

Fusion and Adaptation: The Transformation of Unglazed Stoneware Heritage in Northern China

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ABSTRACT

Traditional Chinese crafts are a vital component of the nation's cultural heritage. In recent years, efforts to preserve and revitalize these crafts have ignited debates on cultural diversity and the adaptability of heritage protection. This paper explores the dynamic nature of traditional craft heritage in contemporary China, arguing that it evolves through environmental interactions and integrating new practices. The study examines the heritage of Pingding casserole (unglazed stoneware) in Northern China, using cultural ecology theory to analyze its adaptation to both natural environments and community policies. Through an investigation of geographical resources, local customs, and social policies, the research traces the evolution of Pingding stoneware. Interviews with local artisans reveal the flexibility of unglazed stoneware practices in meeting modern needs while highlighting the role of craft heritage in responding to shifting community contexts. The findings show that Pingding stoneware embodies distinct regional characteristics, fosters cultural cohesion, and stimulates local economic development. This study concludes that traditional crafts should be viewed as living heritage, continually adapting to environmental and societal changes, thus ensuring their continued relevance in the modern era.

Contribution/Originality: This study contributes to the existing literature by integrating cultural ecology into the analysis of traditional Chinese crafts. The paper's primary contribution is finding that Pingding unglazed stoneware evolves through local adaptation to environmental and socio-economic changes. It also documents artisans' strategies for balancing tradition with innovation, providing a holistic understanding of heritage preservation.

1. Introduction

Cultural globalization, characterized by homogenization and universalization, pervades diverse local cultures worldwide (Fish & Jameson, 1998; Liu, 1997; Martell, 2007; Pieterse, 2009; Zheng, 2003). Chinese traditional craft heritage, deeply rooted in unique local culture, grapples with the sweeping effects of cultural globalization (Jiang, 2015; Zhou, 2006). Focusing on northern China, this paper examines the evolution of the Pingding casserole (unglazed stoneware). However, prior research on traditional cultural or craft heritage primarily centers on historical context, developmental trends, and intrinsic craft characteristics, including shape, colors, patterns, and styles (Liu, 2016; Peng, 2017). This paper claims that understanding traditional craft requires departing from isolationist perspectives, emphasizing crafts as adaptive processes within holistic environments. Using cultural ecology and adaptation theories is critical, providing frameworks to understand how artistic cultures transform (Steward, 1959; White, 1975; Yang et al., 2022). Cultural ecology, a nexus between human societies and cultural systems, investigates how human experiences adapt to environments (McElwee et al., 2022). Using interviews, this study highlights the specificity of local clay (gangu), integral to Pingding casserole (unglazed stoneware) production and use in daily life. Pingding casserole (unglazed stoneware) are interwoven with local refractory clay, shaping social culture and adapting to changing environments (Zhang, 1988). The author examines material resources, customs, policies, and other factors shaping the transformation of Pingding casserole (unglazed stoneware) within northern China. As a result, this craft exemplifies adaptation to natural landscapes and contemporary socio-economic conditions.

1.1. Statement of the Problem

Pingding, a historically significant ceramics center in Shanxi Province (Guang, 1995), has seen a decline in the production of unglazed stoneware due to factors like environmental regulations, shifting demand, and technological changes (Han & Zhao, 2013; Kang, 2015). Despite its historical importance, Pingding's unglazed stoneware has received less academic attention compared to southern ceramics, largely due to its simple design and a lack of consensus on stoneware classification (Capoglu & Taskiran, 2004). While national policies increasingly emphasize cultural heritage preservation (Feng, 2001; Li, 2008; Zhou, 2007), an evaluation of local preservation efforts is needed to assess their effectiveness (Pingding government, 2017).

Most studies on craft heritage focus on aesthetics, neglecting the broader cultural and ecological contexts. The concept of cultural ecology, which examines the relationship between heritage and its local environment (McElwee et al., 2022), has been underapplied to Pingding's unglazed stoneware. This approach can provide a more holistic understanding of the craft's evolution and its challenges in a globalized world (Pieterse, 2009; Zhao, 2020).

Although China's cultural revival movement has focused on top-down policies (Du Gay & Hall, 2011; Li, 2009; Xiao, 2004; Zhang, 2008), the role of artisans in balancing tradition with innovation has been largely overlooked. Pingding artisans must navigate the tension between preserving traditional techniques and meeting modern demands. Research on this balance, especially in the context of traditional crafts like Pingding casserole (unglazed stoneware), is sparse but essential for understanding how artisans contribute to heritage preservation and adaptation in a globalized market.

1.2. Research Objectives

This study explores the issues confronting Northern China's traditional Pingding unglazed stoneware heritage amidst regional and global transformations. It seeks to trace the historical trajectory of Pingding unglazed stonewares, delving into their origins, development, and the role of local traditions and geological conditions in shaping their production. Furthermore, it assesses this heritage's authenticity by examining how environmental and cultural influences drive its evolution and adaptation. The research also highlights the work of modern Chinese artisans, particularly in Shanxi Province, emphasizing their endeavors to harmonize tradition with innovation while safeguarding cultural identity and heritage in the face of contemporary challenges.

