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Preface

The 5th International Conference on Educational Innovation and Philosophical Inquiries (ICEIPI 2024) is an annual conference focusing on research areas including education innovation, social sciences and humanities. It aims to establish a broad and interdisciplinary platform for experts, researchers, and students worldwide to present, exchange, and discuss the latest advance and development in education innovation, social sciences and humanities.

This volume contains the papers of the 5th International Conference on Educational Innovation and Philosophical Inquiries (ICEIPI 2024). Each of these papers has gained a comprehensive review by the editorial team and professional reviewers. Each paper has been examined and evaluated for its theme, structure, method, content, language, and format.

Cooperating with prestigious universities, ICEIPI 2024 organized three workshops in Huntsville, Beijing and Perth. Prof. Enrique Mallen chaired the workshop "Creative Strategies for Effective Vocabulary Acquisition", which was held at Sam Houston State University. Dr. Jianfei Yang chaired the workshop "Bridge the theory and Practice: The Balance of Arts and Business", which was held at Communication University of China. Dr. Elaine Chapman chaired the workshop "Assessment Task Quality in A Digital Era", which was held at University of Western Australia.

Besides these workshops, Eminent professors from top universities worldwide were invited to deliver keynote speeches, such as Dr. Elaine Chapman from University of Western Australia and Prof. Enrique Mallen from Sam Houston State University. They have given keynote speeches on related topics of education innovation, social sciences and humanities.

On behalf of the committee, we would like to give sincere gratitude to all authors and speakers who have made their contributions to ICEIPI 2024, editors and reviewers who have guaranteed the quality of papers with their expertise, and the committee members who have devoted themselves to the success of ICEIPI 2024.

Prof. Enrique Mallen
General Chair of Conference Committee

Workshop

Workshop – Huntsville: Creative Strategies for Effective Vocabulary Acquisition
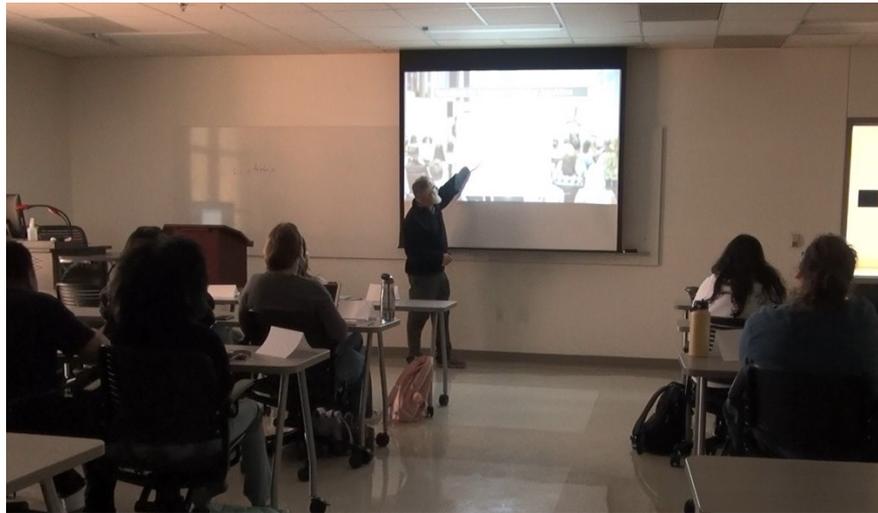
July 12th, 2024 (CDT)

Department of World Languages and Cultures, Sam Houston State University

Workshop Chair: Prof. Enrique Mallen, Professor in Sam Houston State University

Workshop – Beijing: Bridge the theory and Practice: The Balance of Arts and Business

June 17th, 2024 (GMT+8)

The Department of Cultural Industries Management, Communication University of China

Workshop Chair: Dr. Jianfei Yang, Associate Professor in Communication University of China

Workshop – Perth: Assessment Task Quality in A Digital Era

August 26, 2024 (UTC+8)

Graduate School of Education, University of Western Australia

Workshop Chair: Dr. Elaine Chapman, Associate Professor in University of Western Australia

The 5th International Conference on Education Innovation and Philosophical Inquiries

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Digital Preservation, Inheritance, and Innovative Development of Intangible Cultural Heritage from the Perspective of Metaverse

Bing Yu[1,a], Jing Sun[1,b,*], Zhaoxing Wang[1,c], Sanfeng Jin[1,d], Panpan Bai[1,e]

[1]*College of Landscape Architecture and Art, Northwest A&F University, Yangling, China*
a. yubing@nwafu.edu.cn, b. sj2011@nwafu.edu.cn,
c. cherry9990223@163.com, d. 1045842021@qq.com, e.2275319915@qq.com
*corresponding author

Abstract: With the rapid change of meta-universe technology, the digital inheritance of intangible cultural heritage (ICH) shows unprecedented broad prospects, and injects new vitality into the inheritance and development of ICH. Aiming at the multiple challenges in the process of digital inheritance of ICH, this paper explores in depth the specific application of meta-universe technology in ICH, and proposes a series of innovative strategies such as the digital inheritance of visual language, the construction of immersive experience, the protection of free creation and copyright, and the construction of panoramic interactive venues. These strategies provide a new perspective and practical methodology for the digital inheritance of intangible heritage, and at the same time make a positive contribution to the promotion of the continuous prosperity and innovation of intangible heritage culture. This paper is committed to providing solid theoretical support and practical guidance for the protection, inheritance and innovation of ICH, so as to help ICH culture to be revitalized in the digital era.

Keywords: meta-universe, intangible cultural heritage, digital heritage and innovation, digital heritage

1. Introduction

With the rapid progress of science and technology, metaverse, as an emerging technological platform, brings unprecedented opportunities for the protection and transmission of intangible cultural heritage (ICH) with its highly immersive and interactive characteristics [1]. The uniqueness of metaverse lies in its ability to break the limitation of physical space and provide a brand new dimension for the display and dissemination of ICH [2]. The introduction of metaverse technology is especially important in the context of intangible cultural heritage facing serious challenges such as the loss of traditional skills and low public participation.

This study aims to investigate the use of meta-universe technology in the ICH, emphasizing its distinctive and inventive nature in safeguarding ICH. In order to effectively address the current issues facing ICH and encourage the widespread dissemination and creative development of it, it is necessary to integrate modern scientific and technological means in order to contribute new ideas and

methods for the digital intangible cultural heritage. This will ensure that ICH can be inherited for a long time and glow with new luster.

2. Overview of the Metaverse and the Current State of Digitization of Intangible Cultural Heritage

2.1. Overview of the metaverse

The cutting-edge technologies of Virtual Reality (VR), Augmented Reality (AR), and Blockchain, when combined, create a highly realistic, interactive, and rich virtual realm, form the foundation of the Metaverse, an emergent idea in the digital era [3]. The fundamental feature of the metaverse is its extreme scalability and openness, which allows users to freely explore, create, and interact with one another, creating a whole new social and entertainment environment. The meta-universe also offers businesses and brands hitherto unheard-of marketing and promotion avenues, greatly enhancing their commercial value. From a more macroscopic perspective, the creation of the metaverse transforms the domains of digital culture, education, and entertainment in addition to offering users a brand-new virtual environment with previously unheard-of experiences.
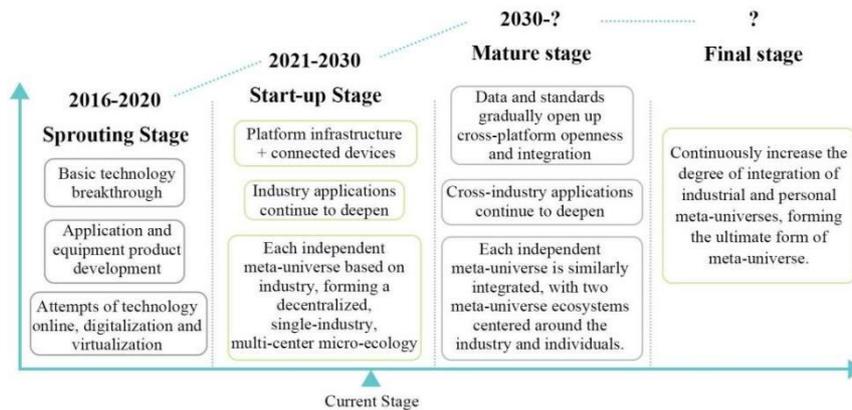
Figure 1: Development Stages of the metaverse

2.2. Current situation of digital intangible cultural heritage

At present, the digital preservation of intangible cultural heritage has surpassed the conventional methods of archiving and static display, and has started to extensively incorporate advanced technologies such as the metaverse [4]. This shift presents fresh prospects for advancement, yet it also entails a range of technical and cultural hurdles.

At the level of digital heritage of visual language, there is the core problem of how to ensure high precision of data collection, high simulation of model construction, and high efficiency of data storage and access; at the level of immersive experience construction, there is the key problem of how to create a virtual environment with high realism, provide colorful interactive experiences, and ensure broad compatibility and popularity of the technology; at the level of creation and copyright protection, there is the problem of how to provide a convenient creative platform while at the same time providing a convenient and convenient platform for creation. At the level of creation and copyright protection, there is the challenge of how to provide a convenient creation platform while guaranteeing the reliability of copyright authentication and the fairness of economic returns for non-legacy digital content; at the level of construction of panoramic and interactive venues, there is the challenge of how to maintain the sustainability of the venues, enhance the user experience, and successfully incorporate socialization and gamification elements into them.

3. Connections between Metaverse and the Digital Preservation of Intangible Cultural Heritage

With the swift advancement of metaverse technology, its fusion with the digital preservation of Intangible Cultural Heritage (ICH) is becoming increasingly intertwined[5], showcasing a noteworthy alignment. The ensuing discourse provides a comprehensive examination of how the metaverse breathes fresh vitality into the digital preservation of ICH through the lenses of technological amalgamation, innovation in cultural experiences, and reshaping of inheritance methodologies.

3.1. Innovative potential of technology convergence

The core of meta-universe technology is comprised of advanced technologies like virtual reality (VR), augmented reality (AR), and blockchain, demonstrating unparalleled innovative potential for the digital preservation of Intangible Cultural Heritage (ICH)[6].

The amalgamation of these state-of-the-art technologies delivers fresh and robust technical backing for safeguarding and passing on ICH. More specifically, VR technology can faithfully recreate historical settings of intangible heritage endeavors, enabling users to sense a journey across time and space to savor the distinctive allure of ICH; AR technology adeptly merges non-heritage elements into the real world surroundings, fostering a more immersive and authentic interactive encounter for users; while blockchain technology ensures secure storage and dependable transactions of non-heritage digital assets, furnishing a solid assurance for the legacy of non-material cultural traditions. By ensuring the secure storage and reliable transactions of intangible heritage digital assets, blockchain technology offers a firm guarantee for the preservation of ICH . This integration not only substantially enhances the efficiency and impact of intangible heritage digital preservation but also presents limitless prospects for the innovation and advancement of ICH.

3.2. Deep innovation in cultural experiences

The meta-universe introduces profound innovation in cultural experiences for the digital preservation of intangible cultural heritage[3]. In the Metaverse virtual environment, users can explore the virtual settings of Intangible Cultural Heritage using VR devices, engage with ICH inheritors in real-time, and develop a deeper comprehension of their creation processes and cultural significance. This immersive encounter allows users to perceive the essence of culture more instinctively and profoundly, thus enhancing their awareness and insight into intangible cultural heritage. Moreover, through the utilization of AR technology, Metaverse effectively integrates elements of intangible cultural heritage into everyday life scenarios, providing users with a richer cultural experience. These novel methods of cultural immersion not only pique users' keen interest in intangible cultural heritage but also pave the way for its wider dissemination and promotion.

3.3. Revolutionary Change in the Heritage Model

Meta-universe technology has led a revolutionary change in the transmission mode of intangible cultural heritage. The traditional inheritance mode is limited by oral transmission and face-to-face teaching, while meta-universe technology breaks this limitation and gathers user groups interested in intangible cultural heritage by means of socialization, forming a virtual community of inheritance. In this community, users can share their experiences and learning results, and have in-depth communication and interaction with other users, so as to jointly promote the inheritance and development of intangible heritage culture. At the same time, Yuan Universe also attracts young users to participate in the inheritance through gamification, designing interesting and challenging game

tasks and reward mechanisms to stimulate users' interest and motivation in learning, so as to make the inheritance of intangible cultural heritage more vivid and interesting[7]. This socialization and gamification mode of inheritance not only expands the channels and audience scope of ICH inheritance, but also injects new vitality into its cultural inheritance.

4. Digital Inheritance Strategies of Intangible Cultural Heritage under the Perspective of Metaverse

4.1. Digital Preservation and Inheritance of Visual Language

In the realm of safeguarding and preserving intangible cultural heritage, the digitization of visual language, serving as its fundamental component, not only forms the basis for the effective continuation of ICH, but also exemplifies a profound integration of contemporary technology and traditional culture. Employing a range of state-of-the-art technological tools, the digital preservation of ICH visual language is accomplished with the substantial support of metaverse technology. Initially, utilizing 3D reconstruction technology within the Metaverse, alongside high-precision tools like laser scanning and photogrammetry, meticulous data collection of the ICH project is conducted. This procedure precisely captures crucial visual aspects of ICH such as shape, color, and texture, establishing a comprehensive and precise database for subsequent digital model construction. Subsequently, sophisticated 3D modeling software is employed to intricately craft models and map textures based on the collected data, resulting in the successful creation of highly realistic digital representations of ICH. These digital models are presented in a multi-dimensional manner within the meta-universe's virtual space, enabling users to fully appreciate the distinctive allure of ICH. Users can engage in interactive experiences, including traversing virtual reality environments and engaging in dialogues with virtual characters, significantly enhancing their overall involvement.

The digital inheritance approach to visual language transcends the constraints of physical space and time in ICH preservation. Users are liberated from geographical and temporal limitations, allowing them to access these digital models via the meta-universe platform at any time and from any location. This access provides a thorough insight into the historical lineage, intricate artisanship, and profound cultural significances of ICH. Additionally, this approach furnishes robust technical backing for ICH preservation, guaranteeing the enduring safeguarding of ICH through digital archiving and dissemination, thereby bequeathing a valuable cultural legacy to forthcoming generations.

4.2. Constructing Immersive Intangible Cultural Heritage Experiences

With the support of metaverse technology, users can deeply engage with and participate in the immersive experience of intangible cultural heritage. This technology allows for the creation of virtual environments closely mirroring real cultural scenes. Through the use of Virtual Reality (VR), users can fully immerse themselves in these virtual worlds, experiencing the authentic atmosphere of cultural heritage projects in great detail[8]. The high level of simulation provided by VR technology enables users to observe and interact with intricate aspects of cultural projects, such as the shapes, colors, and textures of traditional crafts. Additionally, the integration of sound, light, and video further enriches the cultural experience, allowing users to interact with virtual heritage practitioners, gaining insights into the production processes and cultural significance of intangible cultural heritage. Augmented Reality (AR) technology enhances this experience by overlaying virtual elements onto the real world, offering users a more natural and interactive encounter with cultural heritage. For instance, when attending a traditional craft exhibition, users can utilize AR devices to explore the production processes, historical contexts, and other relevant information, providing a seamless integration into the world of intangible cultural heritage.

In order to further enhance the user's immersive experience, it is also necessary to combine the characteristics and historical allusions of regional intangible cultural heritage, and craft various types of ICH classic storylines or skill demonstrations. These contents not only enrich the form of expression, but also strengthen the visual perception of the stage content expression by means of technological empowerment. For example, by utilizing advanced technologies such as naked-eye 3D technology, holographic and sensing technology, AR and mixed reality (MR), an immersive stage that interacts with the stage virtual simulation in real time has been constructed on the building of the existing venue. This kind of stage can bring all-round sensory stimulation to users, making them feel as if they have traveled through time and space, and are in the historical river of intangible cultural heritage, deeply feeling its profound heritage and unique charm.

