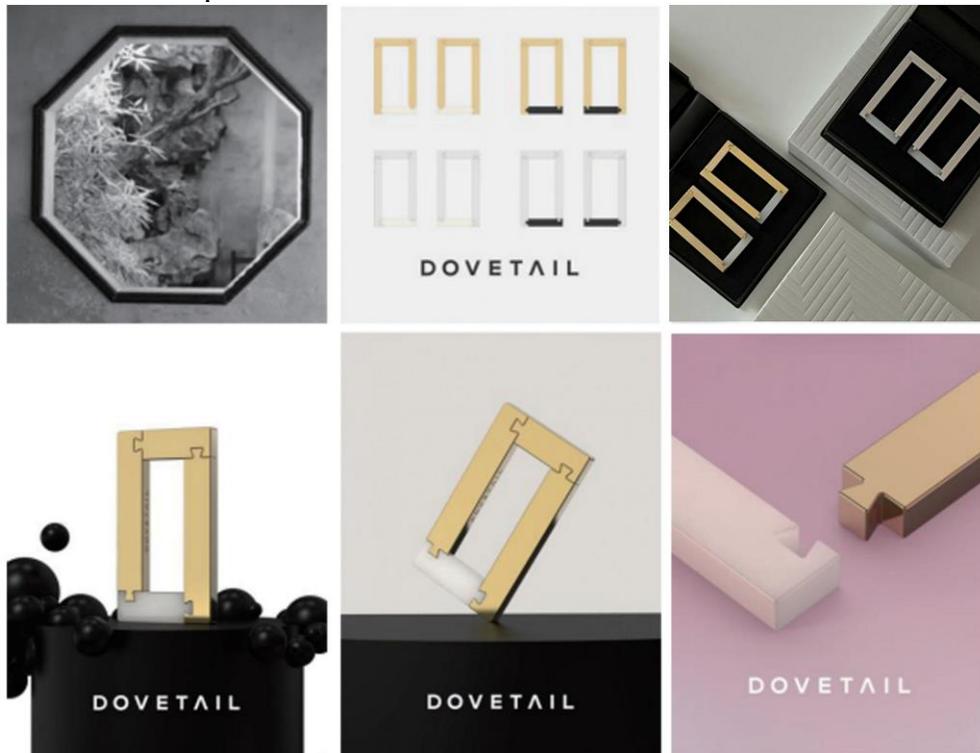


Figure 49 Jade Rabbit Watching the Moon Jewelry

[Figure 49 Jade Rabbit Watching the Moon Jewelry. Source: Internet check]

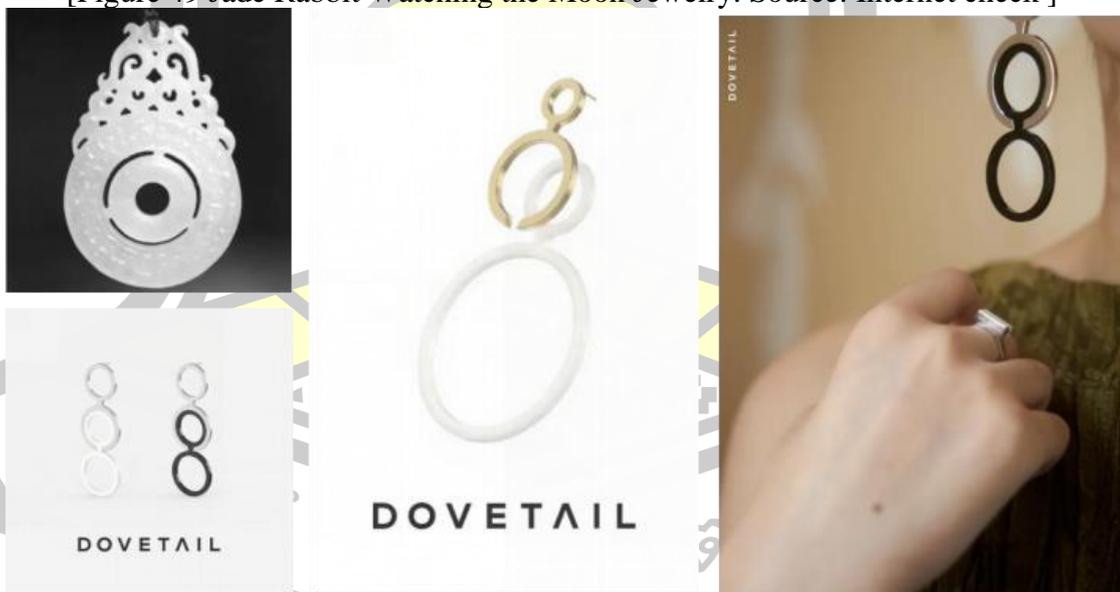


Figure 50 Modern Design and Jade Combination

[Figure 52: JDOVETALL·Ring buckle modern dovetail series. Source: Internet check]

The art of Dushan jade carving is a testament to the ingenuity, skill, and creativity of the artisans who have devoted their lives to this ancient craft. Through their mastery of traditional techniques and tools, as well as their willingness to experiment with new designs and styles, Dushan jade carvers have created works of extraordinary beauty and significance that continue to captivate and inspire audiences around the world.

The unique material properties and composition of Dushan jade, including its hardness, toughness, color, and luster, have made it a highly prized medium for carving and decoration for over a thousand years. The geological formation and distribution of Dushan jade, as well as the mineral composition and crystal structure of its main components, tremolite and actinolite, have all contributed to its distinctive qualities and cultural significance.

The traditional carving techniques and tools used by Dushan jade carvers, such as hand carving, abrasive carving, and polishing, require great skill, patience, and attention to detail. These techniques have been passed down through generations of artisans and continue to form the foundation of the craft today. However, contemporary jade carvers have also embraced innovation and experimentation, incorporating new technologies, materials, and design elements into their work.

The innovative designs and styles that have emerged in Dushan jade carving in recent years reflect a growing interest among Chinese artists and consumers in contemporary aesthetics, global art trends, and conceptual and thematic content. From the fusion of traditional and modern elements to the exploration of social and cultural issues through jade sculpture, Dushan jade carvers are pushing the boundaries of their craft and engaging with broader discussions about the role of art in society.

Collaborative and interdisciplinary projects have also opened up new opportunities for Dushan jade carvers to work with artists, designers, and scholars from other fields, creating works that combine jade with other materials, technologies, and sensory elements. These projects have helped to raise awareness of Dushan jade carving among new audiences and promote cross-cultural exchange and dialogue.

As the art of Dushan jade carving continues to evolve and adapt to changing market demands and cultural trends, it is important to recognize and celebrate the enduring value and significance of this ancient craft. Through their dedication, skill, and creativity, Dushan jade carvers are not only preserving and promoting the cultural heritage of their region but also contributing to the global artistic and cultural landscape. Their works serve as a reminder of the beauty, complexity, and resilience of the human spirit, and the power of art to connect us across time, space, and culture. The art of Dushan jade carving is a rich and complex tradition that embodies the cultural heritage, artistic creativity, and technical skill of the Chinese people. From its ancient origins to its contemporary innovations, Dushan jade carving has evolved and adapted to changing social, economic, and cultural conditions, while also preserving its essential values and techniques.

This chapter has explored the characteristics and carving techniques of Dushan jade, highlighting the unique properties and composition of this precious stone, as well as the traditional and innovative methods used by jade carvers to create works of extraordinary beauty and significance. It has also discussed the challenges and

opportunities facing the Dushan jade carving industry today, and proposed recommendations for its sustainable development and promotion.

To ensure the continued vitality and relevance of Dushan jade carving art, it is essential to balance the preservation of traditional craftsmanship with the demands of a rapidly changing market. This requires a multi-faceted approach that includes policy support, industry regulation, education and training, cultural tourism, public engagement, innovation and experimentation, and international exchange and collaboration.

By working together to implement these recommendations, jade carvers, scholars, cultural institutions, and government agencies can help to create a sustainable and vibrant future for Dushan jade carving art, one that honors its rich heritage while also embracing innovation and change. In doing so, they can ensure that this precious cultural treasure continues to inspire and enrich the lives of people around the world for generations to come.

This chapter focuses on the influence of Dushan jade on artists' carving patterns and imagery designs. It explores how the unique properties and cultural significance of Dushan jade have inspired and guided artists in their creative processes. This chapter is divided into three parts: 1) An analysis of the aesthetic qualities of Dushan jade and their impact on artistic expression. 2) A discussion of the traditional and contemporary carving patterns and imagery designs influenced by Dushan jade. 3) An examination of the cultural and symbolic meanings conveyed through Dushan jade carvings and their role in shaping artistic creation. This chapter will highlight the profound influence of Dushan jade on the artistic and cultural landscape, laying the foundation for understanding the importance of preserving and promoting this valuable cultural heritage.

4. Aesthetic Qualities of Dushan Jade and Their Impact on Artistic Expression

Dushan jade, with its unique material properties and aesthetic qualities, has long been a source of inspiration for artists and craftsmen. The inherent beauty and symbolism of Dushan jade have profoundly influenced artistic expression, guiding the creation of exquisite carvings and designs that showcase the material's distinctive characteristics.

4.1 Color and Texture

One of the most striking features of Dushan jade is its rich color palette, ranging from pure white to various shades of green, yellow, and even red or black. The most prized and sought-after color is the vibrant emerald green, which is caused by the presence of chromium ions in the mineral structure (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). The color variations in Dushan jade have inspired artists to create carvings that highlight and celebrate these natural hues, often using the stone's inherent color patterns to enhance the overall design.

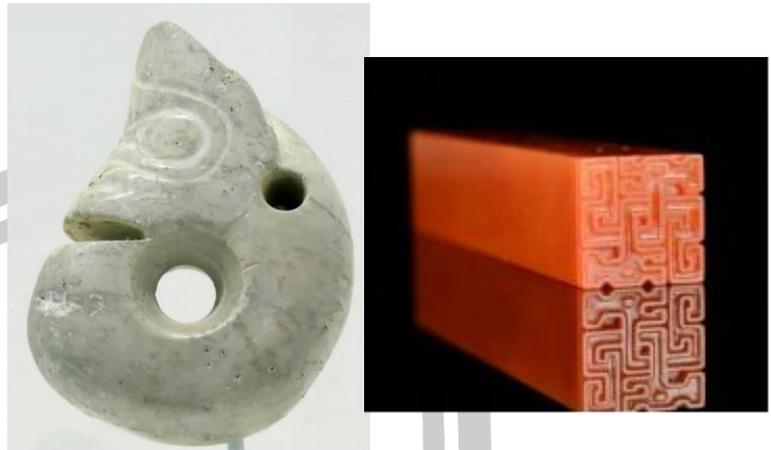


Figure 51 Jade pig dragon unearthed from the Hongshan culture site.
 [Figure 51 Jade Pig Dragon Unearthed from Hongshan Cultural Site.Source: Internet check]



Figure 52 curved pattern.Source: Internet check
 [Figure 52 curved pattern.Source: Internet check]



Figure 53Kui dragon pattern graphics.
 [Figure 53 Kui dragon pattern graphics.Source: Internet check]



Figure 54 Bogu pattern graphics.

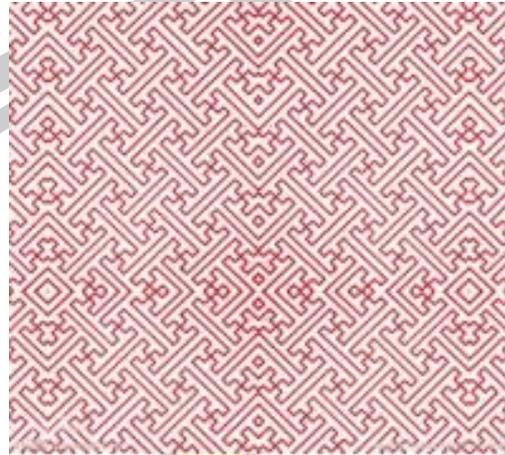


Figure 55 Whistle pattern

[Figure 55 Whistle pattern.Source: Internet check]

Jade carving art is a unique art form in China and an important part of building rich Chinese culture and art.

Jade art has rich cultural connotations and is a unique art category. The art of jade carving modifies ordinary stones with graceful shapes and exquisite patterns, as well as its complex and delicate processing techniques, making the world marvel at the charm of Chinese art.

The texture of Dushan jade is another essential aspect that influences artistic expression. The compact structure and fine intergrowth of tremolite and actinolite crystals give Dushan jade a smooth, waxy, or greasy texture (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682). This unique texture allows for intricate carving and polishing, enabling artists to create highly detailed and refined works of art. The interplay between the jade's texture and the carved surfaces creates a tactile and visual experience that is highly prized by collectors and connoisseurs.

Artists often use the color and texture of Dushan jade to guide their design choices, selecting specific portions of the stone that showcase the desired qualities. For example, an artist may choose a piece of jade with a particularly vivid green color and a smooth, even texture to create a carving of a leafy plant or a bamboo shoot, highlighting the natural beauty of the material.

Jade has experienced a long history, and its patterns have also continued to develop. During the Shang and Zhou dynasties, the most prominent jade decorations were the gluttonous pattern, the Kui dragon pattern, the flat chi pattern, the milk nail pattern, the cloud and thunder pattern, and the animal face pattern; during the Spring and Autumn Period and the Warring States Period, the multi-pu pattern and the valley pattern were the most popular; after the Han Dynasty, the most common patterns are cloud-shaped and landscape patterns; after the Sui and Tang Dynasties, various natural flower patterns became popular. The main themes of jade works include various animals and plants, as well as various characters. These works are usually created from real-life animals or surreal divine animals, such as birds, cicadas, fish, frogs, sheep, pigs, owls, eagles, etc. in real life, as well as divine animals that do not

exist in nature such as pigs. Dragon, hook dragon, animal face, etc. Jade works also often use botanical works as their themes, such as plums, orchids, bamboos, chrysanthemums, pine, gourds, lotus, peonies, leaves, pomegranates, cabbages, melons and fruits, etc. Another kind of works shows more about people's daily life. Their designs are often consistent with the surrounding landscape, showing a secular theme tendency. Jade is a unique work of art, ranging from practical utensils in daily life to ritual utensils with patriarchal cultural connotations. They are closely related to the natural world and human life, and at the same time convey people's beautiful longing for the future.

4.2 Translucency and Light

Another essential aesthetic quality of Dushan jade is its translucency, which allows light to penetrate the stone and create a soft, luminous effect. The degree of translucency varies depending on the thickness and composition of the jade, with some pieces exhibiting a more opaque appearance while others are nearly transparent (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). Artists often use the translucency of Dushan jade to create carvings that play with light and shadow, resulting in works that appear to glow from within.

The interaction between light and the carved surfaces of Dushan jade can also create a sense of depth and dimensionality, enhancing the overall visual impact of the piece. Artists may use various carving techniques, such as relief carving or openwork, to manipulate the way light passes through the jade, creating intricate patterns and designs that change appearance depending on the angle of observation (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

For example, an artist may create a jade carving of a flower with delicate, translucent petals that allow light to pass through, giving the piece a soft, ethereal quality. The play of light and shadow on the carved surfaces can also be used to highlight specific details or create a sense of movement and dynamism in the design.

4.3 Hardness and Durability

The hardness and durability of Dushan jade have also had a significant impact on artistic expression. With a hardness of 6 to 6.5 on the Mohs scale, Dushan jade is relatively hard and resistant to wear and tear (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682). This durability has allowed jade carvings to survive for centuries, preserving the artistic and cultural legacy of past generations.

The hardness of Dushan jade has also influenced the carving techniques and tools used by artists. Carving jade requires specialized skills and tools, such as diamond-tipped saws, drills, and abrasives, to shape and polish the stone (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). The difficulty of working with such a hard material has led to the development of a highly skilled and respected craft tradition, with jade carvers often dedicating years to mastering their art.

The durability of Dushan jade has also made it a popular choice for creating functional objects, such as jewelry, seals, and decorative items, in addition to purely artistic carvings. These objects often incorporate intricate designs and symbols that reflect the cultural and historical significance of jade in Chinese society (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

For example, a Dushan jade seal may feature a carefully carved design incorporating auspicious symbols and calligraphy, serving as both a functional object

and a work of art. The hardness and durability of the jade ensure that the seal can withstand repeated use while maintaining its beauty and cultural significance.



Figure 56 Dushan Jade Seal

[Figure 56 A Dushan jade seal with a carved design featuring auspicious symbols and calligraphy. Source: Photograph by the author, 2022.]

The aesthetic qualities of Dushan jade, including its color, texture, translucency, and hardness, have had a profound impact on artistic expression. These qualities have guided artists in their choice of materials, carving techniques, and design elements, resulting in a rich and diverse tradition of Dushan jade carving that celebrates the inherent beauty and symbolism of the stone. As artists continue to draw inspiration from the unique properties of Dushan jade, they contribute to the ongoing evolution and vitality of this ancient art form.

5. Traditional and Contemporary Carving Patterns and Imagery Designs

Dushan jade carving has a long and rich history, with traditional patterns and imagery designs that have been passed down through generations of artisans. These designs often reflect the cultural, religious, and philosophical beliefs of Chinese society, as well as the aesthetic preferences of different historical periods. In recent years, contemporary artists have also begun to incorporate new themes, styles, and techniques into their Dushan jade carvings, resulting in a dynamic and evolving art form that bridges the past and the present.