2. Literature Review

2.1. The Impaction of globalization

In the context of cultural globalization, tensions between global and local identities have emerged, particularly in relation to regional economic frameworks, social structures, and traditional heritage (Berger & Huntington, 2003; Hong & Cheon, 2017; Lam, 2006; Scott & Storper, 2003). Sociologist Pieterse (2009) explores these dynamics, identifying three paradigms through which globalization interacts with culture:

- i. **Universalism:** This view posits that globalization leads to cultural convergence, driven by global consumerism and media. It suggests a growing homogenization, exemplified by the spread of global brands and lifestyles.
- ii. **Differentialism:** In contrast, this paradigm emphasizes the persistence of cultural differences, leading to conflicts, as seen in the “clash of civilizations” theory.
- iii. **Hybridization:** This perspective highlights the blending of cultures facilitated by globalization, fostering innovation and diversity rather than uniformity or conflict. Hybridization results in new cultural forms, bridging local and global identities (Pieterse, 2009).

In China, these tensions are particularly relevant in the context of contemporary art, where scholar like Gao (2011) have examined the negotiation between traditional Chinese cultural identity and Western influences, particularly during the '85 Movement. Gao (2011) further emphasizes the fusion of the traditional and modern in Chinese contemporary art, providing insight into how local and international dimensions converge in artistic practices.

2.2. Cultural Ecology: Shape the Local Culture

To understand cultural change, it is crucial to consider the concept of cultural ecology—the relationship between culture and local ecological conditions. White (1975) introduced cultural ecology, emphasizing the reciprocal interaction between culture and the environment. Similarly, McElwee et al. (2022) developed the concept of culturology, which examines the holistic interaction of cultural practices with geography, climate, and natural resources.

In the context of Chinese culture, scholars like Hsu (2006) argue that the interplay of blood, belief, and geography sustains cultural identity. Hsu (2006) suggests that family and regional affiliations are integral to Chinese social structures, ensuring the continuity

of traditions despite modern challenges. Li (2009) also emphasizes the connection between individuals and their cultural environments, highlighting how geography influences both identity and tradition.

These theories underscore the significance of local environments in shaping cultural practices. However, the impact of globalization on traditional arts—particularly craft practices—remains underexplored. Scholar Hutcheon(2006) and point to the adaptive nature of culture, suggesting that changes in environmental and cultural ecologies influence artistic production. As globalization advances, traditional Chinese crafts, such as unglazed stoneware, face pressures to adapt while maintaining their cultural authenticity. Since the early 2000s, China has witnessed a cultural revival movement, particularly concerning the preservation and transformation of cultural heritage (Xiao, 2004; Zheng, 2017). Scholars argue that in the face of globalization, maintaining cultural independence is essential. Liu (2012) suggests that the state, alongside local elites, plays a key role in constructing national identity through heritage preservation. Meanwhile, scholars such as Li (2007), Pan(2011), and Feng (2001) stress the importance of national identity in bridging traditional and modern cultural practices.

A significant issue in this discourse is the evolving concept of “authenticity” in the context of globalization. Scholars such as Zhu (2014) and Gu (2014) argue that authenticity should not be seen as static but as a dynamic concept. They highlight the necessity of adapting traditional craftsmanship to contemporary contexts while retaining a sense of authenticity. This ongoing negotiation between preservation and adaptation is central to the study of cultural heritage under globalization.

2.3. Cultural Hybridity – A New Way for Introspection of Cultural Identity

The concept of cultural hybridity offers a lens through which to understand the transformation of Chinese cultural identity under globalization. Dirlik (2000) examine how postmodernism in China reflects a complex interplay of global and local cultural forces. Chinese intellectuals, including Yu (2008) and Li (2009), argue that contemporary Chinese culture is evolving through the synthesis of traditional Chinese values and global influences. Yu (2008) asserts that Chinese culture is not merely a revival of the past but a dynamic fusion of local traditions and global elements, creating a new, hybrid identity.

While much of the literature has focused on cultural identity and globalization, less attention has been given to the ecological factors that influence traditional craft practices. As arts become increasingly hybridized, understanding how ecology shapes cultural identity and authenticity is crucial. This study seeks to fill this gap by exploring how traditional artisans, particularly those involved in unglazed stoneware, navigate the pressures of globalization while maintaining their cultural heritage.

3. Research Methods

This qualitative study explores the impact of globalization on traditional craft heritage. This research is based in Pingding casserole (unglazed stoneware) in Northern China, chosen for its rich history in ceramic craftsmanship and the contemporary challenges faced in preserving these traditions. The research adopts a purposeful sampling strategy, selecting 15 artisans with relevant expertise and firsthand experience, to ensure a diverse range of perspectives, including both experienced and younger practitioners.

Data were collected through in-depth, semi-structured interviews, field observations, and photographs, with an interview guide ensuring consistency across participants. NVivo software will be used for data management and analysis, following a multi-step framework that includes transcription, open coding, theme development, and categorization. Triangulation will enhance the credibility of the findings by cross-verifying data from multiple sources. Ethical approval was obtained, and informed consent was provided by all participants, who were assured of their confidentiality and voluntary participation. This methodology ensures that the research is grounded in real-world practices while providing a thorough, reliable analysis of the evolving craft heritage in contemporary China.

