The modernization of traditional culture

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Abstract: The modernization of traditional culture, in light of globalization and technological changes, stands as an inevitable proposition in modern times. This paper tries to look at, from different fields of study, the paradox of values and the risks of culture when facing modernization. It offers a method of balancing these issues in a dynamic way. Social change, the break in understanding across generations, and the competition from the global stage are all things that can't be avoided in the evolution process. At the same time, the loss of cultural authenticity, the alienation of goods, and the identity crisis show just how much modernity is eroding traditional culture. The paper suggests that through mechanisms like gradient protection, an ethical framework, and a pattern of collaboration involving many parties, there can be a way to keep traditions and modernity interacting with each other. The "cultural gene threshold model" and "three-axis review mechanism" are introduced in a way that helps bring new ideas with a blend of practical value and theoretical depth. These may provide a different direction for cultural governance in the future.

1. Introduction

With the combined might of technological revolution and globalization, modernization of traditional culture is now an unstoppable demand of The Times. Whether it is selling cultural and creative products in the Forbidden City, digital presentation of traditional festivals, industrialization of intangible cultural heritage techniques, or tourism upgrading of local folk customs, traditional culture is undergoing transformation and renewal on a scale never seen before. However, the process is not sequential: cultural authenticity disintegration, intergenerational transmission cognitive failure and alienation effect of commercialization are the profound dilemma in the modernization transformation. Based on cultural ecology theory and institutional economics, with the backup of digital humanities approach and field survey data, this article attempts to reveal the law of development of traditional culture in technology empowerment, capital intervention and intergenerational inheritance, and seek an operable path for the dialectical integration of traditionality and modernity, in order to provide a new paradigm with theoretical basis and practical guidance to cultural governance.

2. The necessity of modernization transformation: the proposition of The Times for the survival of traditional culture

2.1. Social changes drive the renewal and iteration of cultural forms

With the rapid development of the post-industrial civilization era, the cultural value system has been profoundly deconstructed and reconstructed. The moral norms and collective memory cultivated by agricultural civilization are facing the crisis of deconstruction with the tide of globalization promoted by digital technology[1]. The ritual sanctity of ancient festival traditions has been deconstructed by the atomized spread of short video websites, and the emotional warmth of clan genealogies has been dispersed in electronic databases. The transformation process from "substantive ethics" to "digital ethics" requires traditional culture to go through morphological rebirth in an effort to regain its meaning anchor.

The widening of the intergenerational cognitive gap also enhances the decoding problem of orthodox culture. The aesthetic regime constructed by Generation Z in algorithmic feeding and cyberspace is structurally displaced from the orthodox symbolic system. When Dunhuang murals shift from cave exhibition halls to VR panoramic halls of exhibition, their religious connotations get lost in miracles of technology into visual commodity of "punch card economy"; When folk opera is spread via the second creation of the short video platform, the formal singing gets degraded to the "magic" entertainment content. The picture of convention culture by the youthful generation gradually divests from "meaning resonance" to "symbol seeking novelty". This intergeneration lack of decoding of culture not only flags the crisis of interpretation of the old symbol system, but signals the need for reconstruction of cultural heritage's subjectivity - it is only through the aid of today's mechanism of translation that it is possible to bridge the cognitive distance between the old genes and the new aesthetics.

The soft power cultural move of globalization gives strategic momentum to the recycling of cultural form. The Palace Museum's practice of reconceptualizing the imperial history into a "cute" cultural commodity is in fact to realize the reproduction of symbolic power with cultural capital: reviving blue and white porcelain designs onto mugs not only completes the conveyance of value from "the height of the temple" to "the distance of the river and lake", but also builds a new model of cultural identity on the platform of consumerism. Such creative metamorphosis is not only a non-violent resistance to Western cultural domination, but also a voluntary preference to struggle for the right to decide in global cultural markets. Once Sanxingdui bronze mask is a stylish play hand, it not only bears the enigmatic gene of ancient Shu civilization, but also conveys the symbolic certification of Chinese culture engaging in building global modernity.

