

Emerging Waste Treatment and Disposal Strategies: For Better Public Health

Lead Guest Editor: Chongqing Wang

Guest Editors: Mika Sillanpaa and Vijay Kumar Thakur





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Retraction

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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.

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Research Article

The Influence of Cultural Communication on the Psychological Health of University Students in the Environment of Big Data

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With the progress of information technology and Internet technology, many new media communication technologies are also progressing, and university students are at the forefront of the development of the Internet and the application of cultural communication. Therefore, the impact of modern cultural communication on college students is the most obvious. Time culture communication relies on time communication media, which affects university students' psychological cognition, experience, and mental health level. University students are the high-risk group of mental health problems. At present, most college students are mentally healthy. However, a considerable number of students' mental health is not optimistic. Therefore, paying attention to the impact of culture on college students' mental health plays an important role in the healthy growth of college students. However, a considerable number of students' psychological health is not optimistic. Therefore, paying attention to the impact of culture on university students' psychological health plays an important role in the healthy growth of university students. In this article, 300 university students were randomly selected as the subjects of this study. SCL-90 test and related factors were used to investigate, covering 9 factors. Five common classification algorithms were trained with training sets and evaluated through verification sets. The classifier with the best effect was selected as our algorithm; it is used to discern students with psychological health problems in the test set. The experipsychological results show that precision reaches 0.68, recall reaches 0.56, and F1 measure reaches 0.67. Based on the influencing factors of university students' psychological health, through the analysis of random samples, based on family environment, school environment, community environment, information culture environment, and other factors, this article puts forward strategies to create a warm and progressive family environment, a friendly and positive campus environment, a democratic and scientific community education environment, and a civilized and fair legal environment, so as to properly solve the psychological health problems of university students.

1. Introduction

The problem of university students' psychological health has become the focus of attention all over the world, and it is also a major problem faced by all countries in the world. Exploring university students' psychological health teaching model based on big data is helpful to more effectively improve the psychological health level of higher vocational students [1]. In recent years, universities have regularly carried out psychological censuses or assessments, collected basic information of students, and taught psychological courses, which will generate a large amount of diverse data.

These fragmented data are inseparable from the factors that affect students' psychological health. The advent of the era of big data has brought unprecedented changes to people's lives, and all walks of life have been impacted to a certain extent. Although "big data" has become a hot word that people are familiar with, it is more concerned by the Internet and the marketing industry [2]. As a cultural industry greatly influenced by big data, the application and value mining of data is still in the initial stage of development. Based on the research on the change of cultural communication of big data, using the research method combining theory and practice, it analyzes the characteristics of cultural

communication, the external and internal driving forces of cultural communication reform, etc. and discusses the challenges and challenges brought by big data to cultural communication. Opportunities and strive to put forward to deal with the impact of cultural communication on the psychological health of university students in the context of big data [3].

In this article, the current situation of university students' psychological health and its influencing factors are studied by sampling and collecting the basic information table of students in recent years, SCL-90 data in psychological census and issuing a simple social support questionnaire. Based on the analysis of random samples, this article discusses the family environment, school environment, community environment, information and cultural environment, and other factors and puts forward some targeted strategies, such as creating a warm and progressive family environment, building a friendly and positive campus environment, building a democratic and scientific community education environment, and creating a civilized and just legal environment, to properly solve the psychological health problems of teenagers. At the same time, massive text information from the Internet is introduced to realize transfer learning; data excavation is carried out for data unrelated to the field of psychological health, and TLLR algorithm is used to effectively predict the psychological health status of university students. Therefore, through the analysis of the data in the data set, the attribute values that need to be predicted are found by statistical analysis, and the distribution of attribute values is estimated according to the analysis of similar data [4].

In the era of big data, the channels of cultural communication data are extensive and the cost is low, which makes the data grow exponentially in volume and speed up in transmission by leaps and bounds [5]. Some data of student information can be obtained in the psychological census of university students' enrollment. For a large number of data, how to find useful and decision-making information for students' psychological health education from these data is a very important and complex process. University psychological counseling centers have higher and higher requirements for information processing of computer decision-making and analysis [6]. Facing the increasing expansion of data and the lack of effective means to obtain information, people began to pay attention to data excavation technology. Therefore, we need to be familiar with the development of data excavation and its application in the field of education [7]. The innovation of this article is that

- (1) The application of data excavation technology to the psychological management system will make effective use of the massive data in students' psychological files, and the decision tree algorithm in data excavation can be used to predict and analyze students' psychological problems; the association rule algorithm can analyze the internal relationship between students' psychological problems and other attributes of students, so that it can provide accurate

and useful information for psychological counseling teachers and improve work efficiency

- (2) This paper applies decision tree excavation technology to the analysis of students' psychological problems, studies data excavation technology based on network environment, especially establishes data excavation server on the Internet, and cooperates with database server to realize the perfect combination of data excavation and mental health education

This article is organized into six sections. The first section is the introduction part, which is based on the influencing factors of university students' psychological health, through the analysis of random samples, and discusses the family environment, school environment, community environment, information and cultural environment and other factors, aiming to solve the problem of university students' psychological health. The second section mainly summarizes the relevant literature, summarizes the advantages and disadvantages, and puts forward the research ideas of this article. The third section introduces in detail the application of university students' psychological health management in the context of big data era and mentions the comparative application of algorithms. The fourth section analyzes the influencing factors of university students' psychological health, especially the sample data set. The fifth section is the optimization strategy of university students' psychological health development. The sixth section is the conclusion, summary, and outlook.

2. Related Work

The researchers expounded the concept of big data. Zhang and Jia proposed a new method to obtained students' depression scores through depression questionnaire and established a more accurate prediction model to identify the psychological state of depressed groups [8]. On the other hand, Xia proposed the goals, contents, and strategies of digital campus construction under the background of big data [9]. Xuan observes the significant relationship between emotional expression and the individual characteristics of searchers; the investigation of users' emotions in the search process showed that users with happy emotions invested a lot of time in searching and viewing search solutions [10]. Gao analyzed the employment value orientation of university students based on big data and proposed corresponding guidance strategies [11]. Although the establishment of psychological archives has attracted the attention of many schools, from the current application practice, the quality and quantity are not satisfactory. Researcher Xia conducted a cross-sectional historical meta-analysis on the mental health level of college students in recent 10 years, and the results showed that the overall level of mental health of college students was gradually improving [12]. In terms of gender differences, the trend of improving the psychological health level of boys is higher than that of girls. In the research of influencing factors of psychological health, Ming and Long think that when people are in poverty, the

improvement of economic development level can enhance the harmony of psychological health, but when the economic development level reaches a “turning point”, the relationship between psychological health and economic development level will become complicated [13]. In view of the increasing environmental psychological uncertainty of the whole society, Chen believes that anxiety has become a basic social psychologicality [14]. Xiaojun and Zheng believe that in today’s network society or information society, information has become the direct production object, which leads to uncertainty becoming the essential characteristic of network society [15]. The unprecedented abundance of information on the Internet and the extremely fast speed of communication and diffusion have further strengthened the uncertainty of cultural communication. Haixia and Qing believe that, for university students, the upward mobility demand and the uncertainty of the environment together cause the “class anxiety” of contemporary university students [16]. Shihuan believes that the process of social transformation has brought more environmental psychological uncertainty, which is a major reason for the decline of adolescents’ psychological health [17]. From the psychological point of view, uncertainty means that individuals cannot make an accurate assessment of the future, so they cannot make preparations in advance, which leads to students’ anxiety.

3. The Application of University Students’ Psychological Health Management under the Background of Big Data Era

3.1. Characteristics of Cultural Communication in the Era of Big Data. Compared with traditional media, the era of big data has obvious characteristics of media transformation, which are embodied in the following aspects:

(1) *Thematic.* In the context of big data, the hotspots and sensitive information of cultural communication tend to be blurred. Due to the large amount of information and faster updating, the collection and analysis of data cannot be precise, but the theme is set by ordinary people as the subject of reception. It shows the theme of large capacity, short cycle, and fast production [18].

(2) *Abundance.* Due to the universality, equality, and openness of big data, recipients of different age groups can share personal and group information anytime, anywhere, regardless of their status.

(3) *Reality.* The main body of cultural communication is no longer limited to professional media practitioners but maximizes the freedom to select thematic content and style characteristics and can more freely reflect the reality of life [19]. Spontaneous cultural communication subjects get rid of the dogma of communication theory, form a simple cognition of objective things, get through the convenient channel of big data platform with unique emotional expression, and easily get the communication themes close to life.

(4) *Fissibility.* In cultural communication, with the help of existing social media such as Weibo, WeChat, and QQ, the core supporting role of data analysis technology is brought into play, so as to achieve the communication valid-

ity of instantly driving culture to radiate from one social group to another.

(5) *Intelligence.* Big data technology spans the distance between time and space, spreads culture through virtual data magic, and realizes the intelligent synchronization between the virtual world and the real world. Communicators and receivers participate in the release scope and in-depth discussion that is not limited by time and space. Through the push of big data, the whole process from cultural interaction to cultural identity can be completed in the shortest time, and the communication effect can be maximized. The future will be a world that dares to change and innovate constantly, and intelligence will become the trend leading the future communication field [20–24].

3.2. Data Mining Algorithm Based on Big Data. In the actual use of the psychological management system, the task of screening students with mental disorders is basically completed by the psychological measurement scale. However, the diagnosis of students with mental disorders cannot be determined only by the score of a single measurement scale, and the scale is only an auxiliary tool. It is our desire to mine and search out regular and meaningful patterns from the database. Therefore, using data excavation technology to analyze and diagnose more scientifically and accurately can really help psychological counselors and counselors do a good job in mental health education and can really help psychological students to solve mental problems as soon as possible. Figure 1 shows a data excavation model, which represents the basic process of data excavation.

Using the fast, predictable, accurate, and practical application value of big data technology, we can quickly and accurately determine the state and degree of crisis, so as to effectively formulate crisis intervention plans and reduce or eliminate crises. In the process of data excavation, select the appropriate data excavation algorithm to analyze the input data after preprocessing and use the efficient data excavation algorithm to scan the data set repeatedly or once to produce the desired mining results, so as to find the correlation between attribute values and obtain a new cognition that is more realistic than the original cognition.

In order to obtain the ideal mental health evaluation results of college students, a big data-driven mental health evaluation model of college students is designed, which fully considers the big data-driven background, applies the efficient data clustering method to big data, establishes the mental health evaluation index system of college students, determines the weight of each index in the evaluation index system, and uses the fuzzy comprehensive evaluation method to evaluate the mental health of college students, and to realize the quantification of College Students’ psychological state and provide effective reference basis for colleges and universities to formulate educational courses and psychological counseling, as shown in Figure 2. Applying the big data-driven data clustering method to the mental health evaluation data of college students, we need to calculate the similarity of different texts in the massive big data and obtain the similarity by counting the number of the same feature words between different texts.

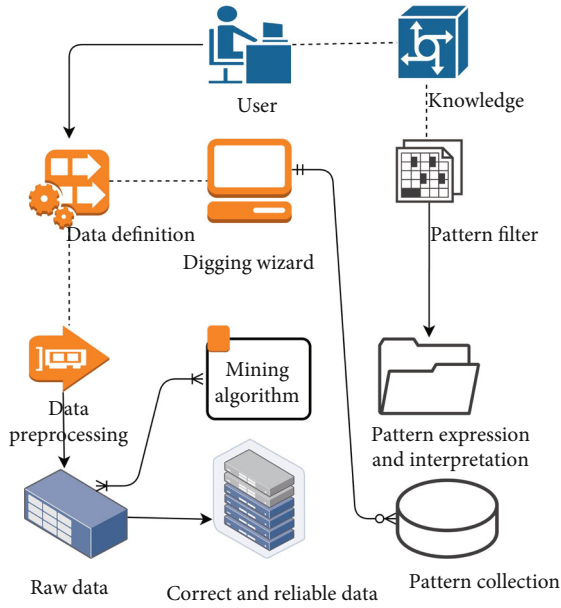


FIGURE 1: Model of big data excavation.

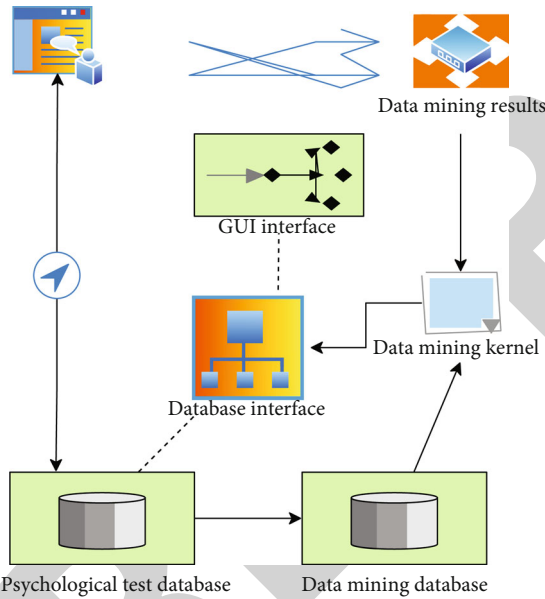


FIGURE 2: Structure diagram of mental health crisis prevention system.

In the psychological management system, a large number of psychological measurement scales are introduced. The data in these scales are added by psychologists from relevant aspects. The items in the scales reflect some symptoms, requiring subjects to make independent self-assessment that is not affected by anyone, so as not to affect the accuracy of analysis. The information collected by establishing psychological archives may not cover all the information needed for the study. In addition, human factors may also lead to the deviation and mutilation of data records. Students' incomplete information will be affected by their unclear understanding of the project and their own evaluation. Therefore, the information obtained by students using

a single scale cannot determine the mental health status of students. More scientific and accurate data will be obtained after comprehensive analysis of students' basic information and influencing factors. Therefore, we plan the overall framework of the student mental health problem recognition algorithm based on multisource data, as shown in Figure 3.

In the process of freshmen's psychological survey in recent years, the psychological measurement analysis results show that the proportion of individuals with abnormal psychology is very large, which can not screen out the individuals with real psychological abnormalities and can not well reflect the actual mental health status of students. Most of them are measured by SCL-90 psychological measurement scale and UPI measurement scale. Such results also directly affect the application of data excavation technology. Therefore, the method of linear fitting can be considered to correct the data, so as to improve the measurement results and provide a favorable guarantee for data excavation.

3.3. Introduction to Different Algorithms. The most critical technique in the construction of a decision tree is the selection of split attributes. There are often many attributes in the data set. For some high-dimensional data sets, there are even thousands of attributes. How to choose the best attribute is a decision tree. The research focus is, among several attributes, which attribute is preferentially selected for splitting. C4.5 algorithm is the improvement of ID3 algorithm and the basis of more decision tree algorithms. The method of constructing decision tree is top-down recursive construction. Select an attribute in the training set according to a certain strategy, divide the data set into several subsets according to each value of the attribute, and satisfy that all data in each subset have the same attribute value on the selected attribute, and then recursively perform subsequent processing in each subset. The binary decision tree obtained by C4.5 algorithm under this unbalanced data set can fully meet the needs of students' mental health analysis. The calculation of the information entropy is shown in Formula (1).

$$\text{entropy}(G) = - \sum_{i=1}^m p_i \log_2 p_i. \quad (1)$$

Among them, m represents the number of categories in data set G , p_i represents the probability of the i -th category, and the smaller the value of $\text{entropy}(G)$, the higher the purity of G .

The implementation of the SCL-90 algorithm is based on the completion of supervised learning on labeled training, so the basic model needs to be determined first. The model has a wide range of choices, and the logistic regression model (LR) is selected in this article. Under this model, the classification is done using the discriminant based on the logical distribution. The mathematical definition of the logical distribution is as follows:

$$p(y|x) = \frac{yx^T w}{1 + yx^T w}. \quad (2)$$

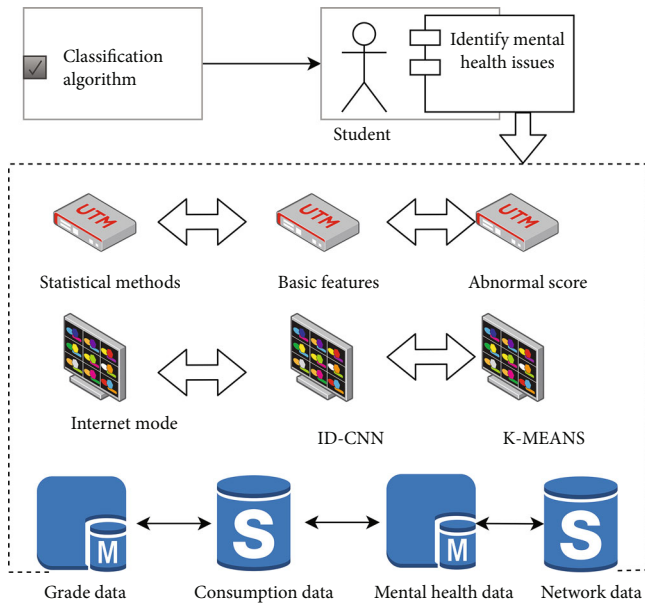


FIGURE 3: Algorithm framework of student psychological health problem identification based on multisource data.

In corpus $[y, x]$, the LR model is

$$w = \arg_w \min \sum_{i=1}^n \log(1 + (-yx^T w)). \quad (3)$$

The calculation result of the above formula is a linear function. At the same time, starting from the LR model, its characteristics are independent of each other. However, for text information mining, lexical co-occurrence information is a feature significantly different from general tasks. Therefore, it needs to be enhanced. This article establishes a relationship graph between domain independent features and domain specific features. The adjacency matrix of this graph is

$$A = X^T X - \text{diag}(X^T X). \quad (4)$$

To solve this problem, this article uses the OWL-QN algorithm. First, the objective function is rewritten in the form of adding the loss function and the L1 norm:

$$f(A, B) = L(a, B) + R(w). \quad (5)$$

The loss function of the TR model is

$$L(w) = \sum_{i=1}^n \log(1 + (-yx^T w)) + \frac{1}{2} \beta \sum_{i \neq 1}^n (w - c)^2. \quad (6)$$

The Pearson coefficient indicates the ratio of the same number of feature words in different texts to the smaller value of the total number of feature words, that is, the text similarity. The clustering index is extended by the self-adaptive method, a fixed threshold is set, and the texts whose text similarity is higher than the threshold are clustered into

one class, and the clustering results obtained are used as the evaluation index. The similarity of relevant evaluation indicators is

$$P_{\alpha, \beta} = \frac{\text{cov}(\alpha, \beta)}{\delta_{x, y}} = \frac{E(\alpha, \beta) - E(\alpha)E(\beta)}{\sqrt{E(\alpha^2) - E(\beta^2)}}, \quad (7)$$

where α, β is the two random variables, $\text{cov}(\alpha, \beta)$ is the covariance between α, β , and $\delta_{x, y}$ is the standard deviation between x, y , and E is the mathematical expectation in statistics. In order to improve the efficiency of data excavation, it is usually not necessary to use all the data in the system. Some data objects and data attributes have no impact on the establishment of model acquisition mode. Before data excavation, a lot of work needs to be done in the research stage. Data extraction is designed according to the collected information, and the required data sources are determined for the defined project tasks, from which data is collected and extracted, which not only simplifies the data. It can also make the hidden laws and internal connections appear. Therefore, it is necessary to select data effectively.

Since we can calculate the values of Z , and values (these two values may be called empirical values) according to the given training sample set, assuming that the measured SCL-90 value of a certain student is X , and the UPI result value is Y , you can use the formula

$$Z = 100 - (k_1 X + k_2 Y). \quad (8)$$

To obtain the value of students' psychological health Z (the meaning of this value is the same as that of the subjective evaluation value), which can be used as the evaluation basis of students' psychological health. After the results are obtained through calculation, the obtained student psychological health status value Z should be compared with the system technical indicators to judge whether the current data correction meets the predetermined requirements. Therefore, error analysis is carried out:

The absolute error is

$$\sqrt{\frac{1}{n} \sum_{i=1}^N e_i} = 2.398. \quad (9)$$

The relative error is

$$\sqrt{\frac{1}{n} \sum_{i=1}^N \left(\frac{e_i}{b_i} \right)^2} \times 100\% = 19.328\%, \quad (10)$$

where N is the total number of samples. After the error analysis, it shows that after the linear correction, the accuracy of the students' psychological measurement can also meet the application requirements.

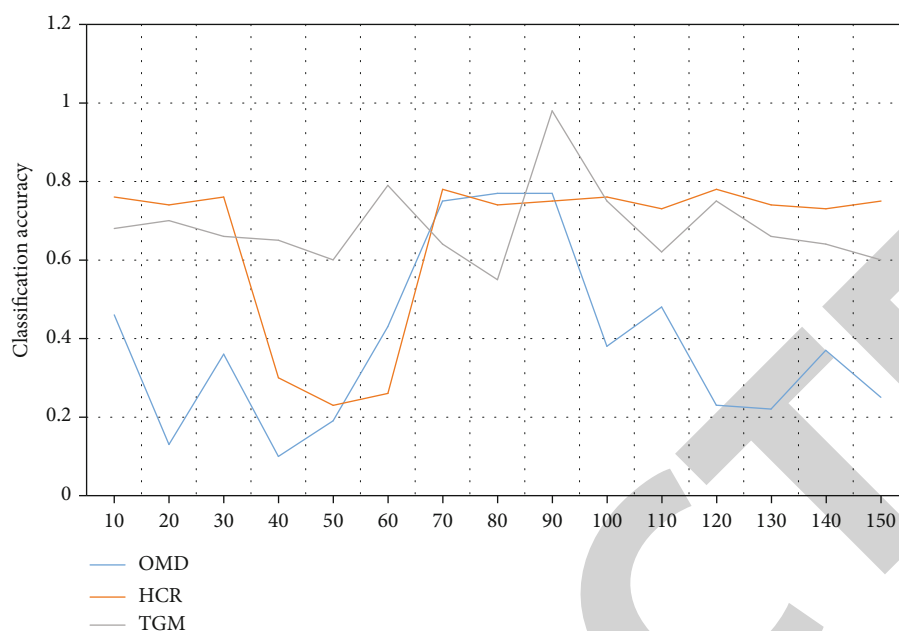


FIGURE 4: Relationship between λ and classification accuracy.

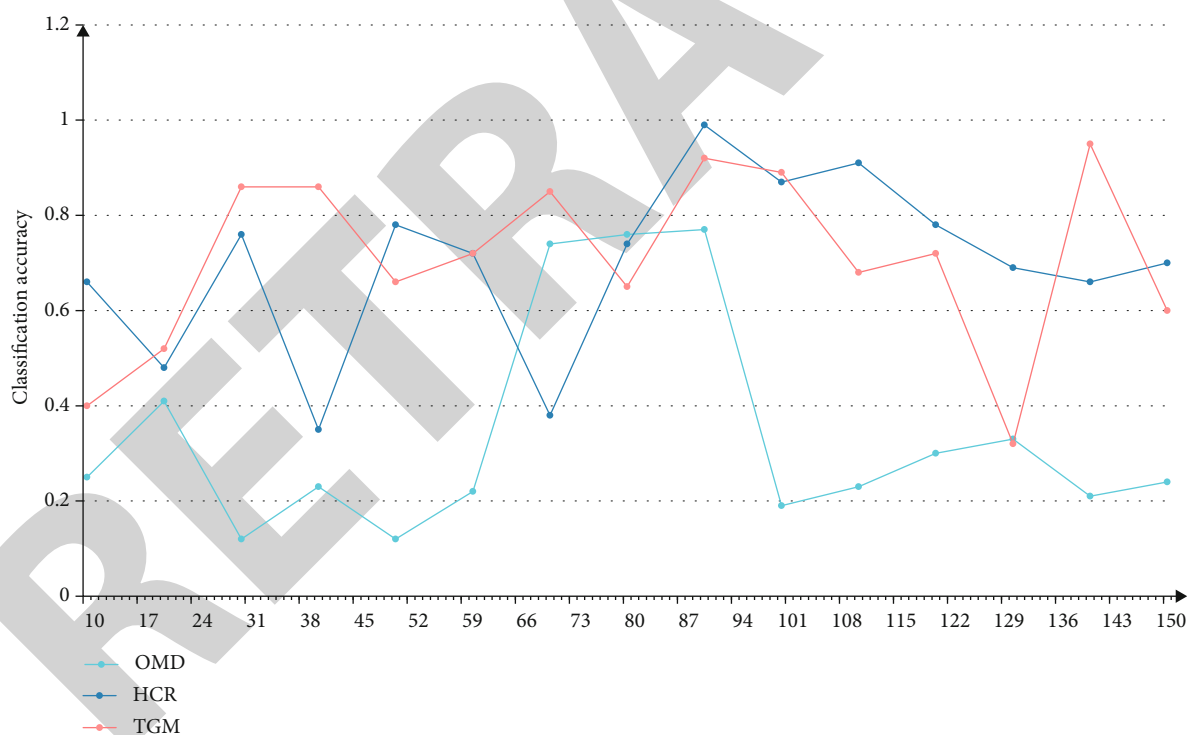


FIGURE 5: Relationship between β and classification accuracy.

4. Analysis of the Influencing Factors of University Students' Psychological Health

In the SCL-90 survey, it can be seen that there are changes in university students' gender, place of origin, and family economic status, and the somatization index of university students is far lower than the norm, which indicates that the psychological health problems of university students are

mainly manifested in their emotions and thinking and have not developed to the point of somatization. Therefore, in the process of daily education, emphasis should be placed on education and prevention to promote the healthy development of university students. For educational institutions such as schools, it is necessary to set up psychological counseling or psychological health departments to regularly guide and intervene the psychological health problems of

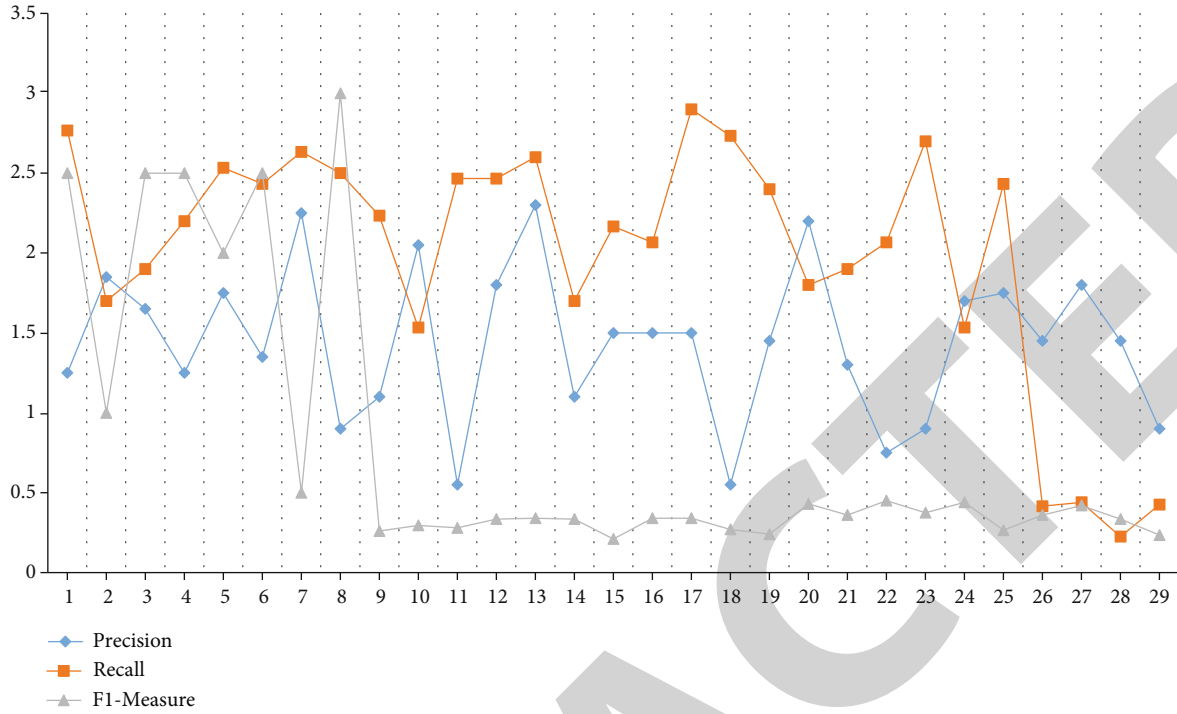


FIGURE 6: Comparison of model performance indicators.

