

Retraction

Retracted: Research on the Effective Fusion of Traditional Art and Old Street Culture Construction Based on Fuzzy Algorithm

Security and Communication Networks

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] M. Gong, "Research on the Effective Fusion of Traditional Art and Old Street Culture Construction Based on Fuzzy Algorithm," *Security and Communication Networks*, vol. 2022, Article ID 9616634, 9 pages, 2022.

Research Article

Research on the Effective Fusion of Traditional Art and Old Street Culture Construction Based on Fuzzy Algorithm

Miao Gong 

School of Art, Xi'an International Studies University, Xi'an 710119, China

Correspondence should be addressed to Miao Gong; gongmiao@xisu.edu.cn

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With the rapid development of modern science and technology, people gradually lose the importance of traditional art and old street culture, and it plays a vital role in improving the knowledge and cultural level of the people. This paper aims to effectively integrate traditional art and old street culture construction by studying fuzzy algorithms. In the era of rapid technological development, traditional culture and art must keep pace with the times and combine traditional art and old street culture through more scientific algorithms through fuzzy algorithm to solve the effective integration of traditional art and old street culture in today's society. Based on the fuzzy algorithm and visualization technology, this paper checks the meaning of traditional art and collective research by analyzing the fuzzy algorithm, uses experiments to verify the theory, refines cultural symbols, and proposes activation methods to integrate traditional art and old street culture as a whole. Through the defuzzification algorithm and the hierarchical evaluation fuzzy algorithm, people's subjective evaluation of the integration of traditional art and old street culture is calculated, and the algorithm is optimized from the above aspects, which substantially contributes to the effective integration of traditional art and old street culture. This case study can also provide new ideas for the protection of historical and cultural blocks in many cities and the integration of traditional art, remedy the dying traditional art and old street culture, and bring a glutinous feast to the construction of traditional art and old street culture.

1. Introduction

Due to the rapid urban construction in the past 40 years, my country's urban architecture has undergone great changes. Although people's lives have been greatly improved, it is needless to say that we have also paid a lot of traditional art and old street culture. It is quietly dying. At present, the traditional art and the old street culture cannot be better integrated with each other. There are still some problems during the integration period, and the traditional art and the old street culture have not been truly integrated through people's interest. Make full use of modern algorithms to reasonably integrate traditional art and old street culture. Based on the fuzzy algorithm [1–5], this article will integrate traditional art and old street culture and show people a “composite” old street that is in line with the development of modern society and can display traditional art. This article will use the defuzzification algorithm and the hierarchical evaluation fuzzy algorithm to reproduce the traditional art

and old street culture in people's memory and calculate the best method for the reasonable integration of traditional culture and old street construction.

2. Deblurring Algorithm for Night Images

When deblurring an image, the role of the blur kernel function is very important. The more accurate the calculation of the blur kernel function algorithm, the better the effect of image deblurring. However, the blur kernel can not only be obtained by calculation but also a mathematical model needs to be established according to the actual situation for calculation. Image blur [6] is roughly divided into three categories, namely defocus blur, Gaussian blur, and motion blur. These three deblurring algorithms also correspond to different types of blur kernel functions, which I will analyze in the following subsections.

2.1. Image Blur Type and Blur Kernel Function

2.1.1. Caustics Blur and Corresponding Blur Kernel Function.

Under normal circumstances, the camera can only form a clear image for the image within a certain focal length range, but for the focal length that is thought or not within the focal length range, it cannot form a clear image, and the blurred image in this case becomes defocus blur. The imaging principle can be described as

$$\frac{1}{u} + \frac{1}{v} = \frac{1}{f}, \quad (1)$$

where f is the focal length of the lens, v is the image distance, and u is the object distance. If formula (1) does not hold, the image of the point light source is in the shape of a disk, and its energy will decrease from the center to the periphery. The blur function for caustics blur can also be described as

$$k(x, y) = \begin{cases} \frac{1}{\pi r^2}, & \sqrt{x^2 + y^2} > r, \\ 0, & \sqrt{x^2 + y^2} \leq r, \end{cases} \quad (2)$$

where r is the lens radius.

There are two optimizations for implementing this operation:

Reduce the image and then perform the convolution operation.

Split the two-dimensional Gaussian convolution into two one-dimensional Gaussian convolution operations (now do convolution horizontally and then do convolution vertically).