4. Finding and Analysis

4.1. Historical Evolution of Pingding Unglazed Stoneware in Northern China

Pingding is a historical epicentre for kiln firing and porcelain production, steeped in the annals of ceramic development within Shanxi Province (Chai & Song, 1994; Zhang, 2009; Zhang, 2017). The lineage of its firing techniques traces back through the history of porcelain and the findings unearthed from archaeological excavations within Shanxi. Nestled in the northern mountainous terrain of China, Pingding experiences a fluctuating climate distinct from the perennial cultivation conditions prevalent in the southern regions. Pingding residents have lived half farming and half pottery (unglazed stoneware) (Zhang, 1882). Residents have long engaged in a lifestyle deeply intertwined with seasonal farming activities and the craft of stoneware production. This dual occupation sees stoneware crafted predominantly during agricultural lulls as a supplementary means to sustain family livelihoods. As shown in Figure 1, the region's abundance of coal resources, particularly the prevalence of gangue—sedimentary kaolin clay—has emerged as a cornerstone material in fabricating this Pingding casserole (unglazed stoneware) (Wei et al., 2010). Notably, the accessibility and simplicity of processing these local materials have fostered the use of Pingding stoneware. Distinguished by its intrinsic attributes of high-temperature resistance, commendable air permeability, corrosion resistance, notable hardness, and cost-effectiveness, Pingding stoneware has seamlessly integrated into the fabric of residents' daily utensils.

Figure 1: Raw material of gangue (Sedimentary kaolin clay) in Pingding (Yangquan) area



However, despite its historical significance, Pingding casserole (unglazed stoneware) has often been overlooked within the framework of definitive Chinese art history. It remained absent from museum collections and largely excluded from the scholarly

within a complex interplay of local cultural ecological factors, such as climate, living customs, social norms, values, and policy measures. These multifaceted interactions encompassed climate variations, societal customs, norms, values, policy interventions, and other contextual influences, distinctively differentiating unglazed stoneware crafted from refractory kaolin in the North from the porcelain production prevalent in Southern China.

Since 2005, there has been a noticeable shift in China’s cultural focus, with an increasing emphasis on preserving traditional culture. This shift has been supported by implementing cultural inheritance protection policies in 2005 and 20231 (Pemerintah Pusat Republik Rakyat Tiongkok, 2005, 2011, 2014, 2021a, 2021b, 2023; Ministry of Culture And Tourism of the People's Republic of China, 2022; Pemerintah Rakyat Provinsi Gansu, 2006; Peraturan Menteri Kebudayaan dan Pariwisata, 2006; The National People’s Congress (NPC), 2011; The State Councilthe People'S Republic Of China, 2021). As a result, traditional crafts have been a resurgence in cultural revival, leading to widespread recognition and participation. This study aims to understand how the social environment has influenced the revival of Chinese traditional culture.

According to the Table 1, Three Art Movements in Modern Chinese History, there are three key movements in Chinese art history: the Liberated Area Art Movement (1930-1950), the Avant-Garde Art Movement (1960-1985), and the Traditional Cultural Revival (2005 onwards). Each of these movements has distinct characteristics regarding their organizers, content, artistic practices, and the relationship between the community and artists/artisans.

Table 1: Three Art Movements in Modern Chinese History

Time	Movement	Organizers & Participants	Contents	Artistic practices	Relationship between Community and Artists & Artisans
1930 ~1950	Liberated area art movement	Gmovement & Artistes	Local language modernization reform Public art & Art returns to life practice The transformation and Reconstruction of old art	Woodcut	Synchronism/ Encouragement
1960 ~1985	Avant-garde art movement	Avant-garde Artistes	Self-expression Exoticism The alien attitude of society and culture Radical	Oil Painting and Avant-garde Art forms	Asynchronism/ Disincentive
2005 ~	Traditional Cultural Revival	Gmovement & Artisans, Artistes, Elite, and Public	Art returns to Public life Self-expression Legitimacy of transmission Attaching hometown Nature worship Cultural identity Harmony	A variety of Traditional Craft	Synchronism /Encouragement

The analysis found that the Liberated Area Art Movement, which spanned from 1930 to 1950, was driven by artists and artisans who focused on local language modernization and public art reform. The movement emphasized transforming and reconstructing old art to reflect life practice. This was reflected in artistic practices such as woodcut, with a focus on synchronism and encouragement, highlighting the engagement of art with broader societal goals. The Avant-Garde Art Movement, from 1960 to 1985, was shaped by avant-garde artists and involved a focus on self-expression and radical attitudes toward society and culture. It emphasized exoticism and the alien nature of society, with an emphasis on avant-garde art forms such as oil painting. This movement reflected the disincentives of traditional cultural forms, seeking to disrupt conventional artistic norms and ideologies. The Traditional Cultural Revival, starting in 2005, involved a wider range of participants including artists, artisans, elites, and the public. The movement emphasized self-expression, cultural identity, and harmony, with an emphasis on nature worship and attaching one's art to their hometown. Artistic practices here varied widely, incorporating both traditional craft forms and new approaches to cultural representation. This revival reflected a desire to legitimize transmission and maintain cultural harmony within contemporary Chinese society, fostering a relationship of synchronization and encouragement between the community and artists.

In summary, each movement in modern Chinese art history presented a distinct shift in both the content of the art and the relationship between artists and the community, with changing practices and ideologies over time. The analysis of these movements shows a trajectory of evolving artistic purposes, from public art reform to radical avant-garde expressions, and finally to the revival of traditional cultural forms with a focus on identity and self-expression. Notably, the landscape shifted after 2005, with China progressively prioritizing the inheritance and protection of traditional culture. This shift, particularly evident through cultural inheritance protection policies in 2005 and 2023, Pingding casserole (unglazed stoneware) achieved recognition with a certified geographical indication in 2017. The revival of traditional culture, fuelled by cultural policies supporting the protection and encouragement of Pingding casserole (unglazed stoneware) as a unique local cultural symbol, has provided more individuals with a cultural identity and attracted them to participate actively.

