How Digital Intelligence Empowers the Introduction of Anyang to the World: Value Implications and Logical Approaches

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Abstract: In the new era of globalization and digitalization, it is a significant task to disseminate effectively China's fine traditional culture and local characteristic cultures to the world. As one of China's eight ancient capitals, Anyang is the birthplace of Chinese first writings: Oracle Bone Inscriptions and the location of the World Cultural Heritage: the Yin Ruins. This paper aims to explore the core values and profound implications of empowering narratives with digital and intelligent technologies to introduce Anyang to the international community, and take logical approaches for its goal. Digital intelligence empowerment can not only break through language and cultural barriers to achieve precise, vivid, and immersive cross-cultural communication but also activate the contemporary vitality of Anyang's cultural heritage. This serves the national cultural digitalization strategy and local economic and social development. the logical approaches must adhere to the principles of content as foundation, technology as means, audience as orientation, and ecological synergy. It should be achieved from four dimensions: the creative transformation of contents, the integrated application and scenario innovation of technology, the delivery and feedback of communication, and the mechanism support. Ultimately, the goals may be achieved to build a sustainable, scalable, and influential new paradigm for Anyang's international cultural digital communication.

Keywords: Digital Intelligence Empowerment; Introduce Anyang to the World; Value Implication and Logical Approaches

1. Introduction

Anyang is the northernmost city of Central China’s Henan Province and it is a land inscribed with the codes of a three-thousand-year-old civilization. the Oracle Bone Inscriptions unearthed here push the documented history of China backward by nearly a millennium; the slumbering Yin Ruins here reveal a highly developed Bronze Age civilization to the entire world. However, such profound and splendid cultural heritage has not yet achieved a level of international recognition commensurate with its values in the global communication sphere. Traditional, one-dimensional, text-centric external dissemination models are increasingly inadequate in today's global communication environment characterized by information explosion, visual dominance, and interactivity. Issues such as language barriers, cultural discount, and outdated narrative methods make it challenging for Anyang stories to resonate deeply with international audiences.

Simultaneously, digital intelligent technologies (referred to as digital intelligence hereafter), represented by big data, artificial intelligence, virtual reality, the metaverse, etc., are reshaping the production, dissemination, and reception of information with unprecedented force. This provides a once-in-a-blue-moon opportunity to overcome the dilemmas of cross-cultural communication. Digital intelligence empowerment is not merely a physical addition of technology plus contents, but a chemical fusion of technology and narratives at the conceptual, modal, and ecological levels. It means utilizing digital intelligence technologies to deeply decode, creatively reconstruct, and intelligently disseminate Anyang's cultural resources, and achieve effective connection and emotional resonance with global audiences.

Therefore, the proposition of digital intelligence empowerment of introducing Anyang to the world is not only a grassroots practice and deepening of the national narrative system of telling China’s stories well, but also strategic thinking on how cultural heritage can rejuvenate itself in the digital age and how it can go global.

This paper will systematically elaborate from the two levels of value implication and logical approaches, aiming to provide theoretical references and practical guidance for the international dissemination of Anyang and similar historical and cultural cities.

2. Systematic Mining and Manifestation: Value Implications of Digital Intelligence Empowerment in Introducing Anyang to the World

The values of digital intelligence empowering the introduction of Anyang to the world far exceeds technological innovations at the instrumental level. It is an innovation in communication philosophy, reshaping of cultural values, and a transformation of developmental momentum, thus possessing profound implications at multiple levels and dimensions.

2.1 Dimension of Cultural Communication: Breaking Through Barriers to Achieve Precise, Vivid, and Immersive Cross-Cultural Dialogue

Breaking language barriers, achieving unified conveyance of meaning, form, and spirit. Oftentimes, traditional foreign language translation only conveys literal meaning. For vocabulary that is rich in cultural specificity, such as Oracle Bone Inscriptions, bronze inscriptions, and ancient ritual systems, the cost of explanation is high and the original meaning gets lost from time to time. Digital intelligence empowerment makes accurate translation possible. By building a multilingual terminology database of Anyang-specific cultural terms and utilizing AI neural network translation combined with contextual understanding, more idiomatic translations may be provided. Furthermore, through Augmented Reality (AR) annotations, international tourists may scan artifacts with their mobile phones and read foreign language introductions. In the meantime, animations can also demonstrate the battle scenes in the chariot pits or the building process of a bronze ware. Therefore, obscure texts may be transformed into intuitive visual information, achieving a leap from language translation to cultural interpretation.

