

Optimization and Application of Chinese Culture Management Model Based on System Theory

Yangfei Zhan^a

^a*School of Journalism and Communication, Hunan Normal University, Changsha, Hunan, 410081, China*

Abstract. This paper analyzes the complexity and dynamics of China's cultural system based on system theory, and adopts mathematical expressions to visualize the dynamic changes of the system state and structural relationships, so as to realize the dynamic equilibrium of China's cultural management model. Taking integrated management as the benchmark, an intelligent and automated digital cultural resource management system is constructed, and design variables and objective functions are defined to satisfy specific constraints of cultural management. The agent model and trust domain sampling space global optimization are used to optimize the design variables through iteration in order to maximize the model performance. In practical application, it is found that compared with other optimization models, the systematic optimal objective value reaches 0.0130, and the optimal solution is reached after 17 calls. Compared with other culture management models, the proposed optimization model has the highest Chinese culture participation, reaching 95.1%. The system theory provides a new perspective for the optimization of the Chinese culture management model, with a view to breaking through the regional limitations and maintaining the effective operation of the management model in practical applications.

1. Introduction

Systems thinking originated in Ancient Greece, and through a long period of evolution and development, it gradually formed the modern systems theory [1]. The core idea of system theory is the holistic concept of a system, which means that the whole of a system is considered to be greater than the sum of its parts [2]. This idea emphasizes the consideration of the interactions and relationships between the elements within the system and the dynamic connection between the system and the external environment from the perspective of the whole. The emergence of system theory not only changed the traditional way of thinking, but also provided a new theoretical framework and methodological approach to solve complex problems [3]. As one of the longest and most extensive cultures in the world, Chinese culture faces many challenges in its inheritance and development. In the context of globalization, how to effectively manage Chinese culture and promote its inheritance and innovation has become an urgent problem [4]. System theory, as a scientific method to study the structure and function of complex systems, provides new perspectives and tools to optimize the Chinese culture management model [5, 6].

Corresponding author: Yangfei Zhan, mail address: 1202030046029@hunnu.edu.cn

Received: 25 June 2024; Accepted: 25 August 2024; Published: 28 October 2024

Keywords. System theory; Chinese culture management; agent model; objective function; trust domain sampling

2010 *Mathematics Subject Classification.* 93A30, 90C90, 91C99

Cited this article as: Zhan, Y., Optimization and Application of Chinese Culture Management Model Based on System Theory. Engineering and Its Applications, 1(1), 2024, 1-11

© 2026 Engineering Journals. Published by Engineering Journals.

With the acceleration of globalization and the rapid development of information technology, cultural management is particularly important at both the national and enterprise levels. This paper firstly understands the meaning of system theory, analyzes the connotation of culture, and establishes the structure of cultural system. Systems theory describes the complexity and dynamics of the Chinese cultural system, showing how the system is characterized by specific relationships through the set of interrelated elements and their interactions with the environment. Then, a Chinese cultural management model is established to support the digital collection, storage, query and utilization of cultural resources, support multiple data format conversion, be easy to operate and maintain, and achieve centralized management, distributed storage and query to maximize the use of Chinese cultural resource data. Then, design variables and objective functions are defined to satisfy specific constraints of cultural management. Finally, the effect of the optimized Chinese culture management model in the application of actual enterprise culture management construction is discussed in the context of specific cases, aiming at providing references and lessons for enhancing the scientificity and effectiveness of Chinese culture management.

2. Related Words

Wang, Z et al. proposed a resource management strategy based on neural network algorithm for cultural and creative enterprises, and the method is based on modeling and matching project, user and content features to maximize resource management [7]. Gao, W et al. designed a communication security management model under the meta-universe in order to improve the security performance in digital culture management and to circumvent security threats in cultural consumption [8]. Li, P et al. used a multi-objective approach for enhance the stability of cultural resources and protect historical heritage, use multi-objective method to construct management scheme and provide decision-making basis for cultural resources management [9]. Santosuosso, P realized the protection of cultural heritage by constructing risk index and managers make decisions through the results of risk calculations [10]. Yi, W proposed to apply that platform of Internet of Things (IoT) in cultural management and communication. The results show that the scheduling time of cultural resources of this platform can be controlled within 40s, and the cultural data can keep more than 90% integrity [11]. Yan, H et al. face the continuous development of the cultural industry, and put forward the cultural management model based on structural equation. Firstly, internal factor indicators are established, and secondly, targeted optimization strategies are proposed for the internal factors of cultural management to promote the effective allocation of resources. Finally, it is verified that structural equations can play a better optimization role for human resources [12]. Hsueh, S. L et al. proposed a multi-attribute management model in order to improve the sales value of cultural creative products. Using the expert scoring method, four influencing factors are identified and quantitative statistical results are derived to complete the optimization of cultural and creative management [13]. Liang, D designed an improved back-propagation network combined with adaptive strategies to make up for the shortcomings from the traditional management approach. This research helps to enhance the application value of cultural and creative industries in the context of digitalization and realize the efficient management of cultural and creative industries [14].