Consequently, the traditional stoneware heritage has become a cornerstone in fortifying community and individual cultural identities. Pingding's local government has actively provided cultural policy guidance, financial aid, educational initiatives, brand development, and cultural promotion to the public, collectively strengthening the community's cultural identity and individuals involved in the traditional Stoneware craft. Then, in 2021, Pingding's local government successfully won the title of China's stoneware City (Zhongguo Shaqi Chengshi 中国砂器之城) by using unglazed stoneware as a cultural medium. This revival environment also afforded participants more avenues for cultural expression, improved social status, and enhanced artistic and emotional outlets (Cai & Sun, 2009; Wang, 2009; Yu, 2008; Zhang, 2010).

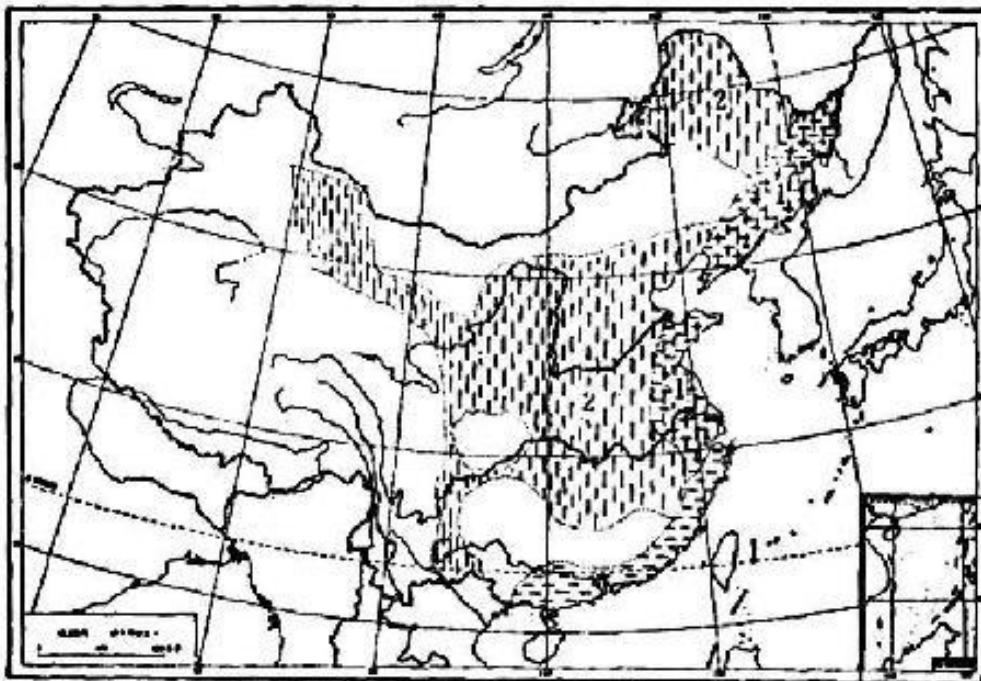
4.2. Geographic and Social Influences on Pingding Unglazed Stoneware

The concept of cultural ecology offers an integrative lens to comprehend the complexity of culture, emphasising societal organisation, politics, and the profound influence of geographical location, climate, and natural resources on a community's way of life. Scholars like Dillon (n.d.) and Michelaki et al. (2015) acknowledge that traditional handmade products are intricately linked to local natural resources, showcasing a

profound connection between the craft and its environmental context. In [Dillon \(n.d.\)](#) and [Michelaki et al, \(2015\)](#) exploration, pottery-making was contextualised within its landscape, highlighting that raw material sources unveil histories of interactions among people, materials, and entire landscapes. Through their interaction with local materials, potters discern the potentialities inherent in these resources.

The local unglazed stoneware Pingding casserole (unglazed stoneware) remains deeply rooted in its environmental context, exhibiting continuity and uniqueness within familial and communal spheres. Understanding the distinct craft of unglazed stoneware-making in North China necessitates exploring its interaction with the local ecology, encompassing both material resources. Geological studies provide essential insights to explore the reasons behind the divergence between stoneware Pingding casserole (unglazed stoneware) in North China and ceramics in South China. Shanxi, renowned for its mineral wealth, mainly hosts kaolin clay—found in coal-measure production areas—high in aluminium and low in silicon potassium and sodium content ([Jige et al., 2018](#); [Wilson, 2004](#); [Wu et al., 2021](#)). This unique sedimentary kaolin resource forms a critical component of the region's geological profile, impacting the characteristics and quality of Pingding stoneware. The book “Geology of Kaolin Deposits in China 中国高岭土矿产地质学”(Guojia Jianzhu Cailiao Gongyeju Dizhi Gongsi, 1984) investigated the kaolin deposits of coal-bearing clastic rock formations and pointed out that many regions have kaolin clay in China. The map shown in the book (see [Figure 3](#)) shows the significant metallogenetic with coal-bearing sedimentary deposits widely found in most parts of North China.