4.3. Promoting freedom of creation and strengthening copyright protection mechanisms

Stimulating user creativity and imagination through rich creative tools and platform support is crucial in advancing the innovative development of Intangible Cultural Heritage (ICH). Firstly, the establishment of ICH creation communities or professional platforms is vital to provide users with services like material libraries of intangible cultural elements and expert creation guidance. These platforms enable users to freely generate digital content tied to ICH, including unique digital artworks, captivating gaming environments, and realistic virtual characters.These creations significantly enhance the digital representation of ICH while offering users a wide platform to showcase their talents and share creative ideas. Secondly, alongside promoting free creation, it is essential to establish a robust copyright protection framework to safeguard the intellectual property rights of ICH. Leveraging advanced blockchain technology for decentralized copyright registration and authentication services for digital ICH content is crucial. This initiative ensures that every creative work is safeguarded by transparent and equitable rights, effectively protecting the lawful interests of creators.Moreover, the creation of an exclusive digital content trading platform for intangible cultural heritage not only facilitates broad dissemination and market consumption of ICH but also provides creators with economic opportunities. This, in turn, further encourages their creative drive and motivation.

4.4. Construction of panoramic interactive venues

The construction of panoramic interactive venues in the meta-universe can provide a virtual perpetual carrier and interactive space for the inheritance of intangible cultural heritage, and realize the long-term preservation and wide dissemination of ICH. First of all, it is necessary to conduct in-depth research and data collection on ICH projects[9]. First-hand information on ICH is obtained through reviewing literature, field visits and expert interviews, etc., so as to comprehensively understand its historical background, cultural connotations and production process, etc., and lay a solid foundation for the construction of the subsequent panoramic interactive venue.Secondly, after fully understanding the detailed information of the ICH project, the advanced 3D modeling and virtual scene construction technology is used to present this precious information to the users in the form of panoramic interactive. The unique shape and fine structure of the ICH project are truly restored through accurate 3D modeling, while the virtual scene construction technology can perfectly integrate these models into a realistic virtual environment. The perfect combination of these two technologies will create a lifelike ICH virtual world for users.Finally, the construction of panoramic interactive venues lies not only in the use of technology, but also in the design of user experience. In order to allow users to deeply understand the connotation and value of intangible cultural heritage, a rich variety of interactive links can be designed in the venue. For example, users can freely explore the production process of ICH projects in the venue and experience the charm of traditional skills through

virtual operation. Panoramic interactive venues also need to combine socialization and gamification elements to attract more users to participate in the inheritance and interactive experience of intangible cultural heritage. For example, virtual tour guides and interactive games are set up so that users can have fun and gain from interacting with ICH.

5. Conclusion

This paper discusses in depth and systematically the innovative strategies of visual language digital inheritance, immersive experience construction, free creation and copyright protection, and the construction of panoramic interactive venues. These strategies effectively break through the inherent limitations of traditional intangible cultural heritage transmission in physical space and time. This study not only provides new ideas and methods for the digital inheritance of intangible cultural heritage, but also provides solid theoretical support and practical guidance for its protection, inheritance and innovation. Although this paper has achieved significant results in the theoretical aspect, the discussion of empirical research is still insufficient. In the future, we will continue to pay attention to the development of meta-universe technology and explore more application scenarios of meta-universe technology in the inheritance of intangible cultural heritage[10], with a view to making a greater contribution to the protection, inheritance and innovation of ICH, and to promote its continuous prosperity and development in the digital era.

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The Awakening and Challenges of Women's Rights: A Comparative Study under the Influence of the American Revolution and the French Revolution

Yufei Liu[1,a,*]

[1]School of History and Culture, Tianjin Normal University, Tianjin, 300384, China
a. 2678515290@qq.com
*corresponding author

Abstract: Both the American Revolution and the French Revolution saw the emergence of women's rights in the modern West to a certain extent. Although both the French Revolution and the American Revolution were characterised by the struggle for women's rights, there were notable differences in the specific ways, times, and challenges they faced. This paper compares the emancipatory effects of the two revolutions on women and the independent links between women's emancipation in the local social and political contexts. It reveals that women's emancipation in the modern West was influenced by the unique internal structure of each country's society at the time. It is revealed that during the French Revolution, women's struggle for rights was more centred on the domestic and social level than on direct participation in the political decision-making process due to the development of capitalism in France. Conversely, women in the American Revolution were more concerned with political, legal, and social issues. This essay will examine the chronology of the pre-revolutionary, revolutionary, and post-revolutionary periods, with a focus on the differing national and revolutionary contexts of the two countries, the varying status of women, and the divergent approaches to the fight for women's rights.

Keywords: American Revolution, French Revolution, Women's Rights, Gender Equality

1. Introduction

In the United States and France during the 18th century, the status of women was generally low. Prior to the French Revolution, French women were frequently subjected to unequal treatment within the home and faced numerous limitations within society. Similarly, American women were accorded a relatively low status in society, particularly in the political sphere. Although some women did exert influence, as a whole they did not enjoy a high status. Against the backdrop of women's oppression, both countries embarked on a quest for women's emancipation in the 18th century. Although both countries commenced their quest in the 18th century, there were intrinsic differences between them.

Although women in the United States and France both began to awaken and fight for their rights in the 18th century, the women's rights movement in the United States seems to have taken shape earlier and been more active and successful in its subsequent development. In addition, French women gained the right to vote on equal terms with men much later than in the United States. These

differences reflect the differences in historical development, cultural background, and social structure between the two countries.

2. Women's activities in both countries and the context in which they take place

2.1. The American

Before 1789, women's rights had never been included in the history of mankind. Similarly, after the triumph of the French Revolution and the American Revolution, both countries began to call for the 'equality of all men' from social consciousness to legal documents, but women were coincidentally excluded at the same time. The Declaration of Independence of the United States of America emphasized the right of all men to be born equal, including the right to life, liberty and the pursuit of happiness [1]. However, in the social context of that time, women were generally regarded as subordinate to men and their rights and status were restricted. Therefore, this declaration does not explicitly mention gender equality or women's rights.

Despite the absence of legal recognition, women have commenced to assume their civic responsibilities and to take action. On the military front, about 20,000 women served in the Continental Army, and they followed the army to the north and south, making important contributions to the independence of North America. Not only did these women play traditional roles in the barracks, such as nurses, seamstresses, and cooks, but some brave women even fought directly in the battles [2]. In addition, many women stayed at home to look after the farm or the family business, while learning new skills and taking on extra work.

With regard to social and political participation, the American Revolution saw some advancement of women's political rights. Despite women's activities in the political sphere and their decline after the founding of the country and before the Civil War, the beginning of allowing women to vote in New Jersey in 1776 shows an increase in women's participation in the public sphere. But women's rights were not included in the 1787 Constitution or the Bill of Rights, which resulted in the virtual legal exclusion of American women [3].

2.2. The French

Similarly, the Declaration of the Rights of Man in the French Revolution laid the foundations of bourgeois democracy, but this 'human right' actually referred to 'male power' [2]. In fact, at this time, the French rulers paid very little attention to women as individuals, and even defined women only in terms of their relationship with men. Because the Declaration of Human Rights was formed on the basis of the development of the theory of natural law in Europe in the 17th and 18th centuries, during which time gender inequality prevailed in European society, and women's social status and rights were far inferior to men's. The Declaration of Human Rights was formulated on the foundation of the outcomes of the evolution of the theory of natural law in Europe during the seventeenth and eighteenth centuries. During this period, gender inequality was a pervasive feature of European society, with the social status and rights of women being considerably inferior to those of men. The Declaration of Human Rights failed to acknowledge the legitimate rights and interests of women as natural human beings. French women are still regarded as subordinate to men [4]. Under such circumstances, women's struggle for their own interests and emancipation became particularly important.

The French Revolution provided the political ground for the feminist movement, and the idea of 'freedom and equality' promoted women's participation in political and social activities. On July 14, 1789, women joined men to take over the Bastille, the first large-scale action by women in the history of France, and then women also participated in the attack on Versailles. The struggle for Versailles. This shows that women played a positive role in the revolution.

Although women were involved in public and political activities as a backbone in the early years of the revolution, their presence and endeavors were also restricted and excluded. For example, there were decrees that regarded women's participation in political activities as a treasonable offence and required all women to return to their homes to await new orders. In addition, the National Assembly issued a decree stipulating that women could participate in social activities only if their husbands and children were present, which led to the closure of the 'Revolutionary Republican Women's Civic Club' on October 30 [5].

In the face of these challenges, women continued to make important contributions during the revolution. Not only did they participate in the uprisings and demonstrations, which were the backbone of the Revolution, but they also played an integral role in the festivities, emphasizing the importance of women's 'civic duty' to the Republic. However, despite the fact that women began to participate more actively in social activities, their political rights were still limited, and even after the victory of the revolution, women's activities were still subject to male control in terms of their activities.

An initial comparison of women's activities in the two revolutions and the contexts in which they took place reveals the similarities between the two regions in the pursuit of the concepts of freedom and equality, as well as the unique political culture and social geography of each.

2.3. The Difference

During the French Revolution, the role and status of women underwent significant changes. Although the French Revolution was labelled as 'human rights', it was actually against women's enjoyment of the same rights, which directly triggered women's struggle for their own interests and emancipation. As the revolution progressed, the feminist movement developed to a certain extent. During this period, women began to pay attention to current affairs and even voiced the pursuit of equality between men and women and expressed their enthusiasm to participate in social and political life. In addition, famous thinkers such as Condorcet and Olympe de Gouge represented feminism during the French Revolution. They defended women's right to political representation and equal opportunities in education, and established the so-called 'universalist' feminism [5].

In contrast, during the American Revolution, American women emphasized the values of freedom and equality. The American Revolution was seen as a great political revolution aimed at overthrowing British colonial rule and establishing a new nation based on the principles of freedom. In their quest for freedom and equality, American women were equally involved in this revolution, although their role in society may not have been as prominent or as widely publicized as it was during the French Revolution.

Both the French Revolution and the American Revolution were called for by Enlightenment ideas, and both attempted to break down old societal ideas and gender role limitations. However, the two countries differed markedly in the nature of their revolutions and social ideas. During the French Revolution, women's participation and the development of the feminist movement faced significant challenges but still made some progress. The American Revolution, on the other hand, focused more on the goals of liberation from colonial rule and the creation of a new nation.

3. Combination of women's emancipation and social revolution in both countries

During the two revolutions, the women's movement in each country took action for the emancipation of women based on their respective social trends, among other factors. During the American Revolution, women gradually became actively involved in the struggle for freedom and equality, expressing their quest for equal rights through the publication of documents such as the Declaration of Sentiments. This was adopted at the first women's rights convention in the United States, and it

drew on the wording of the American Declaration of Independence to emphasize the equal and inalienable rights of men and women. The declaration stated that women, like men, were endowed with the right to life, liberty, and the pursuit of happiness. The Declaration criticizes the deprivation of women's rights by men, including the right to vote, the right to have a say in the making of laws, the right to property, etc., and demands that women be immediately granted the same civil rights as men.

In the Declaration of Sentiments, women's rights were enshrined in several key areas: the right to education, the right to property, the right to equality in marriage, and the right to participate in government. Its passage marked the beginning of the women's suffrage movement in the United States and laid the groundwork for subsequent women's rights movements.

In contrast, during the French Revolution, although women were equally involved in social and political activities, their efforts to fight for their rights were more centered on the domestic and social levels than on direct participation in the political decision-making process. At the time of the French Revolution, men believed that women should be chaste, homemakers, and focus their lives on raising children and caring for their husbands, rather than being socially active. Olympe de Gouge, a female representative of the French Revolution, argued for the equality of women and men, starting with the marriage relationship. The Declaration of the Rights of Women directly challenged the discrimination against women in the Declaration of Human Rights by arguing for a reform of the institution of marriage, advocating for the equality of men and women in marriage, and demanding that the law protect the rights of women and children rights [6]. She suggested that women's roles and responsibilities in society should not justify their exclusion from democratic rights, that gender differences were used to rationalize women's subordination, and that true equality and democracy should eliminate the injustices caused by these differences.

Although the two revolutions differed in their development of women's emancipation, both reflect the influence of Enlightenment thinking - the values of freedom and equality. Both revolutions contributed to some extent to women's reflection on their status and rights and enlightened women's feminist consciousness. Condorcet on women as Citizens argued for equality between men and women, and he argued that if rights are universal, then they should apply to all adults, including women. He opposed the denial of political rights to women simply because of their sex and pointed out that such discrimination was customary injustice. He argued that the difference between men and women was not a difference in ability but a product of society and education. He emphasizes that women, like men, are sentient beings, capable of acquiring moral ideas and reasoning, and therefore they have the same rights. While Condorcet's discourse focuses more on rational and philosophical analyses, and the declaration of the Seneca Falls Conference focuses more on political and social reforms, De Gouge's declaration contains specific criticisms of the society of the time and suggests some concrete reforms in life.

4. The trajectory of women's rights in post-revolutionary countries

Following the French Revolution, which saw the French people embark on a path of emancipation in pursuit of freedom of marriage, there were significant changes in the status of women in terms of the institution of marriage and the role of the family. These changes led to an increase in the active role of women in society. The Constitution and laws of the French Revolution clearly declared that 'marriage is a secular contract', which was recognized in the French Civil Code of 1804. This change meant that marriage was no longer a social contract based on religious rites, but a secular contract based on the consent and equality of the man and the woman. This change of mindset opened up new possibilities for women's role in the family, which was no longer limited to the traditional model of the 'good wife and mother'. At the same time, the political arena of the Revolution created the conditions for women to enter the public sphere, leading to the emergence of women's revolutionary

practice and feminist ideology, and enabling them to play more diverse and independent roles in the family and society according to their own wishes and abilities.

As the twentieth century progressed, France continued to introduce legal and social policy reforms to promote gender equality. In 1974, for example, then-President Destin created the post of Secretary of State for Women's Affairs with the aim of promoting the advancement of women, facilitating their access to positions at all levels of French society and eliminating any discrimination to which they might be subjected[7].

At the end of the twentieth century, France adopted a constitutional amendment that explicitly emphasized women's equal rights with men and radically improved the status of women in society in symbolic terms. In addition, France has endeavored to apply the concept of 'parity between men and women' to all aspects of legislative elections. For example, the Act on Equal Opportunities for Men and Women in Running for Office provides for a quota system for candidate lists, which requires that 50 percent or more of the candidates on each party's local election lists must be women, and that the party concerned will be required to pay a fine if it fails to meet the 48 percent quota [8]. These measures have not only improved the environment for women's political participation, but also promoted women's participation and advancement in the political arena.

However, in the United States, the advancement of women's rights is reflected more in political power than in social and family roles. After the American Revolution, American women's development in politics has gone through a process from nothing to something, gradually fighting for their rights. During the War of Independence, American women changed the prejudice against women at the time and improved their status by participating in war support work. As a result of this war, American women no longer subscribed to the traditional notion that women were the dominant force in the home and men were the dominant force outside the home, and women began to be allowed to vote in some areas.

In the 20th century, the political status of women in the United States improved significantly, and in 1920, American women finally won the right to vote, even half a century later than the black male suffrage, an achievement that marked an important advance in the political power of women in the United States. American women have become increasingly aware of their political participation, and more and more women are demanding to participate in political life. Despite the challenges of gender politics, such as 13 female presidential candidates made 16 attempts between 1872 and 2008 [9]. All ended in failure, but American women's struggle for political power never stopped. By the end of the 20th century, the United States gave birth to the first female Supreme Court Justice in history, Sandra Day O'Connor, which marked a major breakthrough for American women in the political field.

The development of American women in politics has been a long and difficult process. From limited participation during the War of Independence, to the struggle for the right to vote in the late 19th and early 20th centuries, to the adoption of the constitutional amendment in 1920, American women have made remarkable progress in political participation and social status. This process not only reflects the evolution of the concept of gender equality in American society, but also demonstrates the awakening of women's self-awareness and their efforts to fight for their rights.

5. Conclusion

As can be seen, the feminist movement in both countries underwent a shift from focusing on the right to vote to advocating for broader social, economic, and educational rights. At the conclusion of the American Revolution, the United States emerged as a nation with the autonomy to determine its own destiny and a democratic political system. Consequently, the feminist movement initially focused on the campaign for the right to vote in order to establish popular control of the government. This subsequently broadened to encompass access to education, employment opportunities and the redefinition of family roles. Although French women did not gain the right to vote and stand for

election on an equal footing with men until 1945, they gradually gained the right to political rights and education. This began with the advancement of the family through marriage, and to a certain extent contributed to the development of French capitalism.