The above studies apply different methods and models to enhance the optimization strategy for cultural industry and cultural creative industry. However, since there are fewer studies on the optimization of cultural management models for China at this stage, system theory can achieve better management for different cultural categories. Therefore, the research in this paper will combine system theory to realize the optimization and application of China's cultural management model and enhance the influence and competitiveness of China's cultural enterprises.

3. Chinese Cultural Management Based on System Theory

3.1. Structure of the Chinese cultural system

By culture, we mean all things and phenomena related to human activities. It is divided into three parts, namely, material, institutional and spiritual layers.

As a system that exists as a whole, whether it is Chinese culture or culture of other nationalities, its outreach includes the cultural product layer, the cultural behavior layer and the value layer [15]. Figure 1 shows the structure of the cultural system, and the first layer of culture is the surface layer of culture, which is also called the cultural product layer or artifact layer. Cultural products include clothing, food, housing, transportation, utensils and cultural relics, language and writing, etc., the most superficial and intuitive things. Different cultural systems have different cultural products. The second layer of culture is the behavioral layer or institutional layer, where there is cultural behavior to produce cultural products, and behavior is constrained through various norms and systems. The rules and regulations of the state and nation, the laws and regulations, the customs and habits, the management system, etc., these political, economic and legal systems and the related institutions are all cultural behaviors, which are formulated for the purpose of adjusting human behaviors. The third layer of culture is the layer of values or the spiritual layer, which is the core of culture, including people's moral consciousness, value orientation, thinking concepts, worldview, view of life, and standards for judging right and wrong, good and evil. This is the core of a cultural system, from which cultural behavior is regulated and cultural products are produced, constituting a complete cultural system. Therefore, culture is essentially an inseparable whole composed of the product layer, the behavior layer and the thought layer.

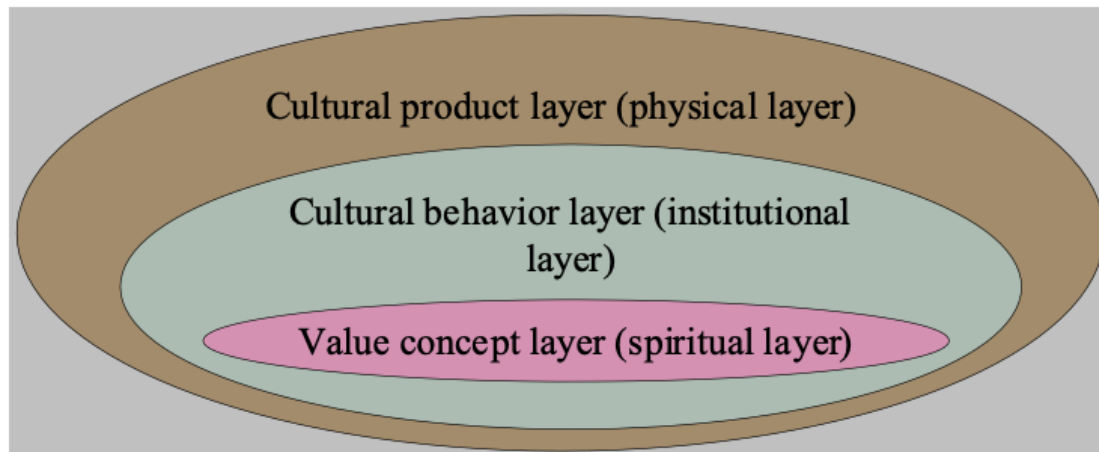


Figure 1: Cultural system structure

3.2. Definition of systematics

A system can be defined as a set of interrelated elements. Where interrelated means that the set of elements P is in the set of relations R , so the behavior of the elements in relation R_1 is different from the behavior in relation R_2 . In the study of the cultural management model, the characteristics of the set of system elements expressed under the cultural relationship $R_i (R_i \in R)$, which is the behavior of the system. General mathematical definitions and descriptions of systems are also based on the unidirectional chain of influence or causal chain of $R_i \rightarrow P$ to study the behavioral characteristics of P . Whether it is a cultural open system or a closed system, the dynamic process of reaching a stable or equilibrium state in a certain time interval always contains the interaction and double influence effects of structural relations and elemental states, R and P together constitute the state of the system at a certain moment.