The first advantage of reducing the image is to reduce the resolution, so that the image can be better reflected in subsequent operations. The second advantage is set $f(x, y)$, $f(x)$, which $f(y)$ conforms to the standard normal distribution, that is, $\mu = 0$, $\sigma = 1$, there are

$$f(x, y) = f(x)f(y). \quad (3)$$

but

$$\begin{aligned} g(x, y) &= \sum_{u=-r}^r \sum_{v=-r}^r s(x+u, y+v) f(u, v), \\ &= \sum_{u=-r}^r \sum_{v=-r}^r s(x+u, y+v) f(u) f(v), \\ &= \sum_{u=-r}^r \sum_{v=-r}^r s(x+u, y+v) f(v) f(u). \end{aligned} \quad (4)$$

It can be seen that the one-dimensional convolution is now performed in the horizontal direction, then the one-dimensional convolution is performed in the vertical direction, and the two-dimensional Gaussian convolution operation can be split. The most generated weights are normalized so that their sum is 1, otherwise the brightness will be reduced.

2.1.2. Gaussian Blur and Corresponding Blur Kernel Function. Gaussian blur can also be called Gaussian smoothing. Gaussian blur [7] is generally obtained by

calculating the pixels around each point of the image through the weighted average method [8–11]. Its blur function can be expressed as

$$k(x, y) = \frac{1}{2\pi\sigma^2} \exp\left(-\frac{x^2 + y^2}{2\sigma^2}\right). \quad (5)$$

The above formula is σ the standard deviation of the Gaussian function. The larger the σ value, the larger the radius and the worse the image clarity.

2.1.3. Motion blur and corresponding blur kernel function.

When the environment is dim or the light is insufficient, in order to improve the quality of the image, we generally choose to extend the exposure time. When the exposure time of the image is prolonged, the possibility of motion blur will be greatly increased.

The function expression of motion blur can be expressed as

$$k(x, y) = \begin{cases} \frac{1}{L}, & 0 \leq |x| \leq L \cos \theta, \quad y = x \tan \theta, \\ 0, & \text{other.} \end{cases} \quad (6)$$

The above formula (x, y) is the position of the pixel, θ is the angle between the horizontal and the moving directions, and L is the distance generated when the image moves. We can thus obtain that when the object moves at a uniform speed and in a straight line, formula (4) can be improved as

$$k(x, y) = \begin{cases} \frac{1}{L}, & 0 \leq |x| \leq L, \\ 0, & \text{other.} \end{cases} \quad (7)$$

Through the above fuzzy algorithm, the traditional art and the old street culture are preserved, and the function is used to conduct induction and integration, integrate the traditional art and the old street construction, and to learn about traditional art and old street culture.

Motion blur, as the name suggests, is the blurring effect produced by objects moving in the scene when the scene is exposed. The effect of real-time computer animation is similar to that of a camera with an infinitely short shutter time, and each (frame) picture is very clear without any motion blur. Compared with simply and rudely increasing the overall frame rate, adding motion blur not only provides an obvious sense of realism and softness to high-speed moving scenes but also avoids the significant power consumption increase brought about by high frame rates.

2.2. Image Blur Model. Generally, the common image blur model is the convolution model [12], but the convolution model has certain limitations; its representation can only be uniform blur, while the space-variant model cannot. It is assumed that most regions of the image conform to the convolutional blur model. The expression of the convolutional fuzzy model is

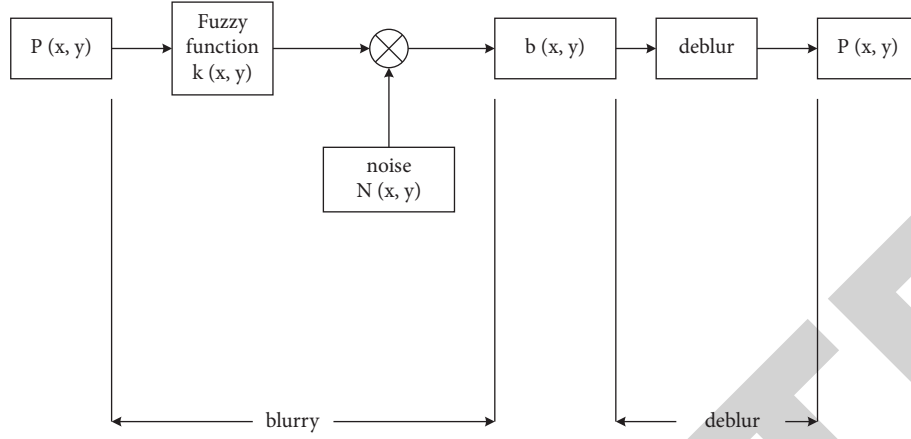


FIGURE 1: Basic flow chart of image blurring and deblurring.

$$b(x, y) = p(x, y) * k(x, y) + n(x, y). \quad (8)$$

The above formula $b(x, y)$ represents the blurred part after convolution, which $p(x, y)$ means that a clear blurred image needs to be restored, and the $k(x, y)$ fuzzy kernel function, $k(x, y)$ also known as the point spread function [13]. PSF (point spread function), $n(x, y)$ means noise. Because when we take pictures of the old street, we will be disturbed by different factors, including motion, brightness, and noise of the old street, etc. I can only take a clear picture of the old street after eliminating these factors, and then through the hierarchical fuzzy algorithm, we can understand the types of old street art and traditional culture that people really like, so as to effectively integrate. So that these traditional arts and old street culture can be preserved.