TABLE 1: Experiments results of three different feature combinations on the deep psy model.

Dataset	Precision	Recall	F1-measure
1	0.68	0.79	0.74
2	0.78	0.8	0.79
3	0.76	0.74	0.7
4	0.65	0.73	0.63

university students. Then, only by analyzing the influencing factors of students' psychological health can we solve the problem and help university students to correct their psychology and maintain a healthy psychological state:

(1) *Family factors.* Most parents have set high learning goals for their children and designed their children's future career direction, placing all the hope of changing the fate of the whole family on their children and continuing to put pressure on them. In such a high-pressure growth environment, many young people are prone to unhealthy psychology, and it is difficult to achieve comprehensive and healthy development.

(2) *School environment factors.* In order to maximize the enrollment rate and employment rate, the school pays more attention to the students' academic scores, thus ignoring the students' psychological guidance education, which further causes different degrees of psychological pressure on the students.

(3) *Social factors.* The current social graduates are overwhelming, the employment situation is severe, and the rise of the service industry and the social and cultural atmosphere created by related industries has adversely affected

the psychological health of young people. Many media information has misled university students' cognition.

4.1. Analysis of Sample Datasets. In order to better correspond to this proportional relationship, this article uses OMD, HCR, and TGM domain independent text sets to realize transfer learning. Because OMD, HCR, and TGM datasets have more regular data structures and richer vocabulary, the training and testing effects are better. Compared with logistic regression model and naive Bayesian model, their accuracy is improved by 10.19% and 4.11%, respectively. This algorithm realizes the transfer learning from OMD, HCR, and TGM datasets to university students' psychological health datasets. In addition to the accuracy of the analytical model, the article also analyzes two parameters that affect the effect of transfer learning $\lambda \cdot \beta$. The influence of model performance is simulated, and the results are shown in Figures 4–5.

It can be seen from Figure 4 and Figure 5 that the accuracy of TL algorithm on HCR data set is lower than that of OMD and TGM models, which is due to the fact that the coincidence degree of OMD data is higher than that of HCR model. About λ it is insensitive to the accuracy of the model within the value range of [0.7, 0.9]. About β it is also insensitive to the accuracy of the model within the value range of [0.3, 1.0]. Therefore, in general, TL is insensitive to the changes of model migration parameters, which greatly reduces the training requirements of the model.

Due to the different qualities of students in various majors, the data in the system has particularity. Here, we take the psychological management system database of our students as an example to carry out a simple data extraction

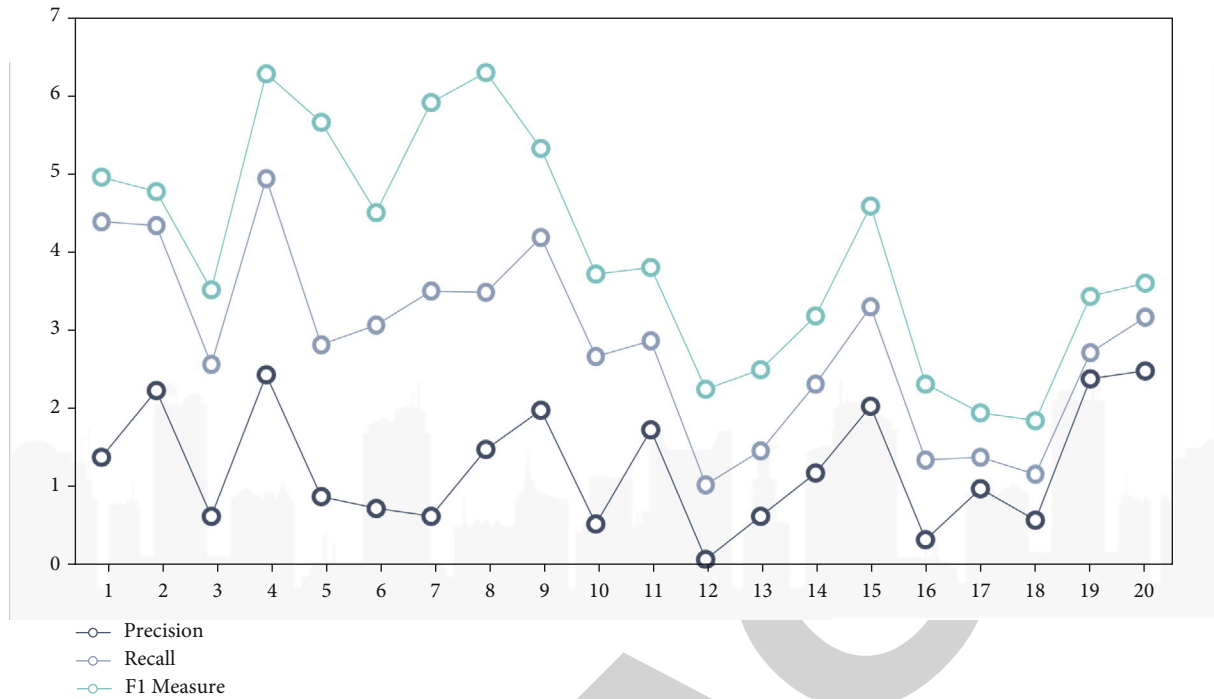


FIGURE 7: Comparison of three characteristic data results.

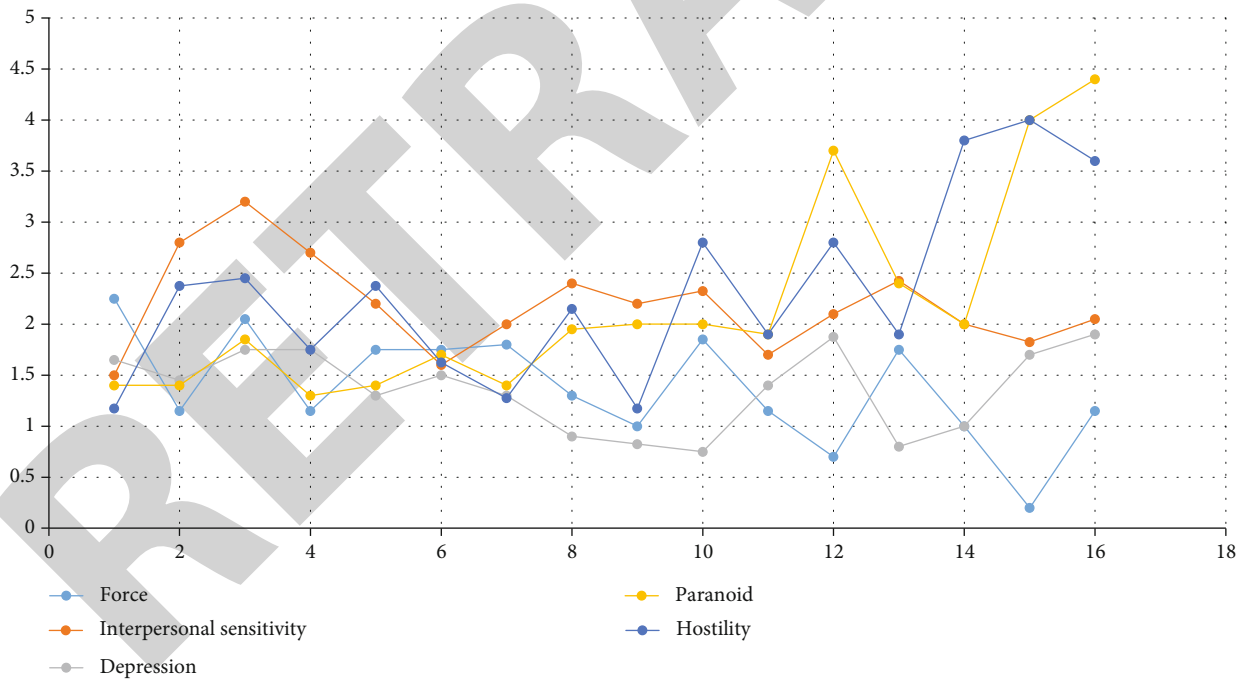


FIGURE 8: Evaluation of the training set of each factor.

work. In order to facilitate the establishment of the decision tree model, from the many attributes in the student psychological management database of our school, select the attributes that are more relevant to the mining task, while other attributes that are not related to the mining task will increase the time and space of mining calculation to a certain extent. Therefore, the irrelevant attribute values should

be removed when mining such data. We analyze the record data of students' mental health status, so as to deduce what factors affect students' mental health status. From the derived rules, psychological counselors can judge which aspects of mental health education and intervention should be strengthened to enable students to improve their ability of self-growth. In this paper, we choose precision, recall,

and F1 measure as evaluation indicators, and their application to the model performance comparison is shown in Figure 6 below.

Table 1 lists the experipsychological results of three different feature combinations on deep psy model. In order to facilitate the analysis of the changes of the experipsychological results, we visualize the data in Table 1, as shown in Figure 7. First, the experipsychological result of feature set 1 is the best. Secondly, with the reduction of feature types, the experipsychological effect gradually becomes worse, especially the decline of feature set 4 is large, because the number of consumption features is large, which has a great impact on the experipsychological results. The experipsychological results show that we conclude that many objective factors have an impact on mental health by analyzing and mining information.

4.2. Analysis of Psychological Health Factors. In this article, 200 university students were randomly selected as the subjects of this study. SCL-90 test and related factors were used to investigate, covering 9 factors: somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, terror, paranoia, and psychosis. Five common classification algorithms were trained with training sets and evaluated through verification sets. The classifier with the best effect was selected as our algorithm. It is used to distinguish students with psychological health problems in the test set. In the process of carrying out the research, this article takes the average score of each factor of $SCL-90 \geq 3$ as the evaluation standard of psychological problems. During the survey, 88 teenagers in the sample have at least one factor exceeding 3 points, so the detection rate is 16.92%. According to statistics, the top five factors include compulsion (3.22%), interpersonal sensitivity (2.80%), depression (1.27%), paranoia (1.06%), and hostility (1.95%), as shown in Figure 8.

In the process of analysis, the closer the tolerance is to 1, the better the result, and the variance inflation factor is less than 10, and the smaller the better. From the final results of the collinearity study, there was no collinearity among the four studied variables, and the final results all showed that the predictors were fully incorporated into the regression equation. At the same time, the constant of SCL-90 is 1.239, and the values of the equation model are 0.349, 0.459, and 0.897, respectively.

5. Optimization Strategies for the Development of Psychological Health of University Students

Under the spread of diversified culture, schools and society need to create a more harmonious environment for university students' psychological health, so we need to do the following:

- (1) Harmonious family environment. In the process of family education, simple preaching should be avoided, and heuristic education should be used to guide their psychological health development on

the basis of good communication, so as to create a good family education atmosphere. Parents should consider their children's development comprehensively, provide them with diversified choices, and conform to each child's different development needs

- (2) A positive and friendly campus environment. While consolidating its own modern educational thought and students' knowledge and culture teaching, the school should pay attention to the education of students' thought and personality, constantly create a campus environment conducive to the improvement of students' own quality, and construct a perfect life-long education learning thought. Through the diversified quality-oriented education model, we can help university students broaden their horizons, strengthen their sense of mission, and cultivate positive interests in the big classroom of society, so as to improve their own quality and practical ability in rich practice
- (3) The spread of socialized culture and the improvement of education. From the perspective of data capture and analysis of big data technology, roles, situations, and behaviors are important representations of cultural communication to build a media society. The changes of roles, situations, and behaviors in the media society are intertwined, forming the external power of cultural communication change under the background of big data. From the source and policy, the state and government should strengthen the audit of online games and mobile apps, and add antiaddiction factors

6. Conclusions

The influence of cultural dissemination of the times on university students has both good and bad aspects. Those unadvised parts of the culture of the times will make a huge change in students' attitude towards life. University students are like a piece of "white article" that has not yet entered the world. Their ability to judge right and wrong information is immature, and their ability to resist bad information is also limited. Therefore, poor culture can easily invade students' minds and affect their physical and psychological health. Health has a huge impact. And a good culture of the times is conducive to the formation of correct values for university students, and to live a full university life. Therefore, in the diverse and rich era environment, university students should improve their ability to distinguish good and bad cultures and promote the development of physical and psychological health. Based on the role of big data technology, analyze the influence of factors and provide guidance and reference for the development of university students' psychological health.

Data Availability

The figures and tables used to support the findings of this study are included in the article.

Retraction

Retracted: Nathaniel Hawthorne's Landscape Writing and His Environment Concerns

Journal of Environmental and Public Health

Received 1 August 2023; Accepted 1 August 2023; Published 2 August 2023

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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. Xiaohan, "Nathaniel Hawthorne's Landscape Writing and His Environment Concerns," *Journal of Environmental and Public Health*, vol. 2022, Article ID 5007422, 9 pages, 2022.

Research Article

Nathaniel Hawthorne's Landscape Writing and His Environment Concerns

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In order to better understand the research and analysis of Nathaniel Hawthorne's landscape writing and ecological environment problems, his paper discusses the description of environmental landscape in Hawthorne's writings. This paper analyzes the "social-ecological" environment during the antebellum era through Hawthorne's literary writings. Comparing Hawthorne's writings of the landscape within statistics and diagrams, this study argues that the romantic descriptions of natural settings and characters in Hawthorne's writings reflect the social and ecological environment of antebellum era. Therefore, reads can accurately understand Nathaniel Hawthorne's living context and the ecological environment problems. This study also argues that Hawthorne's writings of landscape reflect much more the ecological and environmental problems in his era comparing with other antebellum writers. Understanding Hawthorne's writing of the environment will also provide a guidance for the contemporary society.

1. Introduction

During the antebellum period, the relationship between landscape, nature, and environment plays an important role in American writers' works. Antebellum writers devoted themselves to writing American landscapes in emphasizing the uniqueness of American environment. Both northern and southern writers, including Washington Irving, James Fenimore Cooper, William Gilmore Simms, Edgar Allan Poe, and James Kirke Paulding, use regional landscape as the setting and the cultural background in their works. Besides, writers of the Concord School, especially Ralph Waldo Emerson and Henry David Thoreau, also devoted themselves to the philosophical writings on the American landscape [1]. For English writers between eighteenth and nineteenth centuries, writing landscapes went far beyond the record of the local scenery but express different writers' unique ideas of history, classes, and politics, thence to form the identities of individuals and nations [2, 3]. Following this trend in the literary history, antebellum American writers also transcend a kind of simplified loyal, theological, or romantic depiction on the national landscape. Instead, they always use landscapes to transform their ideas.

As one of the members of the American Renaissance, American Romanticism Movement, and the Transcendentalists, Nathaniel Hawthorne also wrote much about the landscape in his novels and short works. During his career, Hawthorne's depiction of characters as well as settings of his novel has a close relationship with the social context of antebellum era. His creation was influenced by the social background and heretical environment at that time. These effects include his family background and religious environment, the social development at that time was in the early stage of the rapid development of capitalist economy, and the social structure was undergoing significant changes and adjustments. However, few scholarships cast sight on Nathaniel Hawthorne's writing of the landscape. Nor do scholars pay enough attention to his creative ideas on the expression of landscape in literary writings. Therefore, the environmental issues play a core role in understanding Nathaniel Hawthorne's works as well as his ideas of the antebellum society. This essay will argue that Hawthorne's writings on the national or foreign landscape not only express his pessimistic view of the future of natural world but also reflects his reflections on the relationship between human and nature.

2. Nathaniel Hawthorne's Career and His Interests in Nature

Nathaniel Hawthorne was born in a poor aristocratic family in New England. Since Hawthorne's father died of illness in 1808, his mother had to live in Salem town with her three children and only a little savings and spent her lonely life here. Influenced by his family environment and his mother's lonely character, Hawthorne developed a character of paranoia and loneliness. Nathaniel Hawthorne's ancestors, William Hathorne and John Hathorne, worked as administrative officials in the Massachusetts colony. Hawthorne was very ashamed of the acts of his two ancestors, their disapproval and anger, and their atrocities. In 1692, William Hathorne participated in Salem witchcraft trial and was determined as one of the three chief judges [4, 5]. The Salem witchcraft trial had a life-long effects on Hawthorne's idea of the relationship between human, nature, and religion. This event makes Hawthorne have a deep understanding of the "evil" part of human nature [6, 7].

Under the effects of his personal history and the darkness of the human psychology, unlike other contemporary writers' positive view in the era, Hawthorne mostly showed the criminal means of authoritarian violence under the rule of social Puritans at that time, the strangulation of human nature, and the negative energy impact on social ecology; the truth, goodness, and beauty of human nature were erased, and the dark side of human nature was revealed [8]. Several factors contributed to Hawthorne's choice of his career, including the sin of his ancestors, the Seneca Falls Convention, and Hawthorne's own idea of the inner evilness of human. As Melville argues in his "Hawthorne and his Mosses," Hawthorne's novel is good at describing the dark side and evil of the characters to deeply explore the Puritan crime of society, nature, and human nature [9]. In all, Nathaniel Hawthorne's living experience and the context of his era founded the basement of his writings on the landscape and evoked his reflections on the relationship between human and nature.

During Hawthorne's era, the newly birthed capitalism is commonly considered as an economic system in which many stakeholders own and control property according to their interests, and market pricing is freely determined in a way that benefits society. Capitalism provided the progressive provision for Hawthorne's contemporaries. The need to make a profit, on of the foundations of capitalism, made people believe that they can conquest the nature. This logic of conquest, under Weber's study, existed in the early tradition of the American protestant [10]. Hawthorne believes that the environmental issue, including both the social environment and natural environment, leads to the theological and sociological evil of human nature [11]. The evilness in people's hearts led to great damage and influence on people's inner world and destroy people's spiritual relationship with the natural world. The collapse of this link is close related to Hawthorne's depictions on the natural landscape in his works.

Under the effects of Hawthorne's family and the power of puritanism, Hawthorne naturally wrote against the puritanism in a serious of works, especially in "Mrs. Hutchinson," "The Minister's Black Veil," "The Gentle Boy," and "The Scarlet Letter." When writing against the puritanism, Hawthorne was

undoubtedly under the context of the era, domestic history, and personal growth experience at that time. In his novels, he described a thick religious color, reflecting the rule of religion on society and the strangulation of human nature. Through the description of the landscape environment, he metaphorized the social ecology and spiritual ecology under the rule of religion [12]. Hawthorne's writing of social ecology examines the ever-changing interaction between all aspects of our society and how each one plays a crucial role in maintaining the system healthy and stable, which is a contemporary issue in religion, conservation, and academics that recognizes that all conservation, environmentalism, and earth stewardship concerns have a spiritual component [13]. In this way, Hawthorne links the religious characters to the environment of colonial America in both symbolic and effective way: all those characters in *The Scarlet Letter* both affect and under the effect of the environment, which forms a coherent system in this novel [14]. This coherent can also be witnessed in many other Hawthorne's novels and short works.

In his career, Hawthorne spent 12 years in his hometown from 1825 to 1837. During these 12 years, he read many of the books in the Boston Public Library and learned about the ancient historical stories of his hometown and the witchcraft era [15]. Under the effects of the European literary and his intention to create a kind of national literature, Hawthorne began his writing career shortly after he graduated from Bowdoin College. The content of his novels contained the cruel religious background in the colonial period, described the great damage caused by religion to people's spiritual ecological environment at that time, and used people's ideological contradictions to destroy people's spirit [16]. Decade after this "Boston Period," Hawthorne was still under the effect of his "hometown period" when he published *The Scarlet Letter* and *The House of Seven Gables*. These two novels reflect the strangulation of religious thought on the inner thought of human nature through the description of puritanism. Puritanism refers to behavior or beliefs based on severe moral or religious ideals, particularly the concept that individuals should suffer from physical pleasure. Writing during the time was significantly influenced by puritanism, a religious movement that attempted to cleanse the church of its links to the Catholic church. Authors of the time were known for writing in the first person with simple language and sentence structure, as well as religious connections and biblical allusions [17, 18]. It not only reflects the destruction of human spiritual ecology but also deeply describes the damage of human social development and civilization to the natural environment, which has brought natural ecological crisis to nature. In *The House of Seven Gables*, though tried to get rid of the negative effect environmental and religious symbol of American puritanism, Hawthorne still cannot make his characters escape from the trap of the landscape as well as the nature. Through the whole novel, characters are trapped by the environment they live in. When Colonel Pyncheon and Jaffrey Pyncheon die for the man-made space in the story, Hepzibah and Clifford find their way out since they choose to merge into the natural environment. Similarly, Holgrave and Phoebe also get their comical ending depending on their inner love of the nature. However, as Manzanetti argues, none of them can thoroughly living without the support of their environment

[19]. Therefore, it is clear that Hawthorne did not give up the inalienable relationship between man and landscape at the end of his career.

Apart from his long novel, Hawthorne also express similar idea in his short works. For instance, in “The Birth Mark,” the protagonist tries to fight against and transform nature with human technology. With the help of scientific experiments, the birthmarks on the wife’s face are removed and transformed at the cost of life. Through describing the protagonists’ confrontation with the natural environment, it reflects the “evil” of human nature and the destruction of ecology [20]. Similarly, in “The Artist of the Beautiful,” Hawthorne also discusses the problem of “beauty” under the comparative perspective between man and nature. Again, in this work, Hawthorne also expresses that man will fall into the darkness should they do not conform to the power of nature [21]. These two works express human’s reckless attempt to resist the natural environment, destroy nature and transform the natural ecology with human power, destroy the natural environment regardless of the idea of harmonious cohabitation between man and nature, and an endeavor to prioritize research and technology. We can perceive Hawthorne’s ideological notion of peaceful cohabitation between man and the ecological environment via an in-depth examination of the works, advocating for the harmonious growth of man and the natural environment, keeping ecological balance, and sustaining concept of human soul superiority [22]. The idea of building a harmonious relationship between man and nature has been supported by many theorists until modernization, advocating the harmonious and common progress of natural ecology and science and technology and building a natural ecosystem.

Indeed, *The Scarlet Letter* describes the “evil” between people and the relationship between people and society from the perspective of social ecology and reveals the social status quo of people living under the rule of puritanism at that time [23]. Due to the rigid application of Puritan rule, both men and women faced severe penalties for a wide range of crimes. For cursing his parents, even a child may be executed. Women carrying male children were thought to have rose complexions, while those carrying female children were thought to be paler. Affected by sects, the social ecology seriously deviated from the development of the times, and the relationship between relatives, friends, and lovers was distorted and disordered, resulting in the continuous reduction of social order and moral norms. In Hawthorne’s short story “Rappaccini’s Daughter,” Hawthorne takes nature as the protagonist of the novel and deeply discusses the social and ecological problems through the description of the social relationship between man and nature [24]. At that time, his super era ecological and social consciousness was still highly valued in modern society [25]. The antebellum society and cultural heritage have always advocated the spiritual belief of the natural development of all things. It is not difficult to see in Hawthorne’s outlook on life that although there are certain differences between social ecological consciousness, spiritual ecological consciousness, and natural ecological consciousness, they have their common ideas and similarities from the perspective of natural development, and they all have the ecological value concept of equal and mutual existence [25]. In the development of modern society, our coun-

try is also constantly exploring Hawthorne’s landscape writing and the ecological environment described. The understanding of the ecological environment is also different under different social development backgrounds. Exploring Hawthorne’s ecological concept has a certain positive significance for future cultural and ecological development. This study compares and analyzes through comparison, starts with the ecological environment problems under different times, and deeply discusses the healthy development of natural ecology, social ecology, and spiritual ecology under the social background, which has important practical significance to promote the healthy and sustainable development of social economy.

3. Hawthorne’s Landscape Writing: Diachronic and Synchronic Perspective

Though Hawthorne was deeply affected by his personal experience in the formation of his literary idea, he did not create the link between human psychology and nature world purely upon his personal experience. The literary current of the turning point between the eighteenth century and nineteenth century also played important roles in the birth of Hawthorne’s reflection on landscape and nature. Apart from his reading of William Shakespeare, Edmund Spencer, and John Bunyan, Hawthorne personally inclined to the historical romance of Sir Walter Scott [26, 27]. Hawthorne was under the effects of the European Romanticism, especially Sir Walter Scott’s historical romance; Hawthorne forms that his unique idea of landscape was under the effects of European Romanticism [28]. Indeed, nature was important to Romantics since it was their teacher, guide, source of inspiration, and mother, whereas nature represented normal reality or universal rule to eighteenth century poets [29].

For most antebellum American writers, Romanticism was characterized by an emphasis on emotion and individualism, secret writing, an idealization of nature, a rejection of science and industrialization, and a celebration of the past with a strong preference for the medieval over the classical. Comparing with his literary predecessors and his contemporary authors, Hawthorne’s famous stories tended to transport the reader to some other time and place. In this way, Hawthorne expresses his own thoughts on society through allegories and other rhetorical methods or devices. These places, events, and scenarios that he transports his readers to were inspired by his environment. For Hawthorne, romantic literature always expresses his passionate pursuit and longing for the ideal world through the description of objective things and environment and shapes the image through gorgeous expression and exaggeration. From the late eighteenth century to the early nineteenth century, many artists, poets, writers, musicians, and other characters spontaneously carried out the romantic movement. Hawthorne, as a representative figure of Romanticism in the nineteenth century, describes the natural scenery in his works, praises the beauty of nature and the vulgar riots of social life under the background of the times to form a strong contrast, and is rooted in the natural landscape through the description of natural environment and scenery, character image description, and psychological activities. Use the description of natural scenery to set off the psychological activities of the characters and the social

background of the times to sublimate the theme of the works [30]. *The Scarlet Letter*, for instance, describes the rule of the times under the religious background in the full text, sets off the atmosphere of the times, and highlights the central thought through the description of natural scenery, which reflects Hawthorne's personal idea of outlook on life, society, and nature. The most important part of the turning point in this work appears in the forest, when the environment works as the beginning and the setting of the reconciliation between Prynne and Dimmesdale. The intermingled relationship between the forest and characters' mind highlights Hawthorne's unique usage of the landscape. Rooted in the Romantic tradition, Hawthorne weakened the conflict between realness and the psychological imagination. He makes the reconciliation merge into the natural background. The representation of the landscape in romantic literature is not only an effort to visualize the ideal society of ideals but also an effort to promote the coexistence of man, society, and nature [31, 32]. Through the comparison of data under different historical backgrounds, Figure 1 is obtained:

As shown in Figure 1, romantic literature flourished from the 18th century to the 19th century, and many romantic writers such as Hawthorne emerged. They criticized the historical background through the description of natural scenery and emphasized the respect for human nature, society, and nature. Romantic literary history is an important trend of thought in Western literature, which inherits and develops the humanistic idea of the Renaissance. Like most of antebellum American writers, Hawthorne criticized his own era through the description of natural scenery and emphasized the respect for human nature, society, and nature, which inherited and developed the humanistic idea of the Renaissance. The idea that humans are the center of their own universe and should appreciate their achievements in science, literature, classical art, and education was among the ideals that humanism stressed. Their work expressed the humanistic, classical, and intellectual values of the Renaissance. Humanism in the Renaissance is distinguished by the enthusiastic study of classical literature, the study of classical works, the rejection of scholasticism, the availability of and belief in education to produce a better human being, and the belief in the power and independence of the person, virtues, ethics, and critical thinking, as well as creative exploration in the arts [33]. Under the social background at that time, literary writers used romantic techniques to express their ideals and personal feelings, praised nature through the description of natural scenery, expressed their feelings with scenery, and used exaggerated techniques to pursue strong artistic effects.