In the case of an open system, external or environmental influences on the system can act directly on P , directly on R , or simultaneously on P and R . The result is that the system tends to stabilize, or leaves one equilibrium state and reaches another. Similarly, changes in the state of a collection of system elements interact and adapt to structural relationships, and together they contribute to changes in the state of the system.

Let the state of the system at a certain moment t be $S(t)$, the set of system elements or state variables be $X(t)$, and the structural relationship of the system be $R(t)$, which can be described as follows according to the idea of general system theory:

$$S(t) = \{X(t), R(t)\} \quad (1)$$

For a dynamic open system, let $U(t)$ be the set of environmental influences on the system, and Eq. can be changed to:

$$S(t) = \{X(t), R(t), U(t)\} \quad (2)$$

Assuming that $X(t)$ and $R(t)$ are vector structures, the system state variables and structural relationships are formulated as follows, respectively:

$$X(t) = F(X(t), R(t), U(t)) \quad (3)$$

$$R(t) = G(X(t), R(t), U(t)) \quad (4)$$

Differentiate and find the functional form expressions for the derivatives of $X(t)$ and $R(t)$, respectively, as follows:

$$\frac{dX(t)}{dt} = \left(\frac{\partial F}{\partial R} \frac{dR(t)}{dt} + \frac{\partial F}{\partial U} \frac{dU(t)}{dt} \right) \left(I - \frac{\partial F}{\partial X} \right)^T \quad (5)$$

$$\frac{dR(t)}{dt} = \left(\frac{\partial G}{\partial X} \frac{dX(t)}{dt} + \frac{\partial G}{\partial U} \frac{dU(t)}{dt} \right) \left(I - \frac{\partial G}{\partial R} \right)^T \quad (6)$$

where I is the unit matrix and assuming the existence of inverse operations of $\left(I - \frac{\partial F}{\partial X} \right)$ and $\left(I - \frac{\partial G}{\partial R} \right)$, which are $\left(I - \frac{\partial F}{\partial X} \right)^T$ and $\left(I - \frac{\partial G}{\partial R} \right)^T$, respectively, Eqs. (5) and (6) give an intuitive representation of the basic functions of the system.

4. Optimization of China's Cultural Management Model

4.1. Management Modeling

Chinese cultural management includes value and moral concepts, interpersonal management and organizational structure, power and leadership, communication and decision-making styles and other put contents, in order to be able to make extensive use of Chinese cultural resources data in the system, and to maximize the reality of the front line of service, the system should satisfy the principle of querying in proximity to the query to support centralized management, distributed data storage, distributed querying way [16, 17]. The cultural resource information of the query branch can be near in the query, and the cross-agency query can be realized through the unified directory center for cross-region search. Based on the system theory of China's cultural management model shown in Figure 2, the integrated management system of cultural resources information can be divided into four major functional modules after organized according to the process of information flow, digital collection and processing of cultural resources data, cultural resources information storage and management, query and utilization of cultural resources information, system maintenance and integrated management.

Its functions cover the whole process of digital transformation of non-digital cultural resources, collection, processing, and storage of digital cultural resource information, maintenance of applications and archiving, organizing, storing, publishing, and utilizing all digital cultural resources after transformation [18, 19]. Designed on the basis of J2EE three-tier architecture, it supports both the entry and reception of physical cultural resources - such as manuscripts, paper documents, audio and video recordings, etc., and

the entry and reception of electronic cultural resources - such as scanned pictures, photographs, audio-visuals, and electronic documents. Support a variety of data specifications, data structures and system standard data formats, data structures, including XML, OA I and other inter-conversion. The operation and maintenance of the system should be as simple as possible to meet the usage habits of users of different skill levels. With the browser/server structure, the system realizes the management, retrieval, and distribution of cultural resources without the need to install a client, and can realize remote network access and maintenance anytime and anywhere [20, 21]. Considering the characteristics of the system with few maintenance personnel and heavy workload, the development and maintenance of the system are centralized at the server side to achieve centralized management and multi-agency access to the cultural resource room of the branch office and police station. The operating interface is highly integrated, and the entry, retrieval, and result display interfaces are integrated into one interface as much as possible to avoid users operating different functions and needing constant switching of interfaces.