2.2. The technological revolution enables the revitalization of cultural heritage

Cyclic renovation of digital technology provides unmatched strength of renewal of cultural heritage. Digital twin technology reconfigures the space-time character of cultural experience in precise modeling and dynamic simulation. The Mogao Grottoes' mural paintings in Dunhuang accomplish the "space-time folding" in virtual reality, and visitors are able to experience the exquisite texture of the millennium-long painted paintings fully without a trip to the caves. Such a technological solution not only solves the paradox of free use and conservation of the cultural heritage. In addition, by way of the process of "super-real" restoration of senses, the old art is given a new mode of interpretation -- the apavas within the murals are transformed from static religious symbols into active digital avatars, and the Buddhist legend underlying them is transcribed into the cross-cultural visual idiom[2]. But disillusionment in the era of mechanical reproduction has given

rise to a new paradigm of "technological brilliance" of our era, i.e., the recreation of cultural holiness through algorithmically generated immersive experience.

The decentralized nature of blockchain technology provides an institutional guarantee of the legitimacy of non-inherited lineages. Taking the database of Miao embroidery patterns as an example, the blockchain's rights verification mechanism documents the creators' creative process, technical skill and regional characteristics of inheritors into an irreversible "cultural gene chain," not only stopping the robbery of symbols and dilution of value of traditional skills during industrialization, but also obtaining fair distribution of value-added in culture through smart contracts. This kind of technological empowerment is precisely the fulfillment of "discourse power": the tacit knowledge system, which originally relied on oral prudence, is transformed into measurable and traceable digital goods and thereby remakes the non-transmitted discourse frame in the international market. The cultural heritage preservation according to digital humanism then goes beyond the pure logic of archiving and goes on to dynamic maintenance of "living data flow" to allow the continued development of the ancient craft within the ecology of virtual and real intertwinement.

Algorithmic recommendation mechanism re-presents the cultural power of communication exactly providing content. Opera art's "rift communication" in the short video platform showcases how algorithmic thinking upends the paradigm of traditional cultural communication: stylized singing and chanting of Beijing Opera are cut into 15-second "highlight clips," being exactly pushed into user portraits and predicted behavior. Although this form of "granular" release has generated the "cultural fragmentation" furore, it has crossed largely beyond the elite inheritance borders to enable regional dramas to reach millions of television audiences in the "long tail effect" through algorithms. It must be noted that intermediary technology did not exclude the subjectivity of culture, but created a new type of "participatory inheritance" - in the sense that young consumers incorporated instances of Nyin music into electronica through secondary production, classical art occupied a genetic reorganization in digital natives' creative process. The technological revolution thus becomes a transformer of cultural memory, not only preserving the old "cultural DNA," but supplementing it with mutation elements pertinent to the digital civilization, and in the end resulting in the creative renaissance of cultural heritage in the new context of the virtual-real symbiosis.

2.3. Cultural innovation activates traditional gene expression

As the modern deciphering mechanism of classical genes, cultural innovation starts the creative reinterpretation of the material of classical culture through cross-media narration and symbol interpretation. From a semiotic perspective, the translation of classical artistic material is not so much a process of form transference, but by re-rooting "signifier" and "signified", the system of cultural meaning is rebuilt within the modern context. The artistic principle of dance poem drama "Only This Green" is illustrated as follows: Northern Song Dynasty's "A Thousand Li River and Mountains" mineral pigment chromatography is broken up into the mechanical form of dance movement, and green landscape scenery by interpreting body posture not only has the space theory of "three far method," but also releases tension of contemporary stage aesthetics of space and time. This cross-medium storytelling not only breaks the fixed-appearing pattern of traditional calligraphy and painting, but also enables the millennium cultural gene to complete the "active awakening" in dynamic interpretation by initiating multi-sensory synaesthesia and creating a resonance effect between ancient and modern beauty[3].

In line with archetypal theory, the recombination strategy for cultural elements provides a new syntactic template for traditional gene expression. Sanxingdui Bronze civilization's contemporary practice of transformation represents inter-activity between deconstruction and reconstruction of

cultural archetypes in two directions: the distorted figure of the bronze vertical mask is decomposed to the language of geometric form of fashion design, and the cultural implication of sacrifice by witch is converted into an image of consumption of "mysticism.". This reconstruction is not an avoidance of the ontology of culture, but the recoding of historical totems into visual inputs to public memory. When this bronze divine tree pattern is transmuted into cyberpunk aesthetic computer graphics, cross-talk between the past and future overthrows linear gaze of time and forms a new web of meaning in the fission and recombinant consonance of cultural genes.