5.1 Traditional Carving Patterns and Imagery

Traditional Dushan jade carving patterns and imagery often draw inspiration from nature, mythology, and religious symbolism. These designs have been refined and perfected over centuries, becoming iconic representations of Chinese art and culture.

One of the most common and enduring themes in traditional Dushan jade carving is the depiction of animals, both real and mythical. Dragons, phoenixes, and tigers are among the most popular subjects, each carrying its own symbolic meaning (Wang, H. (2018) 112-120). For example, dragons are associated with power, strength, and good fortune, while phoenixes represent beauty, grace, and rebirth. Jade carvings featuring these creatures often incorporate intricate details and stylized forms that highlight their mythical qualities



Figure 57 Traditional Dushan Jade Carving

[Figure 57 A traditional Dushan jade carving featuring a dragon motif, symbolizing power and good fortune. Source: Photograph by the author, 2022.]

Another important category of traditional Dushan jade carving is the representation of plants and flowers. Lotus, bamboo, and plum blossoms are among the most common subjects, each carrying its own cultural and symbolic significance (Li, M. (2019) 291-310). For example, the lotus is associated with purity, enlightenment, and the Buddhist faith, while bamboo represents resilience, integrity, and longevity. Jade carvings featuring these plants often showcase the artisan's skill in rendering delicate and naturalistic details, such as the veins of a leaf or the texture of a flower petal.

Religious and mythological figures are also prominent subjects in traditional Dushan jade carving. Buddhist and Taoist deities, as well as legendary heroes and sages, are often depicted in jade, serving as objects of worship and devotion (Wang, H. (2018) 112-120). These carvings may feature intricate robes, facial expressions, and symbolic attributes that convey the figure's spiritual and moral qualities.

In addition to figurative designs, traditional Dushan jade carving also includes abstract patterns and geometric shapes that carry symbolic meanings. For example, the bi disc, a circular jade object with a central hole, is believed to represent the heavens and is often used in ritual contexts (Li, M. (2019) 291-310). Other abstract designs, such as the taotie mask and the kui dragon, are derived from ancient bronze vessels and have been adapted into the jade carving tradition.

5.2 Contemporary Carving Patterns and Imagery

While traditional carving patterns and imagery remain an important part of the Dushan jade carving tradition, contemporary artists have also begun to explore new themes, styles, and techniques in their work. These innovations reflect changing social, cultural, and aesthetic values, as well as the influence of global art trends and technologies.

One notable trend in contemporary Dushan jade carving is the incorporation of modern and abstract design elements. Some artists have experimented with minimalist and geometric forms, creating jade sculptures that emphasize the inherent beauty of

the material through simple, clean lines and shapes (Liu, Y. (2020) 185-203). Others have explored the use of negative space and asymmetry, creating carvings that challenge traditional notions of balance and harmony.

Another area of innovation in contemporary Dushan jade carving is the use of new technologies and techniques. Some artists have incorporated computer-aided design (CAD) and 3D printing into their creative process, using these tools to create complex and precise models that can be used as guides for carving (Zhao, X. (2021) 291-298). Others have experimented with unconventional carving methods, such as using ultrasonic tools or laser engraving, to create unique textures and patterns on the surface of the jade.

Contemporary Dushan jade carving has also seen a growing interest in social and political themes, with some artists using their work to comment on issues such as environmental conservation, social inequality, and cultural identity. For example, an artist may create a jade carving that depicts the devastating effects of pollution on natural habitats, using the inherent beauty and purity of the jade as a contrast to the environmental degradation .



Figure 58 Modern Dushan jade carving innovative design
[Figure A contemporary Dushan jade carving addressing the theme of environmental conservation, depicting a tree with bare branches. Source: Photograph by the author, 2022.]

In addition to these thematic innovations, contemporary Dushan jade carving has also seen a growing trend towards collaboration and interdisciplinary projects. Some artists have worked with designers, architects, and other professionals to create jade installations and sculptures that integrate with larger artistic and cultural contexts (Liu, Y. (2020) 185-203). These collaborations have helped to expand the boundaries of jade carving and showcase the material's versatility and potential for creative expression.

Despite these innovations, many contemporary Dushan jade carvers continue to draw inspiration from traditional patterns and imagery, reinterpreting and adapting these designs to suit modern tastes and sensibilities. This balance between tradition

and innovation is a hallmark of the Dushan jade carving art form, ensuring its continued relevance and vitality in the face of changing times and cultural landscapes.

6. Cultural and Symbolic Meanings in Dushan Jade Carvings

Dushan jade carvings are not merely decorative objects; they are also imbued with deep cultural and symbolic meanings that reflect the beliefs, values, and aspirations of Chinese society. These meanings have been shaped by centuries of artistic and intellectual tradition, and continue to inform the creation and interpretation of Dushan jade carvings to this day.

6.1 Auspicious Symbolism

One of the most prevalent themes in Dushan jade carving is the use of auspicious symbolism to convey wishes for good fortune, longevity, and prosperity. Many traditional jade carving motifs, such as dragons, phoenixes, and peaches, are associated with positive qualities and are believed to bring blessings to their owners (Wang, H. (2018) 112-120).

For example, the peach is a symbol of longevity and immortality in Chinese culture, often depicted in jade carvings as a plump, juicy fruit with a long stem and leaves (Figure 6). The peach motif is derived from Taoist mythology, which describes a magical peach tree that bears fruit only once every three thousand years. Consuming this fruit is said to confer immortality and eternal youth upon the lucky recipient.

Despite these innovations, many contemporary Dushan jade carvers continue to draw inspiration from traditional patterns and imagery, reinterpreting and adapting these designs to suit modern tastes and sensibilities. This balance between tradition and innovation is a hallmark of the Dushan jade carving art form, ensuring its continued relevance and vitality in the face of changing times and cultural landscapes.



Figure 59 A Dushan jade carving featuring a peach motif

[Figure 59 A Dushan jade carving featuring a peach motif, symbolizing longevity and immortality. Source: Photograph by the author, 2022.]

Other auspicious symbols commonly found in Dushan jade carvings include bats (representing happiness and good fortune), fish (symbolizing abundance and prosperity), and the Chinese character "shou" (meaning longevity) (Li, M. (2019)

291-310). By incorporating these symbols into their designs, jade carvers create objects that not only showcase their artistic skill but also serve as talismans and bearers of good wishes.

6.2 Confucian and Taoist Values

Dushan jade carvings also often embody the values and principles of Confucianism and Taoism, two of the most influential philosophical and religious traditions in Chinese culture. These values are expressed through the choice of subject matter, the way figures are depicted, and the overall composition of the carving.

In Confucian thought, jade is associated with the virtues of benevolence, righteousness, wisdom, and integrity (Wang, H. (2018) 112-120). Jade carvings that feature Confucian themes often depict scholars, sages, and moral exemplars, emphasizing their noble character and ethical conduct. For example, a carving of the legendary sage-king Shun may portray him with a serene and dignified expression, holding a jade scepter that symbolizes his just and enlightened rule .



Figure 60 Ancient Confucianism Resonates with Nature

[Figure 60 Ancient Confucianism empathizes with nature Guo Maojie's Confucianism, Buddhism and Taoism Character Kit. Source: Shoushan Petrochemical Network]

Taoist themes in Dushan jade carving often revolve around the idea of harmony between humans and nature, and the pursuit of spiritual enlightenment and immortality. Taoist-inspired carvings may feature mythical figures such as the Eight Immortals, who are believed to have achieved transcendence through their mastery of Taoist practices (Li, M. (2019) 291-310). These carvings often incorporate symbols of longevity and renewal, such as cranes, pine trees, and lingzhi mushrooms, which are associated with the Taoist ideal of eternal life.

6.3 Imperial and Elite Patronage

Dushan jade carvings have long been associated with imperial and elite patronage, serving as symbols of power, status, and cultural refinement. Throughout Chinese history, emperors and nobles have commissioned jade carvings as gifts,

tributes, and personal adornments, elevating the art form to a position of great prestige and importance.

One of the most famous examples of imperial jade patronage is the Dushan jade carvings created for the Qing Dynasty (1644-1912) court. During the reign of Emperor Qianlong (1736-1795), the imperial workshops produced a wide range of jade carvings, from intricate vessels and figurines to large-scale sculptures and architectural elements (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682). These carvings often incorporated auspicious symbols and imperial motifs, such as dragons, phoenixes, and the character "shou," reflecting the emperor's desire for longevity and good fortune.

The association between Dushan jade and elite status has also influenced the development of jade carving styles and techniques. Many jade carvers have sought to create increasingly complex and refined designs to cater to the tastes of their elite patrons, pushing the boundaries of what is technically possible with the material (Wang, Y., Liu, J., Zhang, Z., & Chen, J. (2020) 1-8). This has led to the emergence of highly intricate and naturalistic styles, such as the "slender gold" style of the Ming Dynasty (1368-1644), which features delicate, openwork designs that resemble fine gold filigree.

6.4 Contemporary Cultural Expressions

In recent years, contemporary Dushan jade carvers have begun to use their art to express new cultural and social meanings, reflecting the changing values and concerns of modern Chinese society. These carvings often address themes such as environmental conservation, social inequality, and cultural identity, using jade as a medium for creative and critical engagement.

For example, some contemporary jade carvers have created works that comment on the impact of modernization and urbanization on traditional Chinese culture, using jade as a symbol of cultural heritage and continuity. Others have used jade carving to explore issues of gender and sexuality, challenging traditional norms and expectations (Liu, Y. (2020) 185-203).

One notable example of contemporary cultural expression in Dushan jade carving is the work of artist Liu Zhen, who has created a series of carvings that depict the human figure in various states of emotional and physical vulnerability (Figure 8). These carvings, which often feature fragmented or distorted bodies, serve as a commentary on the pressures and anxieties of modern life, and the need for greater empathy and understanding in human relationships.

พหุ ม ประทีป ชีวะ



Figure 61 Zhang Kezhao Rotating Childhood

[Figure 61 Zhang Kezhao Rotating Childhood. Source: China Collection Network.]

As Dushan jade carving continues to evolve and adapt to new cultural and social contexts, it remains a powerful medium for artistic expression and symbolic communication. By drawing on the rich cultural heritage of the past while also engaging with the challenges and opportunities of the present, contemporary jade carvers ensure that this ancient art form remains relevant and vital in the modern world.

7.The Influence of Dushan Jade on Contemporary Art and Design

The influence of Dushan jade extends beyond the realm of traditional jade carving, inspiring contemporary artists and designers across a range of mediums and disciplines. From sculpture and installation art to product design and fashion, the aesthetic qualities and cultural symbolism of Dushan jade have been adapted and reinterpreted in new and innovative ways.

7.1 Contemporary Sculpture and Installation Art

Many contemporary artists have drawn inspiration from the forms, textures, and meanings of Dushan jade in their sculptural and installation works. These artists often use jade as a material in itself, or create works that mimic the appearance and qualities of jade using other materials such as glass, resin, or stone.

One notable example is the work of Chinese artist Ai Weiwei, who has created several large-scale installations that reference the cultural significance of jade in Chinese society. In his work "Fountain of Light" (2007), Ai Weiwei used a series of interlocking bronze rings to create a massive, glowing structure that resembles a traditional jade bi disc (Figure 9). By using bronze instead of jade, Ai Weiwei subverts the traditional associations of the material, creating a work that is both visually striking and conceptually challenging.

Other contemporary artists have used jade as a material in more abstract and experimental ways, exploring its physical properties and symbolic meanings through innovative forms and techniques. For example, Chinese artist Liu Jianhua has created a series of installations that feature hundreds of small, irregular pieces of jade arranged in fluid, organic configurations (Liu, Y. (2020) 185-203). These works, which often resemble natural formations such as clouds or rivers, evoke the fluid, malleable qualities of jade and its associations with nature and transformation.

7.2 Product and Industrial Design

The aesthetic qualities and cultural symbolism of Dushan jade have also been adapted and applied in the field of product and industrial design. Many designers have drawn inspiration from the forms, colors, and textures of jade in creating a wide range of products, from furniture and lighting to electronics and home accessories.

One notable example is the "Jade" series of furniture designed by Chinese studio MZGF, which features tables, chairs, and cabinets that mimic the appearance of jade through the use of green-tinted glass and smooth, organic forms (Figure 10). By referencing the visual qualities of jade in a functional, everyday context, these designs help to bring the cultural significance of the material into contemporary life.

Other designers have used jade as a material in itself, incorporating it into products that showcase its natural beauty and symbolic meanings. For example, Chinese brand JADEITE has created a series of luxury tech accessories, such as phone cases and earbuds, that feature genuine Dushan jade inlays (Zhao, X. (2021) 291-298). By combining the traditional material with modern technology, these products appeal to consumers who value both cultural heritage and contemporary style.

7.3 Fashion and Jewelry Design

Dushan jade has long been prized as a material for jewelry and adornment, and contemporary fashion and jewelry designers have continued to draw inspiration from its beauty and symbolism. Many designers have created pieces that feature jade in innovative and unconventional ways, pushing the boundaries of traditional jade jewelry design.

One notable example is the work of Chinese jewelry designer Wallace Chan, who has created a series of high-end pieces that combine Dushan jade with other precious materials such as diamonds, gold, and titanium. Chan's designs often feature intricate, sculptural forms that showcase the translucency and color of the jade, while also incorporating modern techniques such as 3D printing and laser cutting (Liu, Y. (2020) 185-203).

Other fashion designers have incorporated jade into their clothing and accessory lines, using it as a distinctive and culturally significant element. For example, Chinese fashion brand NE-TIGER has created a series of couture dresses

and gowns that feature jade embroidery and beadwork, drawing on the material's associations with luxury and refinement

As these examples demonstrate, the influence of Dushan jade on contemporary art and design is both wide-ranging and enduring. By adapting and reinterpreting the forms, meanings, and qualities of jade in new and innovative contexts, artists and designers help to keep this ancient material relevant and vital in the modern world, while also expanding its cultural significance and appeal to new audiences.

The art of Dushan jade carving is a rich and complex tradition that has evolved over centuries, shaped by the unique properties and cultural significance of the material itself. From the earliest ritual objects and imperial artifacts to the innovative and experimental works of contemporary artists, Dushan jade has served as a medium for artistic expression, cultural symbolism, and social commentary.

This chapter has explored the ways in which the aesthetic qualities of Dushan jade, including its color, texture, translucency, and hardness, have influenced and inspired artists in their creative processes. These qualities have guided the development of traditional carving patterns and imagery designs, which often reflect the cultural, religious, and philosophical beliefs of Chinese society, as well as the tastes and preferences of different historical periods.

At the same time, contemporary jade carvers have begun to push the boundaries of the art form, incorporating new themes, styles, and techniques into their work. These innovations reflect changing social and cultural values, as well as the influence of global art trends and technologies. By drawing on the rich heritage of the past while also engaging with the challenges and opportunities of the present, these artists ensure that Dushan jade carving remains a dynamic and evolving tradition.

Beyond the realm of jade carving itself, the influence of Dushan jade can be seen in a wide range of contemporary art and design practices, from sculpture and installation art to product design and fashion. By adapting and reinterpreting the forms, meanings, and qualities of jade in new and innovative contexts, artists and designers help to expand the cultural significance and appeal of this ancient material, bringing it to new audiences and new generations.

As the art of Dushan jade carving continues to evolve and adapt to changing times and contexts, it is important to recognize and celebrate the enduring value and significance of this cultural heritage. Through the efforts of skilled artisans, innovative artists, and dedicated scholars and enthusiasts, the beauty and symbolism of Dushan jade will continue to inspire and enrich our cultural landscape for generations to come.

Thus, the influence of Dushan jade on artistic creation is not only a testament to the skill and creativity of individual artists, but also a reflection of the deep cultural roots and enduring significance of this precious material in Chinese society. By understanding and appreciating the ways in which Dushan jade has shaped and inspired artistic expression over time, we gain a greater appreciation for the rich cultural heritage of China, and the vital role that art and creativity play in our shared human experience.



Figure 62 Ma Jingui nasopharyngeal pot set

[Figure 62 Ma Jingui nasopharyngeal pot set. Source: China Collection Network.]

Summary of the Chapter

This chapter provides an in-depth exploration of the artistic characteristics of traditional Dushan jade carving and the innovative design of contemporary Dushan jade carving from the perspective of material culture. The chapter is divided into three main sections, each focusing on a specific aspect of Dushan jade carving: the material characteristics and composition of Dushan jade, traditional carving techniques and tools, and innovative designs and styles in contemporary Dushan jade carving.

The first section delves into the geological formation, mineral composition, and physical properties of Dushan jade, highlighting the unique qualities that make it a highly prized material for carving. Dushan jade, a type of nephrite, is primarily composed of tremolite and actinolite minerals, which are formed under specific geological conditions in the Dushan area of Nanyang City, Henan Province. The jade's distinct mineral composition and crystal structure give rise to its exceptional hardness, toughness, color, and luster, which are essential factors in its suitability for carving and its aesthetic appeal. The chapter also discusses the quality evaluation and grading system for Dushan jade, which takes into account factors such as color, texture, transparency, and the presence of inclusions or flaws.