Until the modern era, romantic literature has always been the subject of debate in the history of thought and literature. The description of natural scenery is a metaphor to set off the spiritual pursuit of the ideal world and the high respect for nature and emphasize the beautiful idea of the development of society, nature, and humanity in harmony. Nature is the basis and foundation for human and societal life and progress. Social development is both a precondition and a security for the harmonious development of humans and nature. Human development is both the basic foundation and the ultimate destination of nature and society's harmonious development.

The need of having harmonious connections by the way we communicate in order to feel good, make others feel good, and keep self-respect is critical for the self's concept of interdependence.

Hawthorne's idea of the evil in human mind, again, is related to his anxiety about American puritanism. Therefore, when writing about the relationship between human and the landscape, Hawthorne usually focuses on people's spiritual world, ideological contradictions, and tragic experiences under the oppression of religiosity. Hawthorne saw the impact of religious fanaticism and religious dogma on people. He saw the destruction of religion on human nature. Religious fanaticism is a negative term that refers to uncritical enthusiasm or obsessive excitement that is associated with an individual's or a group's dedication to a religion. This type of human fanaticism might also be shown in one's other involvements and participation, such as work, role, and partisan affiliations. For Hawthorne, the dogmatic feature of American puritanism is both a religious belief shared by a social community and Puritan leaders' political method to control the community [34]. To determine a social group's dogmas, people should not only observe their religious practices as if these were the only independent elements in their religion. Religion is central to people's lives in this part of Massachusetts. Religion pervades every element of existence. Religion has the same authority and efficacy as the law. On the other side, the severe reign of Puritan ideology and obsessive religious devotion are, to some extent, a serious attack on human dignity. Indeed, Hawthorne believes in a certain similarity between the American Puritan politics and the rule of Thomas Jefferson's period [35]. The Jeffersonian period and the Monroe Doctrine working cooperatively shape Hawthorne's tragic view of American political tradition as well as those individuals who live in this tradition. Besides, though Hawthorne does not admit the effects from transcendentalists, he cannot totally escape from the ideological current of the transcendentalists [36]. Transcendentalists' mystic beliefs included the conceptualizations that although people are inherently good, they can become corrupted by society and institutions, that intuition and experience are more valuable than reason, that organized religion should not be the source of spirituality, and that nature is beautiful and worthy of consideration. The development of different times leads to different social backgrounds and different ecological environments. Many literary writers with different writing characteristics will emerge; the content of the writing literature also includes the deep exploration of evil and the examination and thinking of ethics and morality. Criticizing the dark side of human nature and social reality is a remarkable feature of Hawthorne's novels. From the antebellum period to modern society, the inner evil of people has been increasingly emphasized. From the 18th century of his life to the 21st century of today's life, a comparative analysis of the deep exploration of evil and ethics and morality is carried out, and the data obtained are drawn in Table 1 and Figure 2.

As shown in Figure 2, composition writing has different influencing factors in different times, including the in-depth exploration of evil and ethics. In the deep exploration of evil, in the era of Hawthorne's life, due to social unrest, the problem of food and clothing cannot be solved, which will make more people have the idea of getting something for nothing. Hawthorne's works reflect his view that the evil of human

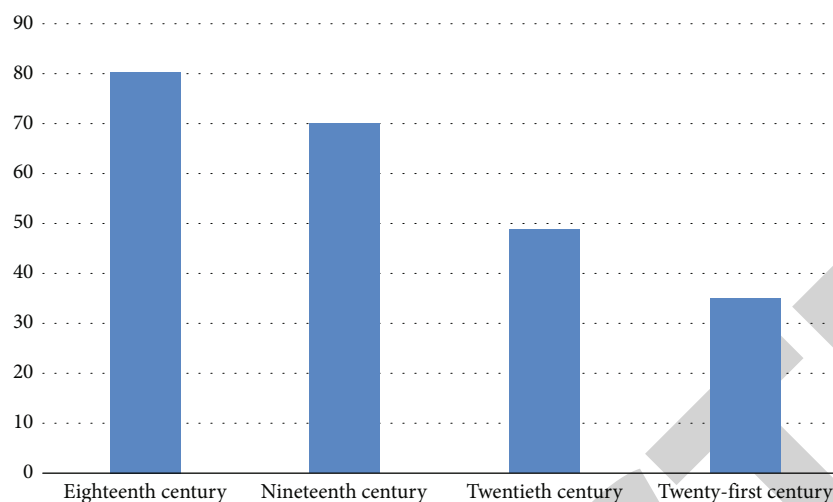


FIGURE 1: Visual comparison of landscape writing in different times.

nature and the evil of society are derived from the “evil” in human hearts. But the forms of “evil” in people’s hearts are different. In terms of ethics and morality, with the progress of the times, human civilization has been gradually strengthened, and ethical and moral problems have also changed. Hawthorne is the ideal in his literary works that he hopes the people should follow ethical and moral norms and norms. Now in the modern society, this ideal has been realized, which has changed significantly compared with the background of Hawthorne’s life. In the process of social development, people’s satisfaction with life, spiritual prosperity, and noble pursuit gradually get satisfaction in their hearts, and there is no longer the accumulation of negative emotions and dissatisfaction with the society. This transformation continues into a modern society. Social development advancement challenges the notion of sustainable development and promotes the concept of peaceful cohabitation between man and nature. Human-environment coexistence is a key premise of ecological civilization development, as well as a defining feature of dynamic and effective practice. The protection of natural ecology has been deeply rooted in the hearts of Nathaniel Hawthorne’s works as well as the men of his era.

4. Landscape and Hawthorne’s Environmental Concern: Contemporary and Comparison

Nathaniel Hawthorne’s concern on the relationship between landscape and human did not confine in his own era. It is clear that, nowadays, in the development and construction of landscape resources, environmental impact management will be involved from the beginning of the modern world. Many problems faced by the modern world also appeared in Nathaniel Hawthorne’s era. With the continuous expansion and deepening of development in both nineteenth century as well as the modern world, landscape resources will bear more and more pressure, and environmental impact management will become more and more important. The problem of landscape and environment is one of the important problems today.

In Nathaniel Hawthorne’s idea, the development of the society always leads to the environment problems, which reflected in his depictions on the fate of the American landscape. Although for Hawthorne’s contemporaries, society is progressing and developing; it definitely causes damage to the environment in Hawthorne’s writings. Under the background of Hawthorne’s life, environmental problems also cause certain damage with the war. However, during the first half of the nineteenth century, industrial development was not much progress, and the damage to the environment was limited. In today’s society, on the contrary, the development of modern society has entered an intelligent era. The progress of science and technology and the expansion of human territory have increased the occupation and destruction of the natural environment. Urban construction and land development continue to encroach on the territory of natural resources. Therefore, the issues appear in Hawthorne’s writings on the landscape, including the crisis between human and nature, the rapid development of human culture, and the collapse of the natural space, and also appear in our own era. No matter in any era, the destruction of natural ecology by human development is inevitable. Hawthorne’s writing content was based on the landscape and environmental problems at that time; use words to express the description and criticism of its background at that time, analyze and discuss the landscape and environmental problems in Hawthorne era and today’s society, and draw Table 2 based on the data obtained.

In Table 2, we can clearly see the data value between the two in terms of environmental issues.

Facing this trend of the society, Hawthorne’s writings depended on the landscape and environmental problems in his era. In Hawthorne’s writing of landscape, including the macro and the micro landscape, he usually uses words to depict and criticize his own era. Generally speaking, Hawthorne discusses in his works, including the collapse of the landscape within the development in “Main-Street” and “The Celestial Railroad”, people’s belief in their power of overcoming the natural world in “Rappaccini’s Daughter” and “The Artist of Beautiful,” and the fragile relationship between

TABLE 1: Visual analysis of the evaluation of writing literature in different times.

Eighteenth century		Nineteenth century		Twentieth century		Twenty-first century	
Deep exploration of evil	Ethics and morality	Deep exploration of evil	Ethics and morality	Deep exploration of evil	Ethics and morality	Deep exploration of evil	Ethics and morality
35	30	47	42	56	55	68	64

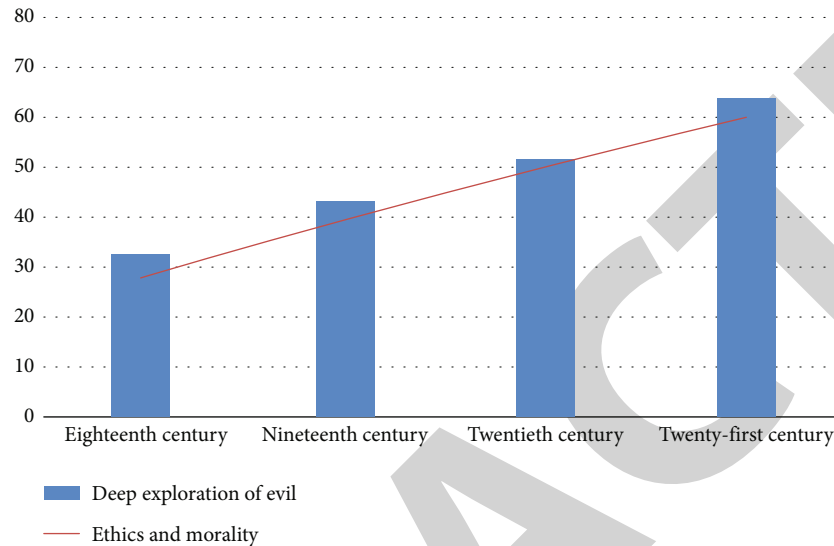


FIGURE 2: Visual analysis of the evaluation of writing literature in different times.

TABLE 2: Comparative analysis of landscape and environmental problems in different times.

Grouping	Landscape issues	Environmental problems
Hawthorne era	38.56	40.12
Today's era	54.12	56.89

people and natural world in *The Scarlet Letter* and *The House of Seven Garbles*. In all, all those environmental problems are under the effects of the human actions. These issues obviously still exist in our modern society, which means different societies need to come similar problems. With the development of industrial revolution to modern mechanization and intelligent development, people have been destroying the natural environment continuously. This concern, though already has been appearing in the literary traditions, still exists in Hawthorne's era until ours. Although the United States advocates the harmonious relationship between human, society, and the natural world, concept of development, the increasing population, and limitation on living resources, as a result, people's pursuit of living environment and rich land is more extensive. Environmental problems have been destroying with the development of human beings.

Environmental problems are the significant consequences of human activity on the environment not only in Hawthorne's era but through the industrial revolution to our contemporary world. Some core issues appeared in the literary writings repeatedly. These issues include air pollution, population growth, waste management, climate change, global warming, and the

greenhouse effect. Landscaping has both beneficial and harmful environmental effects. The negative effects include deforestation, pollution, and ecological modification.

In order to more intuitively analyze the comparative analysis effect between two different times, Figure 3 is drawn according to the data obtained in Table 1.

Like English Romanticism poets who devoted themselves to the writings of the pollution and the collapse of the environment, Hawthorne also casts the similar doubt in his "The Celestial Railroad" and "Earth's Holocaust." In the previous work, Hawthorne uses the railroad as a symbol to express the collapse of the environment under the human power [37]. Under the development of the American railway through the nineteenth century, the development of human society rapidly encroached the natural space during around the world [38]. However, Hawthorne did not take the development of the railway as a positive effect of human world. On the other hand, he believed that people use their own ways to destroy the human world. Therefore, in "Earth's Holocaust" as well as in "Main-Street," people destroy their hometown, or even their previous culture, within their own hand [39]. Accompanying the development of the society, the environment rapidly disappears and cannot reappear in the human society, since people's activity destroys the basement of the environment: the positive interaction between human world and natural environment. Therefore, the theme of "death" of the people in *The Scarlet Letter* thus can be enlarged to the death of the whole human world. Besides, the positive provision of American society also disappears in Hawthorne's tragic writings of the landscape [40].

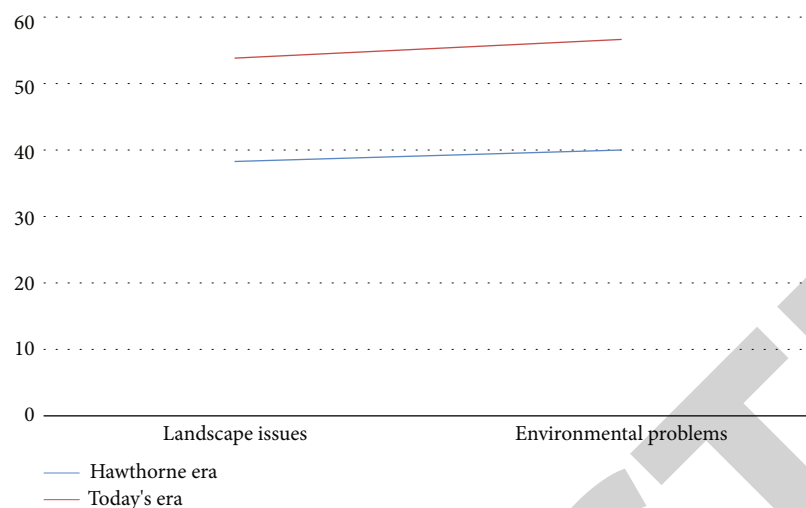


FIGURE 3: Comparative visual analysis of landscape and environmental problems in different times.

As shown in Figure 3, in the context of Hawthorne's writing, both landscape problems and environmental problems are in the same data value, while the data values of landscape problems and environmental problems in today's era are almost the same. In the context of an era, the relationship between landscape and environmental problems is almost in a parallel line, and they complement each other. Throughout Hawthorne's career, Hawthorne continuously focused on the problems of morality and evil and advocated that evil should be washed away and the soul purified through good deeds and self-confession, so as to be saved. At that time, the destruction of human nature in the social background was seriously distorted, and it was also a direct reflection of the dark side of society. These thoughts are completely from the background of the times at that time. Under the influence of different times, they create different values and cultural factors. These shortages in social values and cultural factors, though different from the modern world, still exist to a certain extent. Many problems which exist in Hawthorne's writings on the landscape, especially his discussions on the inner world of human nature, still play certain roles in our society. Therefore, reading Hawthorne's novels will provide great help to us in leading us understand the fall of ruin of the natural environment. This kind of contribution, though not inherently exist in the landscape writings of Nathaniel Hawthorne, can manifest its value under our modern perspective.

Under the background of Hawthorne's life, it mainly takes the dark view, personal psychological character, cultural factors, and evil human nature as the leading thoughts. Educational psychology is the study of how individuals understand and retain knowledge, mainly in educational environments such as classrooms. This involves learning processes on the social, emotional, and cognitive levels. These thoughts are completely from the background of the times at that time. Under the influence of different times, they create different values and cultural factors. Taking Hawthorne's life background as the premise, compare the contemporary life background, and make a comparative analysis of the concept of darkness, psychological character, cultural factors, and human evil under the two backgrounds. The data obtained are drawn in Table 3.

In Table 3, Hawthorne believed that the social problems, the complex contradictions between people, and the criminal phenomenon were the embodiment of evil in human nature. "Evil" is the origin of all evils and a part of nature. Therefore, in the context of Hawthorne's life, the data values of these four concepts are relatively high, mainly taking the evil of human nature as the main view, and the value of human nature is very important to the dark view. The dark side of nature is the hidden and vulnerable underbelly—the negative, yet all too human, aspect. The majority of us may find it easier to avoid investigating the darker elements of ourselves and our surroundings—the pain we see all around us, from real-world events to the entertainment we consume.

In order to more intuitively observe the comparison of cultural factors and human nature under different life backgrounds, draw Figure 4 according to the data in Table 3.

As shown in Figure 4, there is a big difference in the data value of the dark view under the background of two different times, and there is also a big change in the data value between them under the comparison of evil human nature. From Figure 4, it can be seen that under the background of the times, the data value of the four factors is more than 60% in a civilized and harmonious society, while under the background of social civilization turbulence, the data value is less than 40%. There are great changes in data values in the second era. Life background determines the changes of factors.

Throughout his career, Hawthorne always believed that the social problems, the complex contradictions between people, and the criminal phenomenon were the embodiment of evil in human nature and its relation to the natural world. All evils rise as a part of nature, which reflects in Hawthorne's landscape writings as well as human nature. Hawthorne's reflection on the nature, though contributed greatly to his creation, also became the burden of his literary life. Hawthorne's pessimistic view of the human life and the burden of his personal history formed his passive view of human world [24]. The dark side of nature is the hidden and vulnerable underbelly—the negative, yet all too human, aspect. The majority of us may find it easier to avoid investigating the darker elements of ourselves and our surroundings—the pain we see all around

TABLE 3: Analysis and comparison of different factors on life background.

Grouping	Dark view	Psychological character	Cultural factor	Evil human nature
Hawthorne's life background	68.89	61.23	64.59	71.25
Contemporary life background	35.23	37.56	39.58	41.59

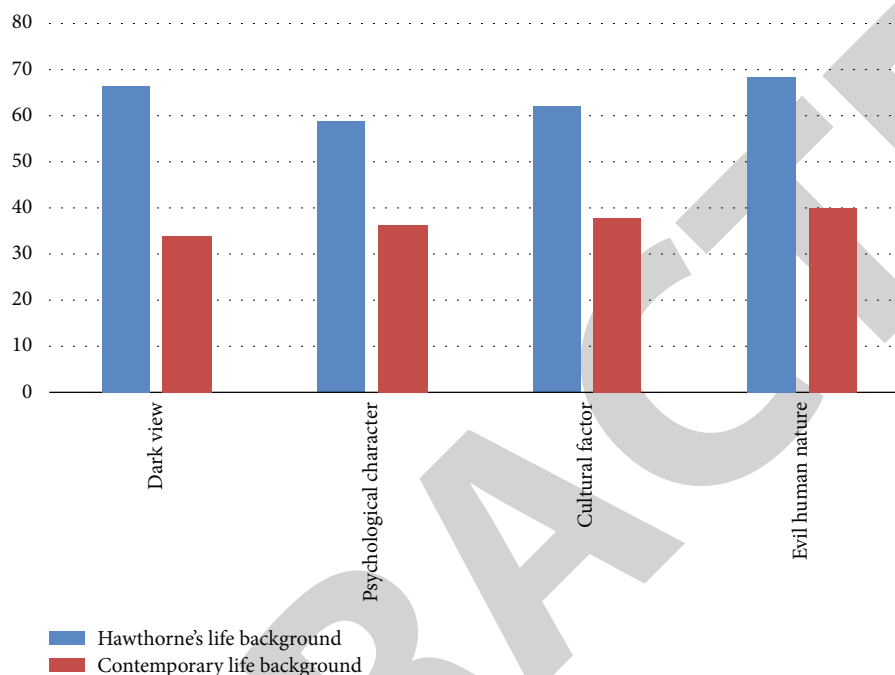


FIGURE 4: Visual diagram of analysis of different factors under the background of life.

us, from real-world events to the entertainment we consume. This idea continues to appear in Hawthorne's works until the end of his career and appears in his unfinished romances [13]. To make people understand their inner evil, many issues need to be taken into consideration, including the shortages of American puritanism, the inner poverty of human nature, and the unlimited development of human society. The realization of all those problems forms the potential "epiphany" in Hawthorne's writings [41]. Ironically, for Hawthorne, the waiving of the civil society represents the rise of the civilization. Only in this way can people find their home, like what Hepzibah and Clifford do in *The House of Seven Gables* [42, 43]. Should people cannot yield to the natural world, they will finally lose their home and ramble like Hawthorne's Wakefield.

5. Conclusion

Through the study of Hawthorne's context and living environment in antebellum period, this paper analyzes Hawthorne's writing characteristics and the description of landscape writing methods at that time and studies the differences in writing styles caused by the influence of his own social background in different times. Hawthorne uses romantic writing techniques to describe the landscape and uses exaggeration and personification to show his missing and the current situation of people's life at that time. This study makes a comparative analysis of

landscape writing based on Hawthorne's life background. At the same time, through the evaluation of different literary writing backgrounds, the relationship between landscape and environmental problems, and the different forms of cultural factors and human nature in different times, it is concluded that the life era background plays a key role in landscape writing, environmental problems, and cultural factors and lays a foundation for the development of the era background. And better understand Hawthorne's creative thought from another side, so as to further promote Hawthorne research in China. It will provide research materials and reference significance for promoting the development of social ecological environment, open a wider stage for the progress, and thought in the field of literature. At the same time, in terms of the protection and maintenance of the natural environment, we call on more human beings to work together to create a green living environment and spiritual ecological environment for human beings.

Data Availability

The data underlying the results presented in the study are available within the manuscript.

Conflicts of Interest

There is no potential conflict of interest in this paper.

Retraction

Retracted: Analysis of the Influence of Western Philosophy on the Development of Chinese Environmental Philosophy Theory and Its Future Direction

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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] Y. Ge, "Analysis of the Influence of Western Philosophy on the Development of Chinese Environmental Philosophy Theory and Its Future Direction," *Journal of Environmental and Public Health*, vol. 2022, Article ID 1216866, 11 pages, 2022.

Research Article

Analysis of the Influence of Western Philosophy on the Development of Chinese Environmental Philosophy Theory and Its Future Direction

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Western environmental philosophy was born out of the environmental movement that emerged in the second half of the 20th century, and it is fundamentally practical in orientation. However, over the past 50 years, the study of environmental philosophy has become increasingly abstract and theoretical and seems to have drifted away from the practice of environmental protection. At the beginning of the 21st century, Western environmental philosophy began to take a policy turn, with an increasing number of philosophers actively participating in national and international environmental policy discussions. This turn is the latest development in environmental pragmatism. However, the philosophy embodied in this turn is still weak and lacks sufficiently strong theoretical roots. An environmental philosophy that truly achieves a policy turn, i.e., one that can exert a truly significant influence in environmental policy making, must be based on a unified and robust theoretical paradigm. This paper takes the goals and tasks of environmental philosophy research as an entry point, analyzes the deviation of the development of environmental philosophy in China to the problem of the intrinsic value argument, and explores the new direction of environmental philosophy research by focusing on the central argument of environmental pragmatism. In order to deeply explore this issue, this paper takes the Marxist concept of development as the theoretical guide and mainly adopts the methods of inductive research, comparative research, and theory to practice. This paper summarizes the foundation of contemporary environmental philosophy into four basic questions of center, value, ethics, and survival and seeks answers to these questions in philosophical thought. To construct the basic framework of modern Chinese environmental philosophy, through the comparative study of environmental ethics in different periods, this paper explores the relationship between environmental ethics in the perspective of Marxist concept of development, so as to further clarify the development direction of environmental ethics in China in the future.

1. Introduction

Historically, the relationship between man and nature has generally gone through three historical stages: from simply relying on and worshipping the forces of nature to man-centred, where man thinks he is the master of nature, and then to the contemporary era, a new period in which development and the environment are advocated in harmony. It is of certain theoretical significance to think about environmental ethics from the perspective of Western philosophy. It helps people to more clearly understand the source of environmental crisis, improve the public's ecological aware-

ness, and form a new concept of consumption. At the same time, guided by Western philosophy and using systematic philosophical thinking to guide practice, it is conducive to the construction of today's ecological society.

1.1. Connotation of Environmental Pragmatism. Since its inception, the philosophy of pragmatism has been the subject of much controversy: pragmatism is a utilitarian, value-based ideology that values profit over reason. In fact, the term pragmatism can be traced back to its Greek origin, *pragma*, which originally meant behavior, action, and later was derived to mean “practice” [1].

In the 1990s, “environmental pragmatism,” as the embryonic development stage of the field of environmental philosophy, was also considered as an outside view [2]. The field of environmental philosophy needs to update its research direction and content, so that the ultimate task of environmental philosophy does not need to deviate from the real environment, enter the current situation of ecological nature and social development, change people’s behavior and environmental protection concepts, and make effective methods and measures to improve the relationship between man and nature, nature and society. Environmental pragmatism is valued in this situation, which is an evolution process of the history of environmental philosophy. It represents the confidence of members of environmental protection and provides a practical guide for environmental protection movement. When it comes to the research task of environmental philosophy, why should it be more used as a practical way of application? It is in order to get it out of the idealized ivory tower, to break through the barrier wall that few members of society read environmental philosophy books, and to enter the field of activities that can improve the current situation of the ecological environment, transform the world, and realize the equal dialogue between us and nature. This is the reason for the emergence of environmental pragmatism.

1.2. Ideas about the Environment. Environment is the basic concept of environmental science research [3]. At present, there are mainly three views on the understanding of the concept of environment: first, the anthropocentrism view. For example, Robin and Davidson define the environment as “the physical environment and artificial environment surrounding us.” The second is nonanthropocentrism. For example, Kuma and Yu Muchang believe that the environment refers to the sum of the external physical and biological systems in which human beings and other organisms live. Third is the relativist view. The environment is a concept relative to the subject, and different disciplines define the subject differently; then, the focus of the definition of the environment is different. See Table 1. They argue that the concept of environment in the sense of environmental science can only be based on human society, but they insist that the environment is a “self-organizing” system, which conforms to the principle of system integration and restricts the relationship between people and the environment. On the whole, this view does not simply consider the environment belonging to human beings but also finds that the environment has a self-regulation function [4]. Therefore, this kind of environmental concept includes the environment of human subjects and the environment of other life subjects. According to this relativistic view, when dealing with the relationship between people and the environment, we should consider not only the environment belonging to people but also the impact on the environment not belonging to people after the change of the environment belonging to people.

1.3. Environmental Ethics Theory. Environmental ethics consists of two relationships, one between human beings and

the other between human beings and nature [5]. Traditionally, “ethics refers to the rules and duties that people should follow in various social relationships,” which emphasizes the relationship between human beings. With the development of ethics, the academic community has become more and more aware that the scope of ethical issues is expanding. The scope of ethics has expanded to include not only the relationship between human beings but also the relationship between human beings and nature, especially in the environmental ethics issue studied in this thesis [6]. We argue for the rationality of this view from two perspectives: First, starting from a narrow ethical perspective, even if we simply consider human beings as a single starting point, it is impossible to ignore nature. For example, the principle of environmental justice and the principle of intergenerational equality, both of which are very important in environmental ethics, confirm this view. From a broad ethical perspective, if human beings, as a part of nature, discuss ethical relationships, especially environmental ethics, in isolation from nature, there are bound to be gaps, and a large number of behaviors cannot be evaluated by ethics. Some scholars have systematically discussed the unity of the “natural nature of man” and the “human nature of nature” in environmental ethics. Marx pointed out that “the so-called connection of man’s physical and spiritual life with nature is the same as the connection of nature with itself, because man is a part of nature”. Therefore, ethics cannot speak about the relationship between human beings in isolation from nature.