Bridging cultural discount and constructing perceivable narrative scenes. the essence of Anyang's culture lies in its historical depth and on-site impact. Digital intelligence technologies can recreate this sense of presence. Through high-precision 3D modeling, Virtual Reality (VR), and metaverse technologies, the palaces, workshops, and sacrificial sites of the Shang Dynasty may be reconstructed. International audiences can stroll along the banks of the Huan River three thousand years ago through VR equipment without visiting Anyang, witness the coronation ceremony of King Wu Ding, and even personally inscribe a divination text on a virtual oracle bone. This immersive experience transforms abstract historical knowledge into embodied, emotional participation. It greatly reduces comprehension barriers arising from cultural differences and makes the distant Chinese civilization touchable, perceivable, and relatable.

Innovating narrative methods, from static display to dynamic activation. Static museum displays are of necessity, but digital intelligence empowerment can make them come alive. Taking advantage of digital twin technology, a digital counterpart can be created for the Simuwu Ding, dynamically displaying the eleven steps of its casting process; through AI-Generated Content (AIGC), the earliest female general in Chinese history——Fu Hao, can personally narrate her campaigns and life in multiple languages. This storified, personalized, and dynamic narrative transcends the artifacts themselves to recount the stories of the people and society behind them, more effectively stimulating the interest and curiosity of global audiences, especially Generation Z.

2.2 Dimension of Cultural Heritage: Activating Heritage, Promoting the Creative Transformation and Innovative Development of Chinese Excellent Traditional Culture

Digital Permanent Preservation and Deep Interpretation. Digital intelligence technology is first and foremost an inspiration for cultural heritage preservation. Through laser scanning, multispectral imaging, and other technologies, fragile artifacts like oracle bones and bronzes may be digitally archived, permanently preserving their most minute details. Furthermore, using artificial intelligence for image recognition and big data analysis can assist scholars in deciphering unidentified oracle bone inscriptions, analyzing the evolution patterns of bronze ornamentation, and discovering correlations difficult for the human eye to detect from vast amounts of

archaeological data, which altogether provides new digital evidence and intelligent solutions for the project of tracing the origins of ancient Chinese civilization.

Empowering the Creation and Derivation of Cultural IP. Anyang's cultural resources are a treasure trove of IP. Digital intelligence technologies can accelerate their transformation into modern cultural and creative products. For example, AI-based pattern design tools can extract aesthetic elements from Oracle Bone Inscriptions and bronze *taotie* motifs to automatically generate trendy patterns that meet modern aesthetics for use in clothing, digital products, etc. Making use of AIGC technology, anime scripts, short video scripts, and online novels centered on Shang history can be automatically generated. By building an Anyang Cultural IP Digital Asset Platform, these digitized cultural elements can be opened to global creators, stimulating broader User-Generated Content (UGC) and forming a vibrant cultural innovation ecosystem.

Expanding the Breadth and Depth of Cultural Education. For students at home and abroad, the digital intelligence——powered Anyang stories are excellent educational resources. Online educational courses like Digital Yin Ruins for a global audience can be offered, incorporating game-based learning and allowing students to acquire knowledge of Oracle Bone Inscriptions and Shang history while completing tasks. This not only enables the inheritance of Chinese cultural genes to break through geographical constraints but also, through edutainment, sows the seeds of Chinese civilization in the hearts of young people worldwide.

2.3 Dimension of Economic and Social Development: Shaping the Brand, Empowering Anyang's Urban Internationalization and Industrial Upgrading

Creating a New Digital Business Card for International Culture and Tourism. Digital intelligence empowerment is the core engine for the upgrade of the cultural and tourism industry. By developing a multilingual international version of the *Travel Anyang on Mobile Phone* App, integrating functions like AR navigation, multilingual intelligent tour guides, VR previews, and online shopping malls, a seamless smart travel experience can be provided for international tourists. Creating a virtual Yin Ruins Metaverse can achieve mutual conversion of online and offline traffic, attracting international digital nomads and younger groups sensitive to digital experiences. This will definitely upgrade Anyang from a geographical tourist destination to a digital cultural experience destination, which significantly enhances its brand recognition and appeal in the global cultural tourism market.

Pushing the Digital Transformation of Cultural Industries. Digitized and intelligent Anyang stories can drive the development of a series of related industries such as cultural and creative design, digital publishing, anime and games, and film and television production. For example, it will help to collaborate with global streaming platforms to produce documentaries or animation series based on Anyang's Shang history, and utilize digital intelligence technologies for special effects production and global multilingual distribution. This can not only generate direct economic benefits but also form a virtuous cycle of cultural communication—brand enhancement—industrial agglomeration —economic growth.

Enhancing the City's International Image and Soft Power. A city that can use cutting-edge technology and innovative methods to tell its ancient stories will inevitably be considered by the international community as dynamic, open, confident, and innovative. Successfully telling the digitized and intelligent Anyang stories will showcase an image of Anyang that is both deeply rooted in tradition and embraces the future. This is an important manifestation of the city's soft power and international competitiveness, thus capable of attracting more international investment, talent, and cooperation opportunities for Anyang.