* represents a convolution operator.

The basic flowchart of image blurring and deblurring is as follows in Figure 1:

The interference of noise is ignored $k(x, y)$ in the blurred image and the blur kernel function $b(x, y)$ is assumed to be invariant in space, the above formula can be rewritten as

$$b(x, y) = p(x, y) * k(x, y). \quad (9)$$

By performing a two-dimensional Fourier transform on the formula, the formula in the region can be obtained:

$$B(x, y) = P(x, y)K(x, y). \quad (10)$$

The above expressions are the formula $B(x, y)$ for the blurred image $b(x, y)$ in the area and the formula $P(x, y)$ for the clear image $p(x, y)$ in the area is $K(x, y)$, and the formula of the fuzzy kernel function in the region $k(x, y)$. The formula at this time can also be expressed as

$$b(x, y) = p(x, y) * k(x, y) = K[p(x, y)]. \quad (11)$$

Through the above formula, we can save and reserve traditional culture and old street culture in a photographic manner, then push it in the form of data, ctivate the economic strength of historical and cultural blocks through fuzzy kernel function. Awaken people's hearts when they were young.

2.3. Hierarchical Fuzzy Algorithms. Since each person has unquantifiable influencing factors on traditional art and old street culture [14], we will express the influencing factors in the form of a set, and the elements are mutually exclusive and do not interfere with each other. Each influencing factor is defined as u_i , and the influencing factors are composed of each person's artistic and cultural set U , expressed as

$$U = \{u_i | i = 1, 2, \dots, n\}. \quad (12)$$

Among them, n is the set of different artistic elements and U is the set of artistic and cultural factors.

In the set U , then, $i \neq ju_i$ with u_j . The results vary in degree of influence, that is, the degree of influence of traditional art and old street culture is different. Corresponding to each factor in the set $u_i, i = 1, 2, \dots, nU$, I assign the value of the influence degree of the response, which is used to reflect $a_i, i = 1, 2, \dots, n$ the weight of each factor in participating in traditional art and old street culture [15, 16]. The influence degree value constitutes a set A , which is mathematically expressed as

$$A = \{a_i | i = 1, 2, \dots, n\}. \quad (13)$$

Among them, a_i the normalization and non-negativity conditions are satisfied, namely,

$$a_1 + a_2 + \dots + a_n = 1, \quad (14)$$

each factor in the set U , if there is a total number of appraisers $S_{ij}S$, the individual evaluation result is v_j , where $S = \sum_{j=1}^m S_{ij}, i = 1, 2, \dots, n$. According to the above, we call the u_i degree of membership to the evaluation results as v_j

$$r_{ij} = \frac{S_{ij}}{S}; \quad i = 1, 2, \dots, n; j = 1, 2, \dots, m. \quad (15)$$

In this way, we can use the above data to change and integrate the influence factors of each person on traditional art and old street culture, so as to achieve a complex old street art culture that everyone likes.

After the fuzzy model of the image is established, we can consider solving a clear image. However, the fuzzy kernel function $k(x, y)$ and noise in formula (6) $n(x, y)$ are unknown, and his solution cannot directly solve the clear image

through convolution operation $p(x, y)$. Even if there is a unique solution, it is difficult to control the influence of noise $n(x, y)$ on the image during the solution process $p(x, y)$ because $b(x, y)$ a slight change in the blurred image will have $p(x, y)$ a great impact on the solution of the clear image.

Combined with the discussion points of this article, the normalization processing point is to start with the set, remove the attributes of the unimportant elements and the elements that are not comparable in the set, and retain the attributes that are helpful to the evaluation behavior. The intention of introducing the weighted average method and the product average method is always the same; the weighted average method and the product average method are A_i both representations after compounding fuzzy sets. The choice of the two is determined based on the size of the calculation amount.