Figure 3: Major metallogenetic province with clastic-built sedimentary deposits and coal-bearing sedimentary deposits



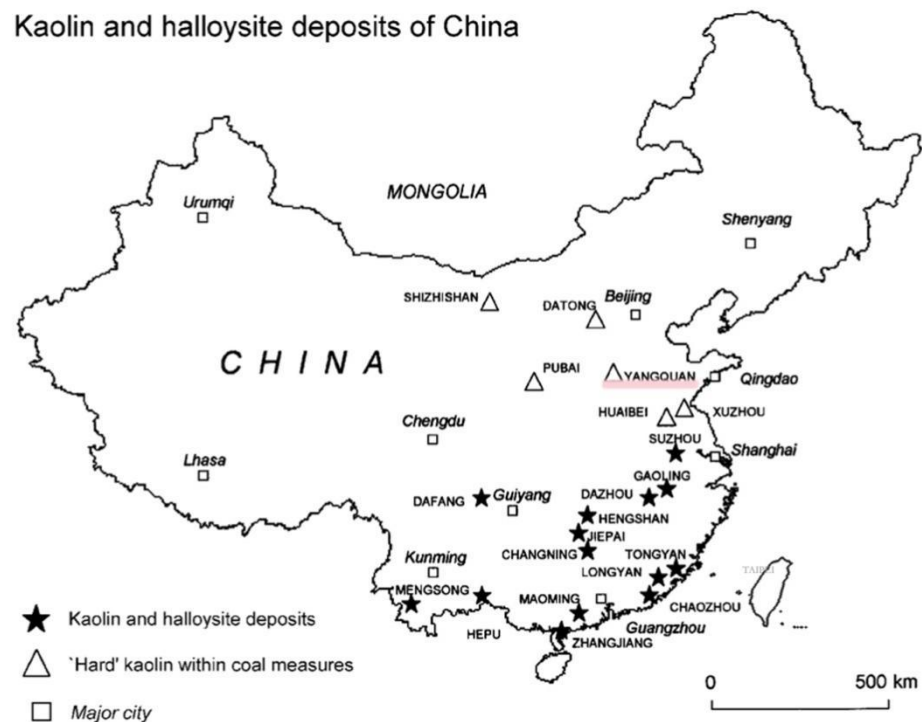
Source: [Guojia Jianzhu Cailiao Gongyeju Dizhi Gongsi \(1984\)](#)

Regarding previous interviews with artisans, record the development and utilization of local clay -- sedimentary kaolin mineral materials -- with coal-bearing formations in the north ([Jige et al., 2018](#); [Wilson, 2004](#)). Artisan interviews corroborate this connection,

affirming the consistent utilization of locally available raw materials, and showcasing the symbiotic relationship between natural resources and human craftsmanship that shapes the distinct qualities and reputation of Pingding stoneware.

Moreover, [Wilson \(2004\)](#), a Western scholar studying Chinese kaolin and halloysite deposits, indicated that many of the commercial deposits in China are formed by the alteration of granitic-type rocks. [Figure 4](#) illustrates that sedimentary clay — “hard kaolin”— is associated with coal measures in many provinces in Northern China. He pointed out the kaolin, halloysite, and hard kaolin clay sites in Yang Quan (the city includes Pingding).

Figure 4: The picture of Chinese kaolin, halloysite and hard kaolin deposits



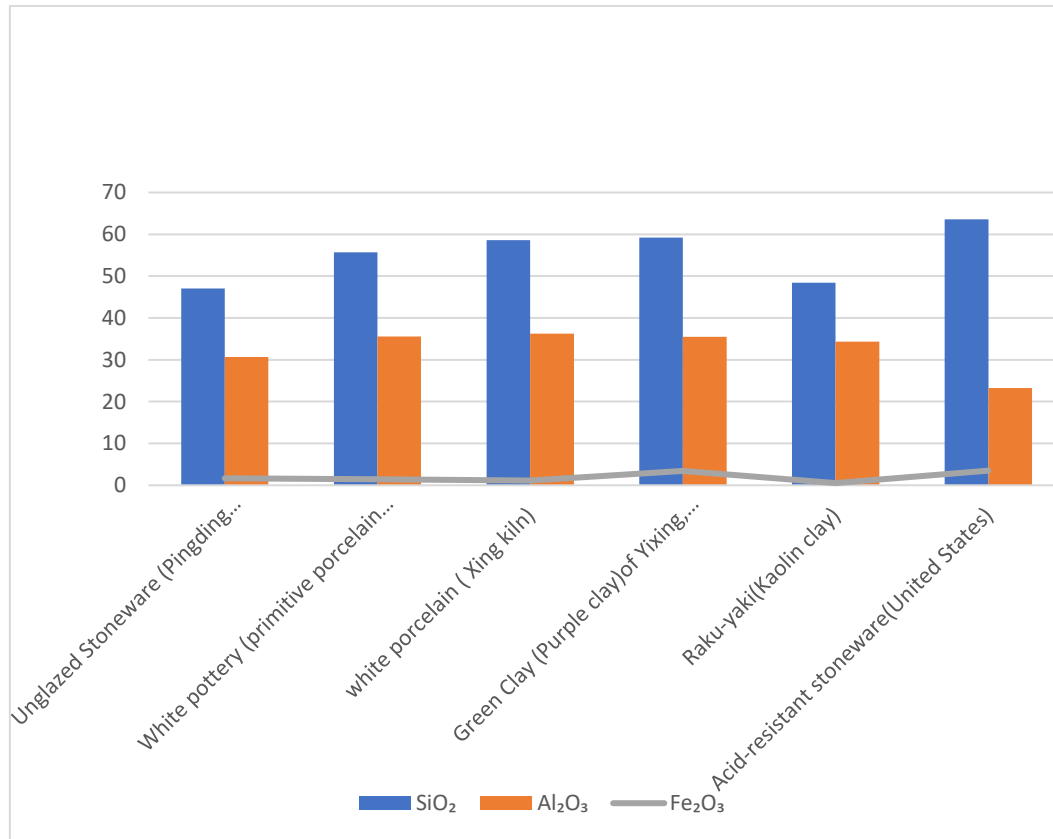
Source: [Wilson \(2004\)](#)