3. Implementation: the Logical Approaches to Introducing Anyang with Digital Intelligence Empowerment

After clarifying the values objectives, clear, systematic, and operable logical approaches are needed to achieve them. These approaches are interconnected, dynamically adjusted systematic projects. the core logic can be summarized as taking the contents as the foundation, the technology matrix as the engine, the communication process as the pathway, and the support ecosystem as the backbone.

3.1 Foundation: building a Trinity Digitally

Intelligent Contents System

Contents are the root of storytelling; the prerequisite for digital intelligence empowerment is the deep exploration of contents.

3.1.1 Textual Research—Interpretation Layer: Achieving deep digitization and semanticization of cultural resources

Comprehensive Digital Collection. A high-precision, multi-modal digital collection of all core cultural resources may be conducted, including the Yin Ruins, Oracle Bone Inscriptions, bronze wares, Yue Fei's hometown, and the Red Flag Canal. This will be conducive to the establishment of an Anyang Cultural Heritage Gene Bank.

Knowledge Graph. This is the core of contents. Scattered cultural elements (people, events, time, place, objects) may be connected in an effort to build an Anyang Culture Knowledge Graph. For example, we may link entities and events like King Wu Ding of Shang, Fu Hao, Simuwu Ding, Oracle Bone Inscriptions—a specific war through semantic interpretation. This transforms contents from isolated documents into a structured knowledge network which can be understood and reasoned about by machines. It lays the foundation for subsequent intelligent retrieval, personalized recommendation, and cross-media generation.

3.1.2 Narrative-Creativity Layer: Promoting the storification, personalization, and IP-ification of contents

Thematic Storyline Development. Based on the knowledge graph, we may extract a couple of thematic storylines for international audiences, such as the Mystery of Bronze Casting, the Dynasty on Oracle Bones, the Legend of the Female General Fu Hao, From Yin Ruins to the Red Flag Canal – the Resilience and Struggle of Civilization. These storylines should contain universal emotional elements like power, love, war, faith, and struggle.

Character and IP Shaping. We may focus on creating historical figure IPs like King Wu Ding of Shang, Fu Hao, and *Zhenren* (oracle bone diviners), endow them with distinct personality traits, and make them the spokespersons for Anyang.

Multi-modal Contents Production. We may utilize AIGC tools, based on storylines and knowledge graph, to batch generate initial drafts of multilingual short video scripts, comic storyboards, and social media copy, which may improve creative production effectively.

3.1.3 Transformation-Adaptation Layer: Completing the precise cross-cultural, multilingual transformation of content

Establishment of a Cross-cultural Adaptation Mechanism. We may form a team consisting of Chinese and foreign cultural experts, linguists, and localization experts to review and adjust the generated contents from a cultural dimension, ensuring it is both historically accurate and aligns with the cultural cognition and acceptance habits of the target audience.

Building of an Intelligent Multilingual Asset Library. We may store the final approved high-quality texts, images, audios, videos, and their multilingual versions in a Digital Asset Management (DAM) system, tagged with semantic labels for intelligent calling and combination in subsequent communication processes.

3.2 Engine: Building an Integrated and Innovative Digital Intelligence Technology Application Matrix

Technology is the means of empowerment and needs to be organically integrated and applied in scenarios according to narrative needs.

3.2.1 Cloud—Edge—Device Collaborative Underlying Infrastructure

We may build 5G/gigabit optical networks covering Anyang's main cultural venues and scenic spots, deploy edge computing nodes to support high-bandwidth, low-latency applications like VR/AR and HD video streaming. Meanwhile, we may also deploy the Cultural Gene Bank, Knowledge Graph, and Digital Asset Library in the cloud to achieve centralized data management and elastic access.

3.2.2 Immersive Experience Layer Composed of AR/VR/MR-Metaverse

AR Scenarios. We can develop AR guide Apps for on-site locations like the Yin Ruins and the National Museum of Chinese Writings, which enable artifact restoration, scene reconstruction, and information overlay.

VR Experiences. We can provide high-quality VR experience products at tourist centers and online platforms, such as VR Yin Ruins Archaeology and VR Oracle Bone Inscriptions Writing.

Metaverse Exploration. We can build an initial version of the Anyang Cultural Metaverse as a persistently operational online social space to host international virtual exhibitions, academic

lectures, and cultural performances, etc.

3.2.3 AIGC-Big Data Driven Intelligent Production and Communication Layer

Generation of Intelligent Contents. AIGC technology may be employed to train vertical domain models based on Anyang cultural data, to assist in generating multilingual press releases, social media posts, promotional posters, etc.