The cultural gene bank's new coding success accomplishes the sustainable development of the traditional elements with planned arrangement. The 24 solar terms' meta-universe digital reconstruction is the paradigm of the cultural inheritance. This practice of coding is the work of "transcription" of the DNA of culture, with current technology to insert adaptive sites of mutation, so that the classical culture can continue to evolve in the virtual and real interconnected ecology. But this work must be careful not to allow cultural subjectivity to dissipate into technological hegemony. It is only through creating an "ethics-esthetics - technology" system that we can resuscitate the traditional genes, ensure their spiritual essence and realize the intergeneration passing of the cultural life.

3. Value paradox and cultural risk in the process of modernization

3.1. The deconstruction crisis of cultural authenticity

The dissolution of cultural authenticity in the process of modernization is essentially a crisis of loss of meaning caused by the collision of traditional and modern value systems. In the wave of mechanical reproduction and digitalization has been given a new reality meaning: the unique presence of traditional manual skills is being disenchanted by the standardized logic of industrial production. Taking handmade papermaking as an example, its texture of "water marks interweaving" is a physical and chemical inscription of natural rhythm, carrying the Oriental philosophy of "unity of nature and man"; The mechanized production line simplifies it into a homogeneous commodity, the dialogue relationship between craftsmen and materials is stripped away in the production process, and the "material spirit" of cultural memory is reduced to a consumption symbol that can be copied in bulk[4]. This disenchantment not only dispels the sacredness of the craft, but also breaks the symbiotic link between cultural practice and local knowledge system, resulting in the dimensionality reduction of traditional craft from "meaning carrier" to "functional tool".

The misalignment of context in cross-cultural adaptation further intensifies the crisis of interpretation of authenticity. The overseas adaptation of Kunqu Opera "Peony Pavilion" exposed this dilemma: when the garden image of "wandering in the garden and dreaming" was replaced by an abstract minimalist stage, the neo-Confucianism critique behind Du Liniang's philosophy of "feeling" was reduced to an Oriental wonder of love narrative in the eyes of Western audiences. This kind of "interpretive violence" not only results in the flattening of cultural meaning, but also forms cognitive colonization in the globalization of communication - traditional culture is forced to embed the discourse framework of others, and its ontological value becomes a decorative element to satisfy the imagination of foreign countries. The tension between "translatability" and "untranslatability" in the process of adaptation reflects the ethical dilemma of cultural authenticity in cross-context communication.

The reconstruction of cultural memory carrier by digital technology dissolves the survival basis of authenticity from the material level. The electronic process of genealogies is of great symbolic significance: the ink traces of paper genealogies are the material witness of the continuation of bloodline, and the time marks such as motheaten and faded constitute the "physical archives" of

family history; In the database form of electronic family tree, the extended consanguineous narrative is cut into editable data nodes, and the ritual authority in the patriarchal system is deconstructed by algorithm logic. Although this "digital disenchantment" improves the storage efficiency of cultural memory, it removes the emotional temperature and historical weight carried by the materiality of the carrier. When the tomb-sweeping ceremony is replaced by a virtual platform, the tactile memory of incense, paper and ash is transformed into pixelated interface interaction, the identity of "physical practice" and "spiritual belief" in traditional culture is separated, and the authenticity is finally reduced to a simulation simulation under the discipline of technical rationality.

3.2. The alienation effect of commercial operation

The alienation effect of commercial operation on traditional culture is essentially the colonization and reconstruction of cultural value by capital logic. When the development of ancient towns transforms historical buildings into consumer theaters of "landscape society", the spatial narrative of traditional settlements is replaced as a symbolic tool for capital appreciation. The arched bridge flowing water in Jiangnan water town is no longer the carrier of poetic dwelling, but the background plate for tourists to take selfies. In the process of commercialization, the carved wooden window frames of Hui-style buildings have lost their ethical function and become decorative elements of "new Chinese style" homestays. This process of cultural capitalization, by abstracting cultural symbols into exchangeable commodity forms, dispels their original network of meaning, and reduces traditional culture to a kind of hyperreal illusion that breaks away from the authenticity.