After a comprehensive review of historical literature and field research, it becomes evident that the tradition of stoneware production, notably the Pingding casserole (unglazed stoneware), extends far beyond Pingding itself. This unglazed stoneware craft is found across regions in China where coal sedimentary rocks prevail, showcasing its widespread presence in areas such as Weixian, Handan, Liaoning, Puyang, Shandong, and several cities within Shanxi. Moreover, unglazed stoneware shares similar compositions, techniques, and even production in Japan, Germany, the United States, and other regions.

However, contemporary cognition still needs to identify the Pingding casserole (unglazed stoneware) systematically. Its attributes, traditional cognition, is a kind of pottery called semi-porcelain. The term stoneware was not widely used in China's local ceramic academically. However, we investigated the local resources and compared the main ingredients in the raw clay. Indicate that the Pingding casserole (unglazed stoneware), White Porcelain, Yixing Purple stoneware, Japanese Raku, and United States stoneware have similar components. It is rich in organic minerals like Al_2O_3

(Aluminium_oxide, n.d.) (22-35%) in the orange column and SiO₂ (Silicon_dioxide, n.d.) (40-55%) in the blue column (see Figure 5). The local crafts underscore their role as carriers adapting to regional geological resources and fostering long-standing cultural exchanges.

Figure 5: Various names for stoneware in different regions



Therefore, the continuous evolution of stoneware shapes, definitions, and appearances change with different community shifts and technological advancements. The prevalence of unglazed stoneware production in North China is inherently linked to its location within the coal-bearing sedimentary regions. For instance, Yangquan in Shanxi, renowned for its substantial coal and aluminium reserves, naturally facilitates stoneware production due to the presence of “hard kaolin”, a coal-bearing sedimentary mineral utilised by residents in their daily lives (Liang, 1989; Zhang, 2009).

The geological attributes of sedimentary kaolin minerals corroborate the unique clay found in Pingding, which is shared as raw material between white pottery (porcelain) Pingding casserole (unglazed stoneware) in the history of Northern China. These materials, derived from coal-measure sedimentary rocks, constitute essential components for high-temperature firing, displaying remarkable heat resistance, air permeability, and corrosion resistance (Capoglu & Taskiran, 2004; Tang, 2016; Wang, 2011). Figure 6 shows local artisans emphasized the importance of local clay for their practices. Zhang Aixiao, a local artisan, meticulously upholds the ancestral art of traditional stoneware production, relying on local natural mineral clay resources as the fundamental raw material. His expertise, rooted in inherited memories and skills, reflected in creating simple yet crucial utensils like steamer baskets and pots, integral to the residents’ everyday lives.

Figure 6: The rough materials around the village



In addition, the region's material resources, sedimentary kaolin minerals, are pivotal in field research. Over time, these minerals undergo a natural transformation, gradually accumulating into easily accessible kaolin clay. [Figure 7](#) shows, this sedimentary kaolin, distinguished by its high alumina and low silica content, becomes the cornerstone for producing durable hard wares such as stoneware, crucibles, jars, and refractory bricks in Yangquan (Pingding)

Figure 7: Brick /Household vat /Parts of fired pottery pipe in Pingding



[Dillon \(n.d.\)](#) underscore the significance of understanding craft as “cultural heritage,” representing distinct local cultures nurtured through the symbiotic relationship

between individuals and their environments. Pingding residents enjoy a steady supply of kaolin through these processes, facilitating the production of refractory and acid-resistant stoneware—materials indispensable for production and daily life. The crafting of clay downpipes in the early days and their continued production in Xiao Xizhuang village demonstrates the enduring utility of high-alumina clay products, boasting exceptional corrosion and fire resistance. Local clay has evolved into an essential material for various purposes, from manufacturing water or sauce containers to crafting specialised cooking utensils. Because of the widespread use of local materials, particularly coal-measure sedimentary clay, renowned for its permeability, durability, and high-temperature resistance, Pingding stoneware is considered essential household utensils and production supplies (Tang, 2016).