The struggle for women's rights in these two periods reflects the characteristics and challenges of women's liberation movements in different historical contexts and social structures. These contradictions and conflicts had a profound impact on bourgeois democratic thought. On the one hand, they reveal the limitations of bourgeois democratic thought, namely, the pursuit of freedom and equality, while ignoring the importance of gender equality. On the other hand, these contradictions and conflicts have also promoted the development of the feminist movement, prompting people to re-examine and reflect on bourgeois democratic thought and explore a more comprehensive and inclusive concept of democracy.

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The Impact of Gender Stereotype on Women's Career Choice and Relevant Factors

Jinru Lin[1,a,*]

[1]*Guanghua Cambridge International School, Shanghai, China*
a. tcymmi@hhu.edu.cn
corresponding author

Abstract: Women have always been treated unfairly in society because of their gender. Society often has biases on the working and studying ability of female. Gender stereotype, which is the origin of these bias, may significantly affect behavior and cognition of women. This suggested that the fact of women and men showed different career patterns might be influenced by gender stereotypes. These types of biases are not only explicit, but also can be implicitly associated to people's mind. Both explicit and implicit stereotypes may cause negative impacts on career choices of women, as women might believe themselves as untalented in specific fields, which are referred to the masculine fields. People live in a social world, so that when they betray the gender stereotype, they might feel threatened on their social identity. Although gender stereotypes may all have negative effects towards all women's selection of career, the impacts can have a variety of extents under different conditions. Most previous studies mentioned in this report are cross-sectional studies and did not include interventions. Therefore, the comparison between distinct influential factors and the dynamic changes of stereotype across different periods remain unclear. In future research, longitudinal and intervention studies should be conducted to further understand the negative impacts of gender stereotype.

Keywords: gender stereotype, career choice, stereotype threat

1. Introduction

Gender stereotype is permeated society and showed significant effect on selection and cognition of public. Gender stereotype means the reflection of general expectations about men and women as a binary categorization [1-2]. It was caused by biological difference between men and women. Level of oxytocin and other hormone and different body strength could both affect behaviour. Men are judged by task performance in society more compared to women. Social roles of women are put into greater emphasis than men, for example being a wife, or being a mom. However, there are some individual men and women who show reversed trend, and the general conclusion is not suitable for them. Moreover, there is no evidence that there is any difference between the brain structure of men and women, and the level of increase in hormones in both male and female infants is same six months after birth [1].

Even though there is no significant evidence to explain of gender difference, most people still use gender stereotypes to classify others. It is simple and efficient to utilize gender stereotypes to estimate the behaviour of unknown individuals and to understand the difference of large groups from others.

However, gender stereotype would reinforce perceived boundaries between genders and influence the judgement of ability of men and women. Under gender stereotypes, female students are considered that they have less talent than male students in science areas, even though they have better grades. This would cause an environment with low self-confidence in women under educational contexts, as they are always seen unexcelled to professional areas. This would not only change the potential social judgements to studying and working ability of male and female, but also influence the evaluation they actually get, which means the career development of men and women would be significantly affected [1]. Women might be discriminated as incapable and not competent to do the science and profession related jobs, therefore the opportunities for prestigious positions and promotions would be less for women than men. Previous study suggested that former statement is the main reason why women have lower incomes than men, which is the discrimination caused by gender stereotypes from job market.

Performance in the fields of science and business might be impacted by the gender stereotype belief. For example, men are considered as better risk takers in general expectation than women [2]. Most positions with high salary were believed as man-suitable jobs, which cause less women to set these careers as their future goals when they were young. Moreover, it is hard for them to change their mind after deciding their career goals, because a large amount of time is needed to learn professional knowledge and practice to get relevant experiences. Even though women changed their mind when they got rid of gender stereotype, they have no time and energy to start all over again but stay in the initially decided career. Few scholars analyzed the effect of gender stereotype from the perspective of women on career choice. Therefore, this review will analyze the effect of gender stereotype on career selection of women. The aim is to investigate the relationship between career choice and gender stereotype belief within women themselves, through an analysis of data from previous research.

2. The Overall Association between Gender Stereotype and Choice of Major

2.1. The Effects of Gender Stereotype and Stereotype Threat

Implicit associations included unconscious biases in the society, which will influence the first impression to a person and cause stereotype. This could enhance the large obstacle that prevent the closing of the gender gap. For example, under implicit associations, women were considered as less talented unconsciously in gender, science, technology, engineering, and mathematics (STEM) fields. This means the negative implicit associations will cause gender stereotype to influence women's choice to field and career. Dunlap and Barth investigated whether STEM will be affected by implicit associations of women, which use 240 college female students that half of them studied in STEM majors and the others studied in female-dominated majors (FDMs) as sample, by using an online test [3]. The test of gender-career and career identity Implicit Associations Test (IAT) was developed to measure participants' implicit association between gender identity and career choice. Participants were required to categorize careers to male-science career or female person career, and science career or person career. According to this study, implicit associations play a significant role in influencing college major decisions. Interest in STEM and exposure to STEM activities may also have an impact on these implicit associations and related major choices. Moreover, this study clearly demonstrates differences in personal identification with STEM fields among women. would be considered first the results for career identity, the work of social identity and stereotype threat theorists. The choice of women to pursue and persist in a STEM career is influenced by implicit STEM identities and gender-STEM career associations. This persistence can be attributed to pre-existing associations, which can expand current knowledge and have implications for improving efforts that examine these factors starting in elementary school [3].

As the effect of stereotype caused by implicit associations to career and fields choice was determined, gender stereotype has been separated to two branches: self-stereotype and stereotype by others. Self-stereotype would be caused by implicit belief, which means the belief of oneself will affect his or her behaviour. For example, women might consider themselves as less talented on STEM field and not choose STEM area jobs and professions. This study was conducted by Dunlap and Barth, which was about career stereotypes and identities within women to themselves [4]. The study investigated implicit beliefs within oneself and major choice for college students in STEM and female-dominated Fields by using self-report. The sample was 117 college STEM or FDMs majored women and their partners in romantic relationship whether majored in STEM or not, Participants were told to categorize careers into self, other, science and person career. Higher positive scores mean weaker stereotypical associations. More stereotypical would show on females in FDMs, compared to male STEM majors. The couple major group was the most relevant effect. This study supports the idea that the career selection of talented individuals, were linked to implicit associations related to STEM, especially for women. Both males and females significantly showed beliefs that their majoring STEM fields have strong associations with the field they chosen and themselves. Although this study has conducted over a year, the time is not enough to alter male's implicit beliefs about STEM majoring and future career. Therefore, implicit belief will affect women and men's career choice significantly as they all chose the professions that they believed have strong connection and suitability to them, and it is difficult to change their mind [4].

The strong relationship between stereotype and field choice may because of the negative effect of stereotype threat. Stereotype threat refers to the risk of confirming negative stereotypes, which would create high cognitive load and reduce academic focus and performance. Petzel and Casad conducted a study about the negative effect of risk-taking on stereotype threat, in a sample of 1013 STEM undergraduate students from two universities [5]. In study 1, self-report that was several rating scales was used to investigate several aspects: demographics, risk-taking, math and science attitudes, math and science expectations, Sense of belonging, commitment to STEM career, self-esteem, challenge and threat appraisals, stereotype vulnerability, gender identity, and self-efficacy. Study 1 revealed higher risk-taking of men compared to women. In study 2, participants were asked to finish several tests, included math tests and self-report of difficulty of math tests. In study 1, women reported lower risk-taking compared to men, which is consistent with past research. This suggested that women with high risk-taking could receive less effect of gender stereotype. There is a contradictory result in study 2 compared to previous research. The interaction between risk-taking and condition is significant, with stereotype threat that elicit cardiovascular challenge states among women higher in risk-taking. This indicates that female can take more risks that might exhibit beneficial cardiovascular caused by stereotype threat. Therefore, although women are considered to be more likely to avoid risks than men, risk-taking showed strong connection to positive academic among women in STEM [5].

As the determinization of buffering of stereotype threat by risk-taking, the influence of stereotype threat on perceptions of STEM would need to be further studied. In this study, Fordham, Ratan, Huang and Silva investigated the relationship between stereotype threat and video game context and perceptions of STEM, in a sample of a group of female students who have an average age of 21.47 years, by using questionnaires and tests [6]. The questionnaire was used contained an open-ended question about the study's purpose. A first-person shooter game was played by participants and several aspects were measured: In-game performance (player's kill-to-death ratio), gaming efficacy (measured on a Likert-type scale), and gaming hours. This study suggested that the gender-related stereotype threat significantly affected the gaming context that may extend into gendered perceptions of STEM fields. This showed that the prevalence of gender stereotyping in the game context has the effect on STEM fields gender disparity, scilicet, women' s underrepresentation of in game contexts caused underrepresentation of STEM of women. Moreover, using of an avatar with high identity

salience will increase in game performance for both males and females, which means although the stereotype threat related expectations were not showed, the effect of stereotypes also be reflected, although the positive direction is for men players. According to this study, the effect of stereotypes threat is significant on player performance within context, which could reflect the increasing of acceptance of stereotype-consistent attitudes about STEM [6].

2.2. Cultural Differences of the Association

Different cultural environments might impact the effect of gender stereotype on career choices to a different extent, as various beliefs towards women would occur in different regions. This concept could be explained by regional traditional gender stereotypes, which means an obsolete concept causing harm and limitation to a certain group in a specific region. For example, in regions with strong regional traditional gender stereotype, women showing their hair and skin will be considered as unwomanly and profligate. Goedderz and Calanchini conducted a study, which is about the representation of women in the workforce and regional traditional gender stereotypes in a sample of women in 45 countries across five continents, by using data from self-report [7]. The data of regional traditional gender stereotypes was collected from survey, which had a strongly positive correlation. This study suggested that the representation of women in the workforce, particularly in managerial positions, was negatively impacted by regional traditional gender stereotypes. Moreover, this finding was similar with previous work in 2005 and 2015, which indicated that even 10-20 years later, regional gender stereotypes are still significant reason of the employment gap. One surprised finding is that regional traditional gender stereotypes had no correlation to parental policies, which means there was on reflection of floor effects in the case of mothers with varied parental leave. Therefore, regional traditional gender stereotypes significantly affected gender employment gap. Women have less opportunity to represent in the workforces of countries in which people more strongly associates careers with male and family with female [7].

3. Relevant Factors and the Impacts

Gender belief included gender disparities, gender identity and gender typicality, to combine these biases as an unconsciously cognitive gender difference. Gender disparities is the difference in society between men and women caused by gender bias and discrimination in. certain field. For example, less women chose to study STEM majors than men, Moreover, gender identity is the behaviour that people believe is what been expected from their gender, as men should act in masculine ways and opposite way for women. Gender typicality suggested that people will do behaviours that they believe is typical and as same as other with same gender. Pownall and Heflick evaluated the effect of gender belief on degree disparities using online questionnaires to identify their gender, academic subject, and gender typicality in 171 male and female undergraduate students studying for a mathematics degree or psychology degree at UK institutions [8]. The gender, subject studying, and eight dependent variables in questionnaire (attainment, gender-role contentedness, gender typicality, stereotype endorsement in math and psychology, and be sex role inventory of feminine, masculine, and neutral of sample) were measured. It was found that females chosen either psychology or mathematics have different patterns of masculinity and femininity, which is women who study psychology degree has higher rate in femininity compared to low masculinity students who studying in math. For men, students who studying in psychology had more femininity when they had high masculinity and moderate masculinity, but not at low masculinity. However, difference with previous research shown that both men and women have no straightforward difference in gender beliefs either they are studying psychology or mathematics. This study indicates that although psychology students have higher femininity rate, women femininity was only higher at low levels of masculinity, men scored higher

on feminine traits only if they were also high in masculinity. Thus, the result suggested that different pattern of gender belief will contribute to women's career choice and major choice, but some of these effect of gender beliefs is not related to men [8].

Fear towards punishment might be another significant influence of gender stereotype, which could link to stereotype threat. The negative stereotype will cause negative evaluation to a task. This might be associated with the level of fear towards punishment as women who evaluated negatively under stereotype, they may have different action because of various level of fear to punishment. Moya and Expósito evaluated the effects of gender stereotype on sensitivity to punishment and fear of negative evaluation in a sample of 110 undergraduate psychology students from the University of Granada took part in the study voluntarily and without financial compensation by using questionnaires [9]. The dependent variable was Iowa Gambling Task (IGT) total score, and the moderators were sensitivity to punishment and fear of negative evaluation (FNE). This study showed that under a stereotype threat condition, females will score lower on the IGT than others, which suggested women make more disadvantageous risk decisions than men. This also means women under stereotype condition are less willing to take risks than men under same conditions. Women have stated that they will monitor their performance as a result. It was found in the results that women with higher FNE scores will have a lower IGT score than others, which suggests that they made more risky choices while being fearful to be evaluated. However, study showed that people high in FNE has greater difficulty to perform tasks effectively and a tendency to make less risky decisions. Therefore, the stereotype threat seems to be a trigger to activate the fear of being negatively evaluated by others [9].

For example, women who have never had children would receive negative impression in employment, because they are considered that they might take a career break in order to have children. The violation of gender stereotype might create guilt. Aarntzen, Derks, Steenbergen and Lippe investigate the relationship between internalized gender stereotypes and guilt level in working parents, in a sample of 135 mothers and 116 fathers in study 1 which used a questionnaire, and 105 mothers in study 2 which using a longitudinal study and questionnaire [10]. In study 1, participants were told to imagine a work-to-family conflict (WFC) situation and state the level of guilt on a scale, which had a result of high mean on guilt. In study 2, a questionnaire about background characteristics were assessed in 5 minutes in first day and a 5-minute online survey about level of guilt each day during experiment through a 5-point rating scale. Through study 2, the results were that women associated more with family and men associated more with work. Study 1 suggested that when under WFC condition, father with more traditional implicit gender stereotypes will fell less guilty than fathers with egalitarian gender stereotypes did, which had no difference with mothers. Furthermore, study 2 suggested that mothers have different understandings of an objectively similar workday, which depends on how much they implicitly associate women with childcare and work. When examining real-life day-to-day fluctuations, there is a connection between mothers' implicit gender stereotypes and their feelings of guilt from WFC. According to these findings, gender stereotypes regarding work, such as men being the primary breadwinners or women being the primary caregivers, influence the cognition and behaviour of both fathers and mothers [10].

4. Conclusion

In summary, gender stereotypes are significantly influential in women's career choice. These influences were from within and surrounding environmental biases, and from education to the job market as a chain reaction. Previous findings suggested that higher risk-taking ability will buffer the level of gender stereotype, because the fear towards punishment would be lightened. As the higher fear towards punishment is, the effect of gender stereotype on career choices would increase. Moreover, gender belief is a significant factor that affects gender stereotype as people may feel guilty when they do not follow the gender stereotype and belief. In different regions, although different level

and effect of gender stereotype on career choices would occur because of various cultures, the influence of gender stereotype is observed in all of the regions being studied.

The studies included in this report most are cross-sectional studies rather than longitudinal studies, so the change through long-term period cannot be seen. For example, the influence on a group of stereotypes in different periods cannot be studied. This means the effect of time and different types of stereotypes are not able to be investigated. Furthermore, these studies are not intervention studies and had no controls. This means the difference between each gender stereotype and each factor cannot been studied, which are not able to suggest which stereotype has more influential and can be caused by which factor. In future research, longitudinal study should be conducted to see the changes of stereotype over time, which could provide a better understanding of changes of stereotype in one individual in the growth process. Moreover, the interventional study should be conducted either to make comparison between each type of stereotype on career choices or to rank the contribution of various influential factors of gender stereotype. This could help the advancement of research on gender stereotype and equality, to provide better growth and employment environment to women.

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The Impact of K-POP and Hip-Hop Culture on the Mate Selection Criteria and Ideal Marriage Age of Chinese Women

Yitong Han[1,a,*]

[1]*Media and Communication, Sungkyunkwan University, Seoul, Korea*
a. hanyt0421@gmail.com
*corresponding author

Abstract: This study evaluates the influence of K-POP and hip-hop culture on the ideal marriage age and mate selection criteria of Chinese female fans by collecting and analyzing data from 29 Chinese women who are fans of these cultures. Utilizing the perspectives of cultural capital theory and cultural globalization, it was found that the globalization of K-POP culture may symbolize high cultural capital, thus affecting women's decisions regarding marriage and mate selection. Hip-hop culture, which emphasizes individuality and freedom, has a limited impact on mate selection criteria. However, this study relies on self-reported data and lacks a sufficient sample size. Future research should expand the sample size and employ various data collection methods to further explore the complex effects of K-POP and hip-hop culture on mate selection criteria and ideal marriage age.