3. Deblurring Algorithm and Hierarchical Blurring Algorithm Optimization for Night Images

The integration of traditional art and old street construction is inseparable from the old-fashioned buildings in the block. We need to optimize it based on the deblurring algorithm to make it represent the time of the block in people's memory and combine the modern society with the style and customs of the old block. How to use the fuzzy algorithm to drive the environment, economy, and history and humanities of the old block is the key to the success of the block and traditional art.

It is assumed that the constrained least squares method is used to restore the old street image. The algorithm is based on smoothness and simplifies the blurring of the image p . The optimal solution closest to the original image can be obtained p' . This problem is described by Lagrangian as follows:

$$J(p') = \lambda \left(\|b - Kp'\|^2 - \|n\|^2 \right) + \|Qp'\|^2, \quad (16)$$

where λ is the Lagrange coefficient. A clear image can be obtained by the above formula.

Because the hierarchical fuzzy evaluation algorithm does not involve the measurable discussion of fuzzy sets and the standard fuzzy division of the universe to a certain extent. There is no doubt that 100% of the requirements cannot be met when the core evaluation calculation is completed, and the calculated value deviates from the actual situation, even lower than the subjective evaluation value. Therefore, this section will focus on the measurability of fuzzy sets and the standard fuzzy division of the universe for optimization.

Assuming that there is a universe of discourse X , there are C and D as the fuzzy sets on the universe of discourse, and x is the element $x \in X$ in the universe of discourse X and then define the measurability of fuzzy set C to fuzzy set D can be expressed as

$$P = \text{Poss}(D|C) = \sup_{x \in S} \left(C(x) * D(x) \right). \quad (17)$$

Among them $P \in [0, 1]$, $(*)$ is the operator.

In particular, when C is a degenerate fuzzy set $x_0 \in X$ on the universe X , that is, only at a certain point, $C(x_0) = 1$, so there is

$$P = \text{Poss}(D|C) = \sup_{x \in S} \left(C(x) * D(x) \right) = D(x_0). \quad (18)$$

The above completes the relevant elaboration on the measurability of fuzzy sets. Let it be $P(y)$ the whole fuzzy set on the universe Y , and x is the element $x \in X$ on the universe X , that is, there is a fuzzy set $\{A_i | i = 1, 2, \dots, r\}$, $A_i \in P(y)$, if the set satisfies:

$$\begin{aligned} & \forall i \in I, \text{Poss}(A_i | A_i) \\ & \forall i, j \in I, \max \text{Poss}(A_i | A_j) < 1 \\ & \forall x \in S, \exists i \in I, A_i(x) > 0, \sum_{i=1}^r A_i(x) = 1. \end{aligned} \quad (19)$$

It is called the $\{A_i | i = 1, 2, \dots, r\}$ standard fuzzy partition of universe X .

Let the universe $U = [a, b]$, $a < b$, $\{A_i | i = 1, 2, \dots, r\}$ of discourse be the standard fuzzy partition set of the universe of discourse, and it is stipulated that the center points of each fuzzy partition set are distributed $[a, b]$ above, namely,

$$\begin{aligned} A_i(x) & \begin{cases} 1 - \frac{1}{d}|x - a - d(i-1)|, & a + d(i-1) \leq x \leq a + d, \\ 0, & \text{other,} \end{cases} \\ A_r(x) & \begin{cases} 1 - \frac{1}{d}|x - b|, & a + d(r-2) \leq x \leq b, \\ 0, & \text{other.} \end{cases} \end{aligned} \quad (20)$$

Among them $d = b - a/r - 1$, the standard fuzzy division of the universe of discourse U and the schematic diagram of the center point are shown in Figure 2.

When solving practical problems, there are fuzzy sets [17] formed by the interaction between influencing factors, and then the overall fuzzy set is constructed to include the subfuzzy sets generated by the interaction. Suppose $U = U_1 \times U_2 \times \dots \times U_n$, the judgment condition is

$$A_i = \mu(U_i), i = 1, 2, \dots, n. \quad (21)$$

Among them, A is composed of A_1, A_2, \dots, A_n complexes. Due to the uncertain factors in the actual problems, the situations faced are different, and the manifestations of A are various. The manifestations of A are mainly classified into two categories, namely, the weighted average method and the product average method.