In this thesis, the different conceptions of environmental ethics are also divided into two types of positions: weak environmental sustainability and strong environmental sustainability [7]. Weak environmental sustainability is based on modern biology and systems ecology, and conservation biologists in general support the paradigm that sustainability is about maintaining the carrying capacity and resilience of ecosystems, so that sustainability is measured by various ecological models. It is not only limited to economic or ecological analysis but also values the community while valuing the ecosystem as a whole. The degree of sustainability is progressively increased from weak economic sustainability to strong economic sustainability to weak environmental sustainability and strong environmental sustainability, as shown in Table 2.

2. Description of the Problem

2.1. Status of Non-Chinese Research. After more than half a century of development, environmental philosophy has achieved important and fruitful results in domestic and international inquiries [8]. In general, its research has led to the formation of many disciplines such as social ecology, environmental justice, environmental post-modernism, and eco-socialism. On the one hand, from “animal liberationism” to “biocentrism,” they have expanded the scope of morality and ethics from the animal world to the whole biological world and advocated the intrinsic value of nature, which has dissolved human initiative and denied the history of human evolution, thus falling into extreme natural mysticism. In the end, a “weak” anthropocentrism was formed

TABLE 1: Concepts of environment in different subjects.

Subject	Main body	Object	Definition of environment
Philosophy	People, animals, plants	Environment	Object relative to subject and subject varies
Sociology	People	Environment	Human environment
Ecology	Biology	Environment	Biological ecological environment
Environmental science	Human society	External	Things around survival and social development

TABLE 2: Two paradigms of sustainability.

Normal form	Weak sustainability		Strong sustainability	
Subject	Welfare economics	Ecological economics	System ecology	Environmental ethics
Representative figure	Solow	Pierce	Bobby	Rolston
Environmental impact equation	Environmental resource value evaluation model		Ecological carrying capacity model	No relevant studies

through convergence and reconciliation, and the reversal of this controversial situation has only given environmental philosophy more say in the context of controversy.

The problem facing environmental philosophy now is how to quell the chaos of these schools of thought and their contending views [9]. If we step away from the focus of these debates and look at the ecological and environmental situation in the world today, which is always facing a serious test of future survival, the practical path needed to achieve “sustainable development” becomes an imperative for environmental protection. Therefore, environmental philosophy continues to deserve a second look and consideration. In recent years, the concept of philosophical “pragmatism” has been introduced and applied by scholars and experts in the field [10]. The founding father of pragmatism, Peirce, linked concepts and meanings, writing that “one has to consider what conceivable practical effects necessarily follow from the truth of the concept. The sum of these effects will constitute the whole meaning of the concept.” James similarly summarizes the pragmatic approach: “The pragmatic approach is not a particular result, but merely a directional attitude. It is an attitude that looks not to the first things, principles, and categories that are assumed to be necessary; but to the last things, gains, effects, and facts.” It is easy to see that the basic idea of pragmatism places special emphasis on utility and final factual results. The emergence and application of environmental pragmatism is a progress in the study of history. It has made a thorough and brand-new change in its views and methods of thinking on the content of environmental philosophy.

2.2. The Current Development of Environmental Philosophy in China. The research of Chinese environmental philosophy originated from Yu Muchang’s “ecological view and ecological method,” which has a history of more than 30 years [11]. It is the first article about environmental philosophy.

The development of western environmental philosophy can be divided into three stages: (1) The first stage is the early stage of “natural preservation movement” to prevent human beings from destroying the environment. (2) After the establishment of modern industrial society, the “nature preservation movement” stage advocated the use of natural

resources from the perspective of human utilitarianism. (3) The third stage is the “environmentalism movement” stage that is based on the symbiosis between man and nature.

According to the development of Chinese environmental philosophy, the development of Chinese environmental philosophy has roughly developed into three stages, namely, the introduction and translation stage, the discussion and dispute stage, and the localization stage. The history of each country is different, resulting in different cultural environments, which directly leads to the philosophy of each country is different, with a certain specificity in each case [12]. Therefore, non-Chinese environmental philosophy is not applicable to China, and it is necessary to build an environmental philosophy in line with China’s characteristics in combination with the situation of China’s ecological civilization construction. China has five thousand years of cultural history. Chinese culture is broad and profound. Many ideas or concept, including the current mainstream values, have indirectly become the code of conduct of contemporary people. Society is developing, but the influence of Chinese culture on ideas remains unchanged. Chinese culture contains many elements. In view of the necessity, urgency, and possibility of the construction of China’s environmental philosophy, in order to develop China’s environmental philosophy quickly and well, it is necessary to conduct in-depth research on the current development status and deficiencies of environmental philosophy at this stage not only learn from western experience but also consider the impact of China’s traditional culture. The emergence of philosophy is closely related to the cultural environment. The construction of the theoretical system of environmental philosophy with Chinese characteristics should be fully combined with the cultural foundation of China and take this as a prerequisite, learn from the essence of non-Chinese environmental philosophy, and eliminate non-Chinese, so that environmental philosophy can be localized and localized in China and smoothly know the construction of ecological civilization in China, as shown in Figure 1.

2.3. Environmental Issues in the Perspective of Contemporary Philosophy. Due to the increasingly prominent environmental problems, people have conducted all-round research and Exploration on environmental problems, as shown in

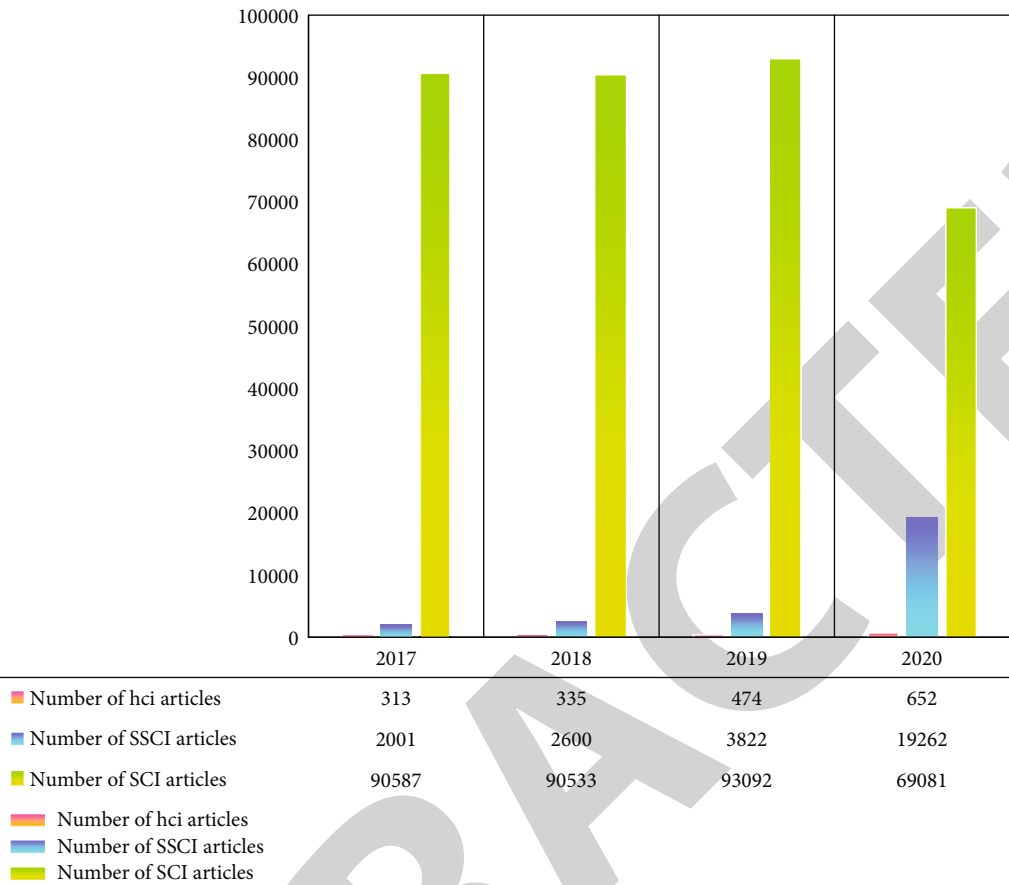


FIGURE 1: Chinese thesis indexed by three major disciplines, 2017–2020.

Figure 2. At the philosophical level, people’s thinking mainly focuses on four aspects: first, the central problem, that is, to determine the “central thing” and “related surrounding things” [13]. The different determination of this leads to the divergence of principles between “anthropocentrism” and “nonanthropocentrism”. The second aspect is value. As the living condition of human beings, the environment has two values for human survival: the value as “human home” and the value as raw materials and resources necessary for human material production. The third aspect is ethical issues. Environmental ethics is a kind of new ethics formed under the condition of the contemporary human survival crisis. The emergence of human survival crisis is not a natural disaster, but a man-made disaster, which is the result of human beings’ unlimited transformation of nature. Therefore, the first basic principle of environmental ethics is as follows: in the relationship between man and nature, what we are able to do is not necessarily what we should do. The fourth value is survival. Existentialism embodies the ultimate concern of philosophy for mankind, and environmental philosophy presents obvious existential implications [14]. In the face of environmental problems, there are four changes, namely, from personal standard to class standard, from absolute subject consciousness to “limited subject” consciousness, from pleasure consciousness to survival consciousness, and from secularism consciousness to future consciousness.

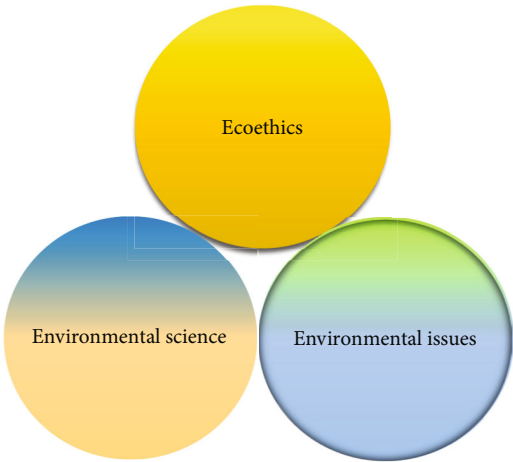


FIGURE 2: Research domain of environmental science issues based on ecological ethics.

3. State of the Art

3.1. Environmental Philosophy as a New Form of Philosophy

3.1.1. Environmental Philosophy Ontology-about the Existence of the World. From the perspective of environmental philosophy, the world exists in a complex and complete ecological system of human, nature, and society [15]. Pure

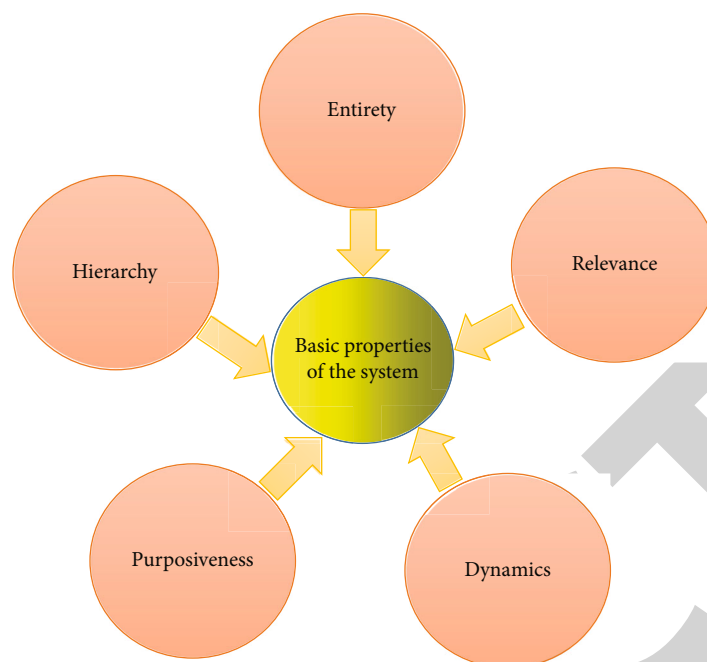


FIGURE 3: Basic characteristics of philosophy.

objective nature and pure human are not the origin of the world. The real origin is the complex and complete ecological system of human, nature, and society. From the perspective of existence, environmental philosophy holds a negative view of the opposition and separation between man and nature, and a complete and complex ecosystem, that is, the mutual unity of man, nature, and society, constitutes the real world. The ontology of environmental philosophy consists of three parts: relationship ontology, process ontology, and holism. Relational ontology refers to the existence of the real world, which is composed of various relationships, of which the two most important relationships include social relations and ecological relations. The main body of social relations is between people, and the main body of ecological relations is man and nature. The whole development process of the world is centered on these two relationships. Process ontology refers to the development process of the world. It can be learned through philosophy that things in the world are dynamic, not static. The development of the world is the unity of absolute motion and relative stillness. Process is the basic form of things. Holism refers to the relationship between the whole and the part. The whole occupies a leading position, commands the part, has functions that the part does not have, and the part cannot be separated from the whole. It requires us to establish the concept of the overall situation, based on the overall situation, plan the overall situation, and achieve the optimal goal. The whole is composed of parts, which restrict the whole. The functions and changes of key parts even play a decisive role in the functions of the whole. It requires us to pay attention to the role of the part, do a good job in the part, and use the development of the part to promote the development of the whole [16]. Therefore, the view advocated by environmental philosophy is contrary to the view of “centrism,” as shown in Figure 3.

3.1.2. Value Theory of Environmental Philosophy-about the Value of Man and Nature. The axiology of environmental philosophy mainly studies the value of nature. Natural value includes two kinds, one is its external value and the other is its internal value [17]. External value refers to the great value of nature to people, and internal value refers to its own value, that is, the value of the survival subject. These two values constitute a relatively complete natural axiology. The basic theory of environmental philosophy is the theory of natural value, which determines the affirmation of natural value and is the primary requirement for understanding the basic theory of environmental philosophy, as shown in Figure 4.

The basic problem of environmental philosophy is the relationship between man and nature. Traditional philosophy regards the relationship between man and nature as binary opposition or separation, while environmental philosophy discusses the harmonious development between the two. It can be regarded as a transformation of mode, that is, from the old philosophical mode to the new philosophical mode. However, this transformation does not blindly criticize or completely deny the original philosophical model, but just according to the needs of the development of the current era, eliminate some outdated views and ideas, retain the reasonable and constructive opinions and ideas, and from the perspective of ecology, rebuild the advanced ideas in line with the spirit of the times, which is a kind of perfection and Transcendence of the old philosophical model.

3.1.3. Methodology of Environmental Philosophy-Ecological Thinking. What is ecological thinking? It can also be called ecological method, which is to think about problems from the perspective of ecology, observe and study real things in the real world from the perspective of ecology, and use the

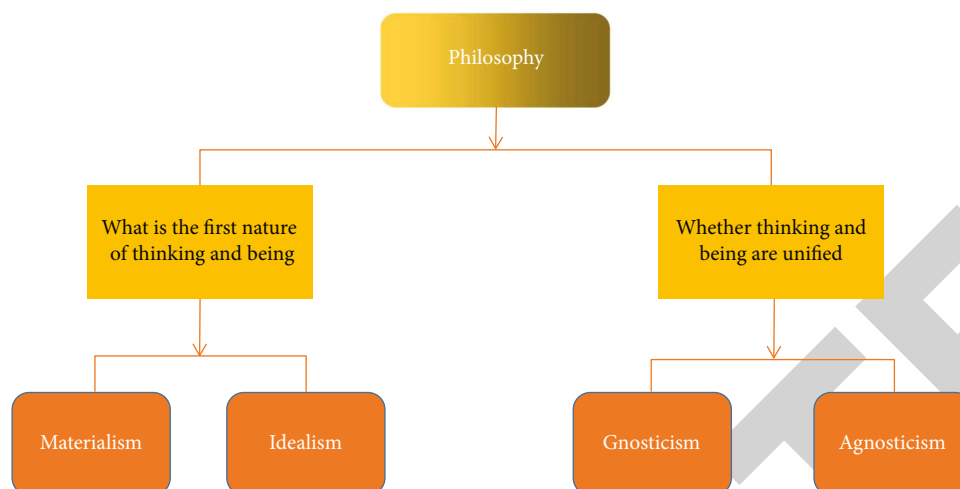


FIGURE 4: The main classification of philosophical ideas.

perspective of ecology to solve problems. Ecological thinking is a new way of thinking. Some people call it organic thinking or group thinking. It was proposed by Bertalanffy, the founder of general system theory [18]. He emphasized that life should not be simply understood as a single organism, but should be examined as a whole or system with the environment. Because life is a process of material and energy exchange and information transmission between organism and environment, organism cannot be separated from environment. Life is an organic whole of organism and environment, and life can exist, develop, and express only in the process of its interaction with environment. Thinking about life from this point of view is a change in the thinking mode of biologists. Using this new way of thinking to think about problems related to life phenomena and study various biological processes and relationships is to reveal life processes and relationships at a deeper level, which is conducive to understanding the essence of life phenomena. This way of thinking is of general methodological significance not only in the field of biology but also in the understanding of various ecosystems, including the relationship between man and nature. Therefore, it has become one of the most important thinking modes in environmental science.

3.2. The Theoretical Basis of Environmental Philosophy and Its Trend of the Times. Environmental philosophy takes the relationship between human beings and the environment as its research object, and through thinking and asking about the ultimate meaning of the existence of the environment, it reflects deeply on the relationship between human beings and nature in the post-industrial era in order to seek harmony and sustainable development of human beings and the living environment. The environmental philosophy of the new era should have a new connotation of the times, as shown in Figure 5. Zhou Guowen of Beijing Forestry University explains the concept, challenges, connotation, and development trend of environmental philosophy in the world with the title “Environmental Philosophy for the New Era.” He pointed out that in the face of the changing world environment and industrialization, the challenges fac-

ing the world environmental philosophy are the dilemma of consciousness forced by problems, how to improve practice with concepts, how to optimize action with thoughts, and how to enhance existence with spirit. After that, Zhou clarifies the environmental philosophy of the new era from the perspective of the relationship between environment and philosophy, pointing out that the new world environmental philosophy strives to condense a natural rationality integrated with ecological knowledge and to grasp the environmental function and its structural empowerment. Finally, Zhou traces the origins and development of environmental philosophy and looks at the trends of world environmental philosophy in the new era, pointing out that the trends of world environmental philosophy are more focused on philosophical thinking about the future world environment, on thinking about and analyzing events, and on clarifying the position of environmental philosophy in the discipline of philosophy, which should focus on broader global issues in the new era. Ecological consciousness is an organic component of modern social consciousness and an organic unity of human nature consciousness and social consciousness [19]. Chen Qiuyun of Fujian Jiangxia College presented a thesis entitled “An Exploration of the Basic Dimension of Ecological Consciousness,” pointing out that the relationship between human beings and nature is the core issue of ecological consciousness. She analyzed that the common problem faced by human beings is the conflict between the specific limited nature of human reality and the infinite nature of social development from the three dimensions of limited reality, space of the overall system and future-oriented time. Based on this, she argues that the cultivation of ecological consciousness needs to be implemented in the cooperation of global environmental protection.

3.3. Environmental Philosophical Perspectives. Nonanthropocentrism: ecocentrism is the essential opposite of anthropocentrism. Nonanthropocentrism opposes the dichotomy of subject and object and believes that man and nature are a unified whole, in which nature and man are equal, and have the same rights of survival and ecological values.

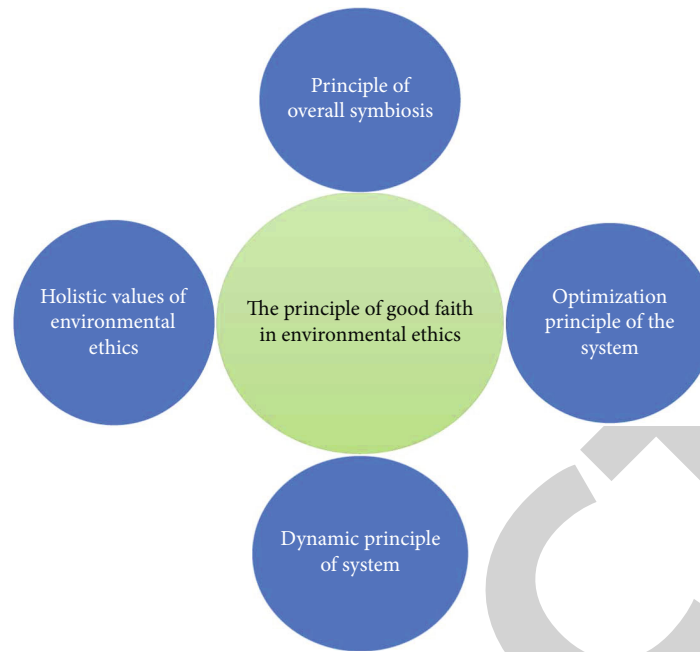


FIGURE 5: Integrity principle of system philosophy.

Nonanthropocentrism believes that man is not the master of nature and nature is not the object of human conquest but that nature and man are ontologically equal partners in existence and that nature is even the mother who gave birth to man before man. We should abandon the anthropocentric view of human interest as the ultimate value measure and establish a non-anthropocentric view of harmony between humans and nature as the highest value measure.

Anthropocentrism: Anthropocentrism is based on the dichotomy of subject and object and believes that man is the subject, while all other natural objects are objects, and man has the priority status in the sense of absolute value in relation to the natural environment. Therefore, anthropocentrism advocates that everything should be human-centered and human-measured and that human interests and values are the supreme yardstick for judging human practical activities and that human practical activities are “humanitarian” if they meet human purposes and achieve human interests or else they are “non-humanitarian.” Otherwise, it is “non-humanist”.

3.4. Theoretical Models and Trends of Contemporary Environmental Philosophy. The environmental philosophy of value discernment reflects the linguistic analysis of the value theory of environmental philosophy. The general study of value is called value theory. There are different types of values, and the most common one is the division of values into intrinsic, embedded, and extrinsic (or instrumental) values. The environmental philosophy of value discernment, however, depends on a deepening of the understanding of the content of environmental values, and the debate arises from who the subject of value belongs to. It is possible that the consensus emerges from respect for the specific intrinsic value of nature. But for a considerable time frame, nonanthropocentric and anthropocentric theories, both ontologi-

cal, value and epistemological, have been vigorously debated on the merits of their models and connotations. This debate has the potential to make the process of developing environmental policy more difficult, as shown in Figure 6.

Whether the source of value is subjective or objective, and whether the value of natural objects has internal or external value, these considerations have affected the judgment of the economic, cultural and ecological attributes of natural values. The search for these issues provides a conceptual basis for the value theory of environmental philosophy. The value-discursive environmental philosophy re-examines the value of nature and natural objects, reaffirming and expanding the intrinsic value of natural beings as an essential feature of a major environmental philosophical debate on value and use value.

3.5. Ecological Environmental Philosophy. An ecologically minded environmental philosophy focuses on the expansion of the self not only from the self to nature but also from nature to ecology [20]. Our understanding of ecosystems has the potential to add value to the environmental philosophy we are refining. Using ecology as a cornerstone, strengthening the study of an ecologically minded environmental philosophy is also a way to establish the unity and certainty of environmental philosophy.

An ecologically minded environmental philosophy does not mean that all of our considerations of environmental philosophy converge on an ecological paradigm but rather emphasizes an ecological mindset to examine important issues in environmental philosophy. Is there any new pollution of natural ecology in our efforts to improve it; are there any unnatural or anti-natural biased mistakes in ecosystem action; or is this the least bad outcome of our best choices in returning to nature, or are we engaging in ecological

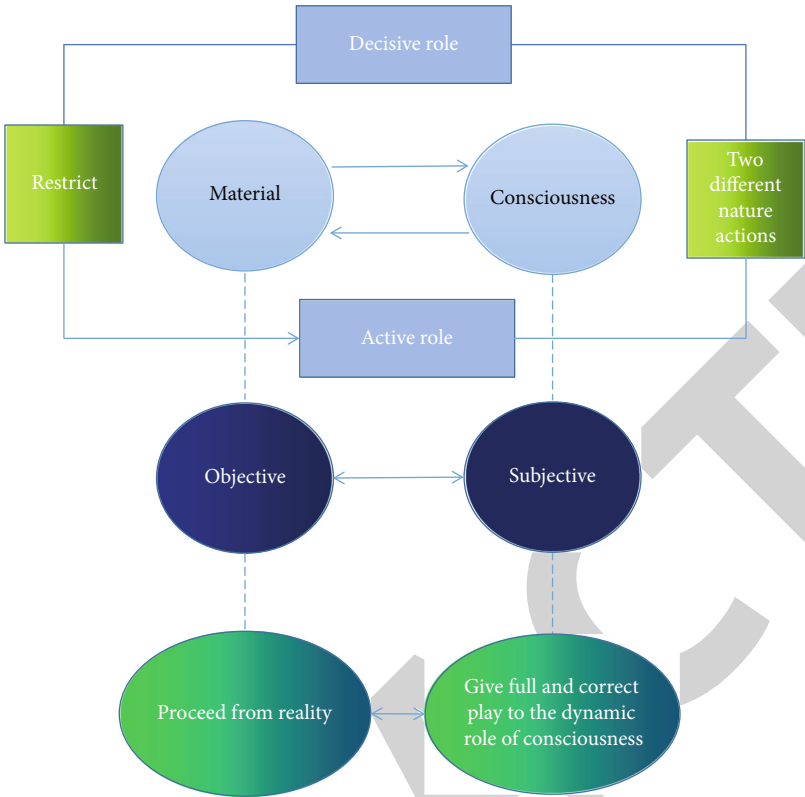


FIGURE 6: Principle and methodology of dialectical relationship between matter and consciousness.

TABLE 3: Different discourse systems and corresponding rules of sustainability.

Discourse system	Standard type	Type of rule	Focus	Time hierarchy
Economical	Economic standard	Weak sustainability	Maintain the decline of welfare	0–5 years
Ethical	Fair standards	Intragenerational equality	Equitable access to resources	Continuous and eternal
Apocalyptic	Community value	Minimum safety standards for protection	Maintain opportunities for future generations	Without limit

restoration practices that are somewhere between useful and useless. All of these questions are clearly linked to an “ecologically minded environmental philosophy,” as shown in Table 3.

4. Significance Analysis of Environmental Philosophy

4.1. Western Philosophy Provides a Reference for Deepening the Study of Marxist Philosophy. As a generalization and summary of natural and social sciences, philosophy can only maintain its power source of innovation and development by constantly tracking, capturing, and taking in new achievements and theories of natural and social sciences. Western philosophy began with the Miletus school of natural philosophy and has a long tradition of natural philosophy. According to the statistics disclosed in the West, the philosophical thesis published by natural scientists accounts

for more than 60% in the journals about philosophical research. Among modern Western philosophers, some are famous natural scientists themselves, such as Mach and Affinarius; some specialize in social sciences but also have deep attainments in the field of natural sciences, among which the philosophers of philosophy of science and structuralism are the most prominent. Their philosophical researches pay much attention to summarizing and absorbing the results of natural sciences in time, so they are often able to try out novel perspectives and introduce advanced methods in their philosophical researches, and achieve remarkable development. Few of our philosophical workers have a solid foundation in natural science. In the past half century, natural science and social science have made rapid development, but the research team and research mode in the field of philosophy in China have not fundamentally changed.