Keywords: Mate Selection Criteria, K-pop, Hip-hop, Cultural Capital Theory, Cultural Globalization

1. Introduction

In recent years, K-POP and hip-hop culture have rapidly risen in China, becoming integral components of the mainstream market. These popular cultures not only attract a large number of young audiences but also profoundly influence the lifestyles, values, and mate selection choices of young women.

1.1. Definition of Culture and Its Development in China

1.1.1. K-POP Culture

K-pop, or Korean popular music, refers to a genre that combines various musical styles with dance-pop. It is not just a musical form but a comprehensive cultural phenomenon, encompassing complex dance choreography, fashionable clothing styles, and sophisticated music videos. [1]

In the early 1990s, idol groups like HOT and solo artists like Lee Jung Hyun entered China. Groups like Super Junior-M and EXO quickly attracted a large number of cultural consumers through localization strategies. As of December 2023, there are 225 million Hallyu (Korean Wave) fans worldwide. After the re-broadcast of Korean dramas in China in 2022, the number of Hallyu fans, including those of K-POP, reached 100 million in China, accounting for about 68% of all Hallyu fans. [2] Therefore, K-POP has had a profound impact on young Chinese women.

1.1.2. Hip-Hop Culture

Hip-hop is a cultural phenomenon closely associated with African, Latin, and other Black cultures. It is more than just a musical form; it includes four main elements: rap, breakdancing, graffiti, and DJing.

Hip-hop culture originated in the late 1970s and early 1980s in the Bronx, USA. This music expressed the dissatisfaction of the working class with poverty, racial discrimination, and class political injustice. Its straightforward lyrics, strong rhythm, and vivid expressions quickly resonated with the working-class population. Over time, hip-hop culture evolved into rap, hip-hop, graffiti, and DJing. [3]

In recent years, hip-hop music has gradually entered the Chinese music market. With the explosive popularity of China's large hip-hop music talent show "The Rap of China," hip-hop culture in China has steadily progressed. By 2021, hip-hop music culture had become mainstream and was widely loved by the public.

1.2. Research Questions

Studies [4] indicate that female college students' views on marriage and love are influenced by negative celebrity marriage phenomena, such as high mate selection criteria and casual attitudes toward love. With K-POP and hip-hop culture entering the Chinese market and capturing public attention, it is significant to study the impact of these cultures on the mate selection criteria and age of marriageable Chinese women.

Therefore, to investigate the different impacts of K-POP and hip-hop culture on Chinese women's mate selection criteria and marriage age, the following specific research questions are proposed:

How does K-POP culture influence the mate selection criteria and marriage age of Chinese women?

What specific impacts does hip-hop culture have on the mate selection criteria and marriage age of marriageable Chinese women?

Additionally, this study will compare the specific impacts of both cultures in different aspects and discuss their differences in mate selection criteria and marriage age.

By studying these questions, this research aims to analyze the different impacts of K-POP and hip-hop culture on the mate selection criteria of marriageable Chinese women, providing new perspectives for cross-cultural communication and social behavior.

1.3. Importance and Significance of the Study

This study will explore the influence of K-POP and hip-hop culture on the mate selection criteria of Chinese women within the context of globalization, and explain how these cultures affect women's mate selection criteria as cultural capital.

By examining the impact of K-POP and hip-hop culture on Chinese women's mate selection, we can not only deepen our understanding of how these popular cultures influence individual values and behaviors but also provide new perspectives and theoretical foundations for understanding marriage and mate selection decisions within the context of cultural capital and cultural globalization.

1.4. Research Methods

This study explores the impact of K-POP and hip-hop culture on Chinese women's mate selection through a comprehensive analysis and summary of relevant literature. This will provide a theoretical framework that helps deepen our understanding of the nature and mechanisms of this phenomenon. Additionally, to investigate the extent to which marriageable Chinese women are exposed to K-POP and hip-hop culture, the time and money invested, and their perceptions of marriage age and mate

selection criteria, data were collected using questionnaires. Through statistical analysis and data analysis, this study further explores the actual impact of these cultures on women's mate selection concepts. By employing the above research methods, this study aims to comprehensively understand the influence of K-POP and hip-hop culture on Chinese women's mate selection, providing important references and guidance for further research and practice in related fields.

2. Literature Review

2.1. Cultural Capital Theory

Bourdieu [5] categorizes capital into economic capital, social capital, cultural capital, and symbolic capital. Cultural capital includes embodied cultural capital, objectified cultural capital, and institutionalized cultural capital. Zhu Weijie [6] considers cultural forms such as taste, emotions, and temperament as a type of material cultural capital. Since it takes significant time and effort to accumulate, being a fan of K-POP or hip-hop culture requires substantial time and money investment to regularly listen to and experience these cultures.

In the realm of marriage and love, cultural capital is reflected not only in an individual's educational level and knowledge but also in their ability to understand and appreciate specific cultural forms. As representatives of modern popular culture, K-POP and hip-hop culture, with their unique music, dance, and fashion styles, have become competitive arenas for young people. In this context, K-POP and hip-hop are not merely music or cultural forms but also social symbols and cultural capital that can influence personal mate selection criteria and values.

During the development of K-POP culture, the significance of media gender images produced by the combination of the Hallyu production system and the training methods for Hallyu idol singers has been critically validated. This creates a fan community enthusiastic about shaping body images into products. Additionally, Hallyu culture, rather than being a cultural construct formed in cross-border cultural exchanges, is depicted in music videos as erotic characters and off-stage as "girl" images consumed to satisfy people's desires [7]. Meanwhile, the body image of K-pop male idols, characterized by well-trained, disciplined slimness, is interpreted as an extraordinary masculinity in the global market, showcasing a blend of normalcy and abnormality [8]. Therefore, these images are created to fulfill desires and are consumed.

As a result, K-POP idol groups and artists are more likely to represent success and charm, attracting the attention of young women through their images and values. By participating in the consumption and dissemination of K-POP culture, women can gain a sense of identity and belonging and use this cultural capital to enhance their social status and attractiveness. Consequently, K-POP culture influences the formation and selection of women's mate selection criteria, making external appearance, personality traits, and cultural understanding important considerations.

In contrast, as contemporary China's political, economic, and cultural environments change, Chinese hip-hop culture, while facing the penetration of commercial forces and social pressures, still retains the essential "resistance spirit" of hip-hop culture [9]. Hip-hop culture emphasizes individuality and authenticity, with its music and art more directly expressing the lives and emotions of the working class. The anti-traditional and anti-establishment spirit advocated by hip-hop culture attracts some women, making them value personal independence and self-expression in marriage and love more. Therefore, the impact of hip-hop culture on women's mate selection concepts is more reflected in internal qualities and social status, such as the pursuit of equality and respect, as well as the recognition and resonance of values.

2.2. Cultural Globalization

Cultural globalization refers to the global movement of information, people, cultural practices, tastes, and styles alongside economic globalization [10]. With the acceleration of globalization, K-POP and hip-hop cultures have transcended national borders, becoming common cultural symbols for young people worldwide.

One of the interaction patterns between globalization and culture is the process of cross-regional integration and cultural blending or hybridization. According to the hybridization perspective, external and internal flows interact to form a unique cultural mixture that contains elements of both components [11]. While there are barriers to external flows, these barriers are sufficient to protect local culture from being overwhelmed by external exchanges but not enough to completely prevent external influences.

Therefore, although there are various policies and social systems to protect Chinese culture, they are insufficient to prevent the inflow of foreign cultures. In the collision between traditional and modern cultures, women's standards and values are also changing.

As global cultural forms, K-POP and hip-hop cultures have brought new aesthetic experiences and cultural identities to Chinese women. By participating in K-POP fan culture and hip-hop communities, women can gain more social capital and a sense of identity, thereby altering their perceptions of partner selection and value orientation. In this process, personal cultural identity and social belonging become important factors influencing mate selection criteria, leading women to prefer partners who match their cultural background.

However, cultural globalization also results in a mix of cultural identity and conflict, known as cultural exclusion [12]. Chinese women influenced by K-POP and hip-hop cultures sometimes face these conflicts.

Therefore, the impact of K-POP and hip-hop cultures on Chinese women's mate selection concepts is a complex and multidimensional process that requires further investigation and research.

3. Questionnaire Survey

Existing studies have partially explored the influence of K-POP and hip-hop cultures on Chinese women's mate selection. However, these studies exhibit some noticeable shortcomings that need further addressing.

Firstly, most research focuses on the analysis of K-POP and hip-hop cultures themselves, lacking systematic studies on their impact on women's mate selection perceptions. Secondly, current research often only examines the influence of a single culture on women's views, lacking comparative analysis. This results in an incomplete and superficial understanding of the phenomenon. Lastly, due to the continuous development and evolution of K-POP and hip-hop cultures, existing research often fails to timely reflect the latest influence mechanisms and trends.

To address these deficiencies, this study designed a detailed questionnaire to analyze the impact of K-POP and hip-hop cultures on the mate selection criteria and age of Chinese women. Through this questionnaire, we aim to provide more comprehensive and systematic empirical evidence to reveal the specific mechanisms by which these two cultural phenomena influence Chinese women's mate selection.

3.1. Questionnaire Design

To thoroughly understand the influence of K-POP and hip-hop cultures on the mate selection criteria and age of Chinese women, a questionnaire survey was developed.

The questionnaire is divided into four parts: The first part measures the level of cultural exposure by surveying the frequency of respondents' contact with K-POP and hip-hop cultures and their

participation in related activities. The second part investigates the respondents' time and money investment in K-POP and hip-hop cultures. The third part explores the ideal marriage age and the criteria for selecting an ideal partner, such as appearance, height, and economic conditions, among those exposed to K-POP and hip-hop cultures. The final part collects basic information, including age, educational background, occupation, and income.

3.2. Data Collection

Data collection for this study will be conducted through an online questionnaire. The questionnaire link will be distributed via Chinese social media platforms (WeChat, Weibo, etc.) to groups of Chinese female K-POP fans and hip-hop fans. We plan to collect at least 30 valid questionnaires to ensure the validity of the preliminary analysis. Although the sample size is small, it will provide a basis for further in-depth research.

3.3. Statistical Methods

This study will first use SPSS 21.0 to perform descriptive statistical analysis on the collected demographic information. Then, multiple regression models will be used to measure the correlation between K-POP and hip-hop cultures and the ideal marriage age. Finally, we will compare the differences in mate selection criteria (appearance, height, annual income, cultural background) between different cultural exposure groups (high exposure and low exposure).

3.4. Expected Results

Chinese women with high exposure to K-POP and hip-hop cultures are likely to have higher demands regarding their partners' appearance, annual income, and cultural background. The time and money invested in K-POP and hip-hop cultures will significantly impact women's mate selection criteria and ideal marriage age. Under the influence of K-POP and hip-hop cultures, the ideal marriage age for Chinese women may be delayed.

4. Discussion

4.1. Descriptive Statistical Analysis

Table 1: Basic Information of Respondents

	Valid	Frequency	Percent
highest education	Undergraduate	19	65.5
	Graduate and above	10	34.5
Occupation	Student	26	89.7
	Schools, Research Institutions	1	3.4
	Government and institutions	1	3.4
	Freelancing	1	3.4
Age	18-25	24	82.8
	26-35	5	17.2

A total of 35 questionnaires were collected in this experiment. After excluding 6 invalid questionnaires, 29 valid ones remained. According to the study's purpose, the respondents were all

Chinese women who had varying degrees of exposure to K-POP and hip-hop cultures. The ages of the respondents mainly ranged from 18 to 35 years, with 82.8% aged 18-25 and 17.2% aged 26-35. Among them, 65.5% had a bachelor's degree or higher, and 34.5% had a master's degree or higher. The vast majority of respondents were still students, with 89.7% being students, 3.4% employed by schools or research institutions, 3.4% employed by government or public institutions, and 3.4% being freelancers.

4.2. Multiple Regression Analysis

Table 2: Impact of Time and Money Invested in K-POP and Hip-hop Cultures on Ideal Marriage Age

Independent variable	Regression coefficient	Standard error	t-value	p-value
Time invested in K-pop	0.342	0.076	4.500	<0.001
Time invested in Hip-hop	-0.215	0.094	-2.287	0.025
Money invested in K-pop	-0.128	0.052	-2.462	0.015
Money invested in Hip-hop	0.076	0.065	1.169	0.244

This table presents a multiple linear regression analysis of the time and money invested in K-POP and hip-hop cultures and their impact on the ideal marriage age. According to the multiple linear regression analysis results, the time and money invested in K-POP and hip-hop cultures may have a certain impact on the ideal marriage age.

Time invested in K-POP has a significant positive impact on the ideal marriage age (β=0.342, $p<0.001$), whereas time invested in hip-hop culture does not have a significant impact on the ideal marriage age (β=-0.215, p=0.025). However, money invested in K-POP has a significant negative impact on the ideal marriage age (β=-0.128, p=0.015). Similar to time investment, money invested in hip-hop culture does not have a significant impact on the ideal marriage age (β=0.076, p=0.244).

Therefore, both time and money invested in K-POP culture significantly influence the ideal marriage age. Increased time investment in K-POP raises the ideal marriage age, while increased money investment lowers it. In contrast, investments in hip-hop culture, whether time or money, do not significantly affect the ideal marriage age.

Overall, respondents' investment in K-POP culture is somewhat related to their assumptions about the ideal marriage age. Specifically, increased time investment in K-POP culture is associated with a higher likelihood of delaying marriage, whereas financial investment in K-POP culture encourages individuals to consider marriage earlier. Conversely, investment in hip-hop culture (whether time or money) appears to have no significant impact on the ideal marriage age.

4.3. Chi-Square Test

Table 3: Chi-Square Test Results for the Relationship Between Frequency of Exposure to K-POP and Hip-hop Cultures and Partner Selection Criteria

	chi-square value	degree of freedom	p-value
Kpop Frequency vs. Appearance	5.73	3	0.123(p > 0.05)
Kpop Frequency vs. Height	9.68	3	0.022(p < 0.05)
Kpop Frequency vs. Annual Salary	8.56	3	0.036(p < 0.05)
Kpop Frequency vs. Cultural Background	6.42	3	0.093(p > 0.05)
HipHop Frequency vs. Appearance	7.91	3	0.050(p = 0.05)
HipHop Frequency vs. Height	6.78	3	0.080(p > 0.05)
HipHop Frequency vs. Annual Salary	5.34	3	0.145(p > 0.05)
HipHop Frequency vs. Cultural Background	8.21	3	0.042(p < 0.05)

The study compared the frequency of exposure to K-POP and hip-hop cultures with standards for appearance, height, income, and cultural background. According to the chi-square test results, the frequency of exposure to K-POP culture does not have a significant relationship with the appearance and cultural background standards of an ideal partner (p>0.05). However, there is a significant relationship between the frequency of exposure to K-POP culture and the standards for height (p=0.022) and income (p=0.036). Therefore, women with higher exposure to K-POP culture tend to have higher standards for height and income. In other words, women who are more exposed to K-POP culture are more likely to correlate with higher height and income requirements.

Additionally, in the selection of partners, the relationship between exposure frequency to hip-hop culture and ideal partner attributes such as appearance, salary, and cultural background was not significant (p > 0.05). However, the relationship between exposure frequency to hip-hop culture and height standards approached a significant level (p = 0.080), indicating that women with higher exposure to hip-hop culture may slightly prefer taller partners. Therefore, women exposed to hip-hop culture are more likely to have higher height requirements. In other words, women with higher exposure to hip-hop culture are more likely to be associated with height preferences.

In summary, the comparison of spouse selection criteria between K-POP and hip-hop cultures, especially regarding height, shows that the frequency of exposure to these cultures has a certain impact on women with high exposure.

5. Summary

5.1. Influence of Cultural Capital on Ideal Marriage Age

This study reveals that individuals who invest more time in K-POP culture tend to have a significantly higher ideal marriage age. Increased time investment suggests greater exposure to idol images and

lifestyles within K-POP culture. These images and lifestyles often promote a youthful, single-oriented lifestyle focused on career and personal development, thereby delaying personal marriage plans.