$\delta_1, \delta_2, \dots, \delta_n$ As a set of weights, the weighted average method expression is

$$\mu_A(u) = \sum_{i=1}^n \delta_i \mu_{A_i}(u_i). \quad (22)$$

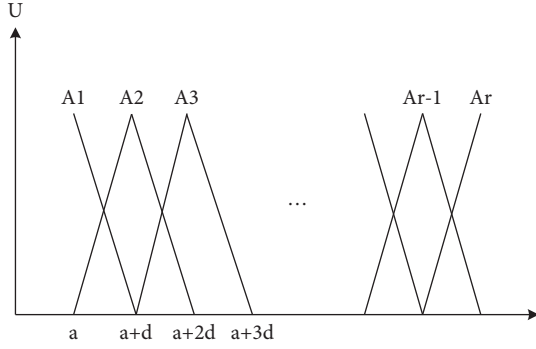


FIGURE 2: The standard fuzzy partition of the universe of discourse $U = [a, b]$.

a_1, a_2, \dots, a_n As a set of weights, the product-average method expression is

$$\begin{aligned} \mu_A(u) &= b \left((\mu_{A_1}(u_1))^{a_1} (\mu_{A_2}(u_2))^{a_2} \dots (\mu_{A_n}(u_n))^{a_n} \right) \\ &= b \prod_{i=1}^n \mu_{A_i}(u_i)^{a_i}. \end{aligned} \quad (23)$$

According to the modified form of A expression, any product factor of the product-average method changes proportionally and is not allowed to be 0.

Combined with the context, the infinite phenomenon does not exist in the fuzzy comprehensive evaluation model. According to the actual situation, the evaluation factor set in this paper $a + d(i-1) \leq x \leq a + d$ takes the value of 0 when it is not in the middle, and the formula is: $a + d(r-2) \leq x \leq b$

$$\begin{aligned} A_i(x) &\begin{cases} 1 - \frac{1}{d}|x - a - d(i-1)|, & a + d(i-1) \leq x \leq a + d, \\ 0, & \text{other,} \end{cases} \\ A_r(x) &\begin{cases} 1 - \frac{1}{d}|x - b|, & a + d(r-2) \leq x \leq b, \\ 0, & \text{other.} \end{cases} \end{aligned} \quad (24)$$

4. Defuzzification Algorithms and Hierarchical Fuzzy Algorithms

Based on the image deblurring method to publicize the scenery of the old street [17–19], the current local government's propaganda of the old street culture is not enough, and it is necessary to increase the publicity live. The fuzzy algorithm will increase the publicity, increase the reputation and popularity of the old street, let more people know about the business opportunities of traditional art and old street culture [20, 21], and let the public participate in it.

4.1. Column Simulation of Defuzzification Algorithm. Based on the image deblurring method to publicize the scenery of the old street, the current local government's

propaganda of the old street culture is not enough, and it is necessary to increase the publicity live. The fuzzy algorithm will increase the publicity, increase the reputation and popularity of the old street, let more people know about the business opportunities of traditional art and old street culture [21], and let the public participate in it.

4.1.1. From the Perspective of the Age of the People, The Simulation of the Fusion of Traditional Art and Old Street Culture. The public's perspective is mainly reflected in the degree of attention paid to traditional art and old street culture in different age groups. Through the blurring algorithm and the hierarchical blurring algorithm, the people at both ends show a certain subjective thinking and independent income of adulthood, and through the view of the picture, the people based on the image de-blurring algorithm and the hierarchical blurring algorithm are compared to the old street scene. Interested age groups and numbers are shown in Table 1 and visualize its data, as shown in Figure 3.

After visualizing the data, the trend of the deblurring algorithm is roughly in line with the population distribution trend of the hierarchical fuzzy algorithm, and there is authenticity under the statistics. It is inferred in turn that the deblurring algorithm still conforms to the real situation when the subjective consciousness is not unique, so in terms of authenticity, the results given by the algorithm can be used.

4.1.2. The People's Expectation Perspective Is a Simulation of the Fusion of Traditional Art and Old Street Culture. The perspective of public expectation is mainly due to the subjective evaluation of the future fusion of traditional art and old street culture [22]. Taking people of different ages as an example, the algorithm-based population classification and expectations are shown in Table 2, and the simulation results are shown in Figure 4.

From the simulation results that the public is seriously lacking confidence in the future of traditional culture. In conclusion, a total of 102 people think that the future of traditional culture is relatively optimistic, but only 36 people are not very optimistic, and we still need to inherit and protect it together [23]. There are 77 people who are relatively unobjective, accounting for 35.8% of the total number. It is still a large group of people, and we must attach great importance to this point. It is highly similar to my survey results, so the calculation results of the algorithm can be used for reference.

4.1.3. People Pay Attention to Cultural Types and Simulate the Fusion of Traditional Art and Old Street Culture. The perspective of the type of culture people pay attention to is to quantify different types of culture, calculate the type of culture and age group concerned, and take the type of culture: agricultural culture, traditional culture, traditional festivals, traditional Chinese medicine, Chinese opera, Chinese architecture, Chinese martial arts, Chinese painting and calligraphy, folk crafts, food, and cooking [25]. The

TABLE 1: Table one or two different methods collect comparisons for different age groups.