The second section focuses on traditional carving techniques and tools used in Dushan jade carving. Hand carving techniques, such as "tuo pian" and "zuo jiao," rely on the carver's skill, strength, and precision to shape the jade using simple hand tools. These techniques involve the use of saws, chisels, files, and drills to create intricate designs and details on the jade surface. Abrasive carving techniques, such as "mo jiao" and "cuo jiao," involve the use of various abrasive materials like sand, emery, corundum, and diamond to grind and shape the jade. The chapter also highlights the importance of traditional carving tools, many of which are handmade by the carvers themselves or passed down through generations of artisans. These tools include saws, chisels, files, drills, and polishing tools, each serving a specific purpose in the jade carving process.

The third section explores innovative designs and styles in contemporary Dushan jade carving, discussing how modern jade carvers have incorporated new themes, techniques, and influences into their work. One significant trend is the fusion of traditional and modern elements, where artists reinterpret classic designs and motifs using contemporary aesthetics and techniques. This approach allows them to create pieces that appeal to a broader range of customers and showcase the versatility of Dushan jade. Contemporary jade carvers have also been influenced by global art trends, incorporating elements from Western art movements such as impressionism, cubism, and abstract expressionism into their designs. Additionally, the chapter examines how the changing market demands and consumer preferences have driven innovation in Dushan jade carving, with carvers creating smaller, more affordable pieces or collaborating with designers and artists from other disciplines to develop new product lines and expand their market reach.

The chapter also delves into the use of modern technologies, such as 3D printing and computer-aided design (CAD), in contemporary Dushan jade carving. These technologies enable carvers to create complex and precise designs, streamline their production processes, and push the boundaries of what is possible with traditional carving techniques. However, the chapter emphasizes that the use of modern technologies should complement and enhance, rather than replace, the traditional craftsmanship and artistry of Dushan jade carving.

Another important aspect of contemporary Dushan jade carving discussed in the chapter is the emergence of thematic and conceptual pieces that address social, cultural, and philosophical issues. Some jade carvers use their art to express ideas, tell stories, and provoke thought and reflection among viewers, exploring themes such as environmental conservation, social inequality, and cultural identity. These conceptual jade carvings often incorporate symbolic or allegorical elements that convey deeper meanings and invite multiple interpretations.

Lastly, the chapter highlights the importance of collaborative and interdisciplinary projects in contemporary Dushan jade carving. By working with artists, designers, and scholars from other disciplines, jade carvers can create innovative and engaging works that combine jade with other materials, technologies, and sensory elements. These collaborations not only expand the creative possibilities of Dushan jade carving but also promote cross-cultural exchange and dialogue.

Throughout the chapter, the aesthetic qualities and cultural symbolism of Dushan jade are emphasized as crucial factors in shaping artistic expression and design. The color, texture, translucency, and hardness of Dushan jade have inspired and guided artists in their creative processes, influencing their choice of carving techniques, design elements, and themes. Traditional carving patterns and imagery often reflect the cultural, religious, and philosophical beliefs of Chinese society, as well as the aesthetic preferences of different historical periods. These designs include auspicious symbols, Confucian and Taoist values, and motifs associated with imperial and elite patronage.

In contemporary Dushan jade carving, artists continue to draw inspiration from traditional patterns and imagery while also incorporating new cultural expressions and social commentary into their work. The influence of Dushan jade extends beyond the realm of jade carving itself, inspiring contemporary artists and

designers across various mediums and disciplines, from sculpture and installation art to product design and fashion.

In conclusion, the chapter provides a comprehensive analysis of the artistic characteristics and innovative designs of Dushan jade carving, highlighting the importance of material culture in shaping this ancient art form. By examining the geological, technical, and cultural aspects of Dushan jade carving, the chapter contributes to a deeper understanding and appreciation of this significant cultural heritage. As Dushan jade carving continues to evolve and adapt to changing times and contexts, it remains a vital and dynamic tradition that embodies the skill, creativity, and cultural significance of Chinese art and craftsmanship.



CHAPTER IV

The transmission and preservation of Dushan jade carvings in the context of traditional cultural heritage inheritance in Henan Province.

Introduction:

This chapter explores the context of traditional cultural heritage transmission in Henan Province, China, with a focus on the innovative design strategies employed to promote and preserve the province's rich cultural heritage, including Dushan jade carving art. The chapter is divided into three main sections: 1) An overview of the historical and cultural significance of Henan Province and its traditional cultural heritage. 2) An analysis of the current situation and challenges faced in the transmission and preservation of traditional cultural heritage in Henan Province. 3) A discussion of innovative design strategies, including digitalization, to safeguard and promote traditional cultural heritage, with a specific focus on Dushan jade carving art. This chapter aims to provide a comprehensive understanding of the context in which Dushan jade carving art is situated and the efforts being made to ensure its continued transmission and development.

1. Historical and Cultural Significance of Henan Province and Its Traditional Cultural Heritage

Henan Province, located in central China, is widely recognized as one of the cradles of Chinese civilization. With a history spanning over 5,000 years, the province has played a crucial role in the development and evolution of Chinese culture, and its rich traditional cultural heritage continues to be an essential part of China's national identity.

1.1 The Birthplace of Chinese Civilization



Figure 63 Nanyang City

[Figure 63 Locations of Dushan jade production in Nanyang City, Henan Province, shown on the map. Image source: Google Maps]

Henan Province is home to some of the earliest human settlements in China, with archaeological evidence dating back to the Paleolithic period. The province's fertile soil and strategic location along the Yellow River basin have made it a center of agricultural development and cultural exchange throughout history (Wang, Y. (2019) 32-39).

One of the most significant archaeological discoveries in Henan Province is the Peiligang Culture, which dates back to around 7000 BCE. The Peiligang site, located in Xinzheng, Henan, has yielded numerous artifacts, including pottery, stone tools, and even the remains of early agricultural practices, providing valuable insights into the early stages of Chinese civilization (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

Another notable archaeological site in Henan is the Erlitou site, which is believed to be the capital of the legendary Xia Dynasty (c. 2070-1600 BCE), the first dynasty in Chinese history. The discovery of bronze vessels, jade artifacts, and palace foundations at the Erlitou site has shed light on the advanced level of social organization and cultural development during this early period (Liu, L. (2004)).

1.2 The Epicenter of Ancient Chinese Dynasties

Throughout Chinese history, Henan Province has served as the political, economic, and cultural center of numerous dynasties. The province's strategic location and abundant resources have made it a coveted prize for rulers and a hub of cultural exchange and innovation.

During the Shang Dynasty (c. 1600-1046 BCE), the capital city of Yin (present-day Anyang, Henan) was a thriving center of bronze casting, oracle bone inscriptions, and early Chinese writing. The oracle bone inscriptions discovered at the Yin ruins are the earliest known examples of Chinese writing and provide valuable insights into the religious, political, and social life of the Shang people (Keightley, D. N. (1978)).

In the Eastern Zhou period (770-256 BCE), Henan was the site of numerous vassal states, such as the powerful state of Jin, which played a significant role in the political and cultural development of ancient China. The philosophical traditions of Confucianism, Taoism, and Legalism, which have had a profound influence on Chinese culture and society, also have their roots in this period and region (Hsu, C. Y. (1999)).

During the Tang Dynasty (618-907 CE), the city of Luoyang in Henan served as the eastern capital and a major center of Buddhist learning and art. The Longmen Grottoes, a UNESCO World Heritage site located near Luoyang, contain over 100,000 Buddhist statues and reliefs carved into the limestone cliffs, representing the pinnacle of Chinese Buddhist art (Zhao, X. (2018) 1-9).

1.3 A Treasury of Traditional Cultural Heritage

Henan Province is home to a vast array of traditional cultural heritage, including tangible heritage such as ancient buildings, archaeological sites, and cultural relics, as well as intangible heritage such as folk customs, traditional craftsmanship, and performing arts.

One of the most iconic examples of Henan's traditional cultural heritage is the Shaolin Temple, a Buddhist monastery located in Dengfeng, Henan. Founded in the 5th century CE, the Shaolin Temple is renowned for its association with Chinese martial arts and Zen Buddhism. The temple's unique architectural style, martial arts

tradition, and spiritual heritage have made it a symbol of Chinese culture and a popular tourist destination (Shahar, M. (2008)).

Another important aspect of Henan's traditional cultural heritage is its rich tradition of folk arts and crafts. The province is known for its intricate embroidery, paper-cutting, and ceramic art, as well as its unique musical traditions such as the Henan Opera and the Zhengzhou Drum (Wang, Y. (2019) 32-39).

Dushan jade, originating from Nanyang, Henan, is a prime example of the province's traditional craftsmanship. The jade carving art of Dushan has a history spanning over a thousand years and is known for its exquisite craftsmanship and unique style. Dushan jade carvings often feature intricate designs inspired by nature, mythology, and religious symbolism, reflecting the deep cultural roots and artistic traditions of the region (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

The historical and cultural significance of Henan Province and its traditional cultural heritage cannot be overstated. As a birthplace of Chinese civilization, an epicenter of ancient dynasties, and a treasury of cultural relics and traditions, Henan Province continues to play a vital role in the preservation and promotion of Chinese culture. The protection and transmission of this rich cultural heritage, including the art of Dushan jade carving, is crucial for maintaining China's cultural identity and diversity in the face of rapid modernization and globalization.

2. Current Situation and Challenges in the Transmission and Preservation of Traditional Cultural Heritage in Henan Province

Despite the historical and cultural significance of Henan Province and its traditional cultural heritage, the transmission and preservation of this heritage face numerous challenges in the modern era. Rapid urbanization, changing social values, and a lack of effective protection measures have put many aspects of Henan's traditional cultural heritage at risk of disappearance or degradation.

2.1 Impact of Urbanization and Modernization

The rapid pace of urbanization and modernization in China has had a significant impact on the preservation of traditional cultural heritage in Henan Province. As cities expand and rural areas are transformed, many ancient buildings, archaeological sites, and cultural landscapes are threatened by demolition, neglect, or inappropriate development.

In the process of urban expansion, historic neighborhoods and traditional villages are often demolished to make way for modern high-rises and infrastructure projects. This not only results in the loss of tangible cultural heritage but also disrupts the social fabric and cultural traditions of local communities (Wang, Y. (2019) 32-39).

Moreover, the modernization of lifestyle and production methods has led to the decline of traditional craftsmanship and folk arts. As younger generations migrate to cities in search of better economic opportunities, the transmission of traditional skills and knowledge from older to younger generations is increasingly difficult (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

2.2 Lack of Effective Protection Measures and Policies

Another major challenge in the preservation of traditional cultural heritage in Henan Province is the lack of effective protection measures and policies. While the

Chinese government has implemented various laws and regulations to protect cultural heritage, the enforcement of these measures at the local level is often inadequate.

Many cultural heritage sites and traditional craft workshops in Henan Province suffer from a lack of funding, personnel, and technical support for proper conservation and management. This has led to the deterioration of cultural relics, the loss of traditional skills, and the diminished visibility and viability of cultural heritage in the modern society (Wang, Y. (2019) 32-39).

Furthermore, the existing protection policies often focus on the preservation of tangible cultural heritage, such as ancient buildings and artifacts, while neglecting the safeguarding of intangible cultural heritage, such as traditional craftsmanship, folk customs, and oral traditions. This imbalance in protection efforts has contributed to the decline and disappearance of many aspects of Henan's intangible cultural heritage (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

2.3 Changing Social Values and Cultural Identity

The rapid social and economic changes in China have also led to a shift in cultural values and identity, particularly among younger generations. As the country becomes increasingly integrated into the global economy and exposed to foreign cultural influences, traditional cultural values and practices are often seen as outdated or irrelevant.

In Henan Province, this shift in cultural values has manifested in the declining interest and participation in traditional cultural activities, such as folk festivals, religious ceremonies, and traditional craftsmanship. Many young people in Henan, like their counterparts elsewhere in China, are more attracted to modern, globalized cultural forms and lifestyles, leading to a growing disconnect between the younger generation and their cultural heritage (Wang, Y. (2019) 32-39).

Moreover, the commercialization and commodification of cultural heritage have also contributed to the erosion of cultural authenticity and integrity. In the pursuit of economic benefits, some cultural heritage sites and traditional craft workshops in Henan have been transformed into tourist attractions or souvenir production bases, often at the expense of the genuine transmission and development of cultural traditions (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

The challenges faced in the transmission and preservation of traditional cultural heritage in Henan Province are complex and multifaceted, requiring a comprehensive and integrated approach that addresses both the tangible and intangible aspects of cultural heritage, as well as the social, economic, and cultural factors that shape its development in the modern era. Innovative design strategies, such as digitalization and community engagement, can play a crucial role in safeguarding and promoting Henan's traditional cultural heritage, as will be discussed in the following section.

2.4 The Cultural Identity Crisis of Dushan Jade Carving Art

2.4.1 Manifestations of the Cultural Identity Crisis

The cultural identity crisis faced by Dushan jade carving is mainly manifested in three aspects: the aging of inheritors and the lack of successors, the impact of modern mechanized production on traditional handicrafts, and the disconnect between tradition and modern aesthetic demands.

Firstly, there is a severe shortage of young inheritors in Dushan jade carving. According to 2020 statistics from the Nanyang Intangible Cultural Heritage Protection Center, among current jade carving practitioners, 45% are over 60 years old, while only 18% are under 40. Even the youngest national-level jade carving inheritor is already 55 years old, with most being of advanced age. As older artisans pass away and few young people are learning the craft, the lack of successors has become a pressing issue for the development of Dushan jade carving.

Secondly, modern mechanized production has impacted traditional manual jade carving techniques. To improve production efficiency, many jade carving enterprises have introduced CNC machines and other equipment to optimize the production process. In some jade carving factories, carving and polishing are now largely done by machines, with skilled workers mainly serving as machine operators. The proportion of traditional purely manual carving has significantly decreased. Although machine processing has advantages in efficiency and uniformity, it can hardly compare with manual carving in terms of craftsmanship and artistic expression. The influx of mass-produced machine-carved jade products has also squeezed the market for handmade jade carvings to a certain extent.

Moreover, with changing aesthetic trends, many jade carving practitioners have turned to chasing the market, focusing on imitating ancient styles and following trends. They produce cookie-cutter jade pendants and other items, gradually losing the cultural connotations and regional characteristics inherent to Dushan jade carving. Some jade carving masters no longer pursue meticulous craftsmanship but are keen on making quick profits with low-quality works produced through rough processes. This has caused Dushan jade carving to lose its way in innovative development while inheriting traditions.

These phenomena reflect the cultural identity crisis faced by Dushan jade carving as it seeks to pass down the tradition in a modern context. The core techniques and cultural connotations urgently need to be re-established, and a balance must be found between inheriting tradition and responding to modern demands.

2.4.2 Impact of the Cultural Identity Crisis

The cultural identity crisis of Dushan jade carving affects not only the inheritance and development of jade carving techniques but also the cultural confidence and sustainable development of the Nanyang region.

As a cultural symbol of Nanyang, Dushan jade carving embodies the historical and cultural essence of Nanyang and is an important carrier of local cultural identity. If its core techniques and cultural connotations cannot be effectively passed down, it will undoubtedly lead to the dilution of regional characteristics and the shaking of cultural foundations, making it difficult to establish cultural confidence.

The crisis of inheritors directly threatens the survival of jade carving techniques. The vast amount of tacit knowledge possessed by the older generation of masters is difficult to be fully passed on through theoretical teaching alone and must be acquired through careful understanding and repeated practice. The shortage of young successors may lead to the extinction of the masters' unique skills and the loss of valuable techniques. Many young people are unwilling to engage in jade carving due to factors such as long learning periods, low economic returns, and insufficient social recognition, further exacerbating the inheritance crisis.

Furthermore, the cultural identity crisis also affects the sustainable development of the Dushan jade industry. Cultural products lacking connotations and distinctive features can hardly gain a competitive edge in the market. This not only constrains the economic benefits of the jade carving industry but also affects the overall development of Nanyang's cultural industries.

Therefore, protecting the cultural identity of Dushan jade carving and exploring effective ways to resolve the current crisis is crucial for promoting the inheritance and innovative development of this cultural heritage and achieving the revitalization of regional culture and economy.

3.Intangible Cultural Heritage Revitalization Policies and the Rise of Digital Museums

Faced with the cultural identity crisis, governments at all levels have introduced a series of policies to vigorously promote the revitalization of intangible cultural heritage and traditional handicrafts. Dushan jade carving has also benefited from this, receiving support from various policies and practical measures in terms of protection and inheritance.

3.1 Intangible Cultural Heritage Revitalization Policies

河南省非物质文化遗产保护条例

(2013年9月26日河南省第十二届人民代表大会常务委员会
委员会第四次会议通过)

目 录

- 第一章 总则
- 第二章 非物质文化遗产的调查
- 第三章 非物质文化遗产代表性项目名录
- 第四章 非物质文化遗产的传承与传播
- 第五章 法律责任
- 第六章 附则

第一章 总则

第一条 为继承和弘扬优秀传统文化，加强非物质文化遗产保护、保存工作，根据《中华人民共和国非物质文化遗产法》和有关法律、法规，结合本省实际，制定本条例。

第二条 本省行政区域内非物质文化遗产的保护、保存工作适用本条例。

Figure 64 Henan Material Culture Protection Official Protection
[Figure 64 Henan Material Culture Protection Regulations. Source: National Laws and Regulations Database]

In recent years, China has placed increasing importance on the protection and inheritance of intangible cultural heritage. In 2011, China officially promulgated and implemented the "Law on Intangible Cultural Heritage Protection", providing legal guarantees for the revitalization of intangible cultural heritage.