Conversely, individuals who invest more money in K-POP culture have a lower ideal marriage age. Increased monetary investment may indicate a higher regard for cultural consumption, with individuals seeking immediate gratification and social recognition through early marriage to establish stable emotional and family relationships.

In contrast, individuals who invest time in hip-hop culture do not experience significant changes in their ideal marriage age. Hip-hop culture emphasizes freedom, individuality, and self-expression, allowing for more personalized marriage planning that is less influenced by cultural time investments.

Similarly, personal ideal marriage age does not significantly change with monetary investments in hip-hop culture. This suggests that economic investments in hip-hop culture do not impact personal marriage plans to the same extent as seen in K-POP culture.

Cultural capital theory posits that cultural capital is a symbolic resource acquired through cultural consumption and participation, which can be transformed into economic and social capital. Through this theory, we gain a better understanding of how cultural investments influence the ideal marriage age.

The different impacts of time and monetary investments in K-POP culture on the ideal marriage age reflect K-POP culture as a form of high cultural capital, exerting a significant influence on personal marriage planning. Time investment allows individuals to internalize idol images and lifestyles, thereby delaying marriage. Monetary investment reflects a prioritization of immediate cultural consumption, followed by a desire for early marriage to establish stable emotional and familial relationships.

In contrast, hip-hop culture emphasizes freedom and individuality. Unlike K-POP culture, time and money investments in hip-hop culture do not significantly influence the ideal marriage age. This indicates that the influence of this cultural form on marriage planning is more personalized and indirect.

5.2. Influence of Cultural Exposure on Mate Selection Criteria

This study shows that women exposed to K-POP culture prioritize height and salary conditions when selecting a partner.

This may be because K-POP idols are often portrayed with tall and affluent images, which are internalized into women's mate selection criteria, influencing their preferences. However, while K-POP culture impacts women's mate selection criteria in terms of height and salary, it does not significantly influence preferences regarding appearance or cultural background.

In contrast, the relationship between exposure to hip-hop culture and women's criteria for appearance, salary, and cultural background is not significant. Women with higher exposure to hip-hop culture may slightly prefer taller partners when selecting a mate, but this effect is not significant. This suggests that hip-hop culture has a limited impact on mate selection criteria and does not greatly influence women's mate preferences.

From a perspective of cultural globalization, the study points out that increased cultural exchange among different cultures leads to rapid dissemination of cultural products across various regions of the world. K-POP culture, through global dissemination, has gained widespread recognition and acceptance of its idol images and values worldwide, particularly influencing women's mate selection criteria such as height and salary. However, hip-hop culture also spreads widely worldwide. Yet, due to its emphasis on freedom, its impact on mate selection criteria is limited and not as significant as K-POP culture.

This paper analyzes the influence of cultural investment and cultural exposure on ideal marriage age and mate selection criteria from the perspectives of cultural capital theory and cultural

globalization. These findings offer new insights into the importance of cultural capital and cultural globalization in contemporary society. The results also highlight the need to consider the characteristics of cultural forms, their modes of dissemination, and how individuals position themselves in society through cultural capital.

5.3. Limitations and Future Directions

While this study has made some findings regarding the influence of cultural capital and cultural globalization on the mate selection preferences of Chinese women exposed to K-POP and hip-hop cultures, there are several limitations that provide important directions for future research.

Firstly, a significant limitation of this study is the sample composition. The sample primarily consisted of Chinese women aged 18-35, which limits the diversity of the sample. This may reduce the generalizability of the results. Future research should consider expanding the sample to include a more diverse population.

Secondly, this study heavily relied on self-reported data from participants. This method of data collection is susceptible to social desirability bias and memory distortions, potentially questioning the reliability of the data. Future research could incorporate observational methods and other data collection techniques, such as in-depth interviews, to complement and validate self-reported data.

Additionally, this study did not adequately consider other factors that may influence ideal marriage age and mate selection criteria, such as educational level, family background, and socioeconomic status. These factors could play significant roles in individual marriage and mate selection decisions. Future research should incorporate these factors to obtain a more comprehensive understanding.

In summary, while this study has revealed some impacts of cultural capital and cultural globalization on the mate selection preferences of Chinese women exposed to K-POP and hip-hop cultures, limitations such as sample restrictions, reliance on self-reported data, and inadequate consideration of other influencing factors exist. Future research should aim to address these limitations by expanding sample sizes, utilizing more diverse data collection methods, and considering multiple influencing factors to further explore the complex effects of cultural investment. These improvements will contribute to a more comprehensive and in-depth understanding of how investments in K-POP and hip-hop cultures influence mate selection decisions among Chinese women, providing valuable insights for relevant theories and practices.

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Property Rights and Regulatory Rules of Blockchain Native Digital Assets NFT Digital Collections: Starting from the First Case of "Pang Hu Receives Vaccination"

Xiaoyu Yu[1,a,*], Yihuan Mao[1,b]

[1]*School of Law, Huaiyin Normal University, Huaihai Street, Huai'an City, China*
a. 3139263365@qq.com, b. Eunice200511@outlook.com
*corresponding author

Abstract: With the application of blockchain technology, blockchain native digital assets represented by NFT have emerged. However, contrasting with its broad development prospects, Chinese law does not directly specify the property attributes and transaction nature of NFTs, and judicial practices are not unified. The judgment of the first case of "Pang Hu Receives Vaccination" NFT in 2022 sparked discussions on a series of legal issues related to NFT works. Legal uncertainty has become the greatest obstacle in the NFT trading market. The uniqueness and exclusive control features of NFTs align with property rights attributes. Therefore, existing blockchain native digital assets NFTs should be attributed to property objects, clarifying the regulatory rights under the trading of NFT digital collections, promoting the construction of a healthy market for blockchain native digital assets, and addressing subsequent issues such as bankruptcy and trust.

Keywords: NFT, property rights attributes, transaction regulations

1. Introduction

In April 2022, the Hangzhou Internet Court made a first-instance judgment in China's first NFT infringement case. The court recognized NFTs as unique "digital goods" whose transaction essence is the transfer of ownership, with the rights enjoyed by NFT holders equivalent to those of property rights holders, affirming the transactional nature of NFT digital works and the ownership powers similar to property rights [1]. However, the court negated the transactional behavior, ultimately characterizing it as an act of information network dissemination. The Hangzhou Intermediate People's Court upheld this viewpoint in the second instance [2]. This raises the question: in the same judgment, without truly clarifying the related legal issues, should NFT transactions be classified as property transactions or information network dissemination, and how should NFT digital collectibles be defined?

2. Legitimacy of Blockchain Native Digital Assets NFTs

In China, due to strict regulatory policies, digital collectibles have become one of the main application areas of NFT technology.

NFT stands for Non-Fungible Token, including non-fungibility and token aspects. Tokens refer to the tokenized form of assets, typically homogeneous tokens like securities tokens and utility tokens

[3]. Conversely, NFTs are digital proof of rights with scarcity, which cannot be divided, swapped, tampered with, or replicated.

The property protected by criminal law has the characteristics of management possibility, transfer possibility, and objective value, which are consistent with the characteristics of property in civil law [4]. First, in the transaction of NFT digital collectibles, data blocks are connected and jointly store information, with decentralized technology protected by encryption ensuring the stability of data on the chain [5], preventing malicious tampering. For NFT digital collectibles, the registration behavior of the blockchain and the hash value identifier mapping the non-fungibility is the key to its materialization [6]. Thus, NFT digital collectibles have management possibilities. Secondly, NFTs are digital assets with transferability based on blockchain, capable of free trading to achieve ownership transfer. Finally, as virtual property, NFTs' potential economic value brings vitality to the digital market. The clear ownership and scarcity of NFT digital collectibles make them not only valuable as art but also expand future digital investment and trading markets, indicating their objective value.

In summary, NFTs meet the characteristics of property and should be recognized as legal property by law. Currently, the Chinese legal community classifies NFT works as virtual property, implying that under Article 127 of the Civil Code, NFT digital collectibles should be presumed to have the attributes of legal property.

3. Legal Attributes of Blockchain Native Digital Assets NFTs

3.1. Application in the Property-Debt Dichotomy System

Both domestic and foreign research has been conducted on the legal attributes of NFT digital collectibles. Foreign scholars like Joshua Fairfield have conducted in-depth studies on the ownership attributes of NFTs as "unique digital assets," asserting that NFT issuers promise buyers can create "tokenized proof of ownership" for NFTs and their underlying assets during sales, meaning NFT transactions imply ownership transfer [7]. Currently, in China's dichotomy of property and obligation, the domestic academic community primarily holds two mainstream views on the legal attributes of NFT digital collectibles: "property rights theory" and "obligation rights theory," while the "emerging rights theory" legislative theory [8] remains debatable, especially in the era of the Civil Code, where Chinese civil law research has shifted from legislative to interpretative orientation [9]. The critical issue is how blockchain native digital assets (NFTs) can be better applied under the dichotomy of property and obligation.

The "property rights theory" posits that blockchain assets are essentially commodities, can be controlled and dominated by specific subjects, are exclusive, have typical property content, and conform to the composition of property objects [5]. Additionally, there is the "property object theory" [10]. Yang Lixin points out that the legal attribute of virtual property on the internet is a special existence form of objects in the digital age, possessing legal exclusivity and economic value [11]. The "obligation rights theory" indicates that the on-chain and minting stages of NFT digital collectibles rely on computer technology to map the unique hash value to the blockchain, encrypting and assigning token IDs and ownership records. The owner of NFT digital collectibles establishes a network technical service contract relationship with the trading platform, with the owner realizing rights changes based on the contract with the platform as the obligor. User rights are limited by the network service provider; meanwhile, the platform's technical service is a continuous supply behavior, conforming to the characteristics of obligation objects, so the right belongs to obligation rights [12].

Thus, blockchain digital assets (NFTs) should be viewed as legal property protected by law, but their status within the property rights system of the Civil Code remains undecided [5]. The above is based on recognizing blockchain digital assets (NFTs) as virtual currency assets, acknowledging their

legality under Article 127 of the Civil Code. In the judgment of the "Fat Tiger Getting Vaccinated" case, the court identified NFT digital collectibles as virtual property, which should be included in the category of property rights protected by civil law, allowing rights holders to possess, control, and use them, but they are different from property rights, obligation rights, and intellectual property rights as special objects [1,2]. Thus, in this case, the judge affirmed the "virtual property theory."

Indeed, the two are not contradictory. Blockchain-created digital assets (NFTs) are virtual property and belong to objects. The concept of objects is derivative, so modern civil law incorporates such data, network virtual property, and other non-natural objects without physical carriers into the system of objects [13].

3.2. Manifestation of Property Rights in Native Digital Assets NFTs

As mentioned above, under the current civil legal system, blockchain digital assets are protected legal property and can be objects of property rights, with asset owners enjoying the rights of possession, use, income, and disposal.

Property rights have two main characteristics: first, the object characteristic of property rights refers to specific objects that are physically distinct from other objects and can be independently traded and transferred; second, the content characteristic of property rights refers to the rights holders' direct control and exclusive rights over specific objects [14].

The property attributes of native digital assets (NFTs) mainly manifest in the following two aspects: first, NFT digital collectibles have "specificity." As blockchain native digital assets, NFTs are assigned unique tokens to each digital work; second, NFT digital works have the "exclusivity" of property rights, meaning users can exert exclusive control over specific digital assets through "private keys." Specifically, although rights holders cannot achieve direct and real possession and control over NFT digital collectibles, they can exclusively manage and control them through private keys, which is absolute and unaffected by others' will.

In summary, blockchain native digital assets (NFTs) should be incorporated into the property rights protection system. Based on the typical trading mode of NFT digital collectibles in China, their essence is to change registration through smart contracts to form new proof of ownership, thus causing property rights changes and publicizing new ownership subjects [15]. Therefore, classifying them into the property rights system meets social trading needs.

4. Regulatory Framework for Transactions of Native Digital Assets NFTs

4.1. Copyright Protection for NFT-based Works

In January 2024, the transaction volume of the NFT market reached 1.28 billion US dollars, an increase of 35.3% year-on-year [16]. At the same time, under the dynamic development trend of China's digital economy, the digital collectibles market has broad prospects, with an estimated market size exceeding 30 billion yuan by 2028 [17]. However, behind the booming NFT digital collectibles transactions lies the conflict of rights and obligations.

China's digital collectibles can be roughly divided into three categories: original content type, traditional culture empowerment type, and integration with the real industry type [18]. Currently, the mainstream view in domestic and foreign academia recognizes the intellectual property attributes of digital collectibles, while the latter two types of digital collectibles usually do not involve intellectual property infringement issues. However, digital collectibles with digital artworks as underlying assets meet the characteristics of copyright objects [19]. In the "Fat Tiger Getting Vaccinated" case, the premise for determining joint infringement liability of a technology company was the platform user stealing a series of illustrations related to the transfer of copyright from the writer Ma Qianli and Qice

Company, minting them as NFTs signed in their own name and selling them. Thus, copyright protection for original content-type digital collectibles should be emphasized.

As mentioned above, NFT digital collectibles should be considered legal property, but this attribute's establishment should not involve rights disputes.

4.2. Responsibility Boundaries of Trading Platforms in NFT Models

According to the Supreme People's Court's provisions on information network dissemination rights, in the "Fat Tiger Getting Vaccinated" case, from the Bigverse platform's profit model, the minter needs to pay a "Gas fee" before minting their work into an NFT for sale, and the platform takes a certain percentage of commission after the transaction. Therefore, as a network service provider, the trading platform should have a high duty of care.

During minting, the platform should conduct an internal review mechanism to ensure that the work does not infringe on rights before issuance; during the transaction, the platform should optimize smart contracts continuously to ensure open and transparent transactions, protecting the legitimate rights and interests of both parties.

4.3. Ownership Rights of NFT Owners

Owners, after purchasing their desired NFT digital collectibles through a trading platform, enjoy the rights of possession, use, income, and disposal.

NFTs, based on blockchain technology, have controllability. Although owners cannot physically control them, it is equivalent to rights such as pledge of rights and spatial utilization rights, which do not require physical control. Property rights are not limited to physical meaning. Owners can exclusively and absolutely control specific digital assets through private keys [20], and metadata in smart contracts links specific token IDs to digital assets.

Currently, the usage rights of NFT digital collectibles are not clearly applied and embodied. NFT digital collectibles are mainly used for promotional purposes, serving as promotional effects or display of collectible value. However, with the continuous development of the digital collectibles industry, the improvement of qualification review standards for digital collectible platforms, and the gradual expansion and opening of the issuance market, NFT digital collectibles can also play an active role in intellectual property protection. In the past, the ease of copying digital works not only brought about intellectual property disputes but also hindered market development due to the lack of credit endorsement. The emergence of NFT technology will promote the rapid development of the online transaction market and more applications of NFT digital collectibles in various fields.

Owners currently mainly realize the rights of income and disposal through sales. Buyers particularly value the collectible value and future development potential of NFTs. Incorporating NFT digital collectibles into a mature property rights system can effectively prevent transaction risks brought by blockchain digital assets, including bankruptcy, trust, and guarantee.

5. Conclusion

This paper analyzes the legality, applicability under the bifurcation system of digital debt, and property rights attributes of blockchain-native digital assets, specifically NFTs, achieving the initial vision of virtual property. Granting NFT digital collectibles property rights attributes not only aligns with their intrinsic characteristics but also facilitates the transfer of property rights in digital assets. This dual approach not only provides pathways for legal remedies but also presents opportunities for the development of digital markets. With the advancement of blockchain technology, a blended digital ecosystem—metaverse—where reality and virtuality coexist, is becoming feasible. While there is currently no consensus on the concept of the metaverse, unified digital identities, valid

property, and economic systems should constitute its essential framework. Within the existing legal framework, endowing native digital assets represented by NFT digital collectibles with certain property rights attributes provides valuable insights for comprehensive digital development in the future.