4.3. The effect of Local Customs and Resources

Cultural anthropologist White (1975) concept of cultural ecology elucidates culture as a product shaped by the intricate interplay among natural environmental resources, social structures, technology, and labour dynamics. Similarly, scholars like Yi (2004) emphasise the distinctiveness of cultural systems in influencing craftsmanship, attributing craft diversity to climatic variations, social structures, and material availability within specific societal frameworks. Scholar Howard (2007) has discussed how different cultural systems make different crafts in his book. It emphasises the differences in climate, social structure, and even variety and quality of materials that generally account for the types of craft objects in a specific social formation. Fei's (2015) insights into the natural, stable, and cumulative facets of traditional rural life in China further reinforce the deep-rooted stability and continuity embedded within these cultural practices: "...The 'villagers' is a society where life is very stable... Born in Si, dead hands the result of Si's must be the adhesion of generations." Scholar Ferraro (2011) claims the impact of craft on engagement with the surroundings prompts a crucial inquiry into how craft practices mirror cultural ecological considerations. Further investigation is required to unravel why stoneware is predominant in the North and differs significantly from ceramic production in Southern China. Significant distinctions emerge through a comparative analysis of the cultural ecologies between Northern and Southern regions (see Table 2). Shanxi Province is a primary source of coal-based kaolin clay, notably utilized in Pingding for crafting utensils integral to local livelihoods. This coal-bearing kaolin is rich in organic minerals like Al_2O_3 (Aluminium oxide, n.d.) exhibiting properties suited for reduction firing oxidation flame, resulting in Al_2O_3 (22-35%)-rich stoneware in Northern kilns, contrasting with Southern kilns producing SiO_2 (Silicon dioxide, n.d.) (over 60%)-rich porcelain (Zhang, 2009).

Table 2: Differences in cultural ecology between Northern and Southern China

	Northern	Southern
Clays	Gangue (coal-bearing sedimentary sub-type kaolin) Al_2O_3 over 30%	kaolin clay (SiO_2 over 60%)
Weather	Cold and Dry	Warm and Moist
Farming	Two Season	Four Season
Firing	Slack Farming	All Year
Economics	Backward economy	Superior economy

Utensils	Heat-Resistant, Preservation, Good ventilation Heat-resistant Civilian	Heat-Resistant, Aesthetic Officer & Foreigner
Fuel	Coal Wood and Gas	Wood and Gas
Advantage	Rich mineral resources	Enrich humanism and artistry, Facilitate international communication
Studies	Slack of academic studies on stoneware	Ceramic academic data integrity
Customs	Simplicity, Pragmatic and Inexpensive	Delicacy and Beauty

The table highlights key differences between Northern and Southern China, shaped by their distinct environmental, economic, and cultural conditions. In the north, the primary clay used in pottery is Gangue, a coal-bearing sedimentary type of kaolin with high Al_2O_3 content, while in the south, kaolin clay with a higher SiO_2 content is preferred. This variation impacts the material properties and aesthetics of ceramics. The climate also differs, with the north being cold and dry, leading to a two-season farming cycle, while the south's warm and moist climate supports a four-season cycle and more diverse crops. Firing techniques reflect these conditions, with the north's slack farming corresponding to less consistent pottery firing, while the south benefits from year-round firing due to favourable weather. Economically, the North has a backward economy, in contrast to the superior economy of the South, which fosters advanced technology and better resource access. The regions also differ in their utensil design and fuel use; the North focuses on heat-resistant, preservation-oriented tools for civilians, while the South uses tools designed for officers and foreigners, emphasizing aesthetics. Additionally, the North relies on coal alongside wood and gas due to its colder climate, whereas the South predominantly uses wood and gas. The north benefits from rich mineral resources, aiding industrial growth, while the south excels in fostering humanism and artistry, emphasizing cultural production. Academically, the South boasts a stronger infrastructure for ceramic studies, ensuring higher academic integrity, whereas the North has less emphasis on stoneware research. Lastly, cultural customs reflect these environmental and economic conditions, with the North's simplicity and pragmatism contrasting with the South's focus on delicacy and beauty. These differences collectively shape the distinct material practices, economic structures, and cultural values that influence craftsmanship and daily life in both regions.

The climate disparity between the North and South, characterised by colder temperatures and shorter farming seasons in the North, historically necessitated robust, well-preserved, thermally insulated, and high-temperature resistant vessels, particularly crucial during agricultural downtimes. Unglazed stoneware is very important for the residents of northern regions during idle farming periods. The the gap in socio-economic conditions leads to Northern social emphasis on practicality in utensils to keep food and feed the family. [Figure 8](#) shows, unglazed stoneware is reliable for storing and consuming hot meals in colder climates. It offers easy access and demonstrates strong resistance to corrosion and high temperatures, contributing to improved food preservation and taste. Contrasts the Southern with a wellness condition and focus on blending practicality with aesthetic beauty, reflecting a more significant concern for humanistic care. The tea culture was widespread, and fine porcelain in Southern life was used to pursue an elegant quality of life.

Figure 8: Hot pots, pots and other daily utensils made of unglazed stoneware in Pingding



4.4. Adaptability of Pingding Stoneware in Modern Contexts

Since 2005, there has been a significant revival of traditional culture, which has greatly influenced cultural policies and societal perspectives. The local government has actively participated in this initiative by providing support through financial aid, educational initiatives, branding efforts, and cultural promotion. Figure 9 illustrates, recognizing Pingding casserole (unglazed stoneware) as a distinctive cultural symbol has received endorsement from cultural policies, aligning seamlessly with the government's commitment to championing and safeguarding traditional crafts. This multi-faceted approach underscores a dedicated endeavor to conserve and elevate Pingding casserole (unglazed stoneware) heritage.

In 2017, Pingding unglazed stoneware was officially designated as the first "Geographical Indication of P.R.China (中华人民共和国地理标志)" within the city of Pingding (Yangquan). This recognition led to granting it international market access and affirming its quality and reputation (Pusat Kebudayaan Provinsi Shanxi, 2020).