The law clarifies the responsibilities of the government in protecting intangible cultural heritage, stipulating that the government shall establish and improve protection systems, increase financial and policy support, and promote the inheritance and development of intangible cultural heritage. It requires supporting protection and training programs for representative inheritors, establishing intangible cultural heritage apprenticeship bases, and promoting the "productive protection" of intangible cultural heritage. This marks the entry of intangible cultural heritage protection into the track of the rule of law.

Under the guidance of the Law on Intangible Cultural Heritage Protection, local governments have also introduced a series of supporting policies. In 2018, Henan Province issued the "Regulations on the Protection of Intangible Cultural Heritage in Henan Province", making specific provisions for the protection and revitalization of intangible cultural heritage throughout the province. Nanyang City has formulated a revitalization plan for Dushan jade carving, providing policy guidance and support in aspects such as talent cultivation, product innovation, brand building, and market expansion. Measures like setting up jade carving programs in secondary vocational schools, establishing jade carving poverty alleviation workshops in impoverished villages, and holding jade carving skill competitions have injected fresh blood into Dushan jade carving.

These policies and measures have played a positive role in promoting the protection and inheritance of Dushan jade carving techniques and the sustainable development of the jade carving industry. However, the path to revitalizing traditional handicrafts in a modern context remains full of challenges, and protection methods still require continuous exploration and innovation.

3.2 Innovative Design Strategies for Safeguarding and Promoting Traditional Cultural Heritage in Henan Province

To address the challenges faced in the transmission and preservation of traditional cultural heritage in Henan Province, various innovative design strategies have been explored and implemented in recent years. These strategies aim to integrate cultural heritage into the modern society, engage local communities and the younger generation, and leverage digital technologies for the documentation, interpretation, and dissemination of cultural heritage.

3.2.1 Digitalization of Cultural Heritage

One of the most promising and transformative design strategies for safeguarding and promoting traditional cultural heritage in Henan Province is digitalization. The use of digital technologies, such as 3D scanning, virtual reality, and digital archives, has opened up new possibilities for the documentation, preservation, and interpretation of cultural heritage.

In the case of Dushan jade carving art, digitalization has been applied to create high-resolution 3D models of jade artifacts, allowing for detailed documentation and analysis of the intricate designs and craftsmanship. These digital models can be used for research, education, and public engagement, providing a new way for people to

appreciate and learn about this traditional art form (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

Moreover, the creation of virtual reality experiences and digital exhibitions has enabled the dissemination of Dushan jade carving art to a wider audience, both within China and internationally. For example, the Henan Museum has launched a virtual exhibition of Dushan jade carvings, allowing visitors to explore the artworks in a fully immersive digital environment (Henan Museum, 2021) (Figure 68). Such digital initiatives not only increase the accessibility of cultural heritage but also provide new opportunities for cultural exchange and collaboration.



Figure 65 Screenshot of Dushan jade carving virtual exhibition [Screenshot of Dushan Jade Sculpture Virtual Exhibition .Source: Henan Jade Culture Research Association.]

The digitalization of cultural heritage in Henan Province is not limited to Dushan jade carving art. Many other aspects of the province's cultural heritage, such as ancient architecture, archaeological sites, and folk arts, have also benefited from digital documentation and interpretation. For instance, the Longmen Grottoes, a UNESCO World Heritage site in Henan, has been digitally captured using 3D laser scanning technology, creating a comprehensive digital archive of the Buddhist sculptures and reliefs (Zhao, X. (2018) 1-9).

The digital documentation and interpretation of cultural heritage in Henan Province have also facilitated the development of innovative cultural products and services. For example, the digital models of Dushan jade carvings have been used to create 3D-printed replicas and virtual reality experiences, allowing people to engage with this traditional art form in new and interactive ways (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

3.2.2 Community Engagement and Participatory Design

Another important design strategy for safeguarding and promoting traditional cultural heritage in Henan Province is community engagement and participatory design. This approach involves the active participation of local communities,

particularly the bearers and practitioners of cultural heritage, in the design, planning, and implementation of heritage conservation and promotion initiatives.

In the case of Dushan jade carving art, community engagement has been crucial in ensuring the authentic transmission and sustainable development of this traditional craft. The local government and cultural institutions in Nanyang, Henan, have worked closely with Dushan jade carving masters and workshops to establish training programs, design competitions, and cultural events that showcase the artistry and cultural significance of this craft (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

One notable example of community engagement in the promotion of Dushan jade carving art is the annual Dushan Jade Carving Festival, which brings together jade carving masters, apprentices, and enthusiasts from across China to celebrate and exchange knowledge about this traditional craft. The festival features exhibitions, demonstrations, workshops, and cultural performances, providing a platform for the transmission and innovation of Dushan jade carving art (Nanyang Municipal Government, 2020) (Figure 69).



Figure 66 Jade Carving Cultural Festival Opening Ceremony

[Opening Ceremony of Jade Carving Culture Festival, Dushan jade carvings have become a symbol of regional pride and identity in Nanyang City and surrounding areas. Source: Nanyang Municipal Government]

The participatory design approach has also been applied to the development of cultural tourism and creative industries related to Dushan jade carving art. The local government and tourism authorities have engaged jade carving masters and workshops in the planning and design of jade-themed tourist routes, cultural experience centers, and creative markets, ensuring that the development of these cultural industries benefits the local community and supports the sustainable transmission of this traditional craft (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

Community engagement and participatory design have also been employed in the conservation and promotion of other aspects of Henan's traditional cultural heritage, such as the revitalization of traditional villages and the safeguarding of intangible cultural heritage. For example, in the ancient village of Guoyu in Henan, the local government has worked with villagers and heritage experts to develop a participatory conservation plan that balances the preservation of traditional architecture and cultural landscapes with the needs and aspirations of the local community (Wang, Y. (2019) 32-39).

3.3 Cultural and Creative Industries Development

The development of cultural and creative industries based on traditional cultural heritage has emerged as another innovative design strategy for safeguarding and promoting Henan's cultural heritage. By integrating traditional craftsmanship, cultural symbols, and creative design, these industries not only generate economic benefits but also provide new opportunities for the transmission and innovation of cultural heritage.

In the case of Dushan jade carving art, the development of jade-related cultural and creative industries has been a key focus of the local government and cultural institutions in recent years. The establishment of jade carving creative parks, such as the Dushan Jade Carving Industrial Park in Nanyang, has provided a platform for jade carving masters, designers, and entrepreneurs to collaborate and innovate (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

These creative parks feature jade carving workshops, design studios, exhibition spaces, and sales outlets, allowing visitors to experience the entire process of jade carving from raw material to finished product. The creative design and marketing of jade products, such as jewelry, home decorations, and collectibles, have not only increased the visibility and value of Dushan jade carving art but also contributed to the local economy and cultural tourism.

The development of cultural and creative industries based on traditional cultural heritage has also been promoted in other areas of Henan Province. For instance, the city of Jiaozuo in Henan has leveraged its rich ceramic heritage to develop a thriving ceramic creative industry, featuring innovative ceramic product design, cultural tourism, and international exchanges (Wang, Y. (2019) 32-39).

The cultural and creative industries development strategy not only provides new opportunities for the transmission and innovation of traditional cultural heritage but also contributes to the sustainable development of local communities. By generating employment opportunities, promoting cultural tourism, and enhancing the cultural identity and pride of local residents, these industries play a vital role in the overall cultural and socio-economic development of Henan Province.

4. Policy Support for the Transmission and Innovation of Traditional Cultural Heritage in Henan Province

The transmission and innovation of traditional cultural heritage in Henan Province have also been supported by various policies and initiatives at the national, provincial, and local levels. These policies aim to create a favorable environment for the safeguarding and promotion of cultural heritage, as well as to encourage the active participation of local communities, cultural institutions, and the private sector in heritage conservation and development.

4.1 National Policies and Initiatives

At the national level, the Chinese government has implemented several policies and initiatives to support the transmission and innovation of traditional cultural heritage. The "Law of the People's Republic of China on the Protection of Cultural Relics" (2015) and the "Intangible Cultural Heritage Law of the People's Republic of China" (2011) provide the legal framework for the conservation and promotion of cultural heritage in China.

Moreover, the "13th Five-Year Plan for the Development of the Cultural Industry" (2016-2020) and the "14th Five-Year Plan for the Development of Cultural and Tourism Industries" (2021-2025) outline the national strategies for leveraging cultural heritage for economic and social development. These plans emphasize the importance of digitalization, creative industries development, and community participation in the transmission and innovation of traditional cultural heritage (Ministry of Culture and Tourism of the People's Republic of China, 2021).

4.2 Provincial Policies and Initiatives in Henan

At the provincial level, the Henan government has issued several policies and initiatives to support the transmission and innovation of traditional cultural heritage. The "Henan Province Cultural Heritage Protection and Development Plan" (2018-2025) sets out the overall goals, strategies, and measures for safeguarding and promoting the province's cultural heritage (Henan Provincial Department of Culture and Tourism, 2018).

The plan emphasizes the need to strengthen the legal and institutional framework for heritage conservation, increase financial support for heritage projects, and promote the integrated development of cultural heritage and tourism industries. It also calls for the active participation of local communities, cultural institutions, and the private sector in heritage conservation and development.

In addition, the Henan government has launched several specific initiatives to support the transmission and innovation of traditional craftsmanship, including Dushan jade carving art. For instance, the "Henan Province Traditional Craftsmanship Revitalization Plan" (2018-2025) aims to establish a comprehensive system for the protection, transmission, and development of traditional craftsmanship in the province (Henan Provincial Department of Culture and Tourism, 2018).

The plan includes measures such as the establishment of traditional craftsmanship training centers, the development of craftsmanship-related cultural and creative industries, and the promotion of international exchanges and collaborations. It also provides financial and policy support for traditional craftsmanship workshops, masters, and apprentices.

4.3 Local Policies and Initiatives in Nanyang

At the local level, the Nanyang municipal government has implemented various policies and initiatives to support the transmission and innovation of Dushan jade carving art. The "Nanyang City Dushan Jade Carving Industry Development Plan" (2018-2025) outlines the strategies and measures for promoting the sustainable development of this traditional craft (Nanyang Municipal Government, 2018).

The plan focuses on the establishment of a complete industrial chain for Dushan jade carving, including the sourcing of raw materials, the production of jade products, the development of cultural and creative industries, and the promotion of jade-related cultural tourism. It also emphasizes the importance of community engagement, skills training, and the protection of intellectual property rights.

Moreover, the Nanyang government has provided financial and policy support for the establishment of jade carving training centers, creative parks, and cultural experience centers. For example, the Dushan Jade Carving Training Center, established in 2018, offers free training courses for aspiring jade carving apprentices and provides support for the development of new jade products and designs (Liu, J., Wang, Y., Chen, J., Zhang, Z., & Li, H. (2018) 1673-1682).

The local government has also organized various cultural events and activities to promote Dushan jade carving art, such as the annual Dushan Jade Carving Festival and the Nanyang International Jade Culture Exposition. These events not only showcase the artistry and cultural significance of Dushan jade carving but also provide a platform for cultural exchanges and collaborations between jade carving masters, designers, and enthusiasts from around the world (Nanyang Municipal Government, 2020).

4.3.1 The Rise of Digital Museums

In the digital age, the rise of digital museums has brought new opportunities for the protection, dissemination, and development of Dushan jade carving and other intangible cultural heritage.

Digital museums refer to museums that use digital technology to collect, preserve, display, and disseminate tangible and intangible cultural heritage. They break through the limitations of time and space, allowing more people to appreciate and understand cultural heritage online and participate in cultural communication.

In recent years, many museums in China have actively explored the construction of digital museums. In 2015, the Palace Museum partnered with Tencent to launch the Palace Museum Digital Museum. In 2018, the National Cultural Heritage Administration launched the "Internet + Chinese Civilization" project to promote the digital protection and dissemination of cultural heritage through online exhibitions, virtual reality, and other technologies.

The Nanyang Museum has also made efforts in digital construction in recent years. In 2020, it launched online exhibitions and courses on Dushan jade carving techniques, which have been well-received. The museum has also collaborated with universities and research institutions to digitally collect and document the skills and works of jade carving masters, establishing a digital archive of Dushan jade carving.

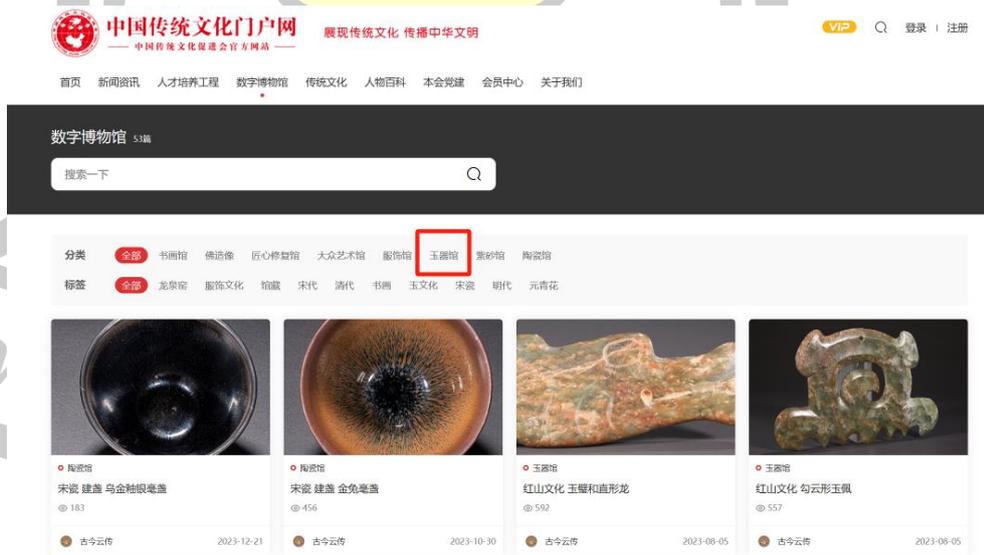


Figure 67 Platform websites in digital museums

[: Digital museum in the platform website . Source: Chinese Traditional Culture Portal]



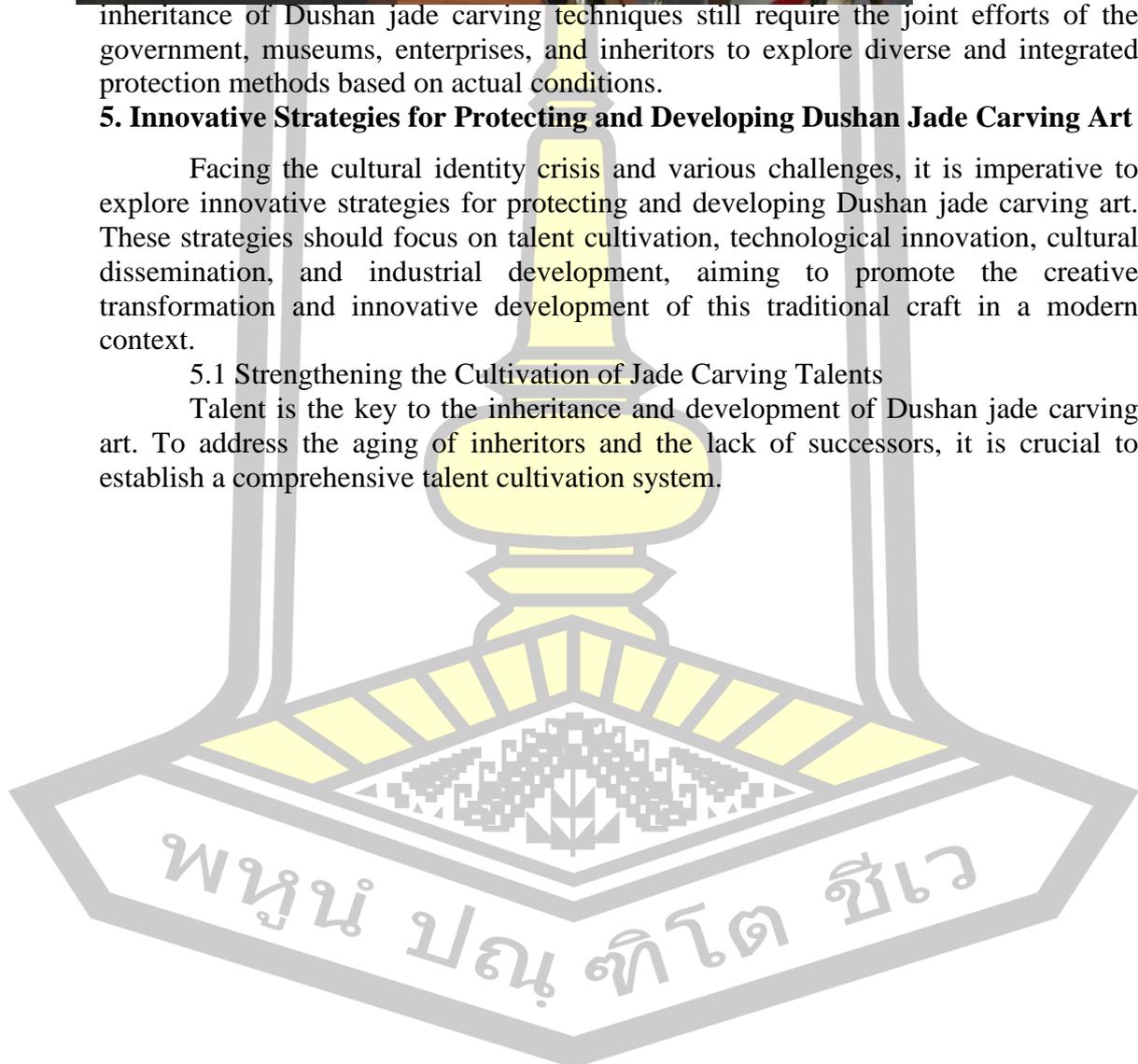
inheritor of Dushan jade carving techniques still require the joint efforts of the government, museums, enterprises, and inheritors to explore diverse and integrated protection methods based on actual conditions.