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Research on the Factors Contributing to Low Fertility in South Korea

Xiyan Bi[1,a,*]

[1]*Living Word Shanghai, Shanghai, 201100, China*
a. xiyanbi2007@gmail.com
*corresponding author

Abstract: In 2023, South Korea had a fertility rate of 0.8831, the lowest in the world. Compared to most other east Asian countries, Korea recovered from the Second World War relatively earlier and is home to some of the most influential companies in the world today. Therefore, while other east Asian countries are in the industrial stage characterized by moderate to high rates of population growth, Korea is already a post-industrial society, marked by low population growth. This paper aims to identify the contributing factors to South Korea's low fertility rate by examining previous surveys completed by Koreans, interviews done with Koreans, and statistics about the Korean economy and society. These surveys, interviews, and statistics show the current economic, social, and cultural characteristics of the country and the flaws in them that lead to low fertility rate. The first significant factor related to the low fertility rate in South Korea is the high economic uncertainty due to rising living costs. Many Koreans struggle to achieve financial independence and move out of their parents' homes, which is a barrier to starting a family. The second factor is the rising number of women obtaining higher levels of education and subsequently entering the workforce. The last factor is the practice of neo-Confucianism beliefs that are patriarchal in nature. Therefore, the proposed solution is that the Korean government should focus on changing current social and cultural beliefs to minimize the conflict between family and work for Korean women.

Keywords: Fertility, Korea, workforce, patriarchy, living costs, education

1. Introduction

The miraculous economic growth of South Korea after the Second World War, otherwise known as "The Miracle on the Han River," officially transformed the country from developing to developed, with many Korean companies like Samsung and Hyundai currently exerting significant influence over the global economy [1]. Consequently, South Korea's GDP per capital has experienced rapid growth since the late 20th century, going from only 279 US dollars in 1970 to 35,000 US dollars in 2021 [2]. Thus, South Korea experienced an earlier population and wealth boom compared to most countries in Asia and is one of the select few Asian countries that have already begun exhibiting a low or negative population growth rate [3], a characteristic of stage 5 in the demographic transition model. The population growth rate of South Korea has decreased so severely that in 2022, it was the country with the lowest fertility rate in the world, with 0.78 children per woman, a record low for the country [4]. A low fertility rate and increasing life expectancy due to rising living standards will likely cause

the elderly population to be the majority in the country. Thus, additional pressure will be put on people in the labor force as they must support a larger percentage of non-working people. The workforce must pay more income tax to provide government transfer payments for elderly people unable to economically support themselves and have more social responsibility in their families than in past generations to sustain themselves and their non-working family members. Moreover, the country will experience less economic growth with fewer workers, and industries like education and childcare will significantly shrink due to decreasing demand. Therefore, this paper aims to explore the social, cultural, and economic factors that influence South Korea's dramatically low fertility rate.

2.   Economic Factors

The high living costs of South Korea caused by rapid urbanization are making having children an impossible choice for an increasing number of young people as economic uncertainty rises. In a ranking of the cities with the highest costs of living by Mercer, Seoul, the capital of South Korea, ranked number 16 [5]. Based on a report by Statistics Korea stating that at least 42.5 percent of South Koreans born from 1980 to 2005 still live with their parents [6], it has become increasingly clear that South Koreans are struggling to afford living costs independently, without the help of their family members or the government. As more young people are currently struggling to purchase homes and sustain themselves due to continuously increasing living costs, the opportunity cost of having children is significantly increasing. Jaya Dass, Ranstad's Asia-Pacific managing director, commented in a CNBC article that "Having a child is tied to many things — the affordability of a house, a spouse, and the maturity of the job market that makes you feel secure enough to do it." [7]. Yun-Jeong Kim, a 31-year-old South Korean woman, showcases the reality that South Koreans must face in an NPR article. She states that her dream of having children has become a fantasy after the lease on her Seoul apartment became too expensive, and she had no choice but to move back into her parent's home [8]. The insecurity that the South Korean youth feel about their housing and working environments causes them to feel discouraged and have a negative opinion about having children.

3.   Social Factors

The empowerment of South Korean women, through increasing educational and occupational opportunities, is a contributing factor to their negative perception of having children. Currently, 64.6 percent of students in South Korean universities of education are women [9], which shows that in the present, more women have access to the job market and have the ability to provide for themselves than before. Moreover, the birth rate of women who graduated from university and lived in urban areas was significantly lower than that of those who graduated from high school and lived in rural areas [10]. Seung Hyun Seo, a sociology professor at Sogang University in South Korea, claims that the reason for this trend is that South Korean women with higher levels of education and employment can live independently without support from a patriarchal figure and have their dreams that they want to achieve [11]. The industrialization of South Korea has caused its labor market to become extremely competitive, and many women don't want to sacrifice their independence and dreams to have children for fear of losing their jobs. It is also extremely difficult for women in the labor force who want to have children to contribute to the fertility rate because their work may cause them to try to have children after the age of 30, which is when fertility falls significantly [12]. As women age, the risk of infertility increases as their ovaries age and decline in quality [12]. Therefore, when most women have a stable occupation and are not easily replaceable in the workforce, fertility starts to rapidly decline, making it difficult or impossible for these working women to get pregnant.

4. Cultural Factors

The current cultural system of South Korea, neo-Confucianism, enforces outdated moral standards on women, thus discouraging them from having children. A study done by a professor at Myongji University in Seoul, Korea on how children and wives view their fathers/husbands found that roughly half of the children regarded their father as authoritative [13]. Moreover, 93.1% of children saw their father as an un-affectionate figure whose mood was the biggest determinant of their family atmosphere [13]. Therefore, men are viewed as the authority figure in Korean society and culture showing that the ideas of neo-Confucianism are highly patriarchal. According to the Merriam-Webster dictionary, patriarchy is "social organization marked by the supremacy of the father in the clan or family, the legal dependence of wives and children, and the reckoning of descent and inheritance in the male line" [14]. Korean culture regards women as inferior to men and one of the greatest examples of this is the value of women's chastity. Since women are supposed to depend on men in all aspects of life, having children out of wedlock is considered a severe way of breaking a woman's chastity, bringing shame down on the woman and her family. Korean culture also conditions women to feel guilty and blame themselves for the loss of chastity even if it happened through no fault of their own [15]. Thus, there is no way to have children that is morally regarded as right other than in marriage. The reclamation of women's sexuality is also a contributing factor to the low fertility rate in Korea. Through neo-Confucianism ideals, sex was simply viewed as a form of procreation for women and although these ideals persist in the majority of Korean culture, Korean women are starting to reclaim sex as a way to gain pleasure [15]. The acceptable standard of chastity has lowered in Korea to the point where sex outside marriage is acceptable. However, majority consent still draws the line at having children out of wedlock, suggesting further improvement in cultural attitudes toward the sexuality of women in the future.

5. Potential Solutions

A study done by professors from various universities in Korea, including Semyung University, showed that current fertility promotion policies proposed by the Korean government did not successfully encourage growth of the country's fertility rate. It was also concluded that cash support is no longer an effective incentive [16]. Therefore, the government should overhaul its current policies that are ineffective and focus on changing Korean society's perception of women. Currently, there is a conflict between the work life and home life of women, forcing them to choose between having children or working. The government could promote gender equality in the workforce by destigmatizing pregnancy and supporting women's roles. This could help to create a more inclusive and supportive culture for women in Korean society. The first way the government could increase support for women in the workforce is to increase campaigns that highlight and advocate for working women to show support for them.

Another way to destigmatize pregnant women in the workforce is to offer monetary incentives to companies that have pregnant women as employees. Monetary incentives can come in the form of tax cuts, fund subsidies for the company, or any other way that changes the company's perception of pregnant women from harming company growth and revenue to helping it. Therefore, tax cuts, fund subsidies, etc. that companies receive make up for the revenue and productivity lost when pregnant employees must go on maternity leave. The government should also extend the qualifications for paternity leave by increasing the number of people eligible and the amount of compensation.

6. Conclusion

South Korea has been marked in the 20th and 21st centuries by rapid industrial development, leading to a rise in costs of living, a change in gender roles, and a persistent neo-Confucianism culture that is

slowly adapting to the country's current level of development. Furthermore, it has shaped the South Korean workforce to value high output productivity, with a negative consequence being the disregard of the needs of its workers and it goes directly against the efforts of the country's women to liberate themselves and their sexualities. Therefore, many people are hesitant or do not plan to have children because the time and money cost of supporting children is too great for them to handle, and women are afraid it will trap them in the constraints of neo-Confucianist culture. A high productivity environment might benefit companies and corporations in the present and the abidance of patriarchal values by Koreans might have worked in the past, but these practices are not economically and socially a sustainable, and will eventually cause significant repercussions for South Korea's socio-economic environment in the future.

Overall, there are many other niche factors contributing to Korea's low fertility rate that were not explicitly discussed or implied in this paper. Korea's large gender divide, and feminist movements were not discussed in further detail. The dominance of companies like Samsung in the Korean economy and their influence on government policies and social standards were also not mentioned. However, the dominance of these companies is a significant factor that encourages the highly competitive atmosphere of the Korean economy. In addition, the highly competitive nature of the education system in Korea was not mentioned but is also a negative economic factor that discourages many people from having children. Furthermore, biological factors influenced by industrialization, climate change, etc. could also affect fertility rate. Future research could focus on how other countries facing low fertility problems have addressed the issue and how Korea could apply the policies of other countries based on their successful experiences.

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The Relationship Between Childhood Trauma, Depression and PTSD, Etiology and Treatment Methods

Xu Han[1,a,*,†], Yuehan Sun[1,b,†]

[1]*Starriver Bilingual School, Shanghai, 201108, China*
a. hanxu20070830@163.com, b. irissun2006@163.com
*corresponding author
[†]*These authors contributed equally.*

Abstract: This paper will explore the relationship between childhood trauma and its impact on mental health, feelings of helplessness, and negative cognitive perceptions that lead to these conditions. Moreover, it highlights the important role of parental influence in shaping emotional well-being, with a specific focus on depression and post-traumatic stress disorder (PTSD). Childhood trauma, encompassing experiences such as abuse, neglect, and violence, can significantly elevate the risk of severe mental health issues. Research understates childhood trauma as a predictor of depression and PTSD, both psychosocially and neurobiologically, as trust issues. The paper provides the underlying mechanisms of this relationship, exploring psychosocial perspectives concerning attachment issues, negative beliefs, and emotion dysregulation. Cognitive emotion regulation strategies are emphasized when taking steps for the recovery of childhood trauma and preventing the development of mental disorders; other interventions and treatments, including psychotherapy and medication, offer avenues for healing and recovery. By recognizing the profound impact of childhood trauma on mental health and implementing effective interventions, individuals affected by trauma can embark on a journey toward healing, resilience, and improved well-being.

Keywords: Childhood trauma, depression, PTSD, treatment interventions.

1. Introduction

Childhood trauma, by the definition of The National Institute of Mental Health (USA), is "The experience of an event by a child that is emotionally painful or distressful, which often results in lasting mental and physical effects." Childhood trauma can take on various forms, and common ones are neglect, domestic violence, physical abuse, sexual abuse, and emotional abuse [1].

Childhood trauma can result in serious mental health issues, which is an important etiology factor. Adult children of childhood trauma can have difficulties in developing healthy relationships, forming attachments and regulating emotions. Childhood trauma is even linked with increased risks of engaging in self-harm and suicidal behaviors along with substance abuse. The Adverse Childhood Experiences–International Questionnaire (ACE-IQ) developed by the World Health Organization [2] shows that childhood trauma is very common among people; in fact, a study shows that almost half of all children in the United States were exposed to some form of traumatic experience. Childhood

trauma is strongly associated with the development and exacerbation of mental disorders, including depression, post-traumatic stress disorder (PTSD), and anxiety disorders.

The many negative mental health outcomes of childhood trauma make it hard to tell if trauma is the main cause of a specific mental disorder or problem. Even though childhood trauma is associated with various mental illnesses, no outcome has been shown to be a specific indicator of early maltreatment [3].

It is important to study the relationship between childhood trauma and mental disorders in order to help individuals who face a higher risk of developing mental disorders due to childhood trauma. By recognizing the relationship between the two, we can come up with more effective treatment and adaptive intervention methods. This paper will discuss how childhood trauma is related to the development of depression and PTSD, and how cognitive regulation methods along with child-parent relationships can play a part in this relationship. Lastly, this paper will explore treatment methods for childhood trauma induced mental illnesses.

2. Childhood Trauma and Depression

Depression is a long-term feeling of emptiness, sadness, or incapacity to feel pleasure that seems to have no clear cause [2]. It is distinct from sadness and other emotions. Depression is also a very common mental disorder; in fact, globally, it is estimated that 3.8% of the world population suffer from the disorder [2]. Depression needs to be taken seriously because it can lead to low self-esteem, efficacy, confidence and can also cause severe physiological and psychological health problems that could potentially lead to suicide and self-harm. According to the DSM-5, symptoms of depression are characterized by a persistent and pervasive low mood. Common symptoms include feelings of sadness, emptiness, or hopelessness, along with a loss of interest or pleasure in previously enjoyed activities. Individuals may experience significant changes in appetite and weight, sleep disturbances, fatigue, and diminished concentration and decision-making abilities. Feelings of worthlessness or excessive guilt, recurrent thoughts of death or suicide. Depression is a serious mental disorder, if an individual has 3 or more of the symptoms described above, it is crucial for them to seek professional care, remember that seeking assistance is a courageous act of self-care.

Depression is also shown to be strongly linked with childhood trauma. Studies show that more than ¾ people with depression report having childhood trauma [4]. To better understand such a relation ship, researchers Negele and colleagues [5], did a study on childhood trauma and its relation to chronic depression in adulthood. From 349 chronically depressed patients in the German LAC Depression Study, researchers found that those with multiple traumas develop more severe depression. It is concluded that those with multiple traumas develop more severe depression, and that childhood trauma is a strong predictor of depression.

3. Underlying Mechanisms- Childhood Trauma and Depression

What are the underlying mechanisms of this relationship? From a psychosocial perspective, a child with childhood trauma might develop attachment issues, negative beliefs about oneself, and emotion dysregulation (attachment issues and emotion dysregulation will be discussed later on in the article); they might feel more depressed, anxious, or detached from reality [6]. Childhood trauma can result in negative core beliefs about oneself, others, and the world. For instance, a child who experiences consistent emotional abuse may develop a belief that they are worthless and unworthy of love; they are also less likely to trust others enough to seek support when dealing with depression, leading to further social isolation, which is only going to worsen their illness. These negative beliefs can persist into adulthood and influence self-esteem and perception of others, leading to more depressive thoughts and feelings.

From a neurobiological perspective, the child who suffers from childhood trauma endures an overwhelming amount of stress during childhood, a crucial period of physiological and psychological development; this could then lead to increased production of stress hormones like cortisol, which causes damage to brain regions like the hippocampus, prefrontal cortex, and the amygdala, resulting in impaired cognitive reasoning, emotional regulation skills and increased impulsivity [7], making children with childhood trauma likelier to develop depression.

4. Childhood Trauma and PTSD

Post-traumatic stress disorder (PTSD) is a mental illness that can occur in people who have experienced or observed traumatic events or situations. (American Psychiatric Association) It may be perceived as emotionally or physically damaging and can impact one's mental, physical, social, and spiritual well-being. Childhood trauma has been shown to have a positive relationship with the development of PTSD in adulthood.

In a study about African-American females from an urban hospital who experienced moderate-to-severe childhood abuse. The researchers found impaired implicit emotion regulation and that high levels of PTSD symptoms were linked with lower accuracy of tasks in those who experienced a history of childhood abuse [8]. Moreover, a study that interviewed a representative sample of 2,181 individuals in southeast Michigan shows that individuals who had any trauma are significantly more likely to experience PTSD. For childhood trauma, individuals who experienced trauma after age 15 have a higher possibility of experiencing PTSD [9].

5. Underlying Mechanisms- Childhood Trauma and PTSD

What are some explanations of such a relationship? From a psychosocial perspective, adult children of childhood trauma can develop all kinds of attachment issues, constantly feeling insecure psychologically, not being able to form healthy relationships or feel comfortable seeking support and trusting others [10]. They might develop a sense of helplessness due to the traumatic experiences that they had to endure during children, not able to protect or standup for themselves. The feeling that they are out of control can cause them to develop harmful ways of thinking and strong emotional reactions that can last into adulthood. Someone who had a traumatic childhood experience might start thinking negatively about themselves, feeling like they're worthless and to be blamed for what happened to the as a child. They might also start to see the world as a dangerous and unpredictable perspective which makes them feel very scared and on edge, contributing to the development of PTSD.