Generation:	Under 18	19-30	30-50	Over 50	All people
Deblurring algorithm	21	110	72	12	215
Hierarchical algorithms	21	111	72	10	214

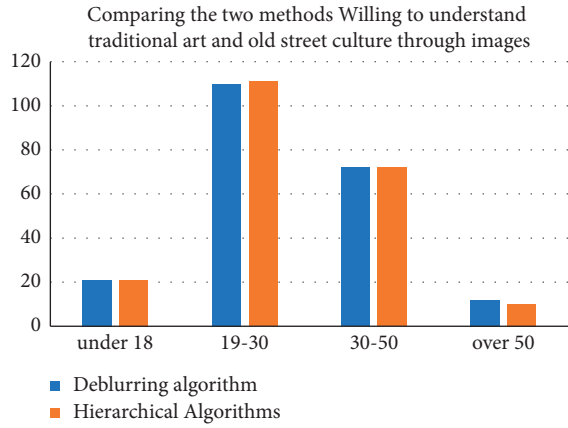


FIGURE 3: A comparison of willingness to understand traditional culture and old street art through images.

TABLE 2: The number of evaluations and the degree of expectation for the future of traditional culture.

Classification	Under 18	19-30	31-50	Over 50	Total people
Very optimistic	2	19	14	1	36
More optimistic	10	54	32	6	102
Hard to say	4	27	16	3	50
Not optimistic	5	10	10	2	27

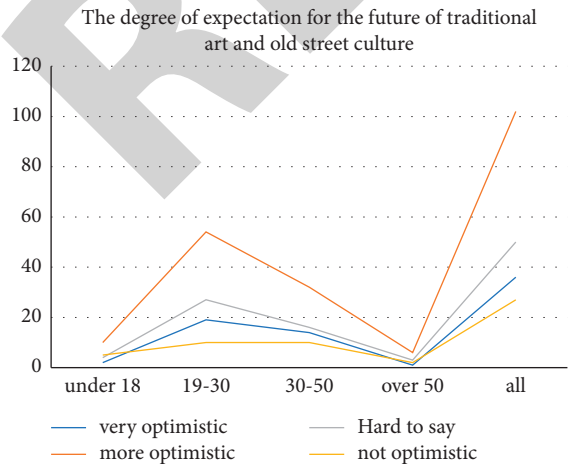


FIGURE 4: The degree of expectation for the future of traditional art and old street culture.

TABLE 3: Evaluators and types of cultures concerned.

Culture type/Age	Under 18 (%)	19-30 (%)	31-50 (%)	Over 50 (%)
Agricultural culture	4	11	20	30
Traditional culture	20	14	12	10
Traditional festival	13	10	13	15
Traditional Chinese medicine	11	15	15	17
Chinese opera	2	20	2	13
Chinese architecture	20	5	8	5
Chinese martial arts	10	5	7	0
Chinese calligraphy	5	8	3	8
Folk craft	11	2	4	2
Food and cooking	4	10	6	0
Total proportion	100	100	100	100

sampling results are shown in Table 3. The simulation results are shown in Figure 5.

From the simulation results, it can be seen that different age groups pay different attention to different cultural types. The quantitative results of teaching different people to pay attention to different cultural types are attributed to percentages and substituted into the calculation formula. The qualitative results obtained are consistent with the statistical results of a large number of experimental data and realize the core idea of fuzzy evaluation.

From Figure 5, it can be clearly understood that traditional art and literature are different for each age group based on different algorithms. Older people can understand that they pay more attention to traditional Chinese medicine and agricultural culture through calculation and comparison; adults pay more attention to traditional festivals; for most groups, those in the 18-50 age group prefer food and cooking, traditional shows, and Chinese opera. Through calculation and analysis, I can roughly conclude that we should start with traditional programs and food and cooking to attract people's interest in traditional art and old street culture.

4.2. Big Data Analysis Method and Sampling Survey Method. Based on traditional cultural types, I use big data analysis method and sample survey method to compare because of fuzzy algorithm and sample survey method to compare. The results of traditional art and old street culture by the public from different angles are shown in Table 4, and the visualization chart is shown in Figure 6.

As can be seen from the above Figure 6, the algorithm we used is highly consistent with the sampling survey method, which shows that the defuzzification method I used is basically the same as the hierarchical evaluation fuzzy method. It is necessary to promote it from images, videos and the Internet to gain more public attention.