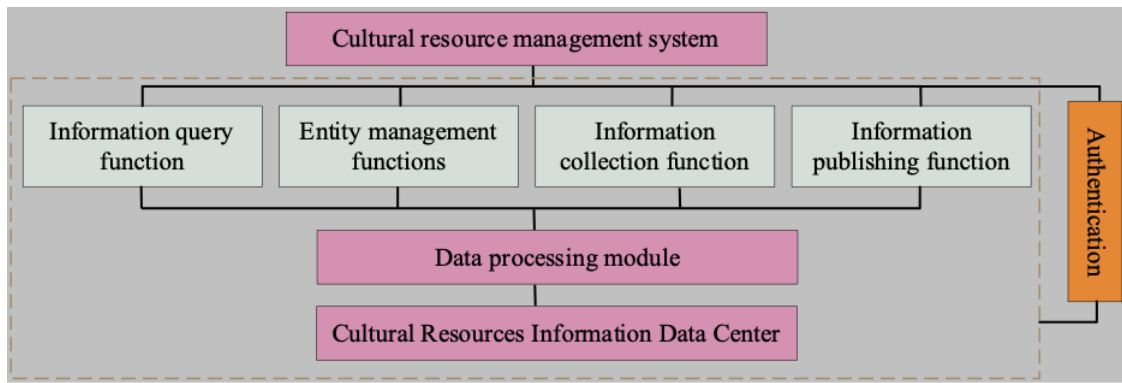


Figure 2: Chinese Cultural Management Model

4.2. Model optimization solution

4.2.1. Setting the objective function

In the context of optimization and application of Chinese culture management model based on system theory, the specific elements and principles of Chinese culture management are fully considered. The design variables, objective functions and constraints are defined according to the characteristics of Chinese cultural management. This can better reflect the actual situation and needs of cultural management and provide more specific guidance for the optimization problem.

In the optimization of Chinese cultural management models, the goal is to find a set of parameters that enable the management model to maximize or minimize a particular performance indicator. At the same time, the selection of these parameters or strategies needs to satisfy some specific constraints, which originate from the organization's culture, values, resource constraints, and so on.

Let the optimization variable be x , where x is a vector containing the parameters that affect the performance of the Chinese culture management model. The standard nonlinear constrained optimization problem is of the form:

$$\begin{aligned}
 & \min f(x) \\
 & \text{s.t. } h_j(x) = 0, \quad j = 1, 2, \dots, J \\
 & \quad g_k(x) \leq 0, \quad k = 1, 2, \dots, K \\
 & \quad x_{L,i} \leq x_i \leq x_{U,i}, \quad i = 1, 2, \dots, n_v
 \end{aligned} \tag{7}$$

The objective function $f(x)$ describes the performance metrics exhibited by the Chinese culture management model when the parameter takes the value x . For example, $f(x)$ can be a function of culture matching satisfaction, management cost, model performance, etc. The objective is to maximize or minimize $f(x)$. The

objective of the model is to maximize or minimize $f(x)$. Constraint $g_k(x) \leq 0$ represents the constraints that the Chinese culture management model needs to satisfy when the parameter takes the value of x . These constraints are derived from the organization's culture, values, laws and regulations, resource constraints, etc. The x design variables consist of n_v dimensional vectors, and the upper and lower bounds of x_i are $x_{L,i}$ and $x_{U,i}$, respectively.

Using the system theory approach applied to the Chinese culture management model can help to find the design variable x that makes the real model $f(x)$ optimal by using the proxy model $\tilde{f}(x)$ under the premise of meeting certain accuracy requirements. Therefore, the optimization problem based on the Chinese culture management model can be formulated as follows:

$$\begin{aligned} & \min \tilde{f}(x) \\ & \text{s.t. } \tilde{h}_j(x) = 0, \quad j = 1, 2, \dots, J \\ & \quad \tilde{g}_k(x) \leq 0, \quad k = 1, 2, \dots, K \\ & \quad x_{L,i} \leq x_i \leq x_{U,i}, \quad i = 1, 2, \dots, n_v \end{aligned} \quad (8)$$

During the optimization process, the optimal solution strategy will use agent models $\tilde{f}(x)$ and $\tilde{g}_k(x)$ to guide the search direction, and update the trust domain and agent models by validating them on the real model to ensure the accuracy and effectiveness of the optimization results.

4.2.2. Optimization steps

The specific steps of the model optimization strategy are as follows:

1. First of all, it is necessary to clarify the specifics of China's cultural management model, including key factors such as organizational culture, management philosophy, organizational structure and staffing. These factors will form the basis of the real analysis model. Establish the real analysis model, determine the design variables and design space A , and make the iteration count parameter $k = 1$.
2. When $k = 1$, the initial trust domain sampling space is selected as the whole design space A , i.e. $B_1 = A$. When $k > 1$, the trust domain sampling space is the updated sampling space. In order to ensure the spatial homogeneity and projection uniformity of the sample points, the Maximin Latin hyper-square test design method is used to select the initial sample points or the new sample points in the trust domain sampling space and calculate the response values of the real analytical models corresponding to the sample points. These design sample points and their corresponding response values of the real analytical model are saved in the sample point database. In order to reduce the computational cost of the high-dimensional optimization problem, it is recommended that the number of initial sample points n_s be taken as:

$$n_s = \min \left\{ \frac{(n_v + 1)(n_v + 2)}{2}, 5n_v \right\} \quad (9)$$

3. For each sample point, calculate its corresponding response value through the real operation or simulation of the Chinese culture management model. Extracting all sample points in the sample point database and their corresponding real model response values, the radial basis function method is used to construct the agent model. In order to reduce the research difficulty, this paper makes an assumption that the computational cost of constraints is negligible compared to the objective function in the study of optimization strategies for Chinese culture management models. Therefore, the Chinese culture management agent model is constructed for the objective function, while the constraints are selected from the real model.
4. The genetic algorithm with global optimization capability is used for global optimization of the agent model constructed in step (3) to obtain the optimal solution x_K of the k st iteration and the optimal objective function value $\hat{y}(x_k)$ of the agent model corresponding to each level of Chinese culture.
5. Substitute the optimal solution in the k st optimization into the real model to obtain its corresponding real model response value $f(x_k)$ and save it into the optimal solution set. Meanwhile, x_K and $f(x_k)$ are saved to the sample point database.

6. Determine whether the convergence criterion is satisfied. When $k = 1$, go directly to step (7). When $k > 1$, calculate the relative error of the real model response value corresponding to the optimal solution found in the k rd and 1st times during the optimization process, and judge whether the relative error satisfies the given convergence criterion ε , as shown in equation (10). If it is satisfied, the loop is stopped, then the optimal solution obtained in step (4) is the optimal solution of the real model, and the process of the global optimization strategy is finished; if it is not satisfied, then go to step (7).

$$\frac{f(x_k) - f(x_{k-1})}{f(x_{k-1})} \leq \varepsilon \quad (10)$$

7. Perform the trust domain sampling space update. Make the iteration count parameter $k = k + 1$ and go to step (2).

Through the above steps, the model can be optimized on the basis of system theory using the concepts of agent model and trust domain sampling space in order to find the combination of design variables that make the model perform optimally, and enhance the influence of Chinese culture in practical applications [22].

5. Practical Application of the Chinese Culture Management Model

5.1. Efficiency of cultural management in different regions

Chinese culture management model is a management thought system with Chinese characteristics, which can better serve the modern management practice by introducing the method of system theory for optimization and application. According to the optimization strategies in the Chinese culture management model, it is applied to the construction of enterprise culture management. By deeply analyzing the efficiency of the three major management categories, namely, traditional art management efficiency, cultural wholesale and retail industry, and cultural and creative service industry, the overall efficiency of cultural management can be effectively improved and the high-quality development of cultural management can be promoted.

The management efficiency of cultural categories in different regions is shown in Figure 3, and the efficiency values of traditional arts management efficiency are 0.7486, 0.6253 and 0.5235, 0.5159. Within the four regions, traditional arts management efficiency has the highest value, followed by China's cultural and creative services, and cultural wholesaling and retailing has the lowest. Relying on the strong foundation of the manufacturing industry, traditional arts management efficiency has a more complete management system and advanced management experience, and is more effective in the utilization of various types of resources, compared with cultural wholesale and retail and cultural creative services. Specifically, the efficiency of traditional arts management and the efficiency of cultural products wholesale and retail industry are higher in the eastern region than in the central region, better in the central region than in the western region, and lowest in the northeastern region. On the other hand, the efficiency of the cultural and creative service industry presents the characteristics that the eastern region is higher than the western region, the western region is slightly higher than the central region, and the northeastern region is the lowest. In addition, the degree of differentiation between the four regions is more significant, as evidenced by the relatively large gap between the efficiency values of the two cultural management categories in the eastern region and the efficiency values of the other three regions, while the gap between the efficiency values of the traditional arts management efficiency in the eastern region and the efficiency values of the other three regions is relatively small.

Therefore, in cultural management, for the cultural wholesale and retail industry and the cultural and creative service industry, in addition to improving their overall efficiency, it is also necessary to further promote the coordinated development between the central, western, and northeastern regions and the eastern region, and to reduce the gap between the efficiency value of the eastern region and the efficiency value of other regions. The Chinese cultural management model based on system theory helps to reduce the cultural gap between regions and promote the synergistic development of Chinese culture within different regions.