From a neurobiological perspective, childhood trauma can cause structural and functional changes in multiple parts of the brain. This is because a child's brain has high neuroplasticity, meaning that it develops quickly and is vulnerable to disruption. When exposed to a high amount of stress, the HPA axis becomes activated, leading to the release of stress hormones, such as cortisol. Long-term severe activation of the stress response system can cause lasting changes in the brain, including areas like the amygdala, hippocampus, and medial prefrontal cortex [11]. The amygdala is involved in regulating emotions, particularly fear responses; changes in the amygdala can result in it being more sensitive and hyperactive, leading to more heightened fear responses and paranoia. The hippocampus is involved in memory formation, and childhood trauma might cause hippocampus shrinkage and damaged functioning in individuals, resulting in memory loss or fragmented, intrusive memories. Childhood trauma can also cause functional changes to the medial prefrontal cortex, which plays a role in decision-making, reasoning, and emotion regulation; such functional changes can cause difficulties in emotion regulation and increased vulnerability to stress-related disorders.

6.   Child Parent Relationship and the Development of Depression and PTSD

Children need love and support from parents in order to develop adaptive emotional regulation methods and social skills. Children with childhood trauma lack such care or are overly protected and controlled. A lot of children with trauma develop attachment and trust issues that led to the development of unhealthy personality and psychopathology. A study investigating the correlation between parental bonding and depression found that experiences of parental bonding, such as abuse, neglect, and overprotection, are linked with problematic personality development and psychopathology [12]. The research involved 181 participants aged 15 to 49 years old who completed the Parental Bonding instrument (BDI), and the 16 Personality Bonding Instrument (PBI). They found that lack of parental care and over-protection are closely associated with the development of depression syndromes as well as personality traits such as low self-esteem, introversion, distress and emotional instability. On the contrary, healthy levels of care and protection are associated with increased self-confidence, reduced stress, and fewer depressive symptoms. Unfortunately, those with childhood trauma fall in the premier case.

The mental wellbeing of a parent or caretaker is crucial in assuring a child's healthy psychological development. Growing up with mentally unstable parents or caretakers with mental disorders can be extremely challenging. In fact, it is shown that if parents undergo mental health difficulties during pregnancy or within the first year after the baby's birth, it can influence children's ability to form a strong emotional connection with and provide sufficient care for their child. Consequently, this can negatively affect for the child's cognitive, emotional, social, and psychological development [13]. For child with mentally unstable parents, they might feel confused and emotionally unstable when their parent experiences mood swings. The child's confusion can be heightened if their parent frequently requires hospitalization due to the severity of their mental health condition.

In the case of PTSD, researcher Rachael Yehuda and colleges did a study that showed that adult children of Holocaust survivors reported higher levels of childhood trauma, primarily due to parental PTSD. Childhood trauma was associated with PTSD severity, and emotional abuse correlated with cortisol levels. Concluding that parental influence can significantly impact a child's well-being and the transmission of PTSD.

7.   The Mediating Role of Cognitive Emotion Regulation Strategies

Cognitive emotion regulation strategies (CERS) are essential in dealing with childhood trauma and the development of mental disorders like depression and PTSD. CERS can allow individuals to change distorted and negative thought patterns and beliefs, by doing so, individuals can better cope with emotional stress, triggers and flashbacks. In the case of PTSD, by learning self-soothing strategies and thought-stopping methods, those with childhood trauma can learn to better interrupt and cope with intrusive memories or reminders of the trauma. On the contrary, maladaptive CERS can cause harm; a study done by Karyn Doba, 2022 revealed that childhood trauma had an indirect effect on PTSD symptoms through its association with maladaptive cognitive strategies (e.g., self-blame, rumination, catastrophizing), and maladaptive interpersonal strategies (e.g., emotional reactivity, avoidance of emotional connection). These complex pathways contribute to severe PTSD in adolescence and young adulthood.

In the case of depression, Huh, H. J. and colleges [14] developed a model that shows childhood trauma directly contributes to current depression and anxiety symptoms, and these symptoms are further influenced by how people regulate their emotions and thoughts. It is shown that individuals with childhood trauma with adaptive regulation methods develop less severe symptoms compared with those who use maladaptive regulation methods [14]. Hence, it is important for us to recognize the significance of CERS on our mental wellbeing.

8. Interventions and Treatments

What are some interventions and treatments for individuals with depression and a history of childhood trauma? Some common ones are psychotherapy, supportive counseling, group therapy and medication. Psychotherapy like CBT (cognitive behavioral therapy) can help individuals with childhood trauma to build positive thought patterns and change negative ones; individuals will then be able to explore and understand their emotions, memories, and beliefs [15]. This can allow the development of more adaptive emotion regulation strategies and help with one's recovery. Supportive counseling and group therapy can also help individuals by creating a safe and supportive environment for them to talk about what has been troubling them and receive trust and acceptance, finding those with similar trauma and illness. Moreover, group therapy can help build a support network by sharing their childhood trauma and experience with other people; it can significantly reduce feelings of isolation, shame, and low self-esteem and efficacy. It will allow individuals to realize that they are not alone in their struggles and be empowered to fight their trauma and illness instead of giving up and engaging in self-harm. In fact, it is said that for individuals with trauma, having group therapy may be the very first step toward feeling better [16].

In the case of PTSD, exposure therapy and Eye movement desensitization and reprocessing (EMDR) can also be helpful. Exposure therapy, a proven effective and safe treatment for PTSD, involves the patient actively engaging with and describing the specifics of a traumatic event, gradually facing anxiety-inducing but ultimately safe situations until the anxiety diminishes [17], by exposing patients to childhood memories and unresolved fixations, patients can slowly learn to gain a better understanding of their traumas and develop better coping methods. Exposure therapy can also be used to treat phobia, OCD and many other disorders. Similar to exposure therapy, EDMR aims to alleviate the emotional distress associated with traumatic memories and promote healing. "Eye Movement Desensitization and Reprocessing (EMDR) is a psychotherapy—or talk therapy—for PTSD. EMDR can help you process upsetting memories, thoughts, and feelings related to the trauma. By processing these experiences, you can get relief from PTSD symptoms." [18], through back-and-forth movements or sounds, while recalling the distressing childhood event, it releases distress and anxiety and promotes healing by shifting how the memory is experienced and helps patients learn how to cope.

Medication can also be helpful. Common antidepressants, such as selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) can increase the levels of certain neurotransmitters in the brain, such as serotonin and norepinephrine. This can help improve mood, boost energy, and reduce symptoms of depression [19]. Antidepressants have been proven to be helpful in treating depression, contributing to the worldwide reduction in suicidal rates. Antidepressants are also effective in treating PTSD; in fact, the SSRIs sertraline and paroxetine are the only medications approved by the FDA for PTSD [20].

It is important to note that relying solely on medication is not sufficient. While medication can have positive effects on depression symptoms, it needs to be combined with other treatment methods like psychotherapy for optimal effectiveness.

Thus, in order to minimize childhood trauma and its subsequent psychological impact on children, parents and teachers and other adults should take responsibility for paying more attention to children's emotional state and behavior to provide timely detection and guidance. If some people, unfortunately, have childhood trauma, it is better to use a Cognitive emotion regulation strategy with a little medication. The core of recovery is to teach them how to regulate their emotions since medication cannot be used for long times.

9.   Conclusion

In conclusion, experiencing trauma during childhood can have a big impact on mental health, especially causing depression and post-traumatic stress disorder (PTSD). Many studies have shown that childhood trauma is strongly connected to these disorders. Trauma affects how we think about ourselves, how we form relationships with others, and how we handle our emotions. It also affects our brains in ways that make us more likely to develop depression and PTSD. Understanding this connection is important for finding effective treatments. Cognitive emotion regulation strategies are an important part of treating the effects of childhood trauma on mental health. Using strategies that help us cope with our emotions and thoughts in a healthy way can make a big difference in managing symptoms of depression and PTSD. Other treatments like talking therapy, group therapy, exposure therapy, eye movement desensitization and reprocessing (EMDR), and medication can also be helpful. It's often best to use a combination of different approaches for the best results. By recognizing the importance of cognitive emotion regulation strategies and getting the right help, people who have experienced childhood trauma can find healing, learn healthier ways to deal with their emotions and improve their overall well-being.

Acknowledgement

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Research on Virtual Reality App Design in the Perspective of Art Healing

Tingchi Liu[1,a], Ying Wang[1,b,*]

[1]*Visual Communication Design, Northeast Normal University, Boshuo Street, Changchun, China*
a. liutc274@nenu.edu.cn, b. wangy986@nenu.edu.cn
*corresponding author

Abstract: In contemporary society, individuals commonly face emotional problems of stress and anxiety from multiple sources, which usually arise when facing challenges, pressure, or uncertainty. Understanding one's stress and anxiety responses, as well as learning to cope with them effectively, has a crucial impact on maintaining physical and mental health and improving the quality of life. To cope with this phenomenon, this paper, from the perspective of art healing, through an in-depth study of a variety of healing apps and healing tools commonly used in psychological studios, uses virtual reality technology to achieve multi-sensory channel stimulation and designs a game app that combines art healing and virtual reality technology, which, through personalized gaming sessions, enables the user to focus on his or her feelings during the game to improve the therapeutic effect, with the aim of Create a peaceful relaxation space for users, through an in-depth study of a variety of healing apps and psychological studio commonly used healing means, combined with multi-sensory channel stimulation. Explore the possibility of combining art healing and virtual reality technology, and provide theoretical and practical support for the progress and innovation of the art healing field.

Keywords: Art healing, Multisensory, Anxiety, Experiential

1. Introduction

In the current high-pressure, fast-paced social context, people's mental health issues are getting more and more attention, and the search for effective psychological healing methods is crucial. Art therapy, as a relatively new healing method, has been increasingly widely used in psychotherapy and has great potential for development.

At this stage, most research focuses on single-sensory applications and art forms, such as guided expression through painting. Although these methods have shown some therapeutic effects, there is little research on combining multi-sensory and art healing. Multi-sensory integration can lead to a deeper experience. This study explores the impact of multisensory art healing on mental health, integrates visual, auditory, tactile, and other art forms, and provides a new way of thinking about multisensory art healing, which in turn enhances the effects of art healing on emotional regulation and psychological relief, and promotes its application and development in the field of mental health.

2. Psychological issues

Under the pressure of society and life, national mental health problems are highlighted. An analysis of the China Mental Health Development Report 2023(Figure 1)shows that only 36 % of the population consider themselves to be in good mental health, that college students are increasingly at risk of depression and anxiety, and that mental health problems are trending towards a younger age group.(Figure 2)
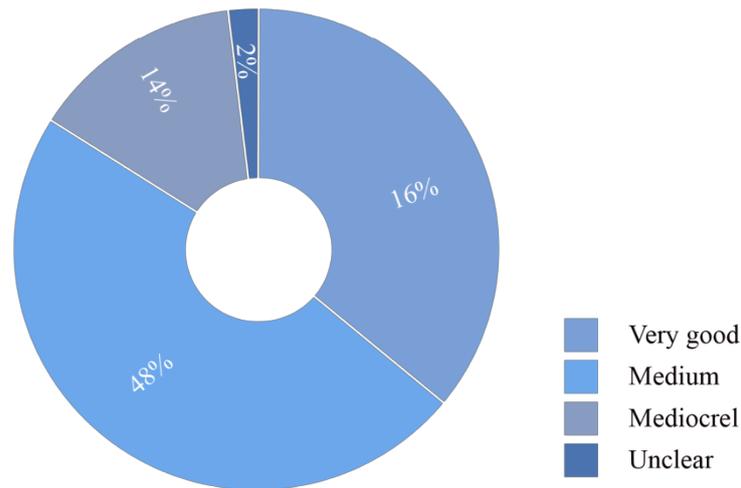
Figure 1: Self-assessment of national mental health.
The 2023 Blue Book of China's Mental Health
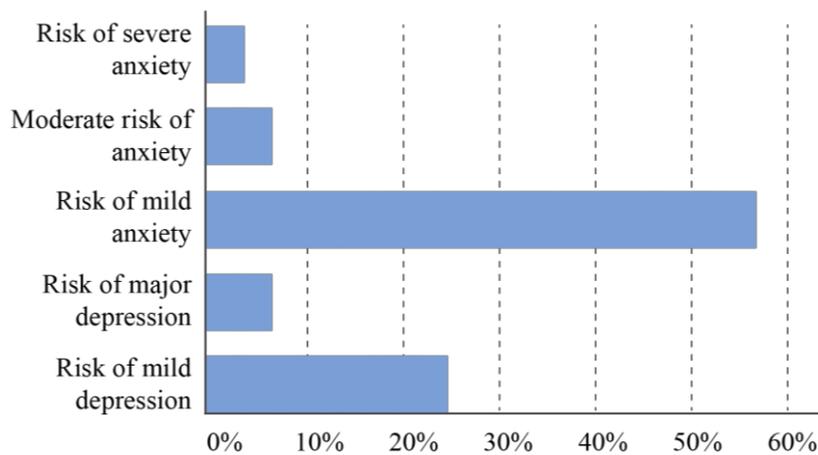
Figure 2: The detection rate of depression risk in different age groups.
The 2023 Blue Book of China's Mental Health

In recent years, under the State's publicity and social guidance, society in general has become more concerned about mental health issues, and greater attention has been paid to mental health issues.

2.1. Anxiety Emotions

Anxiety is a normal phenomenon, but its duration and severity are not conducive to good health.

Anxiety is not easy to observe directly, but it can cause physiological, mental, and multifaceted responses in individuals. Anxiety may be caused by stress in the individual's life, changes in the social environment, disturbances in interpersonal interactions, or certain things that the individual is currently experiencing. For example, some people with low psychological tolerance may feel nervous, short of breath, and depressed before facing events such as major decisions or exams. Today, the detection rate of anxiety risk is 15.8%, which is 1.5 times higher than the detection rate of depression risk. Excessive anxiety tends to harm a person's daily life. When faced with the above situation, some of the anxiety may gradually improve over time, but the other part may haunt people for a long time. They lack channels to digest negative emotions, and if these emotions cannot be relieved, they may evolve into anxiety disorders or other heart problems. In response to the above, we can help individuals understand the nature of anxiety and ways to cope with it by design.

3. Art Healing

3.1. The concept of art healing

Art healing is based on art and psychology, transforming emotions into artistic expression. American education and psychologist Margaret Naumburg Margaret Naumburg used painting as the main means of art healing, interpreting and associating paintings, creating a precedent for the combination of art and psychotherapy, and is known as the mother of art healing.

The healing power of art comes from the enhancement of well-being in life during the creation of a work of art, an expression of thoughts and feelings in a non-verbal form. Like other forms of psychotherapy and counseling, art healing is used to inspire personal growth, increase self-understanding, and aid in emotional healing, and can be used to treat people of all ages.[1]

Artistic expressions such as painting, dance, and music flow from self-exploration of the present state of being, and art is both a medium and a catalyst for emotional expression.

state. Art is not only a medium for emotional expression, but also a catalyst for emotional exploration.

3.2. The Role of Art Therapy

Although traditional psychotherapeutic methods are effective to a certain extent, they still have limitations regarding treatment period and effect. In contrast, art therapy, as an emerging form of therapy, shows unique advantages and plays an important role in relieving anxiety and promoting mental health. Through different art forms, it promotes emotional regulation and self-exploration, and the deepest emotions of individuals can be expressed in disguise.

Art itself has a certain effect of relaxing and delighting the mood. From an experiential point of view, appreciating artwork or listening to music can help individuals relax and reduce the tension and discomfort caused by anxiety. The sense of achievement brought by making artwork can promote the improvement of self-confidence. Art therapy provides emotional value in a variety of ways and can play a positive role in relieving anxiety and promoting mental health. The combination of art allows for a greater variety of ways for individuals to heal.