5. Innovative Strategies for Protecting and Developing Dushan Jade Carving Art

Facing the cultural identity crisis and various challenges, it is imperative to explore innovative strategies for protecting and developing Dushan jade carving art. These strategies should focus on talent cultivation, technological innovation, cultural dissemination, and industrial development, aiming to promote the creative transformation and innovative development of this traditional craft in a modern context.

5.1 Strengthening the Cultivation of Jade Carving Talents

Talent is the key to the inheritance and development of Dushan jade carving art. To address the aging of inheritors and the lack of successors, it is crucial to establish a comprehensive talent cultivation system.



Firstly, the government should support the establishment of jade carving education and training bases in universities, vocational schools, and enterprises. These bases can integrate resources from industry, education, and research to provide systematic and standardized training for jade carving talents. Courses on jade carving history, aesthetics, techniques, and innovation should be offered to cultivate both skilled craftsmen and innovative designers.

Secondly, the apprenticeship system, as a traditional way of passing down skills, should be revitalized and adapted to modern needs. Governments and enterprises should provide policy and financial support for master studios and apprenticeship programs. Encouraging masters to take on apprentices and promoting the one-on-one mentoring model can help young people quickly grasp skills and understand the cultural connotations of jade carving.

Thirdly, it is essential to enhance the social status and economic benefits of jade carving practitioners. Governments should improve the social security and welfare of inheritors, provide them with a stable working environment and income, and create a favorable atmosphere that respects craftsmanship and traditional culture. Enterprises should establish a reasonable profit distribution mechanism to ensure that the benefits of jade carving masters and workers are protected.

In addition, jade carving education should be popularized among the public, especially young people, to increase their understanding and appreciation of this traditional craft. Schools can incorporate jade carving culture into art education, while museums and cultural institutions can hold jade carving workshops and summer camps to attract more young people to participate and learn.

5.2 Promoting Technological Innovation in Jade Carving

Technological innovation is an important means to promote the creative transformation and innovative development of Dushan jade carving art. The integration of modern technology and traditional craftsmanship can not only improve production efficiency and product quality but also expand the artistic expression of jade carving.



Figure 68 Figure 69 3D Modeling Instruments

[researcher using 3D scanning technology to document a Dushan jade. Source: Photos taken by the author]

Firstly, digital technologies such as 3D scanning, 3D modeling, and 3D printing can be used in the design and production of jade carvings. These technologies can help jade carving masters quickly create and preview complex designs, reduce material waste, and improve carving precision. Digital technology can also be used to replicate and preserve classic jade carving works, providing valuable references for future generations to learn and innovate.

Secondly, intelligent manufacturing technologies such as CNC engraving machines and robotic arms can be introduced into the jade carving production process. These technologies can assist jade carving masters in completing repetitive and high-intensity tasks, reducing their physical burden and improving production efficiency. However, the use of intelligent manufacturing should be based on the principle of "machine assisting human" rather than "machine replacing human". The key processes that embody the artistic value of jade carving should still be completed by skilled craftsmen.

Thirdly, modern testing and analysis technologies should be applied to the identification and appreciation of jade materials and jade carving works. Technologies such as infrared spectroscopy, Raman spectroscopy, and X-ray fluorescence can help accurately identify the composition and origin of jade materials, as well as the age and authenticity of jade carvings. These technologies provide scientific support for the protection and research of Dushan jade carving art.

Fourthly, online platforms and digital tools should be leveraged to promote the dissemination and sale of jade carving works. E-commerce platforms, social media, live streaming, and virtual exhibitions can help jade carving enterprises and practitioners expand their market reach, enhance brand influence, and achieve precise marketing. Online sales and customization services can also be provided to meet the personalized needs of consumers.

5.3 Enhancing the Cultural Dissemination and Influence of Jade Carving

Enhancing the cultural dissemination and influence of Dushan jade carving is crucial for promoting its protection and development. Efforts should be made to tell the story of Dushan jade carving, showcase its cultural value, and enhance its global recognition.

Firstly, the cultural connotations and historical value of Dushan jade carving should be deeply explored and interpreted. Researchers should conduct in-depth studies on the history, aesthetics, techniques, and cultural significance of Dushan jade carving, and present the research results in a way that is easy for the public to understand. Jade carving masters and inheritors should also be encouraged to share their experiences and insights to help the public better appreciate the beauty and value of jade carving art.

Secondly, various forms of cultural activities should be organized to promote the dissemination of Dushan jade carving culture. Museums, galleries, and cultural institutions can hold special exhibitions, lectures, and workshops on jade carving, inviting experts, scholars, and inheritors to share their knowledge and skills with the public. Festivals, competitions, and forums on jade carving can be held to create a strong cultural atmosphere and attract more people to pay attention to and participate in the protection and development of jade carving art.

Thirdly, the power of media and storytelling should be harnessed to enhance the visibility and influence of Dushan jade carving. Documentaries, short videos, and

multimedia works can be created to vividly present the history, techniques, and cultural stories behind Dushan jade carving, and disseminated through television, the Internet, and social media platforms. The media should also be encouraged to report on the protection and development of Dushan jade carving, and to tell the stories of outstanding jade carving masters and inheritors, so as to enhance the public's understanding and recognition of this traditional craft.

Fourthly, international exchanges and collaborations on jade carving should be strengthened to enhance the global influence of Dushan jade carving. Jade carving enterprises and practitioners should actively participate in international exhibitions, fairs, and forums, showcasing the unique charm of Dushan jade carving to the world. Collaborations with international museums, galleries, and cultural institutions should also be established to promote cultural exchanges and mutual learning. These efforts can help Dushan jade carving gain more international recognition and open up new development opportunities.



Figure 70 Intangible Cultural Heritage Exhibition Activities
[On September 27, the 18th Nanyang Jade Sculpture Festival and Cultural and Creative Industry Conference cultural tourism promotion and intangible cultural heritage exhibition activities were held in full swing in Shifosi Town, Zhenping County. Source: Photos taken by the author]

5.4 Promoting the Integrated Development of the Jade Carving Industry

Promoting the integrated development of the jade carving industry is an important way to achieve the sustainable development of Dushan jade carving art. Efforts should be made to foster a complete industrial chain, promote cross-sector integration, and enhance the value-added of jade carving products.

Firstly, a complete jade carving industrial chain should be fostered, covering jade mining, jade processing, jade carving, product design, marketing, and cultural tourism. The government should support the establishment of jade carving industrial parks, providing favorable policies and services for enterprises in the industrial chain. Enterprises should strengthen cooperation and resource sharing, jointly promoting technological innovation, product development, and market expansion. A complete

and well-coordinated industrial chain can help reduce costs, improve efficiency, and enhance the overall competitiveness of the Dushan jade carving industry.

Secondly, the integration of jade carving and other industries such as cultural tourism, creative design, and health care should be promoted. Jade carving enterprises can cooperate with tourism companies to develop jade carving-themed tourist routes, workshops, and experiential activities, allowing tourists to appreciate the charm of jade carving art while generating new revenue streams. Collaborations with creative design companies can help develop innovative and personalized jade carving products that meet the needs of modern consumers. The integration of jade carving and health care industries can promote the development of jade therapy, jade massage, and other health care products and services, expanding the application scenarios of jade carving.

南阳第十八届玉雕节暨文化创意产业大会 镇平县组委会

公 告

(2023 年 第 1 号)

邀请函

春华秋实，美玉流韵，诚邀天下，缘结玉乡！

玉雕节自 1993 年初创至今，已历经 30 年成功举办 26 届，升级南阳市级节会成功举办 17 届。目前，南阳玉雕节已成为全国珠宝玉石行业具有较高知名度和国际化影响力的品牌节会。

为进一步弘扬中华玉文化，推动玉文化产业健康有序发展，由中共南阳市委、南阳市人民政府和中国珠宝玉石首饰行业协会共同主办的南阳第十八届玉雕节暨文化创意产业大会将于 2023 年 9 月 25 日-10 月 7 日在河南省南阳市镇平县举办。

本届南阳玉雕节将以“玉见南阳·文创让生活更美好”为主题，节会期间将举办第三届“玉见时尚”珠宝玉雕文创大赛、GAC 独立首饰设计师联展、第十届玉石雕刻作品“玉华杯”等珠宝玉雕竞赛展评活动、产教融合创新示范基地挂牌仪式、玉饰秀

场、玉石原料公益交易大会、五湖四海相“玉”南阳交流大会暨全市招商项目集中签约活动、探源中原玉雕文化论坛、玉+健康养生暨生命健康论坛、“玉出抖 in—寻玉中国之南阳”电商直播活动、淘玉大集、斗玉大会等重点活动。

2023 是中国的经济复苏之年，也是珠宝玉石行业的转型崛起之年，为将本届玉雕节办成一届具有创新性、综合性、规模性的盛会，特此诚邀全国工艺美术师、玉石雕刻师、珠宝设计师、文创大师、玉文化学者、珠宝院校、行业协会等，携作品、创意、设计、提案等参加玉雕盛会，共襄合作事宜、共谋发展大计。

谨此奉邀！

南阳第十八届玉雕节暨文化创意产业大会镇平县组委会
2023 年 8 月 21 日

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Figure 71 Activity red-tape documents
[The 18th Nanyang Jade Carving Festival and Cultural and Creative Industry Conference. Source: Nanyang Zhenping County Organizing Committee]

Since its inception in 1993, the Jade Sculpture Festival has been successfully held for 26 times over 30 years, and has been upgraded to Nanyang Municipal Festival for 17 times. In order to further promote Chinese jade culture and promote the healthy and orderly development of the jade cultural industry, the 18th Nanyang Jade Sculpture Festival and Cultural Creative Industry Conference will be held in 2023, co-sponsored by the Nanyang Municipal Committee of the Communist Party of China, the Nanyang Municipal People's Government and the China Jewelry and Jade Jewelry Industry Association. It will be held in Zhenping County, Nanyang City, Henan Province from September 25th to October 7th.

During the festival, there will be held the 3rd "Yu Jian Fashion" Jewelry and Jade Sculpture Cultural and Creative Competition, GAC Independent Jewelry Designers Joint Exhibition, the 10th Jade Sculpture "Yuhua Cup" and other jewelry

and jade carving competitions and evaluation activities, as well as innovation demonstrations for the integration of industry and education. Base listing ceremony, jade ornaments show, jade raw material public trading conference, "Jade" Nanyang Exchange Conference from all over the world and city-wide investment project centralized signing event, Exploring the Central Plains Jade Carving Culture Forum, Jade + Health and Life Health Forum, "Jade Out" Douin - Jade Hunting in Nanyang of China" e-commerce live broadcast event, jade hunting fair, jade fighting conference and other key activities. We sincerely invite arts and crafts artists, jade carvers, jewelry designers, cultural and creative masters, jade culture scholars, jewelry schools, industry associations, etc. from all over the country to participate in the jade carving event with their works, creativity, designs, proposals, etc.

Thirdly, the cultural and creative development of jade carving should be strengthened to enhance the value-added of jade carving products. Efforts should be made to develop cultural and creative products that combine jade carving with other cultural elements such as painting, calligraphy, and poetry, and to tell the cultural stories behind jade carving through innovative designs and packaging. The development of high-end customized jade carving products should also be explored to meet the personalized needs of consumers and enhance the artistic and collectible value of jade carvings.

Fourthly, brand building and market promotion should be strengthened to enhance the market competitiveness of Dushan jade carving. Jade carving enterprises should be guided to establish their own brands, highlighting the unique cultural connotations and artistic characteristics of Dushan jade carving. Collective brands and geographical indication brands should also be cultivated to enhance the overall image and influence of Dushan jade carving. Various marketing channels such as exhibitions, e-commerce platforms, and experience stores should be leveraged to expand the market reach of jade carving products and services.

6.The Role of Digital Museums in the Protection and Development of Dushan

Jade Carving Art

Digital museums play an important role in the protection, dissemination, and development of Dushan jade carving art in the digital era. They can help break the limitations of time and space, enhance the public's understanding and appreciation of jade carving culture, and provide new ideas and methods for the inheritance and innovation of jade carving techniques.

6.1 Digital Collection and Preservation of Jade Carving Resources

Digital collection and preservation are important functions of digital museums in protecting Dushan jade carving art. Using digital technologies such as 3D scanning, high-definition photography, and video recording, digital museums can comprehensively and accurately collect and preserve the physical forms, crafting processes, and cultural information of jade carving works, tools, and related objects. These digital resources can be permanently stored and easily accessed, providing valuable materials for the research, education, and dissemination of jade carving art. Digital preservation can also help protect jade carving works and related cultural relics from damage, loss, and degradation. By creating digital replicas of classic jade carvings and endangered cultural relics, digital museums can allow the public to appreciate and study these works without direct contact, thus reducing the risks of

damage caused by human activities. Digital restoration technologies can also be used to repair and restore damaged or incomplete jade carving works, providing references for their physical restoration.

6.2 Online Exhibition and Dissemination of Jade Carving Culture

Online exhibitions and dissemination are important ways for digital museums to promote Dushan jade carving culture. Leveraging web technologies and multimedia tools, digital museums can create vivid and interactive online exhibitions of jade carving works, techniques, and culture. These exhibitions can break the limitations of physical space and time, allowing the public to appreciate and learn about jade carving art anytime, anywhere.

Compared with traditional physical exhibitions, online exhibitions of digital museums have many advantages. They can provide richer and more diverse exhibition content, such as high-definition images, 3D models, videos, and virtual reality experiences, enabling the public to observe jade carving works from multiple angles and in greater detail. Online exhibitions can also provide interactive features such as zoom, rotation, and virtual tours, allowing visitors to freely explore and learn according to their own interests and needs.

Digital museums can also leverage social media, mobile apps, and other digital platforms to disseminate jade carving culture to a wider audience. Through text, images, videos, and other multimedia content, digital museums can tell the stories and cultural connotations behind jade carving works, and share the skills and experiences of jade carving masters, enhancing the public's understanding and appreciation of this traditional craft. Online lectures, courses, and interactive activities can also be organized to encourage the public to actively participate in the learning and dissemination of jade carving culture.

6.3 Digital Education and Inheritance of Jade Carving Techniques

Digital education and inheritance are important areas where digital museums can contribute to the development of Dushan jade carving art. By digitizing the skills, experiences, and works of jade carving masters, digital museums can create a rich pool of educational resources for the training of future jade carving talents.

Digital museums can develop online courses, video tutorials, and virtual workshops on jade carving techniques, allowing learners to study anytime, anywhere according to their own pace and needs. These digital learning resources can help lower the barriers to jade carving education and training, attracting more young people to learn and inherit this traditional craft.

Digital technologies such as 3D modeling, virtual reality, and augmented reality can also be used to create immersive and interactive learning experiences. Learners can use these technologies to observe and practice jade carving techniques in a virtual environment, enhancing their understanding and mastery of carving skills. Digital simulation tools can also help learners experiment with different carving methods and materials, fostering their creativity and innovation abilities.

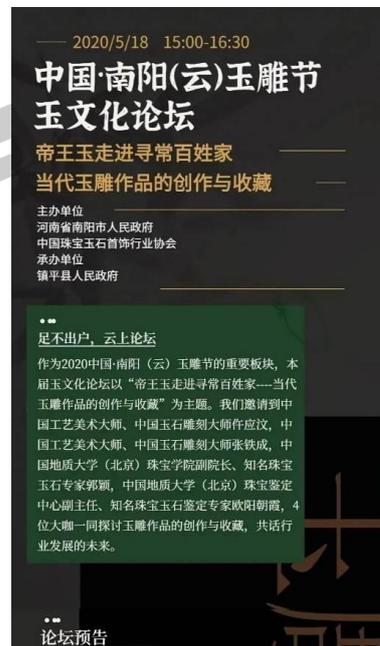


Figure 72 Jade Carving Festival Cultural Forum H5

[China Nanyang (Yun) Jade Carving Festival Cultural Forum Promotional Poster.