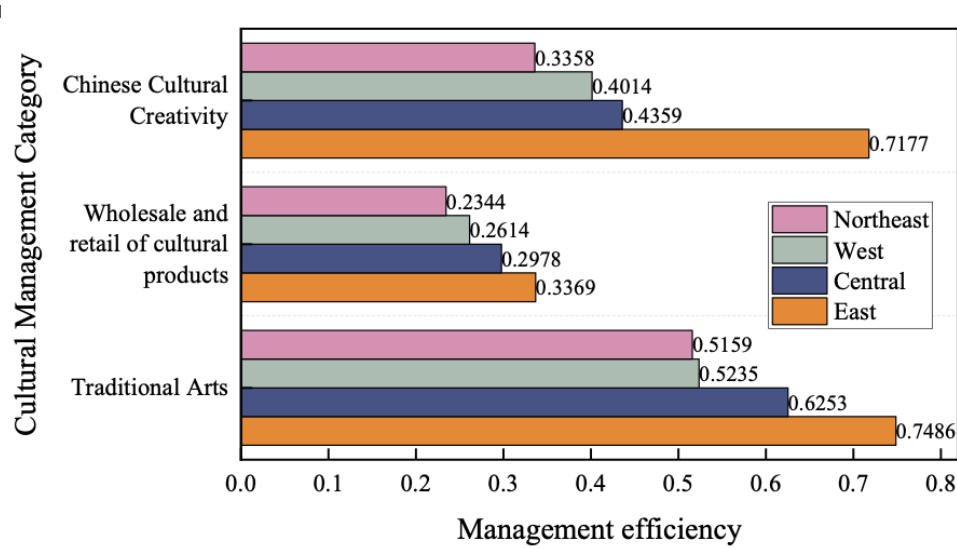


Figure 3: Efficiency values of cultural management categories in different regions

5.2. Efficiency of cultural management in different provinces

The management efficiencies of different provinces were further analyzed using the Chinese cultural management model based on systems theory, and Figure 4 shows the efficiencies of cultural management categories in different provinces. The efficiency of the management model in Shanghai, China are all above 8.0, and the efficiency gap between the three major cultural management categories is relatively small. This shows that Shanghai has a high level of cultural management development and a more balanced development of the three major cultural management categories. In addition to Shanghai, the efficiency gap between the three major cultural management categories in Qinghai is also relatively small, but the efficiency values of the three major cultural management categories are all between 5.57 and 5.58, and there is still much room for improvement from the effective frontier. The management efficiencies of the provinces of Beijing and Zhejiang are between 4.6-7.8 and 3.9-8.2 respectively, and the efficiency of China's cultural management is able to reach a high level. It can be seen that while Chinese culture management in Beijing and Zhejiang has high efficiency, there is still a need to shorten the management gap in order to realize the effective development of different Chinese culture industries.

6. Comparison of Model Optimization Based on System Theory

6.1. Calculation of the optimal value

In order to further test the effectiveness of the system theory management model, the big data management model, convolutional network model, support vector machine were chosen to compare with the system theory-based Chinese culture management model, and Table 1 shows the application effect of different optimization models in the construction of culture management. Where X1, X2, X3 and X4 represent the value and moral concepts, interpersonal management and organizational structure, power and leadership, communication and decision-making styles in Chinese culture.

From the perspective of the optimal objective value, the optimal objective value of the optimization model in this paper is 0.0130 which is the best performance and better than the other three optimization models in the literature. This indicates that the optimization model in this paper has more advantages in improving the efficiency of cultural management construction. In terms of the number of calls, the optimization model in this paper needs only 17 calls to reach the optimal solution, which is much lower than the other models. This shows the advantage of the system theory management model in convergence

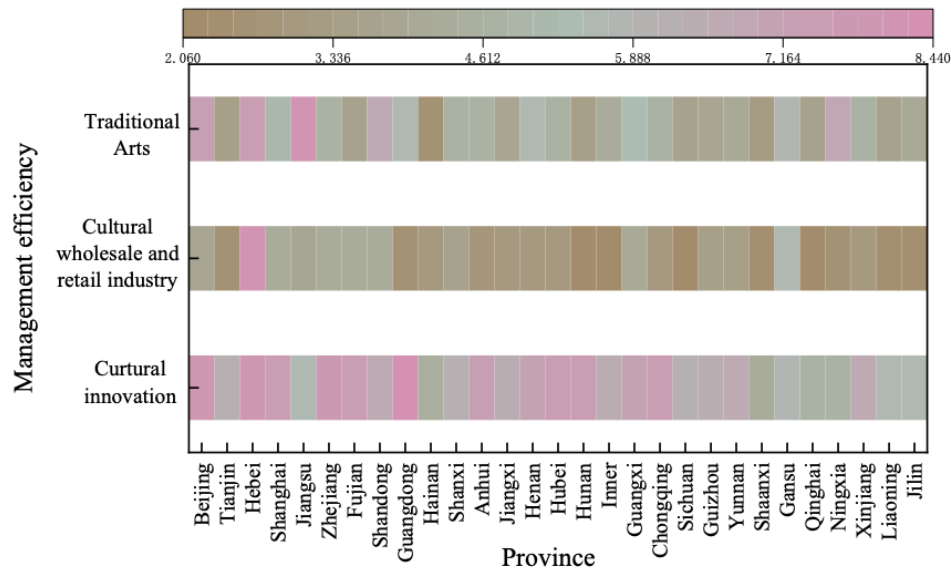


Figure 4: Efficiency values of cultural management categories in different provinces