In addition, analytic philosophy advocates the use of logical analysis to clarify the meaning of concepts and

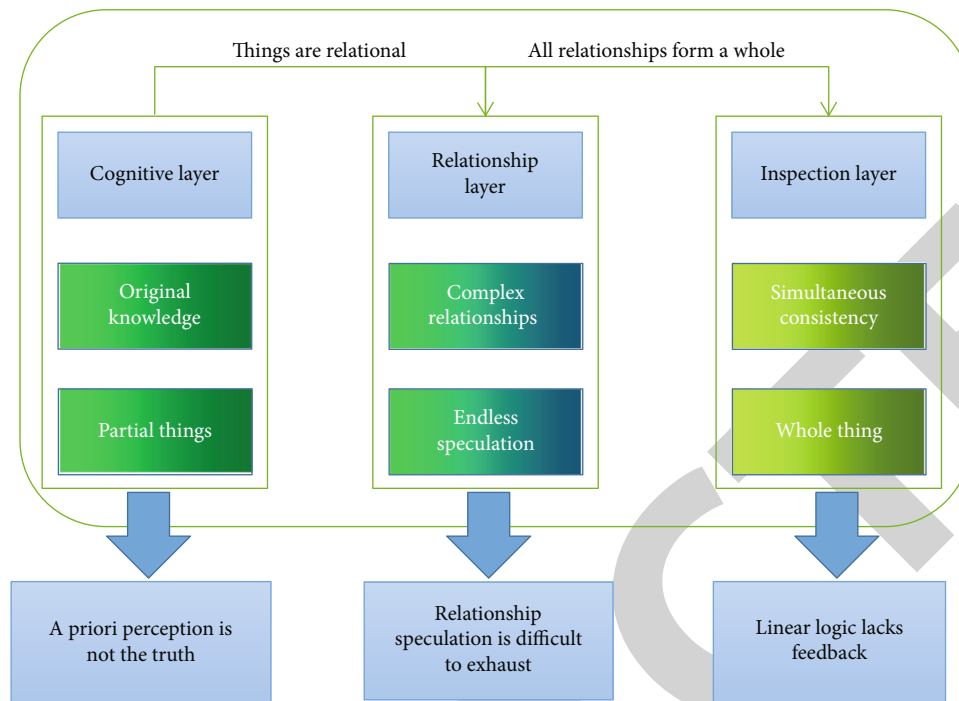


FIGURE 7: Theoretical framework from the perspective of Holism.

propositions and to achieve a scientific understanding of the world and human thinking through the analysis of the meaning of language, which has had an important influence on various aspects of modern thought and culture and is also very worthy of reference. The scientific introduction of the linguistic analysis method of analytic philosophy obviously helps to clarify the meaning of concepts, strengthen the substantiality of arguments, and avoid empty generalizations caused by unclear concepts. Marxist philosophy is an open philosophy, which has always advocated academic tolerance and freedom of thought. Drawing on modern Western philosophical research methods is undoubtedly conducive to strengthening the exchange and communication between Marxist philosophy and other trends, so as to adapt to the changing characteristics of the times and innovate and develop Marxist theories and doctrines, as shown in Figure 7.

4.2. Contemporary Insights on Environmental Ethics in Philosophical Perspective. Systems philosophy believes that society is a complex system composed of multiple elements and that the elements within a social system, such as information and resources, move and interact with each other to form an organic, dynamic, and open system. The so-called harmonious society means that each element of the social system is in an orderly state of mutual coordination between the elements and between the whole social system and the environment.

To achieve social harmony requires not only harmony between people but also harmony between people and nature. Achieving harmony between people and nature can save the means of production, maintain the regeneration of resources provided by nature, and provide the necessary

material basis for human survival and development, and achieving harmony between people can enhance people's cognitive ability and raise the level of understanding to guide the development of human society. Therefore, it is said that the harmonious development of society is based on the harmony between people and nature. Therefore, the harmonious development of society can be seen as a new environmental ethics concept, which leads people to establish the value of environmental protection.

The social system and the natural system are interconnected and interact with each other, and they are a whole that develops together. Therefore, when building a harmonious society, we should take the road of sustainable development and deal with the relationship between human beings and nature.

Social system is a whole composed of political, economic, cultural, ecological, and other subsystems. To build a harmonious society, it is necessary to promote the all-round development of each subsystem.

Harmony between people and nature can not only ease the contradictions between humans and the environment but also enable people to form a sense of environmental protection, in the role of environmental awareness: people's consumption patterns to green consumption, moderate consumption, and scientific consumption; people's economic concept to environmental protection economy and green "GDP" change; people's culture to sustainable development. The human culture is changing towards sustainable development. Harmony between man and nature can make the ecosystem run more smoothly, provide the necessary place for human life, and provide the necessary material materials for human development, so as to drive the development of other subsystems of society and realize the overall progress

of the whole society. Moreover, people are the main body of society, and the mutual coexistence between people can produce a kind of harmonious concept. After all, society needs people to manage, so the harmony of people's concept also determines the harmony of all aspects of the social system, so the harmony of people and people can help build a harmonious society.

4.3. The Contemporary Significance of Marx's Environmental Philosophical Thought. Now, after 30 years of reform and opening up, Chinese society has embarked on the road to modernization at a speed that has astonished the world and created enormous material wealth. However, just as the Western societies that first achieved industrial civilization have experienced, we have also experienced the problem of environmental degradation in the process of industrialization in our development. For developing countries like ours, it is a dilemma to balance the modernization process and environmental costs. In the face of the crisis of modernity, postmodernism has emerged in the West, but its pessimistic arguments do not suit the social development needs of a developing country like ours, which is trying to modernize. The study of Marx's environmental philosophy can point out the correct development path for our society in a more positive sense, and the practical significance of studying Marx's environmental philosophy lies precisely in this.

5. Conclusions

The theoretical core and main line of Marx's ecological philosophy is the dialectical unity of man and nature. In order to study the dialectical unity of man and nature, Marx did not simply discuss the relationship between man and nature in an abstract way, but put the issue in practice and conducted a comprehensive and holistic examination in the context of social relations, explaining the great role of nature for human survival and development.

By interpreting Marx's view of nature under the framework of modern environmental philosophy, this paper tries to integrate China's environmental philosophical viewpoints according to the modern environmental philosophy system, so as to construct the basic framework of Chinese environmental philosophy. This paper believes that Marx's environmental philosophy contains all the important aspects of modern environmental philosophy and can be self-contained, and because of its practicality and subjectivity, it has formed a relatively special environmental thought, which is very important to contemporary society, especially It is of great guiding significance for the practice of socialist modernization in our country.

The innovation of this thesis is to take western philosophy as the theoretical guidance, and try to explore the influence and future trend of western philosophy on the development of Chinese environmental philosophy theory from the aspects of understanding national conditions, strengthening moral education and improving the rule of law, and taking improving the spiritual realm and moral level of citizens as the practical way.

Data Availability

The labeled data set used to support the findings of this study is available from the corresponding author upon request.

Conflicts of Interest

The author declares that there are no conflicts of interest.

Acknowledgments

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Retraction

Retracted: Migration and Deposition Law of Pollutants in Urban Sewage Confluence Pipe Network from the Perspective of Ecology

Journal of Environmental and Public Health

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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.

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Research Article

Migration and Deposition Law of Pollutants in Urban Sewage Confluence Pipe Network from the Perspective of Ecology

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Aiming at the problem of pollutant migration and deposition in urban sewage confluence pipe, an experimental simulation system of sewage confluence pipe was established. The confluence conditions of three flow patterns (velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$) were simulated. The changes of sediment thickness, carbon pollutants, nitrogen pollutants, and phosphorus pollutants in different confluence areas were analyzed, and the migration and deposition laws of various pollutants in urban sewage confluence pipe network under different flow patterns were revealed. The results show that when the flow velocity of trunk and branch roads changes, the deposition of various pollutants and the carrying capacity of water flow in the pipeline change, resulting in the change of sediment layer thickness and pollutant content. With the increase of trunk velocity, the sediment thickness in the area before and after confluence decreases, while the increase of branch velocity only reduces the sediment thickness in the area at the back of confluence. Under any flow pattern, the sediment thickness in the retention area (G3 and G4) shows an increasing trend, which is the key area of pollution removal. Under the three flow patterns, the content of carbon pollutants reaches the peak at the TCOD and SCOD values of G4 monitoring point. Increasing the trunk velocity can effectively reduce the content of carbon pollutants. The content of nitrogen pollutants in each flow pattern also reaches the maximum at G4 point, which are 213.6 mg/g, 205.2 mg/g, and 212.8 mg/g, respectively. Increasing the trunk velocity can effectively reduce the nitrogen content at points G1-G4, while increasing the flow velocity of the branch road can reduce the nitrogen content at points G5-G7. The distribution of phosphorus pollutants is complex, and the flow pattern needs to be adjusted according to different monitoring points.

1. Introduction

With the acceleration of industrialization and urbanization, the domestic and industrial water consumption of residents has increased sharply, which has brought great challenges to the operation of urban sewage pipe network. As a result, the deposition of pipe network system is becoming more and more serious, and the capacity of receiving and discharging sewage is obviously decreased [1–4]. Typically, an urban

watershed is a stormwater collecting and conveyance network that is in charge of swiftly collecting rainwater from just urban locations in order to minimize severe floods. Following usage, wastewater is gathered in a system of sewers, or occasionally ditches, that connects to a wastewater treatment facility or disposal location. Prior to actually releasing effluent into receiving reservoirs or onto impervious surfaces, sewage treatment facilities eliminate a portion of the pollutants from the effluent. Urban sewage pipe network

plays a very important role in the whole sewage treatment and is the first checkpoint of the sewage treatment system [5]. Because the sewage treatment plant is generally far away from the city, the sewage transportation flow time is long, which contains C, N, P, and other pollutants in the pipeline anaerobic environment which will occur a series of physical and chemical series reactions, resulting in changes in the types, concentrations and properties of pollutants, affecting the subsequent sewage treatment process [6–10]. In addition, there are some problems in the sewage pipeline system, such as mixing of rain and sewage, lack of organic matter, sediment blockage, and toxic and harmful gases, which will inevitably cause environmental pollution, especially the pollution of water resources and endanger people's production and life [11–13]. Therefore, this paper studies the migration and deposition law of pollutants in urban sewage confluence pipe network, in order to provide ideas for the rational design of urban sewage pipe network and pipe cleaning.

As a key link of ecological city, urban sewage pipe network has attracted more and more attention of researchers. Kulandaiyelu et al. evaluated the control effect of iron (Fe^{3+}) salt on the content of organic micropollutants (MPs) in pipe network wastewater by using sewage reactor to simulate sewage pipe network, so as to reduce the discharge of phosphorus and sulfide in wastewater treatment plant (WWTP). The merits of using wastewater treatment are good for the environment, provide processed pure water, a strategy to reduce waste, and help you save money, conserve water, and so on [14]. The presence of phosphorus restricts the development of algae as well as aquatic plants in the majority of subsurface waterways. Consequently, the release of P-loads from industrial wastes often leads in a rise in the formation of microalgae and autotrophs, which can sometimes lead in eutrophication as well as worse water management. Bioactive molecules discovered in freshwater resources and treatment facilities for wastewater at levels of less than a few micrograms per liter are known as organic environmental pollutants. The majority of effluents are bioactive, and most are difficult to biodegrade. Gamage was used to remove 18 different kinds of pollutants from sewage pipe network, taking into account the effectiveness and maximum concentration, biological concentration factor, and half-life of the pollutants in the sewage system. Ozonation, reverse osmosis, electrolysis, ion exchange, and adsorption were used to remove the pollutants, and the removal effects of each technology were evaluated [15]. The Newton-Raphson approach, sometimes referred to as Newton's technique, is a rapid way to locate a reliable estimate for a real-valued function's root. It makes advantage of the notion that in a single direction parallel to a constant, linear interpolation can serve as a rough approximation. Pilotti et al. combined the nonbinary tree access algorithm with the Newton-Raphson method to evaluate the distribution of dissolved oxygen in the drainage network by processing drainage network grid diagram [16]. Liu analyzed the concentration changes of pollutants in the urban drainage pipe network at the water inlet, main pipeline, branch pipeline, and water outlet, as well as the distribution of sewage pipeline sediments under different drainage intensities, which provided

a scheme for the optimization of urban drainage pipe network system [17]. In order to clarify the relationship between pollutant concentration and flow velocity, Sang et al. established a sewage simulation system and studied the effects of flow velocity of 0.1, 0.3, 0.6, 0.9, and $1.2 \text{ m} \cdot \text{s}^{-1}$ on the contents of carbon (organic), nitrogen, and phosphorus in the pipeline [18]. Li et al. proposed a multisensor fusion estimation method based on autoregressive moving average model to simulate and monitor the flow velocity of sewage pipe network system, so as to ensure the smooth flow of sewage and provide convenience for dredging work [19]. Giving precise fundamental information is beneficial for feature-level and decision-level fusion. In feature-level fusion, characteristic knowledge from various sensors is first retrieved, and then, the statistics are examined and analyzed. For real-time analysis, this kind of fusion permits the acquisition of encrypted image.

In order to clarify the distribution law of pollutants in urban sewage confluence pipe network, an experimental simulation system of sewage confluence pipe is established. The confluence conditions are simulated under three flow patterns of velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$. The changes of sediment layer thickness and carbon pollutants (TCOD and SCOD, potassium dichromate digestion method), nitrogen pollutants (TN, alkaline potassium persulfate UV spectrophotometry), and phosphorus pollutants (TP, molybdenum antimony antispectrophotometry) at G1-G7 monitoring points under each flow pattern are observed. In order to reveal the migration and deposition laws of various pollutants under different flow patterns in urban sewage confluence pipe network, which provides a theoretical basis for urban pipe network design optimization and sewage pipeline dredging.

2. Methods and Materials

The actual sewage pipe network is surrounded by the underground of the city. Affected by the area of the experimental site, it is impossible to simulate the actual length of the urban sewage pipe network. Therefore, in this experimental study, a certain length proportion of simulated pipeline is established to simulate the actual sewage pipe network, and the internal circulation flow is used to meet the requirements of the actual hydraulic retention time. The mean amount of time the material is held within the digestion is known as the hydraulic retention time (HRT). The soil nutrient feed-in per period of time and furnace capacity is used to calculate the ecological loading rates (OLR) and how long aqueous and hydrophilic substances typically remain in a burner or container. It is computed by splitting the reactor's capacity (in m^3) through the speed of initial concentration flow (in m^3/day). This research is carried out from the following points: (1) design of experimental simulation system for sewage confluence pipeline. The device is shown in Figure 1. (2) Set the experimental conditions. The experiment was divided into three groups: $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$. The first group was operated for 90 days, and the

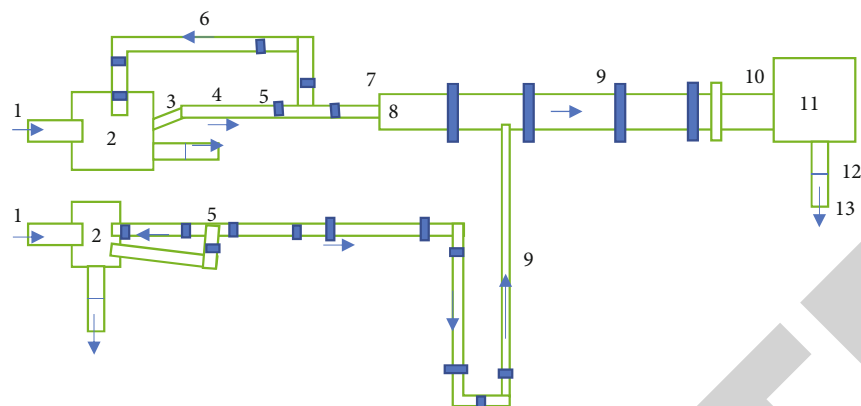


FIGURE 1: Schematic diagram of sewage confluence pipeline simulation system.

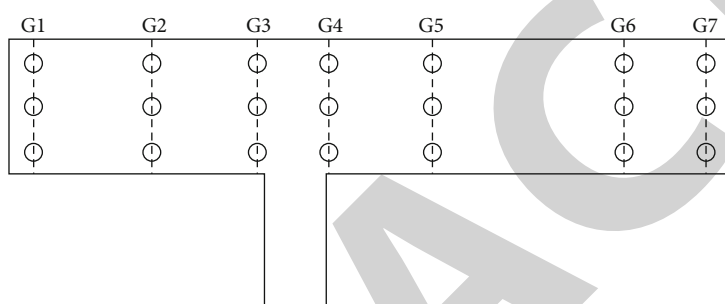


FIGURE 2: Distribution diagram of sampling points in confluence area.

experimental period of adjusting the flow velocity of trunk roads and branches was 30 days. The sewage used in the experiment was sewage at the entrance of Qingdao Younuo wastewater treatment plant. In order to improve the accuracy of the experiment, urban sewage was replaced daily [20–25]. The experimental sewage is pumped to the inlet tank of the system through the submersible sewage pump, the confluence state is simulated by the lift pump, the sewage flow of the branch and trunk is controlled by the regulating valve, and the combined sewage enters the outlet tank to complete the sewage simulation experiment. Ozone, chlorine, UV radiation, and sodium hypochlorite are often used disinfectants. Due to its durability, monochloramine, which is employed to cleanse groundwater, is not utilized to treat wastewater [26–28]. (3) Determine the location of monitoring points. Seven sampling points are set in the experiment, which are located in different confluence areas. In particular, scores of pollutions caused, including unsupervised source information, spirals, waterways, low-pressure regions, and framework finishes, ought to be included in this list of locations because they provide sample population of the circumstances at the resource program's least favorable references or areas [29–31]. The specific location is shown in Figure 2. (4) Sampling. After the end of the experimental operation cycle, close the pipe valve, open the sampling port after the system is stable, the sample is stored at low temperature. (5) Indicator determination. The indicators of carbon pollutants TCOD and SCOD, nitrogen pollutants TN, and phosphorus pollutants TP were determined by potassium

dichromate digestion method, alkaline potassium persulfate UV spectrophotometry, and molybdenum antimony anti-spectrophotometry [32–35]. The solubility COD in the bioreactor is represented by SCOD, whereas the overall COD in the bioreactor is represented by TCOD. When evaluating microorganism responses to atmospheric alterations throughout most of the acclimatization period, COD fluctuations are crucial. Among the most frequently utilized different chemicals in organometallic chemistry are soluble in dilute. It is largely used in labs and in the industry as a potent oxidizing agent in a variety of molecular processes. Anywhere oxidizing is concerned, potassium dichromate is a crucial reagent that is frequently employed. Whenever a blank result is greater than usual, the ammonium hydroxide persulfate digesting UV spectrophotometric technique is typically used to determine the total ammonia in freshwater. The molybdenum blue phosphorus technique combined with a UV-visible spectrometer is used to quantify the quantity of phosphorous. This approach is predicated on the creation of phosphomolybdate combination with the addition of molybdate, accompanied by the degradation of the compound with hydrazine in an environment of dilute sulfuric acid.

3. Results and Analysis

3.1. Sediment Layer Thickness. In order to make the simulation system of urban sewage pipe network more authentic and effective, the reactor needs to run for 3 months (90 d)

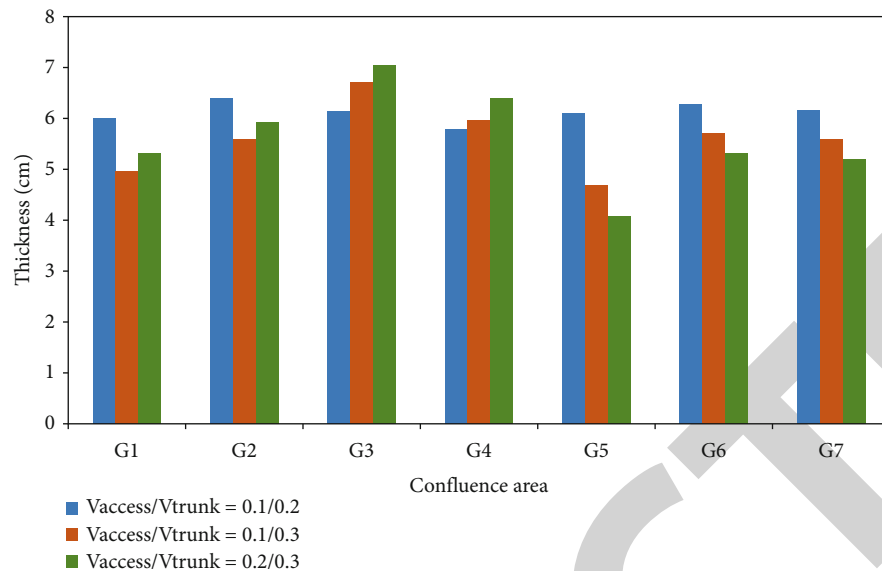


FIGURE 3: Variation of sediment thickness in each confluence area under different sink states.

under the environment of velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$ before the experiment, so that each sampling point (G1-G7) in the pipeline has a certain deposition of particulate pollutants, so as to improve the accuracy of the simulation experiment. During the 90 d-150 d operation of the simulator, the velocity ratio is adjusted from $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$ to $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and during 150 d-210 d, the velocity ratio is adjusted from $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$ to $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$. The variation of sediment thickness at each sampling point under different confluence conditions was observed, as shown in Figure 3. At the initial stage of operation of the urban sewage pipe network simulation system, the velocity ratio is $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, the sewage flow capacity is weak, and the deposition rate of particulate pollutants in sewage under the action of gravity is greater than the migration rate. At 90 days, the sediment thickness of G1-G7 is 60.3 mm, 64.2 mm, 62.3 mm, 58.6 mm, 61.1 mm, 63.0 mm, and 62.9 mm, respectively. Whenever water corrodes the sediment around the foundation or associated structures of bridges, highways, and other man-made constructions, scour develops. Scour is frequently brought on by swift water movement; hence, it frequently happens throughout storms. During the period of 90 d-150 d, the increase of sewage flow velocity on the trunk road strengthens the scouring effect of water on pipeline sediments, and the thickness of sediments in G1-G7 area changes to varying degrees. As G3 and G4 areas are located at the junction of branch roads and trunk roads, the sediment thickness in this area increases slightly by 2-5 mm due to the impact of two streams of water, and the sediment thickness in other areas decreases. G1 and G2 are located at the front of confluence, and the thickness decreases by 10.4 mm and 7.9 mm, respectively, and the sediment thickness at G6 and G7 decreases slightly by about 6 mm. The change is most significant at G5, and its thickness is reduced by 14.2 mm. During 150 d-210 d, the velocity ratio is adjusted from $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$ to $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$.

Due to the increase of sewage flow rate in the branch, the carrying capacity of water body to pollutant particles is enhanced, but the pipe diameter of the branch is small and the influence range is limited. Therefore, the sediment thickness at the front of confluence (G1 and G2) and confluence area (G3 and G4) increases, while the sediment thickness at G5, G6, and G7 decreases slightly by 6.1 mm, 4.5 mm, and 3.8 mm, respectively.

Therefore, when the flow velocity of trunk and branch roads changes, the deposition of particulate pollutants in the pipeline and the carrying capacity of water flow change accordingly, resulting in the increase or decrease of sediment thickness. According to the change of sediment thickness and the location of branch and trunk roads, the monitoring points G1-G7 are divided. G1 and G2 are the front end of the confluence, G3 and G4 are the retention area, G5 is the separation area, and G6 and G7 are the back end of the confluence. When the flow velocity of sewage in the trunk road increases, the sediment thickness in the area before and after confluence decreases. When dirt is removed from the area surrounding a pile foundation for a highway or an offshore structure, the organization's ability is decreased in both the lateral and vertical directions. From the river's greatest water level, the average scour depth is calculated. To determine the mean velocity of the fluid of the channel, increase the surface water flow rate (in m/s) by 0.85 (a compensation element) and divide the outcome by the length from point A to point B (10 m in this instance). When the flow velocity of sewage in the branch road increases, the sediment thickness increases in the front area of confluence and decreases in the back area of confluence, but the decreasing trend of this thickness is not obvious compared with increasing the flow velocity of trunk road. Under either flow pattern, the thickness of the sediment in the fluid confluence retention area shows an increasing trend, which is the focus area of the cleaning work. The flawless interior surfaces of sewage begin to be damaged by solid matter particles when the flow rate

TABLE 1: RTCOD and RSCOD values of sediment in each confluence area under different flow patterns.

Confluence area		G1	G2	G3	G4	G5	G6	G7
Vaccess/Vtrunk = 0.1/0.2	TCOD (10^3 mg/g)	11.0	10.4	11.0	12.2	9.0	7.5	7.3
	SCOD (mg/g)	250.7	231.1	282.6	323.8	177.6	141.5	142.0
Vaccess/Vtrunk = 0.1/0.3	TCOD (10^3 mg/g)	10.3	9.2	10.9	11.9	6.4	5.8	6.2
	SCOD (mg/g)	217.5	183.0	291.9	332.8	136.8	101.2	100.3
Vaccess/Vtrunk = 0.2/0.3	TCOD (10^3 mg/g)	11.1	10.3	11.7	12.7	5.9	5.5	5.5
	SCOD (mg/g)	231.3	207.7	334.9	366.7	123.6	112.3	108.0
Increase trunk flow rate	TCOD difference	-0.74	-1.19	-0.15	-0.30	-2.56	-1.72	-1.13
	SCOD difference	-33.18	-48.14	9.29	9.02	-40.80	-40.35	-42.00
Increase branch flow rate	TCOD difference	0.79	1.08	0.80	0.85	-0.54	-0.26	-0.69
	SCOD difference	13.77	24.70	42.97	33.86	-13.21	11.12	7.71

surpasses a specific threshold, or in simpler phrases, a scouring operation occurs.

3.2. Carbon Pollutant Content. The content of carbon organics is the key to the stable operation of the sewage treatment system. The mass lost during the burning of a material is used to calculate the number of particulate hydrocarbons. This may be accomplished in liquid solution by determining the total matter of a filtration that had a given volume of water run across it both before and after the filtration was heated to 550°C for ignition. Therefore, taking TCOD and SCOD as measurement indicators, the contents of carbon organics in the pipeline sedimentary layer in each confluence area under different flow patterns are characterized [36–38]. Table 1 is the variation of TCOD and SCOD in the sedimentary layer under three flow conditions: $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$. Along the flow direction of sewage, TCOD and SCOD showed the same change trend. The contents of TCOD and SCOD in G1–G2 decreased slightly and then increased gradually, reaching the peak at G4 monitoring point. After a significant decrease at G5 in the separation area, the content of carbon pollutants stabilized at the back end of the confluence [39–41]. Taking the velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$ as an example, the contents of average total organic matter TCOD and average dissolved organic matter SCOD in different confluence areas are analyzed. The values of TCOD and SCOD at G1 are 11.1×10^3 mg/g and 250.7 mg/g, respectively. When flowing to G2 monitoring point, the content of both decreased slightly, but the change value was small [42]. When the sewage further flows to point G4 in the retention area, the organic content in each depth of the sedimentary layer reaches the maximum, which is 12.2×10^3 mg/g and 323.8 mg/g, respectively, increased by 10.3% and 29.2% compared with G1 point. After that, the content of organic matter decreased sharply at G5 point in the separation area, decreased by 26.1% and 45.2% to 9.0×10^3 mg/g and 177.6 mg/g, respectively. At the back end of the confluence, the content of carbon pollutants tends to be stable, and the carbon index values are 7.3×10^3 mg/g (RTCOD) and 142.0 mg/g (RSCOD), respectively, decreased by 33.8% and 43.4% compared with G1 point.