Source: China Jewelry, Jade and Jewelry Industry Association]

Nanyang is the hometown of Chinese jade carving and an important birthplace of Chinese jade culture. It has rich Dushan jade resources and exquisite jade carving craftsmanship. After thousands of years of historical accumulation and nearly 20 years of rapid development, Nanyang's jade cultural industry has grown from a small Growing bigger, from weak to strong, has become a beautiful city cultural business card. In recent years, the Municipal Party Committee and the Municipal Government have attached great importance to the development of the jade cultural industry, insisting on using the jade carving festival as a platform, market-oriented, and enterprises as the main body to actively implement the talent cultivation strategy, the "Jade +" strategy, and the "tourism inlaid jade" industry. In line with the tourism integrated development strategy, promoting industrial transformation and upgrading, and comprehensively enhancing the core competitiveness of industrial development, the jade cultural industry has become a characteristic and advantageous industry that enriches the people and strengthens the city. Zhenping County currently has 24 national-level jade carving masters, 369 provincial-level masters, and more than 300,000 employees. It is recognized by the industry as "the source of jade in the world and the cradle of masters". It has been awarded the title of Hometown of Chinese Jade Carving and one of the Hundreds of Chinese Characteristic Industries. It has been awarded the title of Best County, National Cultural Industry Demonstration Base, and Henan Province Cultural Reform and Development Experimental Zone.

The (Cloud) Jade Carving Festival presents the new characteristics of "innovating the festival format, creating a cloud jade carving festival, integrating offline resources, focusing on online display, injecting cultural elements, and leading the development of the industry." The China Jade Sculpture Cloud Museum was launched online, the Sugong Jade Sculpture Master Cultural and Creative Base

opened for business, the Chinese Jade Sculpture "Yuhua Award" exhibition, the jade carving master entered the live broadcast room, the Zhenping Jade Sculpture Carnival Shopping Festival, the "Internet Celebrity Broadcasting Zhenping" Competition, Preparations for Zhenping Taste and other activities are in steady progress.



Figure 73 Nanyang Municipal Government held a press conference [A press conference for the China·Nanyang (Yun) Jade Sculpture Festival was held. The leaders of the municipal government and Zhenping County introduced the relevant situation of this China·Nanyang (Yun) Jade Sculpture Festival. Source: Nanyang Municipal Government Information Office Press Conference]

Digital museums can also serve as platforms for the exchange and collaboration of jade carving practitioners, researchers, and enthusiasts from around the world. Through online forums, virtual workshops, and collaborative projects, digital museums can facilitate the sharing of knowledge, skills, and experiences among jade carving communities, promoting the collective advancement and innovation of this field.

6.4 Challenges and Prospects of Digital Museums in Jade Carving Art

Despite the many benefits of digital museums in the protection and development of Dushan jade carving art, there are also challenges that need to be addressed. These include the high costs of digital technology and talent, the difficulty of balancing online and offline experiences, and the need for continuous updating and maintenance of digital resources.

To overcome these challenges, it is necessary to strengthen policy and financial support for the construction and operation of digital museums, and to establish a sustainable development model that integrates online and offline services. It is also important to cultivate a team of professionals who are proficient in both jade carving art and digital technologies, and to encourage the active participation and collaboration of jade carving practitioners, researchers, and the public.



Figure 74 Jade Sculpture Festival Film and Television Programs

[Jade culture forum program with the theme of "Emperor Jade Enters Ordinary People's Homes—The Creation and Collection of Contemporary Jade Carvings".

Source: Nanyang Jade Culture Forum Digital Media]

The China Jewelry and Jade Jewelry Industry Association planned and recorded a jade culture forum program with the theme of "Imperial Jade Entering Ordinary People's Homes - The Creation and Collection of Contemporary Jade Carvings" in the Beijing studio.

"China Nanyang Jade Carving Festival" was born in 1993. So far, it has developed into a grand national cultural festival with influence throughout the entire industry. It adopts a new online live broadcast model and focuses on the forum theme "Emperor Jade Enters Ordinary People's Homes - Contemporary "The Creation and Collection of Jade Carving Works", Zhang Yiming, Industry Coordination Department of China Jewelry and Jade Jewelry Industry Association, held a wonderful dialogue with the guests as the forum moderator. The forum dialogue covered many hot issues in the contemporary jade carving industry, from the inheritance and development of jade culture A summary and review of the creation process of jade carvings, from the collection trends of contemporary jade carvings to the intrinsic connection between jade and health, it also puts forward valuable hopes and suggestions for the development of the industry.

6. In the future, with the continuous advancement of digital technologies and the deepening integration of culture and technology, digital museums will play an increasingly important role in the protection, dissemination, and development of Dushan jade carving art. They will help bridge the gap between tradition and modernity, and between the public and specialized fields, fostering a more open, inclusive, and innovative environment for the inheritance and development of this valuable cultural heritage.

6.5 The Nanyang Jade Carving Master Studio

The Nanyang Jade Carving Master Studio, established in 2015, is a successful example of the cultivation and inheritance of jade carving skills. As one of the 365

"Masters of Chinese Arts and Crafts" in the country, Wu Yuanquan's jade carvings have won many national-level jade carving quality awards such as the "Tiangong Award" and the "Hundred Flowers Award". I made a point of visiting him during my fieldwork.



Figure 75 Fieldwork, visit at the jade carver's studio
[Nanyang jade carving master Wu Yuanquan's studio. Source: Photos taken by the author]



Figure 76 Fieldwork, visit at the jade carver's studio
[Nanyang jade carving master Wu Yuanquan's studio. Source: Photos taken by the author]



Figure 77 Fieldwork, visit at the jade carver's studio
 [A conversation with jade carving master Wu Yuanquan. Source: Photos taken by the author]



Figure 78 Fieldwork, visit at the jade carver's studio
 [A conversation with jade carving master Wu Yuanquan. Source: Photos taken by the author]

The eloquent and passionate manner in which he talks about arts and crafts makes people deeply admire him. He said: “Chinese arts and crafts with a long history, exquisite skills and national characteristics are important carriers of cultural relics and intangible cultural heritage of China’s past dynasties. They have made great contributions to the country’s export earnings and have long been favored by the government and the private sector. Pay attention and love. In the future, how to inherit the excellent arts and crafts culture is a question that the country, institutions, industries and craftsmen need to explore.



Figure 79 Qingming Riverside

[The large-scale jade carving "Along the River During Qingming Festival" won the special gold medal in the "Lu Zigang Cup" jade carving competition in Henan Province. Source: Photos taken by the author]



Figure 80 Nine Dragon Dials

[The Nanyang jade carving "Nine Dragon Dials" designed in 1999 as a gift from Henan Province to the Macao Special Administrative Region won the first prize for creative design from the Henan Provincial Government. Source: Photos taken by the author]



Figure 81 Group photo with jade carving masters

[Photo of the author with master jade carver Wu Yuanquan. Photo courtesy of the author]

He is good at the design and creation of jade carving handicrafts, with novel ideas, unique style and self-contained nature. He also focuses on applying modern advanced science and technology to the traditional arts and crafts industry. Wu Yuanquan suggested that the arts and crafts industry be included in the cultural industry and increase financial support. Increase support for the development of the arts and crafts industry, protect traditional arts and crafts, and promote the prosperity and development of traditional arts and crafts.

The studio follows the traditional apprenticeship model, where masters pass on skills and experience to apprentices through step-by-step teaching and demonstration. At the same time, the studio also incorporates modern educational concepts and methods such as theoretical courses, workshops, and exchanges to provide more systematic and comprehensive training for jade carving talents.

Since the establishment of the Nanyang Jade Carving Master Studio, it has trained more than 50 jade carving apprentices, many of whom have become the backbone of the Dushan jade carving industry. The studio has also created a large number of exquisite jade carving works, which have won awards in domestic and foreign competitions, increasing the popularity and influence of Dushan jade carving art.

The success of the Nanyang Jade Carving Master Studio reflects the importance of talent cultivation and the effectiveness of the combination of traditional master-apprenticeship and modern education in the inheritance and development of jade carving skills. It provides valuable reference for the establishment and operation of other jade carving training bases and projects.

6.6 The Dushan Jade Carving Art Digital Museum

The Dushan Jade Carving Art Digital Museum, launched in 2018, is a pioneering example of using digital technologies and platforms to protect, disseminate, and develop jade carving art. The digital museum was jointly built by the Nanyang Municipal Government, the Nanyang Jade Carving Association, and several universities and technology companies.



Figure 82 China Jade Culture Museum

[China Jade Culture Museum.Source: Photos taken by the author]

The digital museum has collected and digitized over 1,000 pieces of jade carving works, tools, and related objects, creating a rich database of digital resources. These resources are presented through various online exhibitions, virtual reality experiences, and interactive features, allowing the public to appreciate and learn about jade carving art in a more vivid and engaging way.

The digital museum has also developed a series of online courses, video tutorials, and virtual workshops on jade carving techniques and culture, providing a convenient and flexible platform for the education and training of jade carving talents. These digital learning resources have attracted a large number of young people to learn about and participate in jade carving art, injecting new vitality into this traditional craft.

In addition, the digital museum has actively promoted the cultural dissemination and exchange of jade carving art through social media, online forums, and international collaborations. It has organized online exhibitions, lectures, and discussions with jade carving institutions and experts from around the world, enhancing the global influence and recognition of Dushan jade carving art.

The Dushan Jade Carving Art Digital Museum demonstrates the great potential of digital technologies and platforms in the protection, dissemination, and development of traditional crafts. It provides a successful model for the construction and operation of digital museums in the field of jade carving art and other intangible cultural heritage.

6.7 The Nanyang Jade Carving Creative Industry Park

International Jade City is located on the south side of Shifosi Town, Zhenping County, Henan Province. The scenic spot covers a total area of about 1,300 acres. It is a new international tourist shopping center that mainly sells professional jade and handicrafts, and also integrates tourism, leisure and shopping. The park has been rated as a "4A-level tourist attraction" and was rated as "Top Ten Advanced Tourism Units" by Nanyang City in April 2012.



Figure 83 Nanyang Zhenping Jade City

[International Jade City is the largest comprehensive development project of international jade carving and jade culture in the country. More than 5,000 varieties of jade carvings produced and processed in International Jade City, Shifosi Town, are sold to more than 50 countries and regions. Source: Photos taken by the author]

The International Jade City has major attractions such as the Jade God Pavilion, the Jade Culture Plaza, the Stone Buddha Temple and the riverside landscape. It integrates antique buildings, garden water landscapes, jade cultural industries and tourism shopping, and processes and sells jade Buddha culture and jade carvings. The exhibition is characterized by the perfect combination of jade culture, garden culture, Buddhist culture and commercial culture. International Jade City has become the largest jade processing and distribution center in the country, realizing the integration and interaction of industry and culture, ecology and tourism, singing the "Central Plains Jade Culture", creating the "China Jade Capital" brand, accelerating the construction of characteristic towns, integrating industry, Integrating culture, ecology, tourism, etc., we strive to become the world's largest professional sales and distribution center for jade and related handicrafts, the world's largest jade culture exhibition base, an international tourist shopping park and a large-scale film and television base.

The park integrates jade carving production, research and development, exhibition, sales, and cultural tourism, forming a complete industrial chain and ecosystem. It provides a platform for jade carving enterprises, artisans, designers, and researchers to collaborate and innovate, and to develop new products, technologies, and business models.

The park has introduced advanced jade carving processing equipment and technologies, such as 3D scanning, 3D printing, and CNC engraving machines, to improve the efficiency and quality of jade carving production. It has also established a jade carving research and development center, which brings together experts from universities, research institutions, and enterprises to carry out technological innovation and application research.

In terms of cultural dissemination and tourism development, the park has built a jade carving museum, a cultural creative center, and a tourist service center, providing visitors with a comprehensive and immersive experience of jade carving art and culture. It has also developed a series of cultural creative products, such as jade carving artworks, souvenirs, and jewelry, which integrate traditional craftsmanship with modern design and marketing concepts.

The Nanyang Jade Carving Creative Industry Park has not only promoted the transformation and upgrading of the jade carving industry but also boosted the local economy and cultural tourism. It has created over 1,000 jobs and generated an annual output value of over 100 million yuan, becoming a new engine for the development of the jade carving industry and the local economy.

The success of the Nanyang Jade Carving Creative Industry Park demonstrates the feasibility and effectiveness of promoting the integrated development of the jade carving industry through cross-sector collaboration and innovation. It provides a valuable reference for the construction and operation of other jade carving industrial parks and cultural creative centers.

7.Recommendations for the Sustainable Development of Dushan Jade Carving

Art

Based on the analysis of the historical development, cultural identity crisis, protection and development strategies, and successful cases of Dushan jade carving art, the following recommendations are proposed for the sustainable development of this traditional craft in the future:

7.1 Strengthen policy support and guidance

The government should continue to strengthen policy support and guidance for the protection and development of Dushan jade carving art. This includes improving the legal and regulatory system, increasing financial and material support, and optimizing the incentive and evaluation mechanisms for jade carving protection and development.

Specific measures may include formulating special plans and policies for the protection and development of Dushan jade carving art, establishing a special fund for jade carving inheritance and innovation, and providing tax incentives and financial subsidies for jade carving enterprises and practitioners. The government should also improve the social security and welfare of jade carving inheritors and practitioners,

and create a favorable environment for the sustainable development of this traditional craft.

7.2 Enhance talent cultivation and education

Talent cultivation and education should be further enhanced to ensure the sustainable development of Dushan jade carving art. This includes improving the jade carving education and training system, strengthening the integration of production, education, and research, and promoting the collaboration and exchange between jade carving masters, apprentices, and researchers.

Specific measures may include establishing more jade carving training bases and programs in universities, vocational schools, and enterprises, developing standardized and systematic jade carving curricula and teaching materials, and promoting the apprenticeship and mentoring system between masters and apprentices. The government and society should also increase the recognition and support for jade carving education and training, and provide more opportunities and platforms for the development and exchange of jade carving talents.

7.3 Promote technological innovation and application

Technological innovation and application should be further promoted to drive the creative transformation and innovative development of Dushan jade carving art. This includes strengthening the research and development of jade carving technologies, tools, and materials, promoting the integration of traditional craftsmanship with modern technologies, and encouraging the cross-disciplinary collaboration between jade carving and other fields such as digital technology, material science, and cultural creative industries.

Specific measures may include establishing jade carving technology research and development centers, promoting the application of digital technologies such as 3D scanning, 3D printing, and virtual reality in jade carving design, production, and display, and developing new jade carving materials and tools that are more efficient, environmentally friendly, and adaptable to modern needs. The government and enterprises should also increase investment in technological innovation and application, and provide more support and incentives for jade carving practitioners and researchers to carry out technological innovation and entrepreneurship.

7.4 Strengthen cultural dissemination and branding

Cultural dissemination and branding should be further strengthened to enhance the visibility, influence, and value of Dushan jade carving art. This includes promoting the cultural connotation and artistic value of jade carving, developing distinctive and high-quality jade carving products and services, and building a strong and influential jade carving cultural brand.

Specific measures may include organizing more jade carving exhibitions, forums, and cultural events, developing jade carving cultural creative products and souvenirs that integrate traditional craftsmanship with modern design and marketing concepts, and promoting jade carving culture and products through various channels such as museums, websites, social media, and international exchanges. The government and enterprises should also strengthen the protection and management of the intellectual property rights of jade carving products and designs, and crack down on counterfeiting and infringement to maintain the credibility and value of the jade carving brand.

7.5 Enhance the construction and utilization of digital museums

The construction and utilization of digital museums should be further enhanced to promote the protection, dissemination, and development of Dushan jade carving art in the digital era. This includes strengthening the digital collection, preservation, and presentation of jade carving resources, developing more interactive and engaging digital exhibitions and educational programs, and promoting the integration and sharing of digital resources among jade carving museums, institutions, and communities.

Specific measures may include establishing a comprehensive and standardized digital database of jade carving works, techniques, and related cultural resources, developing virtual and augmented reality experiences that allow the public to explore and learn about jade carving art in an immersive and interactive way, and building online platforms and communities for jade carving practitioners, researchers, and enthusiasts to exchange ideas, collaborate on projects, and co-create new forms of jade carving art. The government and society should also increase investment and support for the construction and operation of digital museums, and promote the integration and utilization of digital technologies and resources in the protection and development of jade carving art and other intangible cultural heritage.

7.5.1 Invest in Education and Training Programs

To promote the transmission and development of Dushan jade carving skills and knowledge, it is crucial to invest in education and training programs for aspiring and established jade carvers. This could include the establishment of specialized schools, apprenticeship programs, and workshops that provide hands-on training in traditional carving techniques and tools, as well as exposure to contemporary design and technology (Wang, Y. (2019) 32-39).



Figure 84 Jade Culture Industry Industry-Education Integration
[The 18th Nanyang Jade Sculpture Festival and Cultural and Creative Industry
Conference Jade Cultural Industry Industry-Education Integration Development
Forum。 Source: Internet check]

Education and training programs should also aim to cultivate a new generation of jade carving artists and scholars who are equipped with the skills, knowledge, and creativity needed to innovate and adapt to changing market demands. This could involve collaborations with universities, museums, and cultural institutions to develop interdisciplinary curricula that combine jade carving with other fields, such as art history, anthropology, and material science (Liu, Y. (2020) 185-203).