4.3. Algorithm Experimental Index Analysis

4.3.1. Hierarchical Fuzzy Evaluation Algorithm Simulation Results Conformity Test. The superiority of the algorithm is not only reflected in the fuzzy performance but also reflected

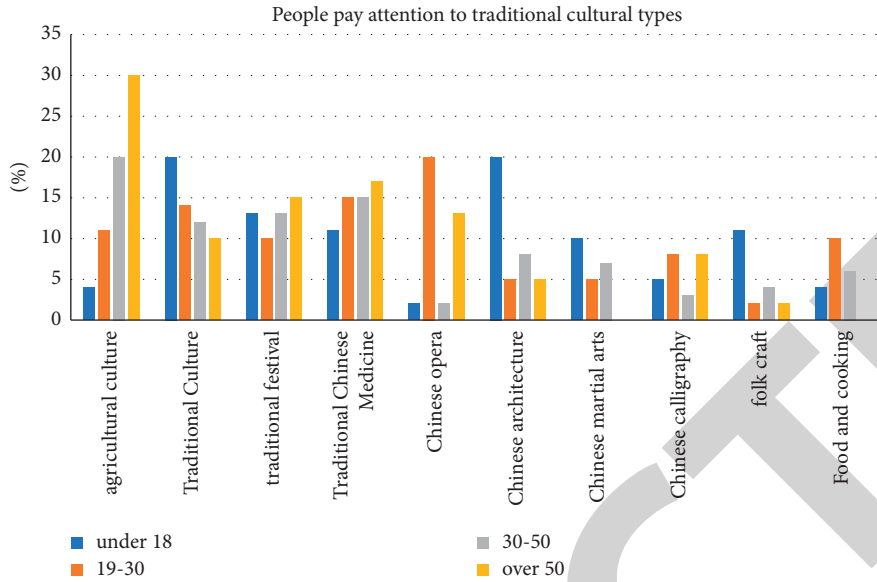


FIGURE 5: The proportion of people concerned about traditional culture.

TABLE 4: Different ways to understand traditional art and old street culture.

	Image (%)	Video (%)	Newspaper (%)	The internet (%)	Other (%)
Big data analytics	80.91	90.20	20.00	88.01	10.00
Sample survey method	79.99	91.00	19.00	89.33	11.00

TABLE 5: Algorithm compliance simulation data comparison.

Algorithm quiz results	8 7.3%	8 7.6%	8 9.5%	8 8.6%	9 1.2%
Subjective evaluation results	8 8.1%	8 7.2%	9 0.2%	8 7.8%	9 0.7%

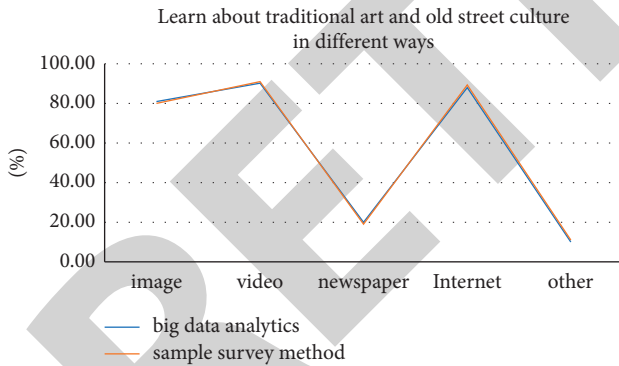


FIGURE 6: Comparison of different understanding methods.

in the consistency detection of the results. In order to achieve a reasonable effect on the judgment of the facts, this paper takes the consistency of the results of the algorithm as the test point, and the experimental data and visual charts obtained by simulation are shown in Table 5 and Figure 7, respectively. The percentage is used as the evaluation standard of the experiment. The larger the value is, the closer the conformity is to the real situation.

The simulation points are based on the individual subjective evaluation of the age of the people, the expectation of the people, and the types of traditional culture that the people pay attention to.

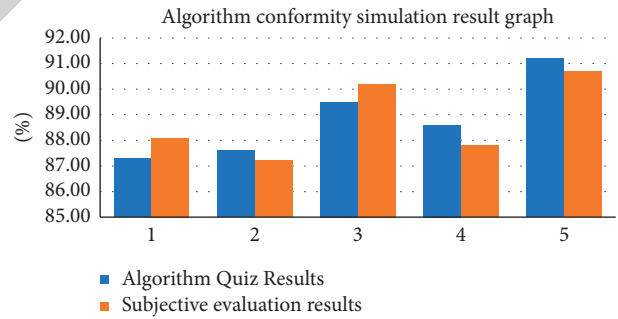


FIGURE 7: Algorithm compliance simulation results.