This geographical indication offers multifaceted benefits, including preferential tariffs, customs clearance facilitation, and credibility as a guarantee of product quality and

reputation. As the depicted in [Figure 10](#), owing to its unique materials, Pingding unglazed stoneware finds itself under the protective umbrella of geographical indication products, safeguarding its intellectual property rights within the framework of the World Trade Organization (WTO). The previous research declared that local governments and local cultural elites had become the main body of heritage construction out of political achievements or the need for modernization and nation-state construction of cultural identity ([Xie, 2015](#); [Xu & Huang, 2013](#)). Against cultural revival, the Yangquan government and artisans synergistically embed stoneware technology into local traditional cultural heritage, amplifying brand visibility and fostering cultural identity and cohesion.

Figure 9: A series of forums, exhibitions and cultural brand activities for unglazed stoneware



Figure 10: Geographical Indication of P.R. CHINA



Source: [Yangquan \(n.d.\)](#)

4.5. Connecting Traditional Practices with Contemporary Needs

Hutcheon(2006) emphasizes the adaptability of art forms to new cultural and material environments. While he does not explicitly address how crafts evolve in response to social changes, he does explore the broader public engagement with adaptation, particularly in the context of globalization. However, limited research has examined how artisans in contemporary China navigate the preservation of traditional cultural heritage. This study aims to fill this gap by interviewing local masters and younger artisans. Understanding how local artisans adapt to evolving social needs is crucial, and interviews with figures such as Zhao Hong, a prominent craftmaster in Pingding, provide valuable insights. Zhao Hong, an inheritor of Intangible Cultural Heritage in Pingding, offers an example of this adaptation through his use of locally sourced clays in his stoneware.

Figure 11 demonstrates Zhao's work, showcasing pieces with an outer glaze derived from natural soil. This traditional method, which avoids the use of additives or chemical components, aligns with contemporary preferences for healthy, environmentally sustainable living. As Zhao notes, *"the popularity of unglazed traditional stoneware stems from its alignment with current ideals of natural and healthy lifestyles."*

Figure 11: The unglazed stoneware of Zhao Hong



The regional Pingding casserole (unglazed stoneware) factory director Wang Ximing, 46, from Xiao Xizhuang village, Yangquan, provimarraisd jobs for local villagers and contributed to local tax revenue and cultural development. Wang Ximing produces stoneware using locally sourced mud and materials. He emphasized their natural and breathable properties. As show in Figure 12, Wang emphasizes the alignment of these products with people's preferences for healthy and natural materials, reflecting a demand for healthy and natural living.

Figure 12: Wang Ximing artworks of unglazed stoneware



5. Discussion

The study underscores traditional stoneware heritage's pivotal role in adapting to contemporary contexts. In particular, the unglazed stoneware heritage serves as a medium for strengthening cultural identity, instilling community pride, and bridging the gap between historical traditions and modern needs. Through this lens, the research reveals how Pingding artisans consciously adapt their practices to meet the demands of the present, skillfully blending tradition with innovation.

This deliberate evolution reflects the artisans' ability to harmonize the preservation of traditional craftsmanship with the challenges posed by a globalized world. By evolving designs, patterns, and functional aspects of stoneware, these artisans ensure its continued relevance, all while safeguarding its cultural essence. The Pingding case study highlights the critical need to balance the preservation of heritage with the embrace of change in response to shifting societal values.

Artisans argue that traditional crafts, like Pingding unglazed stoneware, are inherently dynamic and responsive to the needs of the community and the environment. Their practices, rooted in historical experiences, customs, and environmental contexts, showcase the adaptability of these crafts to evolving social circumstances. The transformation of the Pingding casserole—from a purely utilitarian cookware item to an elegant tea utensil—serves as a compelling example of this evolution. This shift exemplifies how traditional crafts can evolve while simultaneously preserving cultural identity, signifying a deeper integration of craft heritage into modern life.

Ultimately, this transition highlights the broader cultural significance of Pingding unglazed stoneware heritage. It fosters social unity, facilitates artistic expression, and contributes to enriching cultural cohesion in contemporary society. The interplay

between traditional practices and modern innovations underscores the continued relevance of these crafts in sustaining cultural connections across generations.

6. Conclusion

This study highlights the dynamic nature of traditional Pingding unglazed stoneware and its capacity to adapt to contemporary contexts. It underscores the role of traditional crafts in reinforcing cultural identity and community cohesion while addressing the challenges of a globalized world. Through the adaptation of design and function, Pingding artisans skillfully balance the preservation of historical practices with the demands of modernity, ensuring the continued relevance of their craft. The transformation of the Pingding casserole, from a utilitarian object to an elegant tea utensil, exemplifies the resilience and adaptability of traditional crafts in the face of societal change. This evolution not only safeguards cultural heritage but also strengthens social bonds and facilitates artistic expression within the community. Ultimately, the study emphasizes the importance of viewing traditional crafts as living, evolving heritage, capable of bridging the gap between the past and the present while fostering cultural continuity across generations. The findings contribute to a broader understanding of how heritage crafts can thrive by embracing change, thus offering valuable insights into the intersection of cultural preservation and innovation.

Ethics Approval and Consent to Participate

The researchers used the research ethics provided by the Research Ethics Committee of Universiti Malaya (UM). All procedures performed in this study involving human participants were conducted in accordance with the ethical standards of the institutional research committee. Informed consent was obtained from all participants.

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Conflict of Interests

The authors declare no conflict of Interest.

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