Increase the flow velocity of trunk sewage pipe; that is, when the velocity ratio is adjusted from $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$ to $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, the TCOD content shows a downward trend in each confluence area, and the largest decline in the separation area G5 is 2.56×10^3 mg/g, followed by G6 (1.72×10^3 mg/g), G2 (1.19×10^3 mg/g), and G7 (1.13×10^3 mg/g); the decline in the monitoring point is less than 1×10^3 mg/g. Except for the increase of G3 and G4 in the retention area, the SCOD value also showed a downward trend at the monitoring points. When the velocity ratio is adjusted from $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$ to $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$ to increase the branch flow velocity, the RTCOD and RSCOD in the front end of confluence and retention area increase, but the overall increase is not obvious, and the carbon pollutant content in separation area decreases, while the RTCOD values of G6 and G7 in the back end of confluence decrease by 0.26×10^3 mg/g and 0.69×10^3 mg/g, respectively, while SCOD increase by 11.12 mg/g and 7.71 mg/g.

3.3. Nitrogen Pollutants. Figure 4 shows the changes of nitrogen content in sedimentary layers in each confluence area under three flow patterns: velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$. The content of nitrogen pollutants showed an upward trend in the front of the confluence and the retention area under the three flow patterns. Among them, the G2–G3 interval increased greatly from 130.4 mg/g to 189.4 mg/g under the condition of velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$. Under the three flow patterns, the nitrogen content reached the maximum at G4 point, which were 213.6 mg/g, 205.2 mg/g, and 212.8 mg/g, respectively. There was a significant decrease in the separation area, with the decrease rates of 61.3%, 55.7%, and 60.7%, respectively. When the sewage passes through the back end area of the confluence, the TN value rises slightly and finally stabilizes at about 92 mg/g, 100 mg/g, and 93 mg/g, which are decreased by 40.8%, 22.1%, and 39.4%, respectively, compared with the G1 point. With the increase of the flow velocity of the trunk pipeline, the velocity ratio was adjusted from $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$ to $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$. The nitrogen content in the front end of the confluence decreased significantly, and the G1 and G2 points decreased

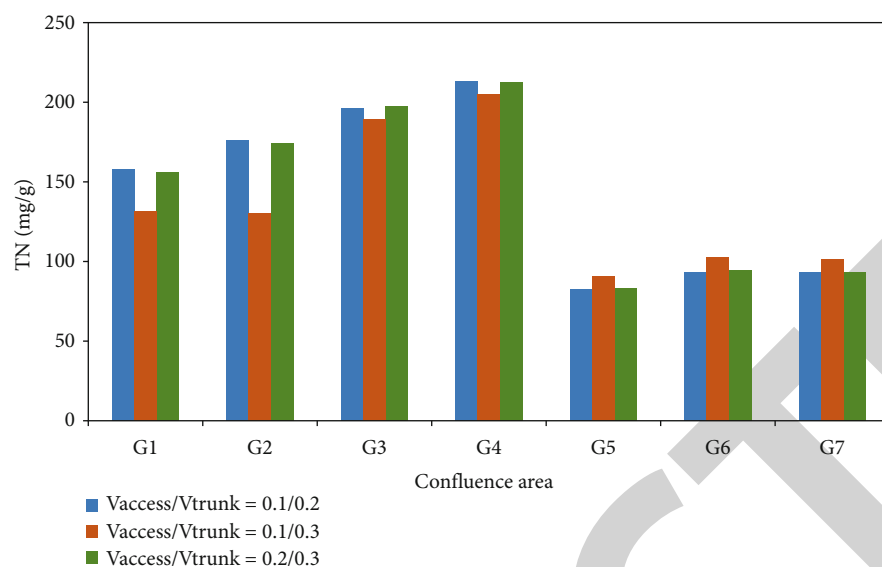


FIGURE 4: Variation of nitrogen content in sedimentary layers of each confluence area under different flow patterns.

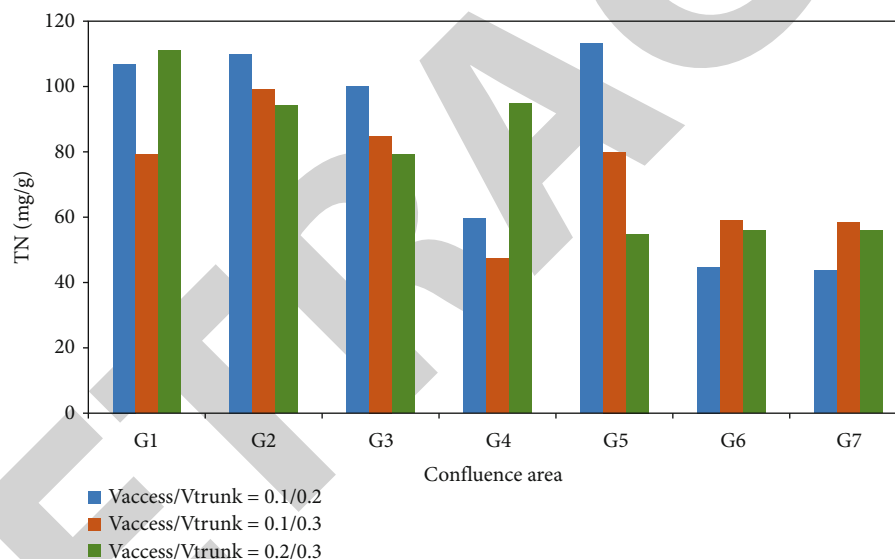


FIGURE 5: Variation of phosphorus content in sedimentary layer of each confluence area under different flow patterns.

by 26.1 mg/g and 45.6 mg/g, respectively. The TN in the retention area decreased slightly, and the nitrogen pollutant content in the separation area and the back end of the confluence increased. The overall change was small, and the increase was less than 10 mg/g. After the branch flow velocity was increased, the velocity ratio was $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$, and the TN value of G1-G4 showed an upward trend. In particular, the increase in the front end of the confluence was particularly obvious, and the nitrogen content at the monitoring point decreased.

3.4. Phosphorus Pollutants. Figure 5 shows the changes of phosphorous content in sedimentary layers in each confluence area under three flow patterns: velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$, and $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$. Compared with the distribution of nitro-

gen pollutants, the distribution of phosphorus pollutants is more complex. Under the condition of velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, along the direction of sewage flow, the TP value increased slightly at the front end of the confluence and then decreased to the retention area. After jumping to the maximum value of 113.4 mg/g at G5 point, the phosphorus content decreased significantly to a stable state, and the TP values of G6 and G7 were about 44 mg/g. The distribution of phosphorus pollutants under the condition of velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.3$ is the same as that of $V_{\text{access}}/V_{\text{trunk}} = 0.1/0.2$, but the spatial fluctuation is small. Under the condition of velocity ratio $V_{\text{access}}/V_{\text{trunk}} = 0.2/0.3$, the phosphorus content in the G1-G3 interval showed a downward trend, which increased slightly at G4 and then decreased again, and finally stabilized at about 56 mg/g. After increasing the flow velocity of sewage

in trunk roads, the phosphorus pollutant content at monitoring points decreased significantly except for a small increase in TP value at the back end of confluence. After increasing the branch flow velocity, the TP value of G1 and G4 points increased significantly.

4. Conclusion

- (1) When the flow velocity of sewage in the trunk road increased, the sediment thickness in the area before and after the confluence decreased. When the flow velocity of sewage in the branch road increased, the sediment thickness increased in the front end of the confluence area and decreased in the back end of the confluence area. Regardless of the flow pattern, the thickness of the sediment in the fluid confluence retention areas (G3 and G4) showed an increasing trend, which was the key area of pollution removal
- (2) The TCOD and SCOD values of carbon pollutants reached the peak at G4 monitoring point, and the content of carbon pollutants could be effectively reduced by increasing the trunk velocity. The maximum decrease was 2.56×10^3 mg/g at G5, followed by G6 (1.72×10^3 mg/g), G2 (1.19×10^3 mg/g), and G7 (1.13×10^3 mg/g)
- (3) Under the three flow patterns, the nitrogen content reached the maximum at G4, which were 213.6 mg/g, 205.2 mg/g, and 212.8 mg/g, respectively. Increasing the trunk flow velocity can effectively reduce the nitrogen content at G1-G4, while increasing the branch flow velocity can reduce the nitrogen content at G5-G7
- (4) The distribution of phosphorus pollutants is relatively complex. After increasing the flow velocity of the trunk road, the content of phosphorus pollutants in other monitoring points decreased significantly, except that the TP value in the back end of confluence increased slightly. After increasing the flow velocity of the branch road, the TP value of G1 and G4 increased significantly

Data Availability

The figures and tables used to support the findings of this study are included in the article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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Retraction

Retracted: The Sequential Influence of Creative Leadership and Organizational Environment on Strategic Performance

Journal of Environmental and Public Health

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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.

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Research Article

The Sequential Influence of Creative Leadership and Organizational Environment on Strategic Performance

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As a distinct form of leadership, the phenomena of creative leadership draw interest. Such leadership is crucial for developing and sustaining the operations of contemporary organizations and businesses. When it comes to boosting strategic effectiveness, the traits of creative leadership are crucial. This is a recognition of the paradoxes and contradictions present in life and a constructive evaluation of the team's creative potential. According to this study, a creative leader may greatly impact how effectively a strategy is implemented. This study explores the connection between innovative leadership and improved strategic performance. Developing nations' societies tend to undervalue innovative leadership's value in managing administration and enterprises. Unfortunately, it received little attention from academic sources and studies. Because of this, the primary goals of this study are to comprehend the ideas of creative leadership, the uniqueness of a leader's job as a manager, and the influence of creative leadership on strategic effectiveness. The goal of quantitative research is to comprehend how creative leadership may improve strategic effectiveness. Therefore, four hypotheses were tested in this study to show how creative leadership and strategic effectiveness are related. The research demonstrates how inventive leaders can enhance customer satisfaction through creative ideas. In conclusion, the strategic performance of a corporation depends on originality and creative leadership.

1. Introduction

First, it should be noted that successful firms and organizations typically have higher levels of dynamism and efficiency than other enterprises, underscoring the significance of leadership in today's management and company. Because of this, good leadership is necessary for leadership in the current day [1]. A manager and a leader have certain distinctions in every business or enterprise. The leader relies heavily on this position to build relationships with subordinates and can also be used to establish dominance. On the other hand, leadership is a unique form of management that places a greater emphasis on social relationships and interactions. Leadership involves greater contact between the participants since it is a more complex process [2].

The idea of creative leadership has been the focus of research in several nations since the turn of the twentieth century. "Creative leadership" is a style of leadership that is

focused on working together to develop original solutions. People who lead intellectually do it by creating an environment that encourages it. Creative leadership is defined as taking the initiative, creating and resolving nonstandard tasks, being open to certain adjustments with others, and taking ownership of others' wellbeing. As a leader, users may generate new ideas that correspond with best practices in your sector by leveraging creativity. A creative outlook could also help users get ready for upcoming developments in their profession. The current society's economic and social developments have increased interest in innovative leadership. Innovation is very important to society's growth because it helps to find solutions to issues like these and strengthens the society's ability to respond. It is in charge of using new technology, typically, to efficiently and sustainably resolve problems in society. This is not by chance since a leader's innovative approach to solving challenges will be crucial to the future success of any business or organization, winning

the competition, and the happiness of the workforce. The Davos Economic Forum listed 10 essential talents for 2020 in 2015 [3].

Evidently, among the required talents, creativity has come in third place. However, in today's world of fast change, traditional leadership is not always sufficient. A new unique quality is needed from the leader in order to increase strategic efficiency, create long-term strategic plans, and resolve unforeseen issues [4]. One of the key components of creative leadership is the quick evaluation of the issue's core and the creation of novel solutions. Otherwise, the odds of winning the competition are significantly diminished in a world of fast change.

Leadership is the effective deployment of several public resources to inspire others to take action in pursuit of common objectives. The first requirement for leadership in any size group, organization, or business is the availability of public resources [5]. We need to keep in mind that the leader's authority is explicitly recognized by law. In any situation, the team and society support the leader socially, psychologically, and emotionally. He will be able to guide them there. Despite the necessity of creative leadership in managing administration and enterprises, cultures in developing countries tend to undervalue it. Unfortunately, it took a poor position in scholarly publications and studies.

The "traditional concept of leadership" states that personal indicators are the foundation for leadership skills. A traditional leadership approach involves giving the leader based on power on existing customs. Examples from today include kings, theocrats, and a large number of business CEOs. The impact of those who came before almost all of the previous leaders was viewed as being conventional. This idea suggests that these indications might be inherited or acquired later in life. In the future, Frank Fiedler created the "situational concept of leadership". Situational leadership is adjusting the management approach to accommodate the demands of the team or individual team members in each special circumstance or objective. There is not a leadership style that "fits everyone," in their opinion [6]. Following this view, a person must establish an environment where he may self-actualize before presenting himself as a leader. It should be highlighted that in addition to skill, developing one's professional and personal traits is important to becoming a leader. Leadership abilities might fail if they are not cultivated over time. The fundamental characteristics of good leaders are the capacity to perceive and comprehend a situation in its whole, effectively communicate with others, earn others' trust, and make swift, informed judgments [7]. Any organization or society's dominant individual is its leader. A leader must have these characteristics in order to do this.

The contribution of the paper is as follows:

Enhancing strategic effectiveness is becoming more closely associated with innovative leadership. In addition, strategic efficiency, which primarily serves to increase a company's worth, is a measure of a business's long-term viability, especially for economic entities. All of these are seen as requirements for creative leadership. Consequently, a "manager-successor" connection is substituted for the

traditional "manager-subordinate" one. Understanding the notions of creative leadership, the uniqueness of a leader's work as a manager, and how creative leadership impacts strategic success are thus the key goals of this study.

The paper is structured as follows: Section 1 indicates the introduction of the study. Section 2 discusses about creative leadership and its role in a mobilizing a company. Methodology of the study is indicated in Section 3. Section 4 indicates the result. Discussion about the study is indicated in Section 5; finally, Section 6 describes the conclusion of the study.

2. Creative Leadership and Its Role in Mobilizing a Company

The capacity to rally a group of people around a shared cause is the key characteristic of leadership. These characteristics, in particular, are becoming more crucial due to the growing significance of interpersonal relationships and the human dimension in management. Organizational change is based on the human dimension; as a result, individual change must be successful in order for organizational change to be really successful. Trident understands the importance of the person in bringing about long-lasting change. In order to improve resource management by considering human causes, repercussions, and responses to coastal environmental problems, human aspects research integrates social science, humanities, and other subjects with natural science. Nearly every managerial task is seen as leadership at the same time. Leadership aspects are planning, constructing a management system, motivating, regulating, and controlling. However, the mechanisms that guarantee the reciprocal implementation of these duties are the main focus of leadership. These procedures include implementing managerial and communication choices and technology for people management [8].

The world is changing so quickly that new demands are being placed on leadership. It follows that since the old paradigm of connections in business and management is no longer functional, innovative individuals now have new options. The main characteristics of creative leadership include managing and going beyond efficiency. The objectives, words, presence, and actions of creative leaders are consistent, transparent, and honest. They establish an organizational culture that supports and encourages other people's ideas, gets rid of impediments, and sets up incentives to encourage the desired change. Every business and leader deals with a variety of issues daily. People frequently encounter these issues under the challenging socioeconomic conditions of our time, regardless of their line of work. Three key indicators of socioeconomic conditions are education, income, and population. The main methods for assessing socioeconomic status (SES) include looking at factors like occupation, income, and education. The way the global economy is structured is also drastically altering. A company's main concern is bringing in new customers and clients. We are now moving towards the era of inspiring people, as opposed to the information age. As a result, there is an increasing need for innovative leaders [9].

Torrance, the father of contemporary creativity, thought it was hard to fully characterize the phenomena of creativity in the middle of the twentieth century [10]. However, another indication of the intricacy of creativity is how difficult it is to define it accurately. As a result, it would be appropriate to discuss creativity and creative leadership in a particular setting. Employees with fewer than five years of experience were more likely to evaluate empowerment and performance favorably, according to the findings. In light of this finding, the authors of [11] recommend that Safeway Company raise and improve its performance by encouraging employees to offer the business feedback that enhances the services offered to clients.

Investing in the future leadership talent of a new generation is another aspect of creative leadership. Future leaders must be capable of cooperative collaboration in all areas of their work [8]. Creative leadership is, first of all, changing the existing mechanisms of influence on others. Creative leaders understand the necessity to influence others by developing their talents and practices. Meanwhile, they also try to create favorable conditions for the development of the creative abilities of subordinates. It is intended to achieve this through removing barriers to collaboration, learning from one another, and fostering creative collaboration. It is irrelevant in creative leadership whether the leader has a formal administrative position [12, 13]. However, his innovation will always come about due to collaboration, communication, and conflict resolution. This further suggests that those in leadership roles have the power to either foster or stifle team creativity.

The way creativity is seen as “service leadership” is another sign of creativity. A leader’s primary responsibility is to bring his team’s ideas and to think styles together [14]. Such leadership enhances each person’s skills and helps him realize his potential for motivation. The ability of an organization to motivate its workforce is essential to its success. It refers to the level of commitment, enthusiasm, and intensity that a company’s personnel bring to their daily job. Without it, organizations experience reduced levels of output, less productivity, and a greater risk of missing important goals. In order to achieve the goals of the organization, a leader must specifically motivate their team members to maximize their contributions. The performance of the organization and employee happiness are largely influenced by leadership and motivation. In this context, “selfless leadership” is also used to describe creative leadership. “Selfless leadership” is the ethical act of guiding people toward the achievement of set objectives and the greater good, representing the needs of others before one’s own. A selfless leader should respect us, treat us with dignity, listen to us, understand us, give us credit, and educate us selflessly, show us the proper path to take, and never hesitate to point out our mistakes. They should guide us on the right way, encourage us to take the initial step, and nourish us for the future [9]. The leader should not attempt to keep things as they are in this situation.

On the contrary, he strives to develop new organizational opportunities while being open to innovation in a cultural and economic context that is quickly changing.

Considering everything, we can conclude that the primary qualities of a creative leader are their capacity for productive work, their understanding of how emotions affect people, and their ability to anticipate the thoughts and intents of others. These characteristics are essential and fundamental for a creative leader. Additionally, there is a fundamental distinction between creative and conventional leaders. A creative leader has the ability to liberate the creativity in others. This kind of leadership focuses more than other types on developing an organizational culture that encourages and promotes creative thinking and problem-solving. The conventional leadership encourages cost-cutting, cost-saving, simplifying, and standardization. Managers that can demonstrate direction with their entire hand and are goal-oriented, and oriented results are important. A conventional leader, unlike a creative leader, is constantly concerned with maintaining the situation’s stability and under his control. Creative leaders are typically not frightened of change because of their inventiveness, fast and flexible thinking, and innovation.

On the contrary, they can guide their teams toward similar objectives under challenging circumstances. Additionally, they are more adaptable to new circumstances than classical (conventional) leaders. It is a crucial quality of imaginative leaders. As we have already said, unlike a creative leader, a leader is constantly concerned with maintaining the status quo. Because of their inventiveness, fast and flexible thinking, and innovation, creative leaders are not frightened of change. Instead, they vary from the traditional leader because they are highly adaptable [15].

The necessity for specific abilities to operate in a changing environment due to the rapid expansion of global markets and technology is one of the primary reasons for the emphasis on creative leadership in Western countries [16]. Modern leaders rely on their abilities and sentiments rather than preexisting rules and standards when making judgments or statements about occurrences. Innovative leaders are always coming up with new ideas, implementing them, and attempting to expand their creative potential in the workplace. Instead of relying on traditional situations, today’s leaders must be able to use their special abilities to make rapid, adaptable judgments in a changing environment. As a result, these leaders cannot rely on the achievements of others. This viewpoint concludes that creative leadership is based on individual abilities and knowledge [17].

2.1. Strategic Efficiency. A company’s preplanned response to environmental changes to attain the desired result is known as strategy. Different labour, entrepreneurial, social, scientific, and technological tactics exist. Three major questions are addressed by strategic management: What is the business’s present state? What condition should it be in after a given amount of time? What methods may be used to get this outcome? To provide answers to these queries, analytical techniques have been created. The management system, structure, and potential of human resources should

be carefully examined to achieve the desired result while analyzing material, technical, organizational, and technological resources.

Five fundamental functions—strategic planning, organizing the execution of strategies, coordinating work on the implementation of strategic issues, motivating human resources to achieve strategic goals, and monitoring the strategy's implementation—are ensured by effective strategic management [14].

Therefore, in this study, the management actions include (a) gathering, storing, processing, and transmitting information; (b) developing and adopting management choices; (c) transferring management tasks to a managed object, and (d) exercising control over how decisions are carried out. Thus, the crucial function of leadership in strategic management has been represented in the criteria above [18].

2.2. The Role of Creative Leadership in the Implementation of the Strategy. As noted in the previous section, managers' leadership abilities are among the most critical prerequisites for successful plan execution. One of the important measures of leadership is how motivated employees are to carry out the planned changes [19]. At the same time, a leader must be able to persuade staff members and alter the company culture. The most challenging and complex process phase is often regarded as implementing these indicators. The company's management is responsible for clearly identifying the direction the organization will develop. Thus, they hold a significant position in this situation. However, knowing about the changes is insufficient. In addition, management should make an effort to reduce disputes that develop during the implementation of the strategic adjustments. To improve organizational performance, strategies can be designed to implement intended change, such as team-building initiatives. Change is inevitable, but there are many approaches to dealing with it, some of which are beneficial and others not [20].

The managers engaged may carry out the plan in various methods, including acting decisively or actively, delegating power, showing a keen interest in every aspect, and taking risks. The majority of businesses that have succeeded in putting their ideas into practice have management that is dynamic and effective, according to experience. The strategic manager takes the initiative, handles administrative duties, trains staff, and distributes resources to accomplish the goal [14, 21]. It is common practice to employ the Paul Hersey and Kenneth Blanchard model of strategic efficiency. The Hersey–Blanchard model states that there is no best leadership style. The idea encourages leaders to focus less on workplace difficulties and more on the people they manage and their talents. Unlike other leadership models, the Hersey–Blanchard model dismisses the idea that organizations require a singular style to leadership. The model suggests an alternative leadership approach that may be modified to the particulars of each workplace. This concept's strategic effectiveness, coaching, support, engagement, and exchange dimensions identify four fundamental circumstances in leadership [22]. The key factors that are

considered in Hersey and Blanchard's situational theory is relationship, task, level of authority, and level of maturity as shown in Table 1.

In carrying out the strategy, the leader assumes five managerial obligations, including (1) monitoring events development, foreseeing potential issues, and examining elements that can obstruct the plan's execution. (2) Increasing business relationships and motivating team members to carry out a successful plan. (3) Continuing the organization's adaptive processes, continually looking for new chances, coming up with new concepts, and striving to surpass rivals in the competitive environment. (4) Guiding the implementation of strict moral principles and working to elevate the company. (5) Making modifications to boost the company's overall effectiveness and implementation of the plan [23].

Efficiency from an economic perspective refers to the strategies created to reach the objectives through the best possible means. Franklin Fisher asserts that a company's cash flow size determines how economically efficient it is. On the other hand, strategic effectiveness gauges a business's long-term viability [24]. Specialists' discontent with the organization's effectiveness measurement methods is rising. As a result, many businesses have doubts about the effectiveness of their systems. Companies with big, complex structures must examine more indications than organizations with smaller structures. However, only the indications used to forecast the future, assess the past, and inspire personnel are adequate in small businesses.

For measuring the effectiveness of structural units and functional areas, current research has focused on four key indicators: market assessment of the organization's activities in the financial markets (additional economic value, added value of equity capital); financial and accounting indicators (volume of income, profitability, cash receipts); and nonfinancial indicators (customer satisfaction, customer loyalty, and product compliance with technical requirements). As a result, we can see that two categories of future indicators may be utilized to help define an organization's strategy [25].

The main objective of strategic effectiveness should be to maximize the organization's value in management decision making. Therefore, innovative leaders use a variety of strategies to raise the most crucial measures of the organization's worth. Increasing an organization's strategic efficacy is its main challenge as a creative leader. It is sometimes thought that the key elements for leaders' success in managing an organization are intelligence, authority, self-confidence, energy, and professional knowledge because there is a direct correlation between the growth and success of any organization and its leadership style and managerial traits. However, research somewhat contradicts this assertion [7]. Therefore, only 25–30% of success relies on personal attributes, making them a secondary success factor in leadership. Instead, the management leadership style is the primary element that guarantees the firm's success. Therefore, it is crucial to emphasize two key characteristics of creative leadership to ensure strategic effectiveness: (1) Production orientation and (2) human orientation [15].

TABLE 1: Leadership styles according to Paul Hersey and Kenneth Blanchard.

Performer training	The degree of focus on the task	Staff orientation coefficient	Leadership style
Not ready and not willing.	Maximum	Maximum	Give instructions
Not ready but willing to learn.	Middle	Middle	Support
He is ready but does not want to work	Down	Down	Attract
He is ready and willing to work	Down	Down	Date of authority

So, to be a creative leader, a high-level psychologist who can interact with every employee is a prerequisite. Creative leaders also possess a unique capacity to perceive psychological nuance. They also require other leaders' charisma and influence. Additionally, imaginative leaders have a social influence on the group, establishing subordinate relationships based on more humane standards. It is no accident that business owner today favor managers with more creative leadership traits when choosing top managers. In this instance, the leader takes control of the team, showcases their creative talents, and delivers greater product marketing and sales to boost the organization's strategic effectiveness. Because of their initiatives, innovative executives are accelerating the company's market share growth [20].

One of the most important elements in establishing strategic success is team motivation. Creative leaders reward the team and include them in decision making, which is different from typical managers and leaders in the incentive area. In addition, regular team members feel accountable for putting choices into action. The organization's successes are typically regarded as the responsibility of creative leaders. They are therefore interested in developing vertical communications, or lines of communication that go "top to bottom" and "from the bottom up." In this scenario, the group activities and teamwork that occur become key determinants of the organization's strategic effectiveness [12]. Managers that adopt the position of creative leaders have faith in their staff members and encourage them on a moral and financial level to help them reach their objectives. As a result, the team assumes ownership in carrying out the strategic strategy.