speed and computational efficiency, which can play a better optimization role. The optimal design values of this paper's optimization model in the four dimensions of X1, X2, X3 and X4 are different from those of other models, especially the X1 value of 70.00 is significantly different from that of other models of 80.00. This means that this paper's optimization model adopts different strategies or focuses in the construction of cultural management, such as focusing more on cost control or flexibility of resource allocation. The values of X2, X3 and X4 also reflect the optimization strategies of this paper's optimization model in different aspects of cultural management, such as production, distribution and service. For example, the X2 value of 45.24 represents some kind of resource input or allocation in the distribution segment, while the values of X3 and X4 are related to service quality and efficiency. Comparison with other management models reveals that the optimization model in this paper performs well in the construction of cultural management and can effectively improve the overall efficiency of cultural management.

Table 1: Optimization results of different models

Management model	Number of calls	Optimal design value (X1, X2, X3, X4)	Optimal target value
Big data	125	(80.00, 37.06, 1.72, 2.33)	0.0158
Convolutional network	30	(79.99, 48.43, 0.90, 2.40)	0.0135
Support vector machine	27	(80.00, 46.52, 0.90, 2.50)	0.0133
System theory	17	(70.00, 45.24, 0.60, 2.21)	0.0130

6.2. Comparison of application effects

China's thousands of years of culture is not static, vertically with different periods of constant change horizontally between the various trends of thought continue to mingle, which has led to the formation of the current rich cultural forms. The Denison cultural management model and the double S three-dimensional cultural model are compared with the system theory model to verify the optimization performance and application value of the model in this paper.

Taking Shanghai, China as the application object, divided into four cycles, a one-month model application test is conducted, and Table 2 shows the statistical results of Chinese cultural participation. The participation in Chinese cultural activities before application is around 70%, and although the Denison and Double S three-dimensional cultural models can improve the participation to some extent, the system theory-based cultural management model has the highest participation, which is 91.5%, 93.4%, 94.2, and 95.1% respectively under the four cycles. It shows that the optimization model of Chinese cultural management established meets the requirements of the current era, can give modern meaning to traditional culture, promote the innovation and development of Chinese culture, and open up a greater space for Chinese cultural development.

Table 2: Chinese cultural participation

Cycle	Pre-app engagement/%	Post-application engagement/%		
		Denison	Double S Stereo	System Theory
1	70.2	75.8	80.1	91.5
2	71.2	76.2	82.2	93.4
3	73.1	76.9	83.1	94.2
4	74.2	77.1	84.5	95.1

7. Conclusion

The optimization model in this paper provides an in-depth analysis and optimization of various links in the construction of cultural management by introducing the methodology of system theory and combining the specific elements and principles of cultural management in China. In different aspects of cultural management such as production, distribution and service, the model realizes the optimal allocation of resources and the maximization of efficiency by adjusting the design variables. Within different regions, the efficiency value of traditional art management efficiency is 0.7486, and in the efficiency of cultural and creative services, the east is the highest, the west is slightly higher than the center, and the northeast is the lowest. Shanghai, China has the smallest gap in management model efficiency, and the average efficiency is above 8.0, while the management efficiency of the provinces of Beijing and Zhejiang is 4.6-7.8 and 3.9-8.2, respectively. By analyzing the efficiency of China's cultural management model in different regions and provinces, it helps to promote inter-regional cooperation and exchanges, and for the high-efficiency regions, it serves as a demonstration region, while the low-efficiency regions need more support and resource investment, thus improving the overall management level. Comparison with other optimization models shows that the optimal objective value of the system theory optimization model reaches 0.0130, and at the same time, it also performs well in terms of convergence speed, reaching the optimal solution in only 17 calls. These data fully demonstrate the practicality and efficiency of system theory in the optimization of Chinese cultural management models, which provides strong support for the high-quality development of cultural management.

About the Author

Yangfei Zhan was born in Longyan, Fujian, P.R. China, in 2002. I am currently studying at the School of Journalism and Communication, Hunan Normal University. My main research direction is directing and editing.

References

- [1] Olli, E., & Swedlow, B. (2023). Cultural theory, rejection of cultural bias, and party preference. *Party Politics*, 29(2), 359–373.