4. Case analysis

4.1. Case Table

Table 1:Case Studies

Case Name		Image	Application	Pain Points
Case One	Online Art Therapy Salon - Emotion Box		Drawing and quiet space, accompanied by soothing music	Lack of immersive experience, unclear therapeutic effects
Case Two	at the MOMENT Art Design Therapy Studio (BAHE Art Research Institute)		Often uses aromatherapy, combined with chanting bowls or light music, crystal meditation	Limited by distance, fewer people can receive therapy at the same time
Case	Case Three	Interactive Wall LUMES (Cabrini Hospital, Australia)		Designed for children, with diverse animation content, fresh and cute colors, pixelated style full of childlike fun. Moderate animation speed helps maintain a steady breathing rhythm	Effective only for mild emotional relief, ineffective for severe emotions
	Case Four	Children's Healing Garden Crown Sky Garden (Chicago Downtown Hospital)		Creates natural light and shadow effects, accompanied by white noise found in nature	Requires high venue standards, expensive costs
	Case Five	Bubble in the Forest FRANK		Provides an opportunity to connect with nature	Limited by distance
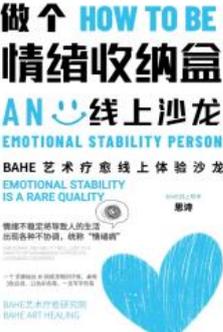
Table 1: (continued)

	Case Six	"Eco-Dance", i.e. "Ecological Dance"		Helps return to the harmony between humans and nature, emotional experiences can be evoked through dance, group dancing enhances connections between people	Limited by venue and location restrictions, fewer organizers
	Case Seven	Children in the earthquake-stricken area after the 2008 Wenchuan Earthquake show symptoms of PTSD		Drawing can help children express emotions and experiences that are difficult to put into words psychologically	
APP	Case Eight	Alto's Adventure		Beautiful art style, weather changes in the scenery, user interest is stimulated through earning points	Single map, easy to get bored, insufficient reward mechanism to stimulate player emotions
	Case Nine	Ethereal Land Meditation		Provides touring and meditation space, visual enjoyment is provided to players through ink wash style, can freely switch weather and seasons	Design style leads to reduced audience
	Case Ten	Pillow - Lying Down Designed VR Game		Can customize bedtime stories. Can be played multiplayer or single player	

Table 1: (continued)

Case	Name	Image	Description	Limitation
Case Eleven	White Noise 3D		An app containing a wide range of scenes and sound sources of white noise, offering various scenes, users can combine different sounds according to preference	Relatively single function
Case Twelve	Worry Doll		Provides a tree hole space to express personal emotions, a new doll is generated each time, giving users a sense of freshness	Relatively single function, minimal user feedback
Case Thirteen	Canned Meditation		Provides various meditation and breathing guidance methods. Users can check in daily	Most functions require membership activation
Case Fourteen	PlayGround Organic Mix		A musical instrument game, slide and collide with tiles randomly to create a nice music rhythm	Cannot customize maps, limited existing choices available, only in English

4.2. Combining Virtual Reality with Art Therapy

Art therapy has been proven to have great potential in psychological counseling. In daily life, people also choose to play games to relieve stress. If the two are organically combined and linked with VR technology to provide interactive opportunities, it is expected to enhance the therapeutic effects to a certain extent.

Meditation apps have maintained high download rates. VR technology provides users with a virtual independent space, helping to reduce external distractions and enter a meditative state. Painting, as the most easily achievable art form, is applied in art therapy. For example, in the online art therapy salon (Case One), healing purposes are achieved through online remote guidance in painting. In the 2008 Wenchuan earthquake (Case Seven), many children were frightened by the slight shaking of chairs after the quake. In response to this, volunteers guided the children to express their inner feelings and emotions through painting to provide targeted psychological counseling. By

incorporating VR technology into the field of artistic creation, an immersive creative environment is created for users to alleviate emotions and relieve stress through creative expression.

Healing games are emerging one after another, such as "Alto's Adventure" (case eight) featuring a simple flat style with soft colors. "Playground" with organic remixing (case fourteen) provides a way for people to vent, allowing users to release negative emotions by randomly sliding the screen, and the game will provide users with rhythmic music feedback.

4.3. Multisensory Integration and Anxiety Relief

Multisensory experiences provide individuals with a more comprehensive perceptual experience by simultaneously stimulating multiple sensory channels. Compared to single-sensory experiences, multisensory experiences are more immersive. In healing cases, it mainly combines visual and auditory stimuli.

Firstly, visual stimuli are widely used in healing environment design. By providing natural landscapes, visual artworks, and other visual elements, it promotes relaxation of body and mind, and alleviates anxiety. In Case Study Three, the interactive wall LUMES from Australia (Case Three) has been carefully considered in terms of spatial layout, color application, and pattern design. The target audience of this design is children, so the choice of colors and patterns is more lively and warm.

Crown Sky Garden (Case Four) is also dedicated to creating a therapeutic space suitable for children. In addition to incorporating natural elements such as green plants, it also uses brightly colored resin panels to enhance the sense of openness in the space, allowing patients to overlook the city skyline and creating a more spacious and bright atmosphere.

Psychologists believe that color has an important impact on people's psychological activities, especially emotions have a very close relationship. Colour acts on the human senses, stimulates the human nerves, and then has an impact on the emotional and psychological aspects. The poet Goethe said: in pure red to see a high degree of solemnity and solemnity. The color red was used as a symbol of kingship because of its solemn and secure character. Pure yellow is joyful, soft, and lovely. Blue expresses a paradox of excitement and security. The ability of colors to influence the mental state and mood of man lies in the fact that they originate from the innate colors of nature. [1]

Case four and case five both connect vision with the natural environment, capturing colors that benefit emotions. Studies have shown that color temperature is an important factor affecting comfort, and in the contrast between warm light and cool light, warm light makes people feel warmer and more relaxed[3] For example, the bubble installation FRANK in the forest (Case five) brings people back to nature, bathed in warm light.

Besides visual, auditory is also an important part of it. Birdsong, the sound of wind, and the rustling of leaves rubbing together in the natural world all belong to white noise. White noise is the sound hint given to us by nature, and low-decibel rhythmic white noise can effectively help people relax and focus. Nowadays, there are many white noise apps on the market, such as White Noise 3D (Case Eleven), where users can combine various sounds according to their preferences to create a more immersive auditory experience.

Rhythm is not only manifested in auditory perception, but also in dance, the two being different forms of rhythmic expression. Rhythm comes from movement, from the regular movement of objects. Its carriers of movement can be the rhythm in the music of sound: or the rhythm of the body in dance.[2]

Researchers have found that dance can effectively release stress, have a certain inhibitory effect on relieving emotions such as anxiety and depression. For example, "Eco-Dance" created by Andy Lubbof, moved the location of people's dance from indoors to the forest, helping people to return to natural harmony and establish a connection with nature.

The combination of multi-sensory experiences and anxiety relief provides an innovative approach to art therapy, and a more comprehensive experience can better alleviate anxiety emotions.

5. The integration of multi-sensory art therapy and virtual reality design strategies

Perception is typically a process involving multiple senses. In most cases, it involves vision, sound, and sometimes touch, taste, and smell as well.[5] In practical applications, multimodal experiences have been widely used in virtual reality, augmented reality, entertainment, and education. By simultaneously stimulating multiple sensory channels, highly immersive environments are created, allowing users to deeply immerse themselves in the experience. Multisensory experiences enrich people's perception of the world, providing important theoretical foundations and practical guidance for innovation in technology and design fields.

5.1. Create a solitary space to confront feelings of anxiety

Currently, most people are not aware of being troubled by anxiety, partly because this emotion often hides in the heart and is difficult to be aware of. Anxiety is easily confused with tension, unease, worry, fear, etc., leading many people to mistakenly consider anxiety as a normal stress response in daily life. In addition, the influence of social culture may cause people to have biased perceptions of anxiety, leading to anxiety being seen as a weakness or an unacceptable expression, so people may try to conceal or ignore their own anxiety.

So, raising people's cognitive level about anxiety emotions is crucial. Only when individuals are aware of themselves or trapped by anxiety emotions, and learn to correctly identify and cope with this kind of emotion, can effective measures be taken to alleviate anxiety emotions.

The goal of game design is to create a relatively quiet and private environment for players, providing opportunities for meditation and self-awareness, guiding players to explore themselves and their cognition, and allowing them to express and release emotions. During the process, players can freely explore the game world, interact with the environment, and thus enhance their level of self-awareness.

5.2. Provide personalized interaction

Personalized interactive design is built on the understanding of user psychology and behavior, and is a technology that makes it easier, more effective, and more acceptable for users to receive information services.[5] Providing personalized interactive opportunities in healing games can enhance player engagement and involvement. Players shape their game experience based on their preferences and needs, making it more tailored to individual personality and emotional needs, thereby increasing their immersion in the game process. Additionally, personalized interactive opportunities can meet the individual diversity needs of different player groups. Different players may have different emotions, preferences, and needs. Personalized interactive opportunities can better adapt to the needs of different players, enhancing the attractiveness and playability of the game. Personalized interactive opportunities can enhance the resonance between players and the game. When players can freely shape the game world and interact deeply with the characters, they are more likely to develop emotions, deepening their involvement and participation in the game.

6. User Experience Process

6.1. Sound Collection

As an important perceptual channel, auditory perception will run through the entire game process, providing different auditory experiences in different game modules. Firstly, provide a tree hole as a

platform for players to relax and share. Players enter an independent space for sound collection, and based on the different sound waves formed by the player's output, the system will randomly generate game images for the next game stage, friendly to people with decision-making difficulties. At the same time, the sounds collected at this stage provide information source for the sound waves feedback to the players at the end of the game, achieving sound visualization, allowing worries to be presented in an abstract way.

6.2. Provide personalized game interaction opportunities

During the game process, provide players with personalized interaction opportunities that cater to different gaming preferences.

6.2.1. "Healing in the Wilderness" Game One
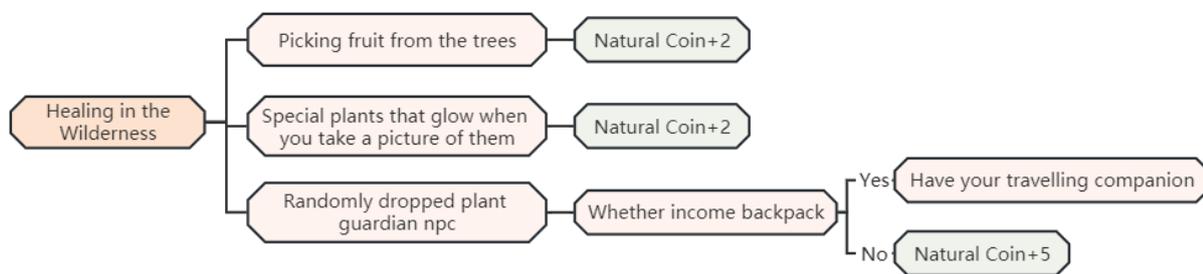
Figure 3: Healing of the Wilderness Game Flow.

Scientific research has shown that the act of picking can effectively alleviate anxiety. "The healing of the wilderness" approaches from a visual perspective, providing players with a color-healing game environment. During the process(Figure 3), players can obtain nature coins in two ways, by picking fruits from trees and taking photos with interesting and beautiful plants. Randomly dropped plant guardian NPCs can be collected as companions on the journey, making the game process no longer lonely.

6.2.2. "Dance of the Soul" Game Two
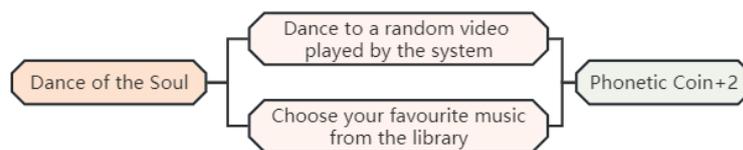
Figure 4: Dance of the Soul Game Flow.

For players who enjoy dancing and sports, opportunities have been created(Figure 4). Exercise can stimulate dopamine in the brain, bringing pleasure. Guiding players to relax through auditory and physical actions, achieving a healing effect. In the game, players can fulfill their dream of hitting the song and accumulate dancing time to continually obtain music notes coins for unlocking more favorite music or building their favorite game maps.

6.2.3. "Yard Space" Game Three
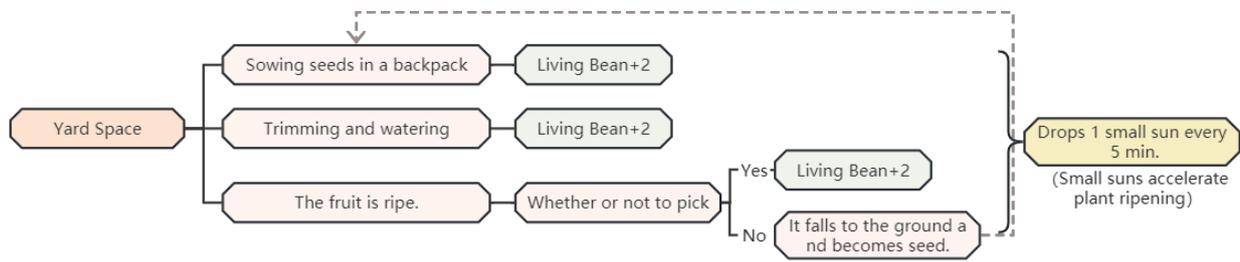
Figure 5: Yard Space Game Flow.

Combining the senses of vision and hearing, players can experience the joy of planting and harvesting in the game, achieving a sense of accomplishment while also accumulating life beans(Figure 5). In the game world, players can switch the weather according to their personal preferences, obtaining different auditory experiences.

6.2.4. "Cat House" Game Four
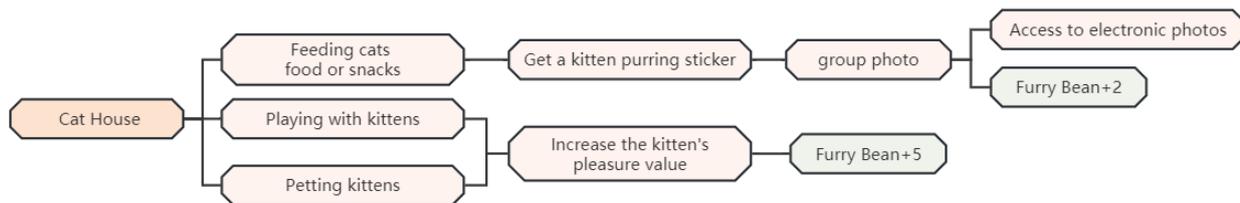
Figure 6: Cat House Game Flow.

Create a warm and healing game space for coexistence with small animals, combining sensory systems such as touch and hearing(Figure 6). The small animals in the virtual world are friendly to those allergic to cat fur. Players can interact with the kittens, feed them, play with them, earn Meow Beans, and continue to purchase toys or snacks. If players can bring a comfortable experience to the kittens, they will receive feedback in the form of purring, which is an effective way to soothe emotions.

6.2.5. "Creative Space" Game Five
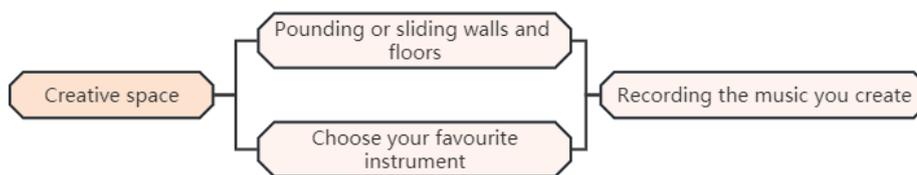
Figure 7: Creative Space Game Flow.

It is a space for players to vent(Figure 7). To avoid the process being boring, blocks representing different music rhythms are added to the game space. Players can get sound feedback by hitting or sliding these blocks, transforming their own negative emotions into pleasant music feedback for players.

In the above game, players are not affected by score pressure, and game time can only be exchanged for experience points, which can be used to draw consolation notes on the app side.

6.3. Sound collection feedback

Convert the collected confession audio from the first phase into voiceprints, visualize anxiety, guide players to face anxiety and actively solve problems. After solving the problems, players can choose different ways to deal with the papers containing their own troubles, symbolizing that they have overcome the worries. Anxiety visualization transforms abstract emotions into specific graphics, colors, or forms, making it easier for individuals to perceive the existence of anxiety and explore its roots more deeply.

7.   Conclusion

In the context of rapid technological development, the combination of art therapy and virtual reality technology has shown great potential and significance, representing an innovative trend. Research has found that virtual reality technology can bring many advantages to art therapy, such as providing a more immersive experience, creating more realistic and rich emotional expressions, and offering personalized and customized