Identifying each employee's capabilities has become one of the main elements in raising the strategic effectiveness of the firm in current times. A model where a worker is a regular system component and may be easily fired if required is not included [5]. The human component nowadays determines how productive and lucrative a business is, demonstrating how it is only natural to replace authoritarian and conventional leaders with innovative leaders. Bill Gates states, "Microsoft faces insolvency if 20 workers quit the business." Therefore, it should be remembered that producing remarkable outcomes with the aid of regular people is the foundation of a strategically effective company [23]. The need to foster innovative thinking and an individualized approach for every employee simultaneously highlights the significance of creative leaders.

These hypotheses are formed by this research based on the study's underpinning theory:

Hypothesis 1 (H1). Customers' satisfaction and desires and diversification of services are positively associated with

employees' encouragement by creative leaders to solve workflow problems.

Hypothesis 2 (H2). Customers' satisfaction and desires, as well as paying attention to the customers' complaints, are positively associated with participating employees of an organization in decision making and choosing innovative alternatives by creative leaders.

Hypothesis 3 (H3). Customers' satisfaction and desires are positively associated with participating employees of an organization in creative leaders' decision-making.

Hypothesis 4 (H4). Customers' satisfaction and desires are negatively associated with leaders' taking responsibility for making decisions by employees.

3. Methodology

In order to conduct this study, a questionnaire that 108 students completed at the Duhok Polytechnic University in northern Iraq was used as a qualitative approach. Strategic effectiveness and innovative leadership have been put at the center of attention. Creativity is the pioneering step of recognizing that something is possibly feasible. But innovation is more than just thinking; it is the act of putting information into practice in the face of obstacles and resistance. Utilizing creativity and innovation to manage people and projects is a part of an innovative leadership style. Innovative leaders typically encourage productivity through innovative and nontraditional strategies, going against the trend of the process. Strategic effectiveness is the primary focus of the creative leadership job. Strategic effectiveness is a method of thinking and performing as an organization to ensuring that its vision, purpose, and goals are accomplished. Users must look at how an organization strategy connects company goals to the methods they want to attain them and the tools they intend to employ in order to determine its efficacy and efficiency. A strategy is successful if it utilizes the available resources, allots them in accordance with their plan, and produces the desired outcomes. Several sub-variables are grouped up into these two primary variables. For instance, these three topics are emphasized under the question "Creative Leadership," which is symbolized by an "X" in the tables: "solving issues and innovatively making decisions," "innovative communication," and "innovative thinking and planning." Innovation communication entails the distribution of goods, services, or methods that differ from those currently in operation. The

TABLE 2: Correlation between ‘customer satisfaction’ and ‘solving problems and making decisions innovatively’.

Correlations			Solving problems and making decisions in an innovative way			
Creative leadership			X1	X2	X3	X4
Customer satisfaction	Y1	Pearson correlation	0.394**	0.277**	0.184	0.262**
		Sig. (2-Tailed)	0.000	0.004	0.056	0.006
		N	108	108	108	108
	Y2	Pearson correlation	0.192*	0.324**	-0.040	0.058
		Sig. (2-Tailed)	0.046	0.001	0.681	0.554
		N	108	108	108	108
	Y3	Pearson correlation	0.113	0.211*	0.282**	0.273**
		Sig. (2-Tailed)	0.242	0.028	0.003	0.004
		N	108	108	108	108

*. Correlation is significant at the 0.05 level (2-tailed).**. Correlation is significant at the 0.01 level (2-tailed). X1: I encourage subordinates to solve workflow problems in an innovative way. X2: Work to provide opportunities for subordinates to participate in decision-making, contributing to work development. X3: I take responsibility for the results after making my subordinates' decisions. X4: Choose innovative alternatives to solve work problems presented by subordinates. Y1: I seek to provide various services desired by clients, whether students or other entities. Y2: Adopt the diversification of services in order to meet the growing needs of students and keep pace with the labor market. Y3: I pay great attention to the complaints of customers from students or all other parties, as they represent the feedback of our concerns towards them.

TABLE 3: Correlation between subvariables.

Correlation	r and p value	Interpretation
A	Y1 X1 $r = 0.394$, $p = 0.000$	The more creative leaders encourage subordinates in their organizations to solve workflow problems, the clients will be more satisfied because the organization's employees try better to provide what customers desire.
B	Y1 X2 $r = 0.277$, $p = 0.004$	The more creative leaders work to provide opportunities for subordinates to participate in decision-making, which contributes to the development of work, and the clients will be more satisfied because the organization's employees try better to provide what customers desire.
C	Y1 X4 $r = 0.262$, $p = 0.006$	When creative leaders choose innovative alternatives to solve work problems presented by subordinates, they seek to provide various services desired by clients and promote customer satisfaction.
E	Y2 X1 $r = 0.192$, $p = 0.046$	Encouraging subordinates to solve workflow problems adopts the diversification of services.
F	Y2 X2 $r = 0.324$, $p = 0.001$	Allowing subordinates in decision making adopts the diversification of services.
G	Y3 X2 $r = 0.211$, $p = 0.028$	When creative leaders work to provide opportunities for subordinates to participate in decision-making, they pay great attention to the complaints of customers.
H	Y3 X3 $r = 0.282$, $p = 0.003$	When creative leaders take responsibility for the results after making decisions that subordinates participate in, subordinates pay great attention to customers' complaints.
I	Y3 X4 $r = 0.273$, $p = 0.004$	When creative leaders choose innovative alternatives to solve work problems presented by subordinates, subordinates pay great attention to the complaints of customers.

TABLE 4: Summary of results.

Hypothesis	Findings
Customers' satisfaction and desires and diversification of services are positively associated with employees' encouragement by creative leaders to solve workflow problems.	Supported
Customers' satisfaction and desires, as well as paying attention to the customers' complaints, are positively associated with participating employees of an organization in decision-making and choosing innovative alternatives by creative leaders.	Supported
Customers' satisfaction and desires are positively associated with participating employees of an organization in creative leaders' decision making.	Supported
Customers' satisfaction and desires are negatively associated with leaders' taking responsibility for making decisions by employees.	Not supported

communication of innovation requires consideration of messaging, media, target audiences, and communication objectives. Only “customer satisfaction” is chosen to be

explored and associated with the subvariables of creative leadership in the other variable (strategic effectiveness), questions shown as “Y”s in the tables.

4. Results

Table 2 shows the correlation between the variables. Y1 makes a significant correlation with “X1, X2, and X4,” with “ $r = 0.394$, $p = 0.000$; $r = 0.277$, $p = .004$; $r = 0.262$, $p = 0.006$ ”, respectively. Then, Y2 makes it with “X1, and X2”, with “ $r = 0.192$, $p = 0.046$; $r = 0.324$, $p = 0.001$ ”, respectively. In the same way, Y3 makes a significant correlation with “X2, X3, and X4”, with “ $r = 0.211$, $p = 0.028$; $r = 0.282$, $p = 0.003$; $r = 0.219$, $p = 0.004$ ”, respectively.

5. Discussions

Customer satisfaction versus solving problems and making decisions in an innovative way.

The results demonstrate significant correlations between the variables under research, which is the major goal of the article to investigate the relationship between strategic success and creative leadership in emerging nations, according to Table 1. An ordinary leader looks on the present and understands how to manage an organization’s day-to-day requirements. A strategic leader, on the other hand, looks to the future to develop new business prospects, products, or services for a company in order to accomplish its objectives. Leaders must be innovative in order to handle the ever-changing challenges of an unknown future. Innovative and productive executives enable businesses to develop cutting-edge goods and services and promote success. However, innovation is crucial at all levels of employment. There are multiple strong connections between the key variables in this study, which examines the relationship between “customer happiness” (strategic effectiveness) and “solving issues and making decisions in an inventive way” (creative leadership). The relationships between the minor variables are explained in Table 3:

The study’s findings in Table 4 demonstrate how creative leadership may increase customer satisfaction. According to Table 4, customer happiness results from innovative leaders encouraging staff, including them in decision making and listening to their alternative answers. The last hypothesis, which the results did not support, also serves as a warning sign for whether or not creative leaders’ failure to encourage their staff to assume responsibility leads to unsatisfied clients. Therefore, creative leaders must consider how they might encourage their team members to be more receptive to client demands and wishes in every situation.

6. Conclusion

There is no longer any debate among experts on the beneficial effects of innovative management and creative leadership on strategic effectiveness. Increasing strategic effectiveness is closely correlated with creative leadership traits. Additionally, the economic success of any business, corporation, or organization depends on a creative strategy. As a result of the quickening pace of change in the modern world, new styles of leadership are developing. Replacing the previous traditional and authoritarian leadership with new and creative ones is drawing attention as a natural process.

As a result, a creative strategy’s significance is growing, particularly in strategic management. It is essential to adjust to the most recent developments, make new decisions quickly to maximize earnings, guarantee that the business retains its place in the market, and inspire the team. Innovative and creative leadership is crucial to a company’s strategic performance. One of the most important elements in attaining strategic goals is the mode of action and the leadership style. Developing personal attributes, inventiveness, and teamwork skills is crucial for establishing strategic effectiveness.

Data Availability

No data were used to support the study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors’ Contributions

Dilshad Ahmed Salman and Khairi Ali Auso contributed to the design and methodology of this study, the assessment of the outcomes, and the writing of the manuscript.

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Retraction

Retracted: Analysis of College Students' Mental Health Education Model Based on Media Integration

Journal of Environmental and Public Health

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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.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

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.

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- [1] Y. Wu, S. Jiang, and L. Zhang, "Analysis of College Students' Mental Health Education Model Based on Media Integration," *Journal of Environmental and Public Health*, vol. 2022, Article ID 7381483, 13 pages, 2022.

Research Article

Analysis of College Students' Mental Health Education Model Based on Media Integration

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At present, the mental health problems of college students in China are on the rise. Many incentives lead to college students becoming a psychological vulnerable group, lacking the minimum “decompression ability” in the face of pressure. With the emergence of new media and the increasingly obvious fusion of new media and traditional media, the recognition algorithm of media fusion begins to enter people’s vision, and multimedia fusion has gradually formed an irresistible development trend. Based on the media fusion recognition algorithm under the background of media fusion, this paper studies the model of college students’ mental health education. In the process of comparing the accuracy of college students’ mental health, the accuracy of this method is the highest, up to 99.25%, followed by the decision tree algorithm, up to 80.53%, and finally the ant colony algorithm, up to 75.25%. Therefore, this method is more conducive to the study of college students’ mental health. Under the media fusion recognition algorithm, colleges and universities should give full play to the advantages of media fusion, broaden the path of mental health education, enhance the effectiveness of mental health education, improve the quality and efficiency of education, and guide the mental health growth of college students.

1. Introduction

In recent years, the proportion of college students dropping out or dropping out due to various mental health problems has increased year by year. Suicide often occurs due to various emotional problems, academic stress, or interpersonal barriers. Everyone has different views on things at different ages. Especially the 16-28 year-old teenagers, once they break the bottom line, the pressure from various aspects will lead to extreme behavior. Everyone has different ways to deal with and cope with stress, but they can be divided into two types: positive and negative [1]. In the process of everyone’s life, no matter how the world develops and changes, they should face it positively and optimistically and learn to communicate with others to reduce their own pressure. Because people are social animals, without communication, they will become autistic and self-closed [2, 3]. At present, most college students were born after the national reform and opening up and grew up in the period of rapid economic

development. Their material conditions are gradually improving, and their brothers and sisters are also decreasing. It can be said that most students have hardly experienced any setbacks. When they encounter setbacks in their study, life, and feelings, students will be at a loss. At present, the mental health problems of college students in China are on the rise. High academic demands, low family socioeconomic status, and low self-esteem are all significant predictors of anxiety and stress in students. Drink use is a significant risk factor for college students, particularly for females. Many incentives lead to college students becoming vulnerable groups of mental health. They lack the minimum “ability to reduce pressure” in the face of pressure, resulting in a lack of motivation in the face of pressure and a tragedy that should not happen. People from all walks of life must pay full attention to this issue from the perspective of cognition and action, help the “favored son of heaven” to stay away from “depression” and regain a sunny and healthy mentality. They will lose confidence in life and feel the meaning of life.

Most students can only accept praise and approval, but cannot accept the pertinent criticism and help from the people around them. However, in the face of the severe employment situation and the opportunities and challenges brought about by the reform of employment distribution system, students have not been prepared for setbacks. As the reserve force of the national talent reserve, college students are more likely to have psychological problems or obstacles due to academic pressure, employment pressure, family expectation and self-expectation, the contradiction between ideal and reality, the conflict between Chinese and Western cultures, and other pressures and influences. The old and new systems change. Numerous emotional issues, academic strain, or interpersonal hurdles frequently lead to suicide. At different ages, everyone has varying perspectives on many issues. Once they breach the bottom line, particularly among 16 to 28-year-old youths, pressure from many sources will result in severe behavior [4, 5]. Stabilizing healthy behaviors, feelings, and thoughts requires maintaining good mental health and managing any mental health issues. Focusing on mental health care can boost productivity, improve our self-perception, and strengthen bonds with others. Finally, what cannot be ignored is that we should mobilize a wider range of social forces; use television, radio, newspapers, magazines, and other media to widely publicize mental health knowledge; and set up special columns, hotlines, and consulting services to improve college students' mental health awareness. With these powerful guarantees, our mental health education can be truly implemented. The psychological status of only child college students is as follows: emotional vulnerability, poor psychological endurance, weak social ability, loneliness, strong attachment, excessive self-esteem, poor cooperation ability, easy to produce anxiety, etc. Some only children even engage in simple labor related to their own lives. A college student's success and ability to succeed academically might be affected by mental health issues. A lack of motivation and difficulties concentrating are caused by poor mental health and might result in unsatisfactory grades. The secret to students' academic achievement may lie in the availability of campus-wide services for mental illness for them to access.

With the emergence of new media and the increasingly obvious integration of new media and traditional media, media fusion recognition algorithm has also begun to enter people's vision, and multimedia fusion has gradually formed an irresistible development trend [6]. With the help of newspaper, radio, television, and Internet technologies, media fusion recognition algorithms are becoming more and more similar. Educators should consciously and systematically cultivate students' media literacy and enhance their ability to resist bad information. College students with mental health have strong ability of emotion management and regulation. They are emotionally stable, optimistic, energetic, and full of hope for life and the future. Be able to correctly express and control emotions, reasonably vent emotions, and correctly deal with joy, anger, sadness, joy, and other emotions in life [7, 8]. "New field based on media fusion recognition algorithm" "The possibility of existence has been obtained, which has also led to profound changes in com-

munication channels. If the emergence of online media has irresistibly changed people's original lifestyle and aesthetic concepts, and naturally formed new aesthetic principles, the development and popularization of mobile media will also create a new aesthetic platform for people, build new aesthetic values, and change people's aesthetic world [9, 10].

College students' mental health is an important group in the media integration environment. At the same time, they also have a very complex psychological basis. Various religious forces try to infiltrate colleges and universities with the help of network media, which poses a serious threat to the ideological security field of colleges and universities [11]. Students' difficulties are not only economic difficulties, but also their mental health problems, which deserve high attention. Economic conditions affect and limit its growth. Low self-esteem and excessive self-reproach make some students unable to get out of the shadow of family economic situation. The fierce conflicts among rural students make them more vulnerable to disappointment and frustration, resulting in tension, anxiety, and sensitivity. The media fusion recognition algorithm has been recognized by all college students. It has become an important way for them to obtain information and the main tool for interpersonal communication. It has a certain impact on the way of thinking and mental health of college students [12]. They lack the minimum "ability to reduce pressure" in the face of pressure, resulting in a lack of motivation in the face of pressure and a tragedy that should not happen. All sectors of the society must pay full attention to this problem from the perspective of cognition and action, help the "favorite of heaven" to stay away from "depression" and regain a sunny and healthy mentality [13]. In the process of school psychological education consultation, it is undoubtedly very important to identify students' various psychological problems timely and accurately, and then take correct and targeted educational consultation measures. Under the media fusion recognition algorithm, colleges and universities should give full play to the advantages of media fusion, broaden the path of psychological education, enhance the effectiveness of psychological health education, improve the quality and efficiency of education, and guide the healthy growth of college students [14].

The innovations of this paper are as follows

- (1) This paper compares the characteristics of various media fusion recognition algorithms. Media fusion recognition algorithm is a new pattern under the diversified development of information transmission. It effectively combines traditional media such as newspapers and TV stations with new media communication channels such as handheld intelligent terminals and computer terminals, centralizes processing, shares resources, derives various forms of information products, and then spreads them to the audience by relying on various platforms
- (2) This paper analyzes and discusses the mental health standards of college students. The self-management and control of college students' emotions is not only an important part of their physical and mental

health, but also a necessary condition for their self-development and personality growth. It is also the basis for them to face setbacks and adapt to the environment. Whether a person's emotions are stable and optimistic is the main symbol of a person's mental health. Students have the ability to monitor and reinforce their own behavior or skill improvement through the practise of self-management. Additionally, they are able to actively participate in their own education, get fast feedback, and develop their independence thanks to this

The overall structure of this paper consists of five parts.

The first chapter introduces the background and significance of college students' psychological education, and then introduces the main work of this paper. The second chapter mainly introduces the related work of college students' psychological education. The third chapter introduces the media fusion recognition algorithm and college students' mental health standards. The fourth chapter analyzes the mental health status of college students, carries out experiments, and draws conclusions. The fifth chapter is a summary of the full text.

2. Related Literature

In recent years, scholars have made special research on college students' psychological education and put forward corresponding theories. Both methodological research and empirical research have achieved fruitful research results and enriched the theoretical and practical experience of college students' mental health education. The details are as follows.

The self-management and control of college students' emotions is not only an important part of their physical and mental health, but also a necessary condition for their self-development and personality growth. It is also the basis for them to face setbacks and adapt to the environment. The network infrastructure of colleges and universities is becoming more and more perfect, which provides favorable conditions for college students to use the network. Most college students cannot resist the complicated information. Huang proposed that "mental health is a state without disease" [15]. This concept of mental health, which is only put forward from the perspective of biomedicine, has dominated people's understanding of health for a long time. The Concise Encyclopedia Britannica also defines health as "a state without disease, malnutrition, and weakness". People once believed that as long as there was no physical disease and pain, they were healthy, and completely ignored the cultivation of healthy psychological quality [16]. Xu conducted a questionnaire survey, case interview, and other research on college students' frustration, and proposed and answered how college students should deal with frustration and how to adjust themselves after frustration from both theoretical and empirical aspects [17]. Mei defines mental health as follows: "The so-called mental health refers to the development of a person's mental state to the best within the range of incompatibility between physical, intellectual, and emotional

health and the mental health of others. Ding pointed out that the school environment has an important impact on college students. For freshmen, they are faced with unfamiliar campuses and unfamiliar and closely related groups of freshmen [18]. Most students leave home for the first time, leaving their long-term dependent parents and familiar environment, which means that they will start to live independently from today and have to solve many problems by themselves [19]. Lee and Mi-na in the process of mental health education, teachers should first master various communication technologies, constantly improve media literacy, use various new media to keep close contact with students, understand the psychological characteristics of college students, reveal the laws of their psychological changes, and truly become their guide [20]. Han et al. put forward that "human nature is not an inherent abstraction of a person. In reality, it is the sum of all social relations". Human needs include survival needs, enjoyment needs, activities, and development needs. This theory emphasizes the essence of human sociality. No one can exist independently of society [21]. Kankan et al. proposed that although most students can try to rebuild their self-rejected by reality and reestablish their life goals, some students try to avoid conflicts with reality, or vent their dissatisfaction with reality through attacks, or become extremely decadent, do not seek progress, indulge in fun and indulgence, and some students even have the idea of suicide. Xueyan put forward the main tasks of current college students' mental health education, defined the main contents, and made clear provisions on the principles, ways, and methods of college students' mental health education, as well as team building and organization management. It can be seen that the cultivation of college students' mental health and psychological quality has become one of the goals of quality education in colleges and universities [22]. It is an important part of higher education. This is a major measure for the transition from examination oriented education to quality education and the training of cross century talents [23]. Goldman et al. put forward that mental health refers to a continuous mental state. In this case, the parties can make good adaptation, have vitality, and give full play to their physical and mental potential. In various studies, health includes physical health and mental health [24].

Based on the media fusion recognition algorithm, this paper studies the mode of college students' mental health education. Educators should consciously and systematically cultivate students' media literacy and enhance their ability to resist bad information. College students with mental health have strong ability of emotion management and regulation. They are emotionally stable, optimistic, energetic, and full of hope for life and the future. Be able to correctly express and control emotions, reasonably vent emotions, and correctly handle emotions such as joy, anger, sadness, and joy in life. The early youth has the characteristics of childhood in some aspects, while the late youth has the characteristics of adulthood in some aspects. This kind of transformation often makes young people in the contradictions between childishness and maturity, dependence and independence, emotion and rationality, blindness and consciousness, ideal and reality. If these conflicts and contradictions

are not effectively guided and reasonably resolved, they will form psychological conflicts and obstacles over time. Under the media fusion recognition algorithm, new requirements are put forward for all media workers. They should not only spread information and news, but also guide college students to make fair and just value judgments on various events, truthfully and objectively reflect social conditions and public opinion, and complete their glorious mission. Seeing problems is often one-sided and subjective, coupled with psychological vulnerability. Once they encounter temporary setbacks and failures, they tend to be discouraged and timid. In front of teachers, they often hide their true emotions and do not want to easily reflect their true psychological state. Impulsivity and internalization interweave together, making college students have a strong psychological conflict at this stage. At the same time, various religious forces are hovering on the edge of the law, trying to infiltrate universities with the help of Internet media, and even compete for future talent resources, so as to achieve the purpose of dividing and Westernizing China. The development of media integration has opened up a new way for mental health education in colleges and universities, and will also face many new situations and problems. Although the contents, forms, and means of education are increasingly diversified, some measures and strategies in traditional psychological education have irreplaceable advantages. The media fusion recognition algorithm poses a serious threat to the ideological foundation, self-confidence, and cohesion of college students, the formation of socialist core values and the ideological security construction of colleges and universities. Therefore, it is necessary to strengthen the religious reverse osmosis work in the media integration environment and build a long-term mechanism to prevent the infiltration of religious forces.

3. Methods

3.1. Media Fusion Recognition Algorithm. Media convergence is the trend of functional integration in the development of various media. Under the media fusion recognition algorithm, on the premise that improving the cultural soft power has gradually become an important strategic background in China, on the one hand, we can see the determination of college students' mental health education model, on the other hand, we can also see the gap between college students' mental health education model and other developed countries. Through networks, information exchange, and communication, soft power is developed. Culture has always been a powerful force, but where it once served as a guiding light for hard power, it now serves as a foundation for soft power, making it even more crucial to comprehend. The concept of media fusion recognition algorithm can be understood from both broad and narrow perspectives; in a broad sense, media fusion recognition algorithm is the combination, aggregation, and fusion of all media and their related elements [25]. Among them, integration is not only reflected in the formal level, but also in the media functions, means of communication, organizational structure, and many other aspects. In a narrow sense,

media fusion refers to the fusion and qualitative change of different media forms, and finally forms a new media form. The media fusion recognition algorithm includes the combination, fusion, and even fusion of all media and their related elements, including not only the fusion of media forms, but also the fusion of communication means, media functions, organizational structure, ownership, and other elements [26]. The whole algorithm process is divided into three parts, including data acquisition and preprocessing, feature extraction, model training and recognition. The flow of the psychological health problems identifies based on media fusion consists of different process. First, the student accesses the internet in the online sequences to analyze the basic psychological characteristics. The statistical method is trained by differed psychological behavior to identify the psychological score. Then the psychological data consists of performance data and consumption data in the network log as shown in Figure 1.

The main idea of media fusion recognition algorithm is: firstly, randomly select K sample points from the sample set and take them as the center of the cluster. Then, according to the distance between each sample and the K centroids, it is divided into the nearest clusters, and then the centroids of each cluster are recalculated. Recall that c squared is equal to the sum of a squared and b squared. So, finding the square root of a squared plus b squared is required in order to calculate the distance c between a certain location and a centroid. The mean of each cluster's data points is then used to compute centroids for each cluster. After obtaining the new centroids, calculate the distance between each data point and all the centroids, and then assign the data point to the cluster with the closest centroid. The calculation formula is shown as follows:

$$d(x, C_i) = \sqrt{\sum_{j=1}^m (x_j - C_{ij})^2}. \quad (1)$$

Where

x is the data object,

C_i is the i cluster center,

m is the dimension of the data object,

x_j and C_{ij} are the j attribute values of x and C_i .

The error square calculation formula of the whole data set is shown as follows:

$$SSE = \sum_{i=1}^k \sum_{x \in C_i} |d(x, C_i)|. \quad (2)$$

Select the best attribute to split by calculating the information gain, and the attribute with the largest information gain after division is the best attribute. Information theory includes the idea of information entropy. It indicates how much information is available about an event. In general, an event will include less information the more certain or deterministic it is. Information is, to put it another way, an increase in entropy or uncertainty. Entropy is measured

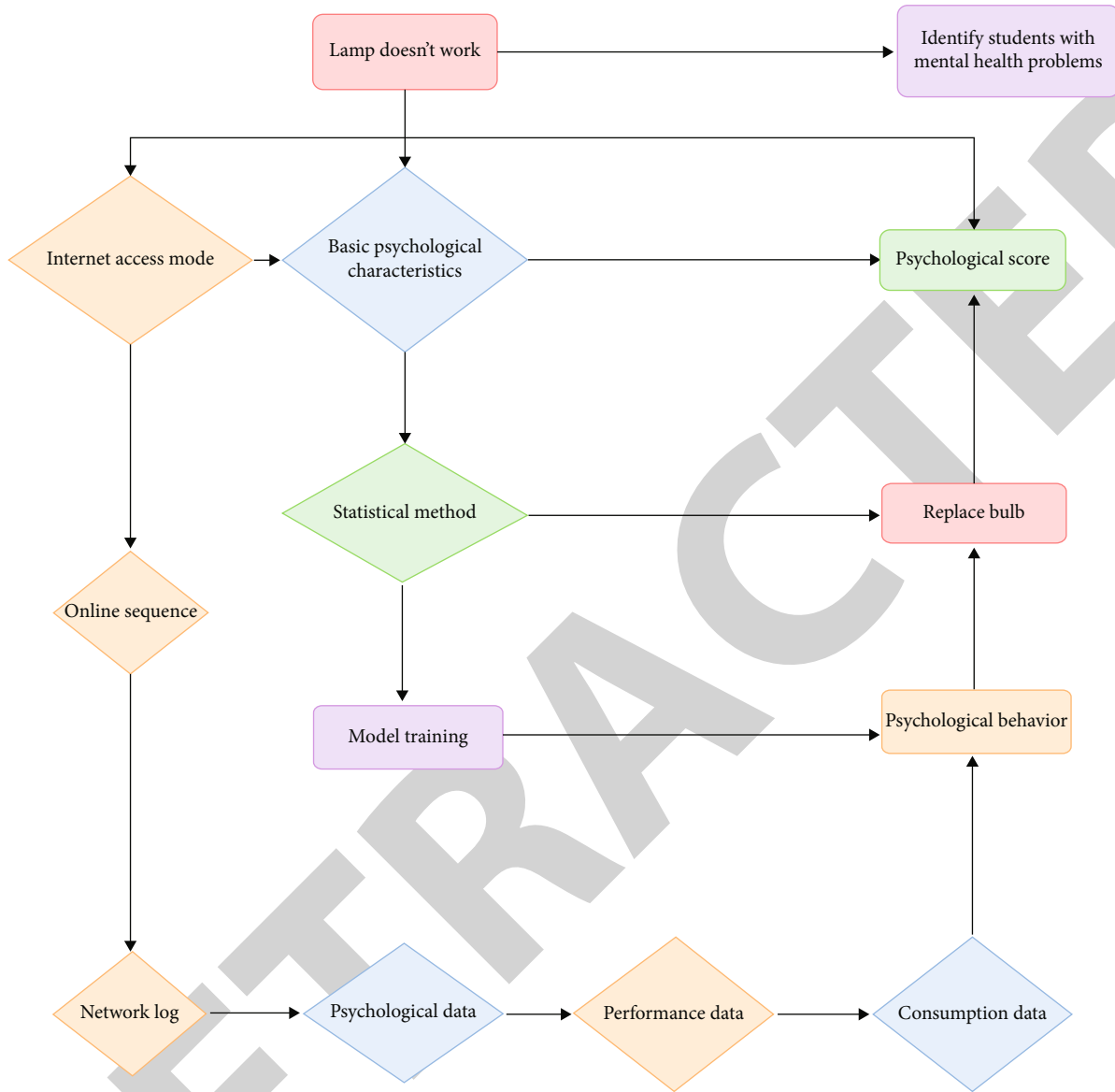


FIGURE 1: Flow chart of identification algorithm of students' psychological health problems based on media fusion.

between 0 and 1, and Gini impurity is measured between 0 and 0.5. Consequently, we may say that Gini Impurity is superior to entropy for choosing the finest features. The information gain is calculated on the basis of information entropy, and the information entropy is calculated as shown in following:

$$\text{Entropy}(D) = - \sum_{i=1}^m p_i \log. \quad (3)$$

Where

m represents the number of categories in the data set D , and.

p_i represents the probability of i category. The smaller the value, the higher the purity of D .