7.5.2 Promote Cultural Tourism and Public Engagement

Cultural tourism can play a vital role in promoting public appreciation and understanding of Dushan jade carving art, while also generating economic benefits for local communities. The development of jade carving-themed tourist attractions, such as museums, galleries, and workshops, could help to raise awareness of this traditional craft and provide opportunities for visitors to experience the art form firsthand (Wang, Y. (2019) 32-39).

To promote cultural tourism, local governments and tourism boards should work with jade carving enterprises and artisans to create engaging and immersive visitor experiences, such as guided tours, hands-on workshops, and interactive exhibits. These experiences could be marketed to both domestic and international tourists, highlighting the unique cultural and artistic heritage of the Dushan region (Liu, Y. (2020) 185-203).

Public engagement initiatives, such as festivals, exhibitions, and educational programs, could also help to foster a greater appreciation and understanding of Dushan jade carving art among local communities. These initiatives could involve collaborations with schools, community centers, and cultural organizations to develop age-appropriate and culturally relevant content that showcases the beauty, skill, and significance of jade carving (Wang, Y. (2019) 32-39).

7.5.3 Encourage Innovation and Experimentation

To ensure the continued relevance and vitality of Dushan jade carving art, it is important to encourage innovation and experimentation among jade carvers and designers. This could involve the creation of incubation programs, design competitions, and collaborative projects that provide opportunities for artists to explore new materials, technologies, and styles (Liu, 2020).

Innovation and experimentation should be guided by a respect for traditional techniques and values, as well as a commitment to sustainability and cultural authenticity. Jade carvers should be encouraged to draw inspiration from a wide range of sources, including contemporary art, global design trends, and local cultural heritage, while also staying true to the essence and integrity of their craft (Wang, Y. (2019) 32-39).

7.5.4 Foster International Exchange and Collaboration

To promote the global recognition and appreciation of Dushan jade carving art, it is essential to foster international exchange and collaboration among jade carvers, scholars, and cultural institutions. This could involve the organization of international exhibitions, symposia, and residency programs that bring together jade carving artists and experts from around the world to share knowledge, skills, and ideas (Liu, Y. (2020) 185-203).

International collaborations could also help to create new markets and opportunities for Dushan jade carvings, as well as promote cross-cultural

understanding and dialogue. For example, partnerships with museums, galleries, and design firms in other countries could lead to the development of new products, exhibitions, and educational programs that showcase the unique qualities and cultural significance of Dushan jade (Wang, Y. (2019) 32-39).

Henan Province, located in central China, is widely recognized as one of the cradles of Chinese civilization, and its rich traditional cultural heritage, including Dushan jade carving art, has played a significant role in shaping Chinese cultural identity. However, the transmission and preservation of this invaluable heritage face numerous challenges in the modern era, such as rapid urbanization, changing social values, and a lack of effective protection measures.

The historical and cultural significance of Henan Province is profound. As the birthplace of Chinese civilization, the epicenter of ancient dynasties, and a treasury of cultural relics and traditions, Henan has been a vital force in the development and evolution of Chinese culture. From the Neolithic Peiligang and Yangshao cultures to the Xia, Shang, Zhou, and later dynasties, the province has witnessed the emergence of groundbreaking archaeological discoveries, philosophical traditions, and artistic achievements that have left an indelible mark on Chinese civilization.

One of the most iconic examples of Henan's traditional cultural heritage is Dushan jade carving art, originating from Nanyang. With a history spanning over a thousand years, Dushan jade carving is renowned for its exquisite craftsmanship, unique style, and deep cultural connotations. Dushan jade carvings often feature intricate designs inspired by nature, mythology, and religious symbolism, reflecting the rich cultural roots and artistic traditions of the region.

Despite its historical and cultural significance, the transmission and preservation of traditional cultural heritage in Henan Province, including Dushan jade carving art, face numerous challenges in the modern era. Rapid urbanization and modernization have led to the demolition of ancient buildings, the neglect of archaeological sites, and the disruption of cultural landscapes and traditions. Moreover, the lack of effective protection measures and policies, as well as the changing social values and cultural identities, particularly among younger generations, have contributed to the decline and disappearance of many aspects of Henan's intangible cultural heritage.

In the case of Dushan jade carving art, the cultural identity crisis is particularly acute. The aging of inheritors and the lack of successors, the impact of modern mechanized production on traditional handicrafts, and the disconnect between tradition and modern aesthetic demands have threatened the authenticity and continuity of this ancient craft. This crisis not only affects the inheritance and development of jade carving techniques but also impacts the cultural confidence and sustainable development of the Nanyang region.

To address these challenges and ensure the sustainable development and promotion of Dushan jade carving art, various innovative design strategies have been explored and implemented in recent years. These strategies include the digitalization of cultural heritage, community engagement and participatory design, and the development of cultural and creative industries.

The digitalization of cultural heritage, through the use of technologies such as 3D scanning, virtual reality, and digital archives, has opened up new possibilities for the documentation, preservation, and interpretation of Dushan jade carving art. Digital

museums, like the Dushan Jade Carving Art Digital Museum, have created rich databases of digital resources, enabling the public to appreciate and learn about jade carving art in vivid and interactive ways. Furthermore, digital education and training platforms have provided flexible and accessible opportunities for the transmission of jade carving skills and knowledge to a wider audience, including younger generations.

Community engagement and participatory design have also played a crucial role in safeguarding and promoting Dushan jade carving art. By actively involving local communities, jade carving masters, and practitioners in the design, planning, and implementation of heritage conservation and promotion initiatives, a sense of shared ownership and cultural pride has been fostered. Events such as the Dushan Jade Carving Festival and the establishment of participatory conservation plans have ensured that the transmission and development of this traditional craft align with the needs and aspirations of the local community.

The development of cultural and creative industries based on Dushan jade carving art has further contributed to its preservation and promotion. Initiatives such as the Nanyang Jade Carving Creative Industry Park have integrated jade carving production, research, exhibition, sales, and cultural tourism, creating a complete industrial chain and ecosystem. By fostering cross-sector collaboration and innovation, these initiatives have promoted the development of new jade carving products, technologies, and business models, while also generating economic benefits and enhancing the cultural identity of the region.

Furthermore, the transmission and innovation of traditional cultural heritage in Henan Province have been supported by various policies and initiatives at the national, provincial, and local levels. The Chinese government has implemented laws and regulations, such as the "Law of the People's Republic of China on the Protection of Cultural Relics" and the "Intangible Cultural Heritage Law of the People's Republic of China," to provide a legal framework for heritage conservation and promotion. At the provincial level, the Henan government has issued plans and policies to strengthen the legal and institutional framework, increase financial support, and promote the integrated development of cultural heritage and tourism industries.

Despite these efforts, the transmission and innovation of traditional cultural heritage in Henan Province still face challenges and uncertainties. The sustainability and effectiveness of current strategies and policies need continuous evaluation and adjustment based on changing social, economic, and cultural contexts. Moreover, active participation and collaboration among all stakeholders, including government agencies, cultural institutions, local communities, and the private sector, are essential for the long-term success of heritage conservation and development efforts.

To ensure the sustainable development and promotion of Dushan jade carving art, several recommendations have been proposed:

Strengthen policy support and industry regulation: Local and national governments should provide financial incentives, establish certification systems, and enforce guidelines for responsible sourcing and processing of jade materials to protect the authenticity and reputation of Dushan jade carving art.

Invest in education and training programs: Specialized schools, apprenticeship programs, and workshops should be established to provide hands-on training in traditional carving techniques, as well as exposure to contemporary design and

technology. Interdisciplinary curricula should be developed to cultivate a new generation of jade carving artists and scholars.

Promote cultural tourism and public engagement: The development of jade carving-themed tourist attractions, such as museums, galleries, and workshops, can raise awareness and appreciation of this traditional craft. Public engagement initiatives, such as festivals, exhibitions, and educational programs, can foster a greater understanding of Dushan jade carving art among local communities.

Encourage innovation and experimentation: Incubation programs, design competitions, and collaborative projects should be created to provide opportunities for jade carvers and designers to explore new materials, technologies, and styles while respecting traditional techniques and values.

Foster international exchange and collaboration: International exhibitions, symposia, and residency programs can promote global recognition and appreciation of Dushan jade carving art, create new markets and opportunities, and facilitate cross-cultural understanding and dialogue.

The transmission and innovation of traditional cultural heritage in Henan Province, including the art of Dushan jade carving, require a comprehensive and integrated approach that combines innovative design strategies, supportive policies, and multi-stakeholder collaboration. By leveraging the power of digitalization, community engagement, creative industries development, and international exchange, while also respecting cultural authenticity and diversity, Henan Province can create a sustainable and dynamic future for its invaluable cultural heritage.

In conclusion, the preservation and promotion of Dushan jade carving art, a living embodiment of Chinese cultural identity and creativity, is essential not only for maintaining the rich tapestry of Henan's cultural heritage but also for fostering a sense of pride, continuity, and resilience in the face of rapid globalization and modernization. By adopting an interdisciplinary and collaborative approach that harmonizes tradition and innovation, Dushan jade carving art can continue to thrive as a testament to the enduring spirit and ingenuity of the Chinese people.

Summary of the Chapter

This chapter provides a comprehensive exploration of the transmission and preservation of Dushan jade carvings in the context of traditional cultural heritage inheritance in Henan Province, China. It delves into the historical and cultural significance of Henan Province, the current challenges faced in safeguarding traditional cultural heritage, and the innovative design strategies employed to promote and preserve this valuable legacy, with a specific focus on Dushan jade carving art.

Henan Province, recognized as one of the cradles of Chinese civilization, boasts a rich and diverse traditional cultural heritage that has played a crucial role in shaping Chinese cultural identity. The province's history, spanning over 5,000 years, has witnessed the rise and fall of numerous dynasties, the emergence of groundbreaking philosophical traditions, and the creation of countless artistic and cultural masterpieces. From the Neolithic Peiligang and Yangshao cultures to the iconic Longmen Grottoes and the Shaolin Temple, Henan's cultural heritage serves as a testament to the ingenuity, resilience, and creativity of the Chinese people.

Among the province's most cherished cultural treasures is the art of Dushan jade carving, which originated in Nanyang and has a history of over a thousand years.

Dushan jade, known for its exquisite craftsmanship, unique style, and deep cultural connotations, has been used to create intricate carvings inspired by nature, mythology, and religious symbolism. These carvings not only showcase the skill and artistry of the craftsmen but also embody the beliefs, values, and aesthetics of Chinese culture.

However, the transmission and preservation of Henan's traditional cultural heritage, including Dushan jade carving art, face numerous challenges in the modern era. Rapid urbanization and modernization have led to the destruction or neglect of ancient buildings, archaeological sites, and cultural landscapes. Changing social values and cultural identities, particularly among younger generations, have contributed to the decline of traditional craftsmanship and the erosion of cultural authenticity. Moreover, the lack of effective protection measures, policies, and funding has hindered the conservation and promotion of many aspects of Henan's intangible cultural heritage.

In the case of Dushan jade carving art, the cultural identity crisis is particularly acute. The aging of inheritors, the lack of successors, the impact of mechanized production, and the disconnect between tradition and modern aesthetic demands have threatened the continuity and authenticity of this ancient craft. This crisis not only affects the inheritance and development of jade carving techniques but also undermines the cultural confidence and sustainability of the Nanyang region.

To address these challenges, various innovative design strategies have been explored and implemented in recent years. The digitalization of cultural heritage, through technologies such as 3D scanning, virtual reality, and digital archives, has opened up new possibilities for documenting, preserving, and interpreting Dushan jade carving art. Digital museums, such as the Dushan Jade Carving Art Digital Museum, have created extensive databases of digital resources, enabling the public to appreciate and learn about jade carving art in engaging and interactive ways. Furthermore, digital education and training platforms have provided accessible opportunities for transmitting jade carving skills and knowledge to younger generations.

Community engagement and participatory design have also played a vital role in safeguarding and promoting Dushan jade carving art. By actively involving local communities, jade carving masters, and practitioners in the design, planning, and implementation of heritage conservation and promotion initiatives, a sense of shared ownership and cultural pride has been fostered. Events such as the Dushan Jade Carving Festival and the establishment of participatory conservation plans have ensured that the transmission and development of this traditional craft align with the needs and aspirations of the local community.

The development of cultural and creative industries based on Dushan jade carving art has further contributed to its preservation and promotion. Initiatives like the Nanyang Jade Carving Creative Industry Park have integrated jade carving production, research, exhibition, sales, and cultural tourism, creating a complete industrial chain and ecosystem. By fostering cross-sector collaboration and innovation, these initiatives have promoted the development of new jade carving products, technologies, and business models while generating economic benefits and enhancing the region's cultural identity.

Moreover, the transmission and innovation of traditional cultural heritage in Henan Province have been supported by various policies and initiatives at the

national, provincial, and local levels. The Chinese government has implemented laws and regulations to provide a legal framework for heritage conservation and promotion. The Henan government has issued plans and policies to strengthen the legal and institutional framework, increase financial support, and promote the integrated development of cultural heritage and tourism industries.

Despite these efforts, the transmission and innovation of traditional cultural heritage in Henan Province still face challenges and uncertainties. The sustainability and effectiveness of current strategies and policies require continuous evaluation and adjustment based on changing social, economic, and cultural contexts. Furthermore, active participation and collaboration among all stakeholders, including government agencies, cultural institutions, local communities, and the private sector, are essential for the long-term success of heritage conservation and development efforts.

To ensure the sustainable development and promotion of Dushan jade carving art, several recommendations have been proposed. These include strengthening policy support and industry regulation, investing in education and training programs, promoting cultural tourism and public engagement, encouraging innovation and experimentation, and fostering international exchange and collaboration. By implementing these recommendations and adopting a comprehensive, integrated approach that combines innovative design strategies, supportive policies, and multi-stakeholder collaboration, Henan Province can create a sustainable and dynamic future for its invaluable cultural heritage.

The chapter highlights the importance of safeguarding and promoting traditional cultural heritage, not only for its intrinsic value but also for its role in fostering cultural identity, social cohesion, and economic development. The art of Dushan jade carving, as a living embodiment of Chinese cultural identity and creativity, serves as a prime example of the challenges and opportunities involved in transmitting and preserving intangible cultural heritage in the face of rapid globalization and modernization.

The successful cases discussed in the chapter, such as the Nanyang Jade Carving Master Studio, the Dushan Jade Carving Art Digital Museum, and the Nanyang Jade Carving Creative Industry Park, demonstrate the potential of innovative design strategies and multi-stakeholder collaboration in revitalizing and promoting traditional craftsmanship. These initiatives have not only contributed to the preservation and transmission of jade carving skills and knowledge but also generated new opportunities for cultural tourism, creative industries, and international exchange.

However, the chapter also acknowledges the need for continuous adaptation, experimentation, and learning in the process of safeguarding and promoting traditional cultural heritage. As the social, economic, and cultural contexts continue to evolve, so must the strategies and approaches employed to ensure the relevance, vitality, and sustainability of Dushan jade carving art and other intangible cultural heritage.

The transmission and preservation of Dushan jade carvings in the context of traditional cultural heritage inheritance in Henan Province require a delicate balance between tradition and innovation, conservation and development, and local and global perspectives. By embracing the power of digitalization, community engagement, creative industries development, and international collaboration, while respecting the cultural authenticity and diversity of heritage, Henan Province can create a vibrant

and sustainable future for its traditional cultural heritage. The art of Dushan jade carving, with its deep roots in Chinese history and culture, and its enduring appeal to contemporary audiences, serves as a testament to the resilience, creativity, and adaptability of the Chinese people in the face of change and adversity.



CHAPTER V

Conclusion, Discussion, and Suggestion

Introduction:

This study, titled "The Art of Dushan Jade Carving: Preserving and Innovating Traditional Cultural Heritage in Henan Province, China," is a qualitative research that explores the historical development, cultural significance, and innovative strategies for safeguarding and promoting Dushan jade carving art in the context of cultural heritage preservation and transmission in Henan Province. The research team includes jade carving masters, apprentices, cultural heritage experts, local government officials, and other relevant personnel. As China undergoes rapid modernization and urbanization, its rich traditional cultural heritage, including the art of Dushan jade carving, faces numerous challenges in terms of preservation, transmission, and development. The Chinese government has recognized the importance of safeguarding and promoting traditional cultural heritage and has implemented various policies and initiatives to support its protection and inheritance. This study uses Dushan jade carving art as a case study to examine the current situation, challenges, and innovative strategies for preserving and developing traditional craftsmanship in Henan Province. By analyzing the data collected from literature review, field research, and interviews, the study presents its findings and provides recommendations for the sustainable development of Dushan jade carving art and other traditional cultural heritage in China.

Conclusion of Research Results:

Historical Development and Cultural Significance of Dushan Jade Carving Art
The study has traced the historical development of Dushan jade carving art, which originated in Nanyang, Henan Province, and has a history spanning over a thousand years. Dushan jade, known for its unique material properties and rich color variations, has been cherished and utilized for carving since ancient times. The art of Dushan jade carving reached its peak during the Ming and Qing Dynasties (1368-1912), when it received imperial patronage and produced numerous exquisite works that embodied the cultural and aesthetic values of Chinese society.