The erosion of ritual space by consumerism further exposes the risk of deconstruction of cultural ontology by commercialization. The traditional temple fair evolved from the belief practice of "respecting the heavenly Fazu" to the commercial carnival, revealing the inversion of the sacred and secular values[5]. The disenchantement process of the Nuo opera mask in Shaanxi Shehuo performance is very typical: the religious instrument that originally carried the function of exorcising evil spirits and offering blessings is simplified into a mass-produced cultural and creative souvenir in the tourism marketing strategy, and the psychic attribute in the ceremonial context is dissolved into a visual label of "exotic customs". This transformation not only separates the relationship between cultural symbols and spiritual beliefs, but also alienates cultural practice into entertainment consumer goods to satisfy the curiosity psychology through the coding mechanism of consumerism. When the ritual space is occupied by shopping malls and Internet celebrities, the "sacred time" of traditional culture is compressed into a transient consumption experience in the capital cycle.

3.3. Cognitive puzzles of cultural identity

The dilemma of cultural identity in the process of modernization reflects the dialectical crisis of the construction of subjectivity under globalization and local tension. The controversy over the improvement design of Hanfu is not only related to the aesthetics of clothing, but also the anxiety of cultural subjects seeking identity between tradition and modernity. The tearing between the authenticity and functionality of traditional symbols makes the cultural identity fall into a vague state. From the perspective of post-colonial theory, the phenomenon of self-orientalization intensifies the dislocation of cultural identity. The international spread of kung fu films has transformed the philosophical core of traditional martial arts into a visual spectacle, satisfying the western imagination of the East, but leading to the hollowing out of the meaning of cultural subjectivity. The fault of value cognition in intergenerational transmission deconstructs the

continuity of cultural identity. The young artisans' choice between traditional skills and modern technology reflects the erosion of cultural memory by modernity. Although technology substitution improves efficiency, it breaks the connection between physical skill and cultural nature, resulting in the entropy increase of cultural identity. The cognitive puzzle of cultural identity is the pain of subjectivity reconstruction in the process of modernity. To solve the dilemma, it is necessary to establish a cognitive framework of dynamic balance, acknowledge the inevitability of cultural gene variation, and protect the stability of the spiritual core. We should guard against self-colonization in the dialogue of globalization, maintain the dialectical tension between traditional genetic inheritance and variation, and anchor the identity coordinates of cultural identity.

4. Construction path of dynamic balance: dialectical unity of tradition and modernity

4.1. Innovation of the guardian mechanism of cultural ontology

The innovation of the guardian mechanism of cultural ontology needs to build a dynamic balance between the survival of traditional genes and the intervention of modern technology. The practice of living inheritance of intangible cultural heritage is gradually shifting from single protection to graded and hierarchical systematic maintenance. Taking Quanzhou Nanyin as an example, its "teacher led apprentice" system realizes modern transformation through digital transformation: the singing techniques of old artists are transformed into three-dimensional data models by motion capture technology, and the music recording system of Gonghe music is combined with AI algorithms to generate a dynamic teaching system. This "technology embedded" inheritance model not only retains the ritual sense and physical memory of mentoring, but also breaks through the time and space restrictions of aging inheritors through data retention, forming a dual-track protection framework of "living archives" and "living practice". The digital documentation project of cultural gene map reconstructs the guardian logic from another dimension -- the Pantone coding practice of the traditional Chinese color system, transforming imagistic chromatograms such as "azure" and "bright red" into quantifiable RGB values, which not only ensures the traceability of aesthetic genes, but also provides scientific basis for the accurate reproduction of traditional colors in modern design.

The internationalization of authenticity certification standards provides institutional guarantee for the protection of cultural ontology. The localization practice of Japan's "Denlu Heritage" certification system has enlightening significance: through the three-dimensional certification of the raw material traceability, technique pedigree and cultural context of the traditional craft, the evaluation model of "authenticity index" is established. In the certification pilot of Suzhou Kesi silk technology, the correlation between silk origin, wood machine shape and the technique of "passing through the warp and breaking the weft" is incorporated into the blockchain storage system, and any improvement attempts need to pass the threshold detection of cultural gene variation. This kind of guardian mechanism innovation is essentially to build an "immune system" of cultural ontology in the context of globalization, which not only allows moderate modernity expression, but also prevents the alienation and mutation of core genes through technical regulation.