Add weight $|D^v|/|D|$ to each branch node. When the data set is divided by attribute a , the information gain of sample set D can be calculated according to the formula.

$$\text{Gain}(D, a) = \text{Entropy}(D) - \sum_{v=1}^V. \quad (4)$$

Firstly, the information gain of attributes is calculated, and the attributes whose information gain is higher than the average are selected, and then the attributes with the highest gain rate are selected for division.

$$\text{Gain_ratio}(D, a) = \frac{\text{Gain}(D, a)}{\text{SI}(a)}. \quad (5)$$

Among

$$SI(a) = - \sum_{v=1}^V \frac{|D^v|}{D}. \quad (6)$$

Therefore, according to the Gini index, we can judge which attribute is the best split attribute. It is determined by deducting from one the total of the squared probability for each class. In contrast to information gain, which promotes smaller partitions with unique values, it favors bigger partitions and is simpler to implement. For a split, a feature with a lower Gini index is picked. The Gini coefficient's fundamental flaw as a gauge of income inequality is that it is unable to distinguish between various types of imbalances.

$$Gini(D) = 1 - \sum_{i=1}^n. \quad (7)$$

The characteristics of media fusion recognition algorithm are content fusion and channel fusion, media technicalization and omnipotence, intensive production of content production, and national writing. Vision fusion is the process of fusing together various input images into a single set of images. With the continuous development of multifunction and integration of media, a single media such as mobile phone can keep abreast of major events and minor events in the world at any time, and everyone can talk and communicate with people he has known all his life [27]. The media fusion recognition algorithm's parameters are all interconnected. When we train the model, the loss of backpropagation acts on both the first module and the second module. At the same time, the online behavior track module will be adjusted according to the feedback of the students' basic characteristics module, which will also be affected by the characteristics of students' online behavior track. Knowing your high school kids will also enable you to foresee or recognize any potential personal problems. If you are familiar with your students, you will be able to tell when they are acting oddly or are depressed. If you observe this, you can step in to support them or refer them to where they can receive assistance. According to research, tracking for conventional teaching has little effect on the academic performance of low- and average-ability kids, but it has a significant positive impact on gifted students who participate in tracks created especially for gifted and talented students. The feature comparison of media fusion recognition algorithm is shown in Figure 2.

The media fusion recognition algorithm is a new model under the diversified development of information transmission. It effectively combines traditional media such as newspapers and television stations with new media communication channels such as handheld intelligent terminals and computer terminals, and generates various forms of information products through centralized processing and resource sharing, and then spreads them to the audience by relying on various platforms [28]. We use the long-term and short-term memory network to capture the time-dependent relationship between the days. RNN of the Long Short-Term Memory (LSTM) type can learn order dependence in sequence prediction issues. The

calculation is as follows:

$$O_t = \sigma \left(W^{(9)} * (h_{t-1}, x_t) \right), \quad (8)$$

$$h_t = o_t * \tanh (C_t). \quad (9)$$

Where

h_t represents the hidden state of output on day t ,

h_{t-1} represents the hidden state of output on day $t-1$,

x_t represents the input on day,

C_t represents the cell state on day t , and

σ and \tanh are activation functions.

The result obtained is the output of the online behavior track module, as shown in the formula, where

s^{tra} represents the online track result and

h^T represents the online hidden status in T days.

$$s^{tra} = f \left(W^{(10)} * h^T \right). \quad (10)$$

Connect the outputs of the two modules together as the input of the next layer of fully connected neural network. The connection operation is shown in the formula, where

s^{base} represents the basic characteristics, and

s^{base} is the summary of the students' online trajectory mode information and basic attribute information.

$$s^{concat} = f \left(W^{(11)} \text{concat} \right). \quad (11)$$

Our goal is a binary classification problem. The simplest kind of machine learning task is binary classification. Binary classification seeks to group data items into one of two categories, such as 0 or 1, true or false, will survive or will not survive, and have blue eyes or not. We use sigmoid function to convert the output result into a value between 0 and 1.

The change of language form has given birth to the change of media form. From a diachronic perspective, written language has developed into digital language. Human beings have experienced the stage of print media and electronic media. Usually we call the printed media, such as newspapers and magazines, which release news or information on paper as the carrier "print media". The in depth and effective research on audience psychology is an important link to realize the value transformation of animation industry resources. A participant experiences an audience effect when they act differently because they think someone is watching them. One of the earliest psychological effects was the focus of extensive research in the 1960s and 1970s but has subsequently attracted less attention. Only by adapting to the environment and changing creative ideas and strategies can we better develop university students' psychological education. The media fusion recognition algorithm has brought great changes to university students' psychological education in the form of communication, production, and experience. Although the global print media has been impacted by electronic media, especially the Internet, print media is also strengthening cooperation with electronic media. The two media are showing a state of "integration and win-win", and neither of them is indispensable.



FIGURE 2: Comparison of features of media fusion recognition algorithms.

3.2. University Students' Psychological Health Standards. University students' healthy psychology should meet the following standards: first, normal intelligence. Intelligence is the sum of a person's observation, memory, imagination, thinking ability, and operation ability. Normal intelligence is the most basic psychological condition for a person to study, live, and work, the psychological guarantee for people to adapt to the environment and seek survival and development, and the primary standard for university students' psychological health. In the process of carrying out psychological health education, teachers should first master various communication technologies, constantly improve their media literacy, keep in close contact with students by using various new media, understand the psychological characteristics of university students, reveal the law of their psychological changes, and truly become their guides. Our emotional, psychological, and social well-being are all parts of our mental health. It influences our thoughts, emotions, and behaviors. Additionally, it influences how we respond to stress, interact with others, and make good decisions. Every period of life, from childhood and adolescent years to maturity, is vital for mental health. Many students' reac-

tion is that they do not have much to say with their parents, even if they write letters, they are basically due to substantive problems such as economic supply, material supplement rather than emotional communication. Although I realize that it should not be like this, it is a common state of mind that I am too lazy to write. On the contrary, the letters between lovers are getting thicker and thicker, and the phone calls are getting denser and denser, which is in sharp contrast. On the whole, students are basically satisfied with their parents, and they also affirm their affection. However, they have fewer returns and confidently believe that their parents do not seek returns. The self-management and control of university students' emotions is not only an important part of their physical and psychological health, but also a necessary condition for their self-development and personality growth, and the basis for them to face setbacks and adapt to the environment. The network infrastructure in colleges and universities is becoming more and more perfect, which provides favorable conditions for university students to use the network. Most university students cannot resist the numerous and complicated information.

TABLE 1: Reliability coefficient of university students' psychological education impedance questionnaire.

Reliability index	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Overall questionnaire
Reliability	0.821	0.714	0.613	0.675	0.662	0.785
Split half reliability	0.775	0.682	0.641	0.724	0.657	0.683

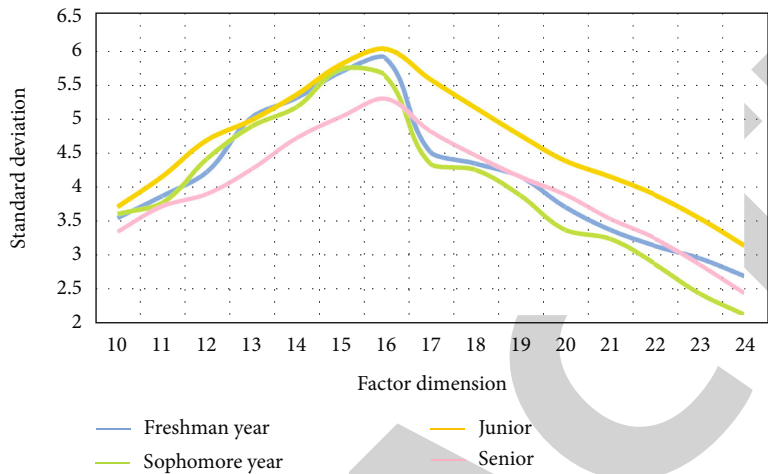


FIGURE 3: The changing trend of grade 3 in all dimensions.

They are not only concerned about the knowledge function of the network, but also have a strong interest in its entertainment function and news function. All this information will have a negative impact on the development of university students' independent thinking ability, right and wrong discrimination ability and rational thinking ability. This unique cultural and humanistic atmosphere on campus has fostered the development of students' emotions. This is not only a problem in interpersonal communication, but also the relationship with love. The humanistic perspective places a strong emphasis on each person's intrinsic worth, the significance of human values, and the creative and active character of people. The approach is upbeat and emphasizes how admirable it is for people to be able to endure suffering, agony, and hopelessness. On the edge of emotion, many students are wandering. When dealing with personal emotional problems, they cannot see friendship and love clearly, and they cannot grasp the scale of communication between male and female students well. I aim to value friendship and unintentionally let it disappear. What university students need most is good media literacy. Media literacy refers to the ability to acquire and understand media information in various environments, which is an organic part of university students' moral quality. Whether one's mood and feelings are stable and optimistic is the main sign of one's psychological health. Positive emotions such as happiness, optimism, cheerfulness, and satisfaction are always dominant in mentally healthy people. Although there are negative emotions such as sadness, sorrow, and anger sometimes, they generally do not last long; strive to meet their own needs within the scope permitted by the society; I am satisfied with everything I can get, and I am always cheerful and optimistic. What university students do not like most is blunt preaching

and boring theoretical knowledge. In order to prevent them from forming contradictory psychology and rebellious psychology, psychological health teachers should take what university students are most concerned about or the people and things that happen around them as the starting point of psychological health education, and pass on psychological health knowledge to students with vivid language, vivid cases, and various forms.

Suicide frequently results from a variety of emotional issues, academic strain, or interpersonal hurdles. Everybody is at a different age and has different perspectives on the world. Pressure from various sources will result in excessive behavior, especially in 16 to 28-year-old youths, once they pass the breaking point. They lack the minimum "ability to reduce pressure" in the face of pressure, leading to the lack of motivation in the face of pressure and the tragedy that should not happen. All sectors of society must pay full attention to this problem from the perspective of recognition and action, and help "heaven's favorite" to stay away from "depression" and regain a sunny and healthy mentality. Educators should consciously and systematically cultivate students' media literacy, and enhance their ability to resist bad information. Psychologically healthy university students have strong emotional management and adjustment ability, stable mood, optimism, exuberance, and full of hope for life and future. Be able to properly express and control emotions, vent their emotions reasonably, and correctly handle emotions such as joy, anger, sadness, and joy in life. Finally, it cannot be ignored that we should mobilize the wider social forces, publicize the knowledge of psychological health by using TV, radio, newspapers, magazines and other media; widely publicize the knowledge of psychological health, set up special columns, hotlines and consultation services, and improve university students'

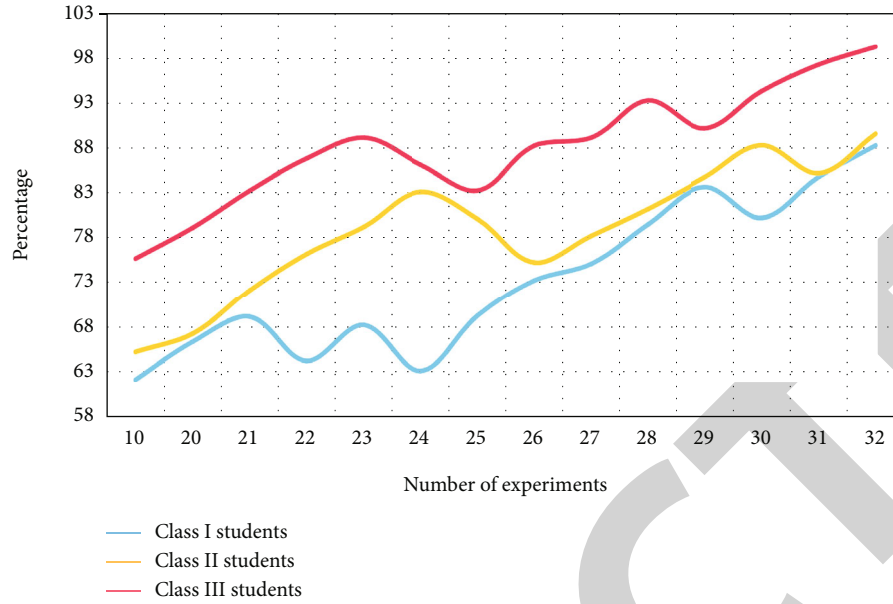


FIGURE 4: Comparative analysis of university students' psychological problems.

TABLE 2: Grade difference test of psychological education impedance of university students.

Grade	Average value	Standard deviation	<i>F</i>	<i>p</i>
Freshman	84.9454	8.05572	3.677	0.011
Sophomore	83.1750	9.56624		
Junior	83.6214	8.58726		
Senior	84.9404	8.89577		

TABLE 3: Experimental results of four different feature combinations on the media fusion recognition algorithm model.

Dataset	Precision	Recall	F1 measure
I	0.72	0.74	0.71
II	0.68	0.72	0.72
III	0.65	0.67	0.66
IV	0.61	0.56	0.58

psychological health awareness. With these powerful guarantees, our psychological health education will really be implemented. In the college stage, the individual's self-awareness is gradually enhanced, but for a long time, they have not formed a solid image about themselves, and their self-awareness is not stable enough. Seeing problems is often one-sided and subjective, coupled with psychological vulnerability. Once they encounter temporary setbacks and failures, they are often discouraged and timid. In front of teachers, they often hide their true emotions and do not want to easily reflect their true psychological state. Impulsiveness and internalization interweave, which makes college students have intense psychological conflicts at this stage. Under the premise that college students are not rich in social life experience, they are likely to have strange and extreme thoughts and behaviors, which should also be paid attention to.

4. Results and Analysis

4.1. Psychological Health Data of University Students. This study examined the internal consistency reliability of each factor, Cronbach coefficient and split half reliability. The internal consistency of a set of items, or how closely connected they are to one another as a group is measured by Cronbach's alpha. It is regarded as a gauge of the stability of the scale. The measure is not necessarily unidimensional if alpha has a "high" value. When determining split half dependability, the complete collection of items related to an interest construct is divided in half, and the findings from the two resulting subsets of items are compared as shown in Table 1.

It can be seen from Table 1 that the reliability of all factors and the total questionnaire has reached the general standard and the overall level has reached an acceptable level, indicating that the questionnaire has good reliability.

This experiment further analyzes the differences of psychological resistance scores of university students in the process of psychological education. The experiment was conducted in freshmen, sophomores, juniors, and seniors, respectively. The change trend of each grade in each dimension is shown in Figure 3.

From Figure 3, we can see the difference of psychological education impedance of university students in different grades and the changing trend of each factor dimension. From the vertical point of view, the psychological education impedance of university students is junior, freshman, sophomore, and senior from high to low in grade. Horizontally, the scores of juniors in 17 and 18 dimensions are higher than those of the other three grades, and the juniors score the highest.

This experiment is based on the category scoring standard: the first category of total scores is those who may have mental disorders or mental diseases; the second category of total score is those who may have general psychological

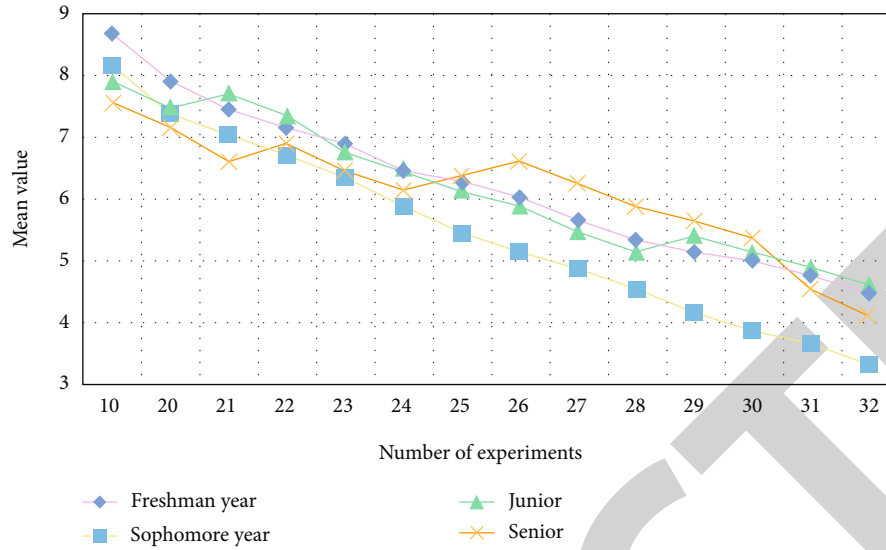


FIGURE 5: Average change of scores of each factor in grade 5.

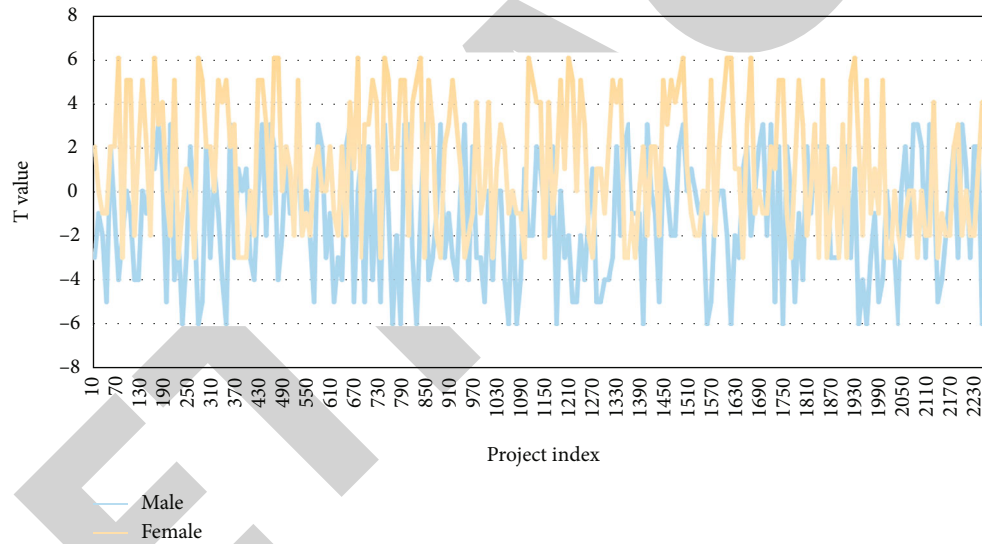


FIGURE 6: Comparison of psychological health level of university students of different genders.

TABLE 4: Gender difference test of university students' psychological education.

Gender	Average value	Standard deviation	<i>F</i>	<i>P</i>
Male	84.1356	8.55405	0.457	0.498
Female	83.8113	9.12143		

problems; the third type is the experimental analysis of the number of normal students, and the experimental results are shown in Figure 4.

As can be seen from Figure 4, the average proportion of "post-90s" university students with normal psychology is 88.56%; the average proportion of university students with general psychological problems is 77.25%; and the average proportion of university students with mental disorders or

mental diseases is 75.32%. From this experiment, it can be explained that at present, university students still account for a large proportion of mental diseases. It is necessary to pay attention to the psychological health problems of university students. We believe that cultivating university students with the basic characteristics and basic spiritual elements of a sound personality should establish the ideal goal of personality as an ideal model of a sound personality for university students.

1502 test papers were analyzed. Variance analysis was conducted on each dimension factor to test whether there were differences in gender, grade, discipline, and source, so as to specifically explore the characteristics of resistance in the process of university students' psychological education. The test results of grade difference of university students' psychological education impedance are shown in Table 2.

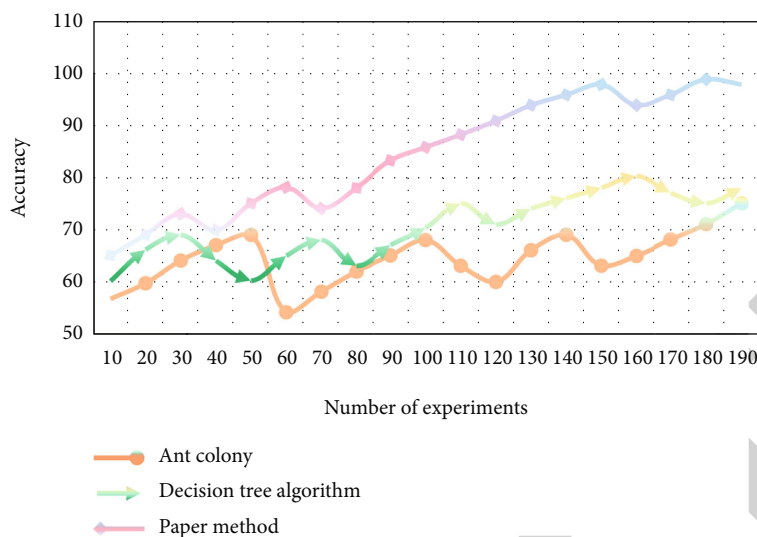


FIGURE 7: Accuracy of university students' psychological health under different algorithms.

From Table 2, we know that $F = 3.677$ and $P = 0.013$, which indicates that there are significant differences in various factors of impedance in the process of psychological education of university students in different grades. Back testing found that freshmen scored significantly higher than sophomores and juniors. Therefore, attaching importance to the shaping of university students' sound personality is the inevitable choice made by modern education facing the future society, and it is a new "Hope Project" with strategic significance, which has great and far-reaching significance.

4.2. An Analysis of University Students' Psychological Health. In order to further discuss the influence of features on the experimental results, the following feature set training models are used for experiments. The experimental results are shown in Table 3.

It can be seen from Table 3 that the experimental results of feature set I are the best. Secondly, with the reduction of feature types, the experimental results gradually become worse, especially in feature set IV, because a large number of consumption features have a great impact on the experimental results. The experimental results show that various behavioral data can improve students' cognitive effect on mental health problems. Only by cultivating and bringing up a large number of high-quality talents who can survive and create, adapt to the fierce social competition, withstand the test of difficulties and setbacks, and have good mental health and personality, can provide a reliable "cornerstone" and guarantee for the development of the future society.

This experiment analyzed the differences of psychological health resistance scores of college students in the process of psychological education. Anxiety, despair, and stress are the most prevalent problems among their college student patients, according to mental health professionals at colleges and universities. Up to 41% of college or university students were thought to exhibit depressive symptoms. The experiment was conducted in grade one, grade two, grade three, and grade four. The average change of each factor score of each grade is shown in Figure 5.

It can be seen from Figure 5 that the average changes of the scores of various factors in university students' psychological education. When the number of experiments reaches 26, the average of freshmen, sophomores, juniors, and seniors is 5.98, 5.12, 5.86, and 6.58, respectively. It can be concluded that the first one is senior, followed by freshman, junior, and sophomore.

This experiment compares and analyzes university students' personality questionnaire of different genders. The experimental results are shown in Figure 6.

As can be seen from Figure 6, the total scores of "post-90s" college boys are extremely significantly different from those of "post-90s" college girls, and the scores and total average scores of girls in various projects are higher than those of boys, which show that the psychological health level of girls is lower than that of boys. Improving university students' personality education is also the need of social civilization and progress. Modern society is driven by reform, and the torrent of reform permeates all levels of social life.

Reform is inseparable from creativity and competition, which are the most prominent features of modern social development. This social feature requires that education should be transformed from "education for the formation of academic qualifications" to "education for adults focusing on the formation of personality". The test of gender differences in psychological education of university students is shown in Table 4.

It can be seen from Table 4 that gender differences are an important aspect of psychological research. From Table 4, it can be seen that there is no significant gender difference in various factors in the process of university students' psychological education.

In this experiment, the accuracy of university students' psychological health is compared according to different algorithms. Ant colony algorithm, decision tree algorithm, and this method are used, respectively. The experimental results are shown in Figure 7.

As can be seen from Figure 7, in the process of comparing the accuracy of university students' psychological health,

this method has the highest accuracy, up to 99.25%, followed by the decision tree algorithm, up to 80.53%, and finally the ant colony algorithm, up to 75.25%. Therefore, this method is more conducive to the study of university students' psychological health. The education of healthy personality of university students refers to the education aimed at developing students' psychological quality and cultivating healthy personality to meet the needs of modern society. Through personality education, students' healthy personality can be cultivated. Considering the value of personality education from a broader perspective, it also plays a great role in promoting and sublimating social civilization. It is an important aspect of reconstructing contemporary national spirit.

5. Conclusions

As outstanding young college students, their mental health growth and success are related to the future and destiny of the country. In the process of everyone's life, no matter how the world develops and changes, they should face it positively and optimistically and learn to communicate with others to reduce their own pressure. People are highly social, therefore, if they do not communicate, they'll develop autism and become more reclusive. In the process of comparing the accuracy of college students' mental health, the accuracy of this method is the highest, up to 99.25%, followed by the decision tree algorithm, up to 80.53%, and finally the ant colony algorithm, up to 75.25%. Therefore, this method is more conducive to the study of college students' mental health. Through the media fusion recognition algorithm, we should fully respect the current situation of students and their current values, outlooks on life, and rights; actively guide them to identify, affirm, and like themselves; establish self-confidence and achievement motivation, and establish a correct moral outlook, outlook on life, and sense of diligence. Any social moral system should establish the ideal personality as the direction and objective of people's moral development in the new era as we pursue the ideal personality under the notion of media integration. It injects rich spiritual power resources into people's all-round development and regulates the direction of people's development. In future, new technologies are developed which helps to identify accuracy of college students' mental health efficiently.

Data Availability

The 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 known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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