- [2] Montoya, M. J., & Stasiewicz, C. (2020). Leveraging historical shifts in the world economy: Systems of patronage and supportive ecosystems for creative and cultural enterprise. *International Journal of Entrepreneurship and Small Business*, 40(2), 247–269.
- [3] Vos, J. F., & Boonstra, A. (2022). The influence of cultural values on enterprise system adoption, towards a culture–enterprise system alignment theory. *International Journal of Information Management*, 63, 102453.
- [4] Drion, G. J. (2022). Towards a theory and practice of cultural communication. *European Journal of Cultural Management and Policy*, 12, 11085.
- [5] Zhang, S. (2022). The function mechanism of the current situation of Chinese cultural integration and environment on the development of Chinese enterprises. *Journal of Environmental and Public Health*, 2022(1), 4393337.
- [6] Jia, S., Liao, Y., Xiao, Y., Zhang, B., Meng, X., & Qin, K. (2022). Methods of conserving and managing cultural heritage in classical Chinese royal gardens based on 3D digitalization. *Sustainability*, 14(7), 4108.
- [7] Wang, Z., Deng, Y., Zhou, S., & Wu, Z. (2023). Achieving sustainable development goal 9: A study of enterprise resource optimization based on artificial intelligence algorithms. *Resources Policy*, 80, 103212.
- [8] Gao, W., Li, L., Xue, Y., Li, Y., & Zhang, J. (2023). Design of security management model for communication networks in digital cultural consumption under Metaverse–The case of mobile game. *Egyptian Informatics Journal*, 24(2), 303–311.
- [9] Li, P., Xiao, X., & Seekamp, E. (2022). Climate adaptation planning for cultural heritages in coastal tourism destinations: A multi-objective optimization approach. *Tourism Management*, 88, 104380.
- [10] Santosuosso, P. (2022). A satisfaction-based model for risk indexing in cultural heritage conservation. *Journal of Cultural Heritage*, 57, 173–183.
- [11] Yi, W. (2023). Logistics scheduling optimisation and allocation of intercultural communication trade under internet of things and edge computing. *International Journal of Grid and Utility Computing*, 14(2-3), 156–168.
- [12] Yan, H., & Lv, J. (2022). Analysis and optimization of internal factors of cultural industry management based on structural equation model. *Wireless Communications and Mobile Computing*, 2022(1), 7784814.
- [13] Hsueh, S. L., Zhou, B., Chen, Y. L., & Yan, M. R. (2022). Supporting technology-enabled design education and practices by DFuzzy decision model: Applications of cultural and creative product design. *International Journal of Technology and Design Education*, 32(4), 2239–2256.
- [14] Liang, D. (2022). Aesthetic value evaluation for digital cultural and creative products with artificial intelligence. *Wireless Communications and Mobile Computing*, 2022(1), 8318620.
- [15] Atherton, A. (2020). Does Confucian management exist in Chinese companies? An examination of the intersection between cultural influence and business practice in China. *Asia Pacific Business Review*, 26(1), 21–31.
- [16] Zhou, X., Guo, Y., Xie, X., Liu, C., & Zhang, F. (2022). The influence of a destination's red cultural atmospherics on tourists' confidence in Chinese culture. *Frontiers in Psychology*, 13, 992125.
- [17] Zhang-Zhang, Y. (2023). Sustainable strategic people management: A Confucian perspective on Chinese management. *Sustainability*, 15(12), 9188.
- [18] Miller, Z. D., Freimund, W., Crabtree, S. A., & Ryan, E. P. (2021). No limits of acceptable change: A proposed research framework for informing visitor use management in the context of cultural resources. *Sustainability*, 13(1), 377.
- [19] Halford, F. K., & Ables, D. M. (2023). The National Cultural Resources Information Management System (NCRIMS): New horizons for cultural resources data management and analyses. *Advances in Archaeological Practice*, 11(1), 52–62.
- [20] Trebitz, K. I., Fennema, S., & Hicks, K. (2021). Integrating cultural perspectives into international interdisciplinary work. *Journal of Contemporary Water Research and Education*, 172(1), 6–18.
- [21] Zhang, X., Ye, J., Wang, D., Tian, F., & Fu, S. (2023). Leadership mindsets, cultural norms and organizational resilience in China: The moderating effect of supportive human resource practices. *Asia Pacific Business Review*, 29(1), 248–265.
- [22] Qi, L., Wang, Y., Chen, J., Liao, M., & Zhang, J. (2021). Culture under complex perspective: A classification for traditional Chinese cultural elements based on NLP and complex networks. *Complexity*, 2021(1), 6693753.