The study has also highlighted the cultural significance of Dushan jade carving art, which reflects the philosophical, religious, and artistic traditions of Chinese culture. Dushan jade carvings often feature auspicious symbols, Confucian and Taoist values, and the cultural identities of the Chinese people. The art of Dushan jade carving is not only a testament to the creativity and skill of the artisans but also a bearer of the cultural memory and identity of the region.

Challenges in the Preservation and Transmission of Dushan Jade Carving Art
Despite its historical and cultural significance, the preservation and transmission of Dushan jade carving art face numerous challenges in the modern era. The study has identified several key challenges, including the impact of urbanization and modernization, the lack of effective protection measures and policies, and the changing social values and cultural identities.

The rapid pace of urbanization and modernization has led to the destruction or degradation of many traditional production sites and workshops of Dushan jade carving. The younger generation is increasingly attracted to modern, urban lifestyles and less interested in inheriting the traditional craftsmanship. The existing protection policies often focus on the preservation of tangible cultural heritage, such as artifacts and buildings, while neglecting the safeguarding of intangible cultural heritage, such as the skills and knowledge of jade carving.

Moreover, the commercialization and commodification of cultural heritage have also posed challenges to the authentic transmission and development of Dushan jade carving art. The pursuit of economic benefits has sometimes led to the over-exploitation of cultural resources and the erosion of cultural integrity and authenticity.

Innovative Strategies for Safeguarding and Promoting Dushan Jade Carving Art To address the challenges faced in the preservation and transmission of Dushan jade carving art, the study has identified and analyzed several innovative strategies that have been explored and implemented in recent years. These strategies include:

a) **Digitalization of cultural heritage:** The use of digital technologies, such as 3D scanning, virtual reality, and digital archives, has provided new opportunities for the documentation, preservation, and interpretation of Dushan jade carving art. The creation of digital databases, virtual exhibitions, and online learning resources has made the art of Dushan jade carving more accessible to a wider audience and has facilitated the transmission of knowledge and skills across generations.

b) **Community engagement and participatory approaches:** The active participation of local communities, particularly the bearers and practitioners of Dushan jade carving art, in the preservation and promotion of their cultural heritage has been crucial for its sustainable development. The study has highlighted several successful examples of community-based initiatives, such as the establishment of jade carving cooperatives, the organization of apprenticeship programs, and the development of community-based tourism.

c) **Integration with cultural and creative industries:** The integration of Dushan jade carving art with the cultural and creative industries has provided new opportunities for its development and revitalization. The study has showcased several innovative examples, such as the creation of jade-themed cultural products, the development of creative tourism experiences, and the collaboration between jade carving artisans and contemporary designers.

The study has also analyzed the role of government policies and initiatives in supporting the preservation and promotion of Dushan jade carving art. The Chinese government has implemented various laws, regulations, and policies to strengthen the protection of cultural heritage and to promote its integration with economic and social development. The study has highlighted several successful cases of government-led initiatives, such as the establishment of jade carving industrial parks, the launch of training and education programs, and the promotion of cultural tourism.

Research Discussion:

The Significance of Safeguarding and Promoting Traditional Craftsmanship The study has emphasized the significance of safeguarding and promoting traditional craftsmanship, such as Dushan jade carving art, in the context of cultural heritage preservation and sustainable development. Traditional craftsmanship embodies the

cultural identity, creativity, and diversity of a region and plays a vital role in the transmission of cultural knowledge and values across generations.

The preservation and development of traditional craftsmanship not only contribute to the cultural vitality and resilience of a society but also provide opportunities for economic and social development. The integration of traditional craftsmanship with modern industries, such as tourism, design, and creative industries, can generate new sources of income, create employment opportunities, and enhance the well-being of local communities.

Moreover, the safeguarding and promotion of traditional craftsmanship can also contribute to the achievement of the United Nations Sustainable Development Goals (SDGs), particularly in terms of promoting inclusive and sustainable economic growth, reducing inequalities, and building resilient and sustainable cities and communities.

The Role of Digital Technologies in the Preservation and Transmission of Cultural Heritage The study has highlighted the potential of digital technologies in the preservation and transmission of cultural heritage, including Dushan jade carving art. Digital technologies, such as 3D scanning, virtual reality, and digital archives, have opened up new possibilities for the documentation, interpretation, and dissemination of cultural heritage.

The digitalization of cultural heritage has several advantages, such as providing accurate and detailed documentation of cultural artifacts and sites, enabling remote access and virtual experiences of cultural heritage, and facilitating the exchange and collaboration among researchers, practitioners, and the public.

However, the study has also noted the challenges and limitations of digital technologies in the preservation and transmission of cultural heritage. The use of digital technologies requires significant financial, technical, and human resources, which may not be readily available in many developing regions. The digitalization of cultural heritage also raises issues of intellectual property rights, cultural ownership, and the potential misuse or misappropriation of cultural resources.

Therefore, the study has emphasized the need for a balanced and integrated approach that combines digital technologies with traditional methods of cultural heritage preservation and transmission, and that engages local communities and cultural bearers in the process.

The Importance of Community Engagement and Participatory Approaches The study has underscored the importance of community engagement and participatory approaches in the preservation and promotion of traditional cultural heritage, including Dushan jade carving art. The active participation of local communities, particularly the cultural bearers and practitioners, in the identification, documentation, and transmission of their cultural heritage is crucial for its sustainability and vitality.

Community-based initiatives, such as the establishment of local cultural centers, the organization of apprenticeship programs, and the development of community-based tourism, can provide opportunities for the empowerment and capacity-building of local communities, and for the generation of economic and social benefits.

The study has also highlighted the need for a more inclusive and equitable approach to cultural heritage preservation and promotion, which recognizes the

diversity of cultural expressions and values, and which respects the rights and interests of indigenous peoples and local communities.

The engagement of local communities in the decision-making and management of cultural heritage not only enhances the effectiveness and sustainability of preservation efforts but also promotes social cohesion, cultural pride, and community resilience.

Suggestions:

Strengthening the Legal and Policy Framework for Cultural Heritage Protection The study suggests that the Chinese government should further strengthen the legal and policy framework for the protection of cultural heritage, particularly in terms of the safeguarding of intangible cultural heritage and traditional craftsmanship. This includes:

a) Improving the implementation and enforcement of existing laws and regulations, such as the Law on the Protection of Cultural Relics and the Intangible Cultural Heritage Law, at the national, provincial, and local levels.

b) Developing specific policies and measures for the preservation and promotion of traditional craftsmanship, such as the establishment of a national inventory of traditional crafts, the provision of financial and technical support for craftspeople and workshops, and the integration of traditional craftsmanship into the formal education system.

c) Encouraging the participation of local communities, civil society organizations, and the private sector in the development and implementation of cultural heritage policies and programs, and establishing mechanisms for their consultation and collaboration.

Investing in the Capacity-Building and Transmission of Traditional Craftsmanship The study suggests that the Chinese government, as well as the private sector and civil society organizations, should invest in the capacity-building and transmission of traditional craftsmanship, such as Dushan jade carving art. This includes:

a) Establishing and supporting vocational training and apprenticeship programs for aspiring and established craftspeople, in collaboration with educational institutions, cultural organizations, and the private sector.

b) Providing financial and technical support for the upgrading and innovation of traditional workshops and production facilities, and for the development of new products and markets.

c) Promoting the documentation, research, and dissemination of traditional knowledge and skills related to craftsmanship, and encouraging the exchange and collaboration among craftspeople, researchers, and cultural institutions.

d) Recognizing and rewarding outstanding craftspeople and cultural bearers, and providing them with opportunities for national and international recognition and promotion.

Promoting the Integration of Cultural Heritage with Sustainable Development The study suggests that the Chinese government and relevant stakeholders should promote the integration of cultural heritage, including traditional craftsmanship, with sustainable development strategies and programs. This includes:

a) Incorporating cultural heritage into local and regional development plans, and promoting its contribution to economic growth, social inclusion, and environmental sustainability.

b) Developing cultural tourism products and services that showcase the unique cultural heritage and craftsmanship of different regions, and that generate income and employment opportunities for local communities.

c) Encouraging the collaboration and partnership between the cultural and creative industries and traditional craftspeople, and supporting the development of innovative and sustainable business models.

d) Promoting the use of traditional knowledge and practices related to craftsmanship in the conservation and sustainable use of natural resources, such as jade mines and forests, and in the mitigation and adaptation to climate change.

In conclusion, this study has provided a comprehensive analysis of the historical development, cultural significance, challenges, and innovative strategies for the preservation and promotion of Dushan jade carving art in Henan Province, China. The findings and recommendations of the study can contribute to the sustainable development of traditional craftsmanship and cultural heritage in China and beyond, and to the achievement of the United Nations Sustainable Development Goals.

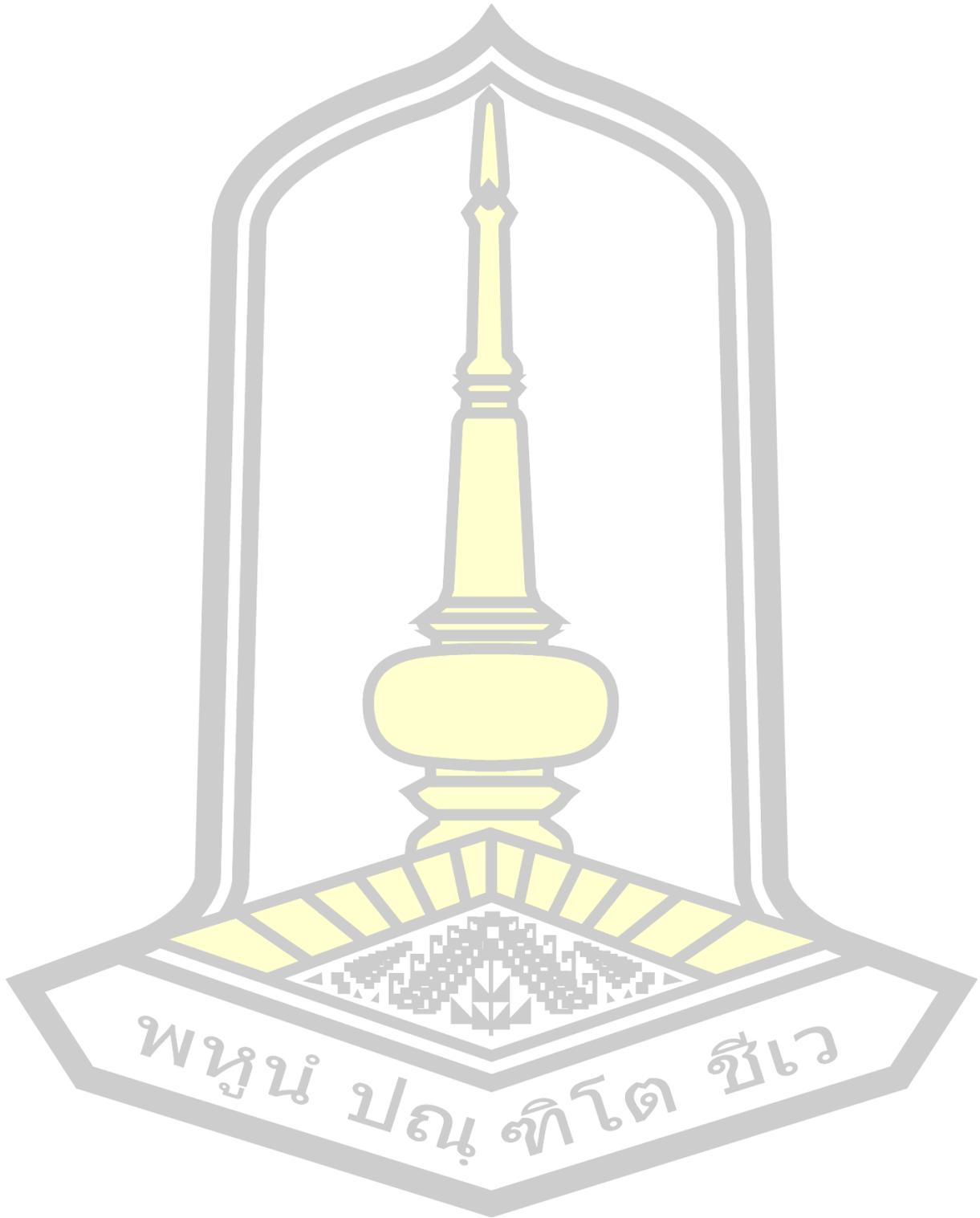
Through a combination of literature review, field research, and interviews with key stakeholders, the study has highlighted the importance of safeguarding and promoting traditional craftsmanship as a vital component of cultural heritage and sustainable development. The study has also emphasized the potential of digital technologies, community engagement, and participatory approaches in the preservation and transmission of cultural heritage, while noting the challenges and limitations of these strategies.

The study has provided several suggestions for strengthening the legal and policy framework for cultural heritage protection, investing in the capacity-building and transmission of traditional craftsmanship, and promoting the integration of cultural heritage with sustainable development strategies and programs.

It is hoped that this study can contribute to the ongoing efforts of the Chinese government, cultural institutions, and local communities in the preservation and promotion of Dushan jade carving art and other traditional cultural heritage, and in the building of a more sustainable, inclusive, and resilient future for all.



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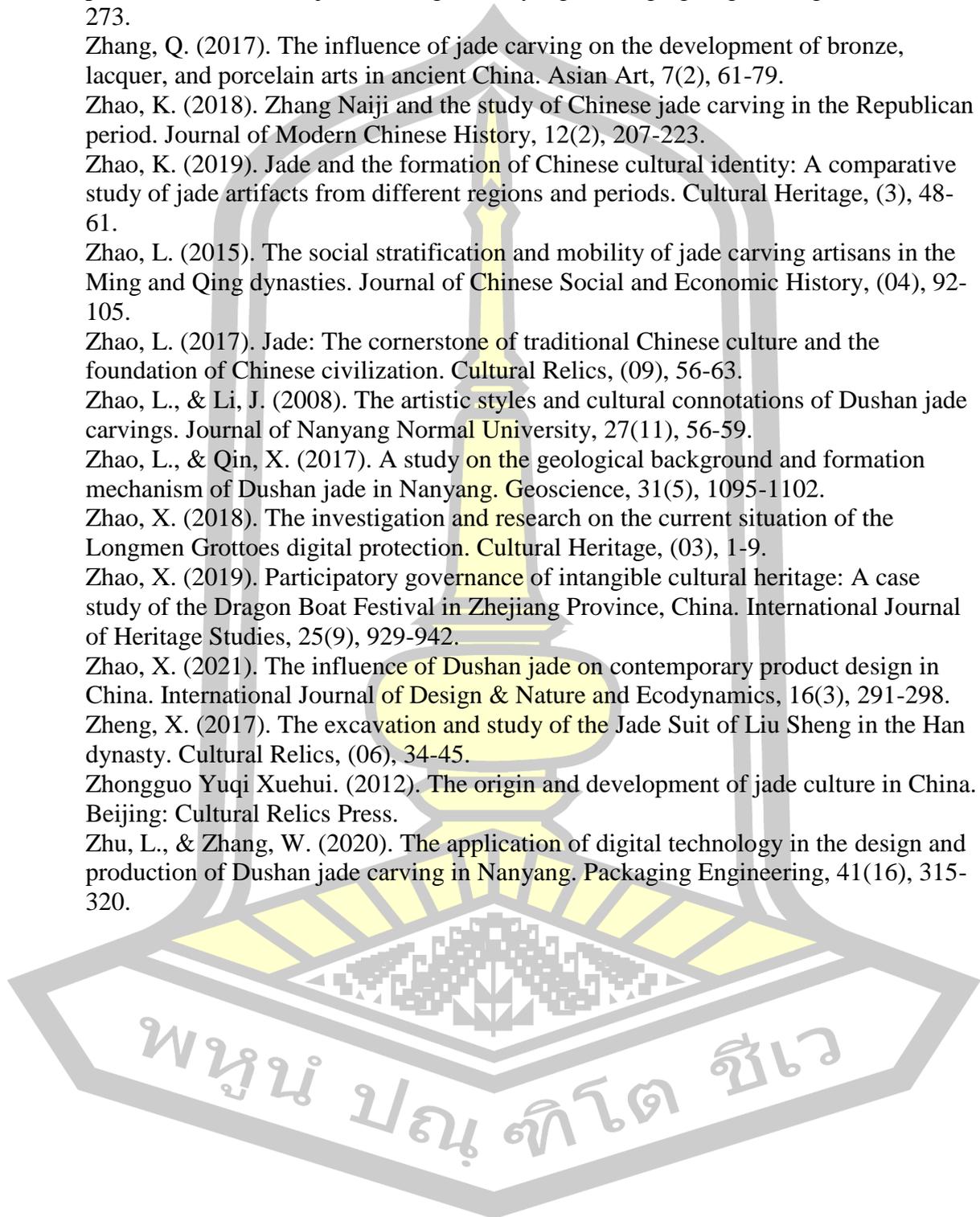
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