4.2. Construction of ethical framework for innovation transformation

The ethical framework of cultural innovation transformation needs to establish a dynamic boundary between cultural subjectivity and modern adaptability. The practice of adaptation of Jin Yong's Wuxia novels reveals that the ethical limit of adaptation should be anchored in the dialectical unity of the spiritual core of the original work and the contemporary value appeal. When the morality of Xiaoxao Jianghu is deconstructed into a post-modern narrative deconstruction, the

tension between "national feelings" and "individual freedom" in its chivalric culture needs to be tested by aesthetics, which not only satisfies the aesthetic expectations of Generation Z for narrative rhythm, but also needs to protect the value of "the great man of chivalric". This "limited adaptation" principle requires the establishment of a threshold model of cultural gene variation, and the demarcation of the "meaning safety zone" of adaptation through interdisciplinary evaluation systems (such as literary criticism, ethics, and communication cross-argument) to prevent innovative practice from sliding into the abyss of meaning nothingness.

The risk assessment mechanism of cross-border innovation needs to establish an early warning system from the game dimension of cultural capital and symbolic power. The review mechanism authorized by the Imperial Palace IP has a demonstration significance: when the beaded earphone transforms the imperial ceremonial symbol into a fashion accessory, its design needs to pass the "cultural gene integrity assessment" - whether the pattern shape conforms to the etiquette norms, whether the material conversion digests the sanctity of the symbol, whether the use of the scene causes value misreading and other multidimensional reviews. The essence of such risk assessment is the concretization of "governance techniques" in the cultural field: through the construction of knowledge power networks, the modern transformation of traditional elements is incorporated into a monitored and modifiable ethical framework. At the same time, the development of quality standards for the revitalization of traditional processes needs to break through the constraints of technical rationality, and the modern testing specifications of Jingdezhen ceramic raw materials innovatively introduce "cultural physical properties" indicators: on the basis of chemical composition analysis, the comparison module of glaze color and ancient aesthetic standards is increased to ensure that the mechanized production of blue and white porcelain meets the ISO certification, and continues the artistic expression of "rain over the sky blue".

4.3. Collaborative governance model of multiple subjects

The multi-subject cooperative governance model is the key strategy in the process of traditional culture modernization, which embodies the institutionalized adjustment of power allocation and value game. Taking garden protection in Suzhou as an example, the government, the market and the society have a three-way governance structure, and the sustainable operation of cultural heritage has been realized through PPP model. The government formulates protective regulations, the market capital activates economic value, and the community supervises the development scale, forming a closed-loop system of "regulation-drive - check and balance". This collaborative mechanism avoids the bias of single-subject governance and reconstructs the logic of cultural resource allocation. The innovation of the education system and the training mechanism of inheritors has injected the kinetic energy of intergenerational continuation into the collaborative governance. The intangible cultural heritage research and training program of the Central Academy of Fine Arts has built a three-dimensional enabling model of "Academy - inheritor - industry", transforming the tacit knowledge of traditional skills into a modular curriculum, and making inheritors become cultural translators. This kind of educational cooperation dispels the intergenerational cognitive fault and provides the evolutionary fulcrum for the traditional craft. The involvement of international organizations has broadened the global perspective of collaborative governance. The Chinese practice in the UNESCO Creative Cities Network integrates local cultural governance into the global cultural diversity protection system. Longquan celadon's "Global Handicraft City" certification demonstrates a two-way calibration mechanism between international and local standards. Such transnational coordination not only promotes the upgrading of local governance, but also contributes Oriental wisdom to global cultural governance. The multi-subject collaborative governance mode achieves balanced development in the modernization process of traditional

culture through institutionalization and adjustment, and provides a strong institutional guarantee for cultural inheritance and innovation.

5. Conclusions

Through multi-dimensional demonstration, this paper reveals that the essence of modernization transformation of traditional culture is the adaptive evolution of cultural gene in the field of technology, capital and power. The research proves that although the disenchantment effect of mechanical replication and the fragmentation transmission of algorithm push dissolve the cultural aura, they open up a new dimension for the living state inheritance. Commercial operation not only causes symbol alienation, but also builds the possibility of cultural capital reproduction. The innovation of the dynamic balance path lies in that it is neither the fundamentalist adherence of conservatism nor the unconditional compromise of progressivism, but the creative transcription of cultural DNA through the establishment of a complex mechanism of "gene guard-innovation evaluation - collaborative governance". Future research needs to further quantify the threshold of cultural gene variation and explore the deep application of blockchain technology in cultural rights confirmation. Only by establishing a precise adjustment system between the traditional core protection and the satisfaction of modern demands can traditional culture complete the paradigm transition from museum specimens to living organisms in the era of digital civilization.

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