From the visual chart, it can be seen that the algorithm test results and the subjective evaluation have a high degree of overlap based on the fuzzy comprehensive evaluation method, and the difference between them is not more than 1%, the difference can be ignored, and the degree of compliance is considered to meet the evaluation requirements.

4.3.2. Defuzzification Algorithm and Hierarchical Fuzzy Evaluation Algorithm Unit Calculation Time Efficiency Simulation. Fixed experimental results are only used as a single variable to be evaluated for experimental anti-simulation. Taking the time efficiency as the evaluation standard for the calculation results reflects the simplicity of the algorithm and the simplification of complex problems.

TABLE 6: Time efficiency (T/s) per unit of calculation of similar algorithms.

To be evaluated (TB)	Deblurring algorithm	Hierarchical fuzzy evaluation method	Comprehensive evaluation method
1.0	55.1	67.3	66.2
1.5	82.3	99.2	103.5
2.0	122.7	153.7	167.3

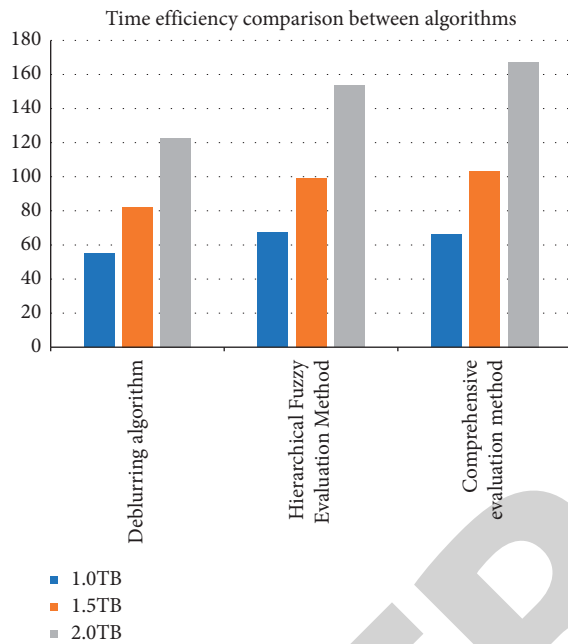


FIGURE 8: Time efficiency diagram between algorithms.

The simulation data are shown in Table 6, and the visualization chart is shown in Figure 8.

Defuzzification algorithm studied in this paper maintains an advantageous state in terms of time consumption when the evaluation results of qualitative understanding are presented in the form of data. In similar algorithms, the evaluation factor is simplified in the form of a set and a matrix, so that the evaluation factor has a regular format, and the simplified data to be evaluated can be calculated, thereby reducing the time consumption of the algorithm.

The measurability of fuzzy sets and the standard division of fuzzy sets are proposed. The reason is that if they are missing, there will be a gap between the results of the algorithm and the real situation. After the introduction of the above two links, the accuracy of the algorithm will be substantially improved; The weight of the degree is not the algorithm itself that ultimately affects the results. The function of the algorithm is only to combine the data organically and participate in the evaluation factor set of the algorithm.

5. Conclusion

Based on the fuzzy algorithm, I will introduce how to integrate traditional art and old street construction. With the

development of urban construction and technology, simple construction can no longer be recognized by the masses for the construction of old streets. The deblurring algorithm and the layered blurring algorithm can more intuitively and clearly show the innovative integration of traditional art and old street construction, and the traditional art and the old street that is about to disappear once again appear in people's vision. The results presented by its algorithm show that when the algorithm performs conditional derivation, the processing form is often radiative, and there is an exponential explosion of data when a single condition is derived from multiple conditions of the same type. Appropriate containment of such divergence is an important factor for the algorithm to improve time efficiency. The focus is also one of the algorithm optimization points in the future. On the basis of fuzzy algorithm, understand how to integrate traditional art and old street construction and promote the old street scenery based on the combination of traditional culture through different methods, so as to attract more people to learn about traditional art and old street culture. Create a historical and cultural block with more traditional artistic connotation and value.

According to the method of fuzzy calculation, calculate and analyze how to integrate traditional art and old street culture in today's society. As mentioned in the preface of the chapter, the blessing of fuzzy algorithms will greatly reduce the research efforts in terms of efficiency, so the research focus will naturally increase on the accuracy rate. For example, the traditional art and old street culture that people in different regions love are calculated through fuzzy calculation, and the construction and integration are carried out in different locations. While not losing traditional Chinese culture, they can develop together according to the combination of modern civilization and integrate a complete historical and cultural district.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest regarding this work.

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