User Profiling and Precision Push. By analyzing user behavior data on international social media platforms, we may build refined audience profiles to understand contents preferences of different national, age, and interest groups, thereby achieving personalized contents recommendation and precise ad placement.

Intelligent Interaction and Customer Service. We can develop a multilingual Anyang Culture AI Virtual Assistant, which may be embedded in official websites, Apps, and social platforms to answer global users' queries about Anyang's history and tourism 24/7. In this way, we may be able to provide personalized itinerary suggestions.

3.3 Pathways: Optimizing the Digitally Intelligent Precision Reach Communication Process

Good communication contents and technology are in desperate need of effective communication channels and strategies to reach the audience.

3.3.1 Pre-Communication: Data-based Audience Insight and Strategy Formulation

Big data tools may be used to analyze global search trends and topic popularity for keywords like Chinese history, Oracle Bone Inscriptions and archaeology, identify core target audience segments (e. g., sinologists, history enthusiasts, backpackers, international students), and formulate communication strategies segmented by region and platform.

3.3.2 During Communication: Multi-channel, Interactive Precision Content Delivery

Platform Selection. We may focus attention on operating international mainstream platforms like YouTube, Instagram, TikTok, X, and Facebook, and customizing contents according to platform characteristics (e. g., TikTok focuses on short, fast, visually impactful content; YouTube suits in-depth documentaries).

KOL Collaboration. We may consider partnering with influential foreign bloggers in history, travel, and technology, and inviting them to experience the digitally intelligent Anyang cultural and tourism products. Their credibility may be leveraged in an attempt to expand influence.

Interaction Activation. We may organize online events such as the Global Oracle Bone Inscriptions Emoji Design Contest or the Yin Ruins VR Experience Check-in Challenge. In this way, we may encourage UGC to create communication ripple effects.

3.3.3 Post-Communication: Effect Evaluation and Closed-loop Optimization

A set of communication effect evaluation indicators may be established to track data such as view counts, engagement rates, sentiment analysis, website referrals, and actual tourism booking conversions. Data analysis is used to gain real-time insights into which contents, on which channels, and for which audiences, are most effective. Thereby, we may quickly adjust contents creativity and distribution strategies, and form a data—driven closed loop of monitoring—analysis—optimization—re-communication.

3.4 Support: Perfecting the Collaborative Co-Governance Ecosystem

The success of this systematic project requires strong top-level design and the synergy of resources across society.

Mechanism Innovation. It is recommended to establish an Anyang International Digital Communications Center led by the municipal government, coordinated by departments of culture and tourism, publicity, cultural relics, economy and information technology, foreign affairs, etc. We may consider involving universities, colleges, think tanks, cultural enterprises, and technology companies. This center is supposed to be responsible for overall planning, integration of resources, and project promotion, which may help break down data silos and departmental barriers.

Introduction of Talents. This is a key bottleneck. Efforts are needed to introduce a group of interdisciplinary talents who understand Anyang’s local culture, are proficient in foreign languages, and are familiar with digital technology. This can be achieved through cooperation with domestic and foreign universities to establish special programs, provide on-the-job training, and set up expert studios, etc..

Funding Guarantee. A diversified investment

mechanism should be established with government guidance, market leadership, and social participation. the government may set up special funds while actively attracting social capital and internet platform companies to participate in project investment and operation. Models like PPP (Public-Private Partnership) may also be explored.

Cooperation Network. Strategic cooperative relationships may be proactively established with top-tier technology companies, research institutions, media platforms, and even international organizations. In this way, we may leverage their technological, platform, and channel advantages to jointly develop projects and enhance the capacity and reach of the dissemination of Anyang stories.

4. Conclusion

Introducing Anyang to the rest of the world is not only a responsibility of Anyang itself, but also an important window to showcase the continuity, innovation, unity, inclusiveness, and peacefulness of Chinese civilization to the world. In the digital intelligence era, we must reactivate the cultural charm of this ancient city with new thinking, new tools, and new pathways.

Digital intelligence empowerment to introduce Anyang definitely has profound value implications pertaining to the effectiveness of cultural communication, the vitality of cultural heritage, and the momentum of urban development. Its logical approaches are a systematic project requiring long-term planning and continuous iteration. It demands that we start from a profound cultural foundation, use cutting-edge technology as wings, and with a global perspective and audience-oriented thinking, build an organic ecosystem where contents, technology, communication, and safeguards integrate and advance synergistically. This path is full of challenges but also full of hope. Through systematic digital intelligence empowerment, Anyang has the potentials to leap from a historical and cultural city in China to a pioneer in digital culture within global civilizational dialogue. This may allow the three-thousand-year-old Shang civilization to radiate new brilliance in the digital world. We may contribute to expanding China's soft power and influence of Chinese civilization and promoting the building of a community with a shared future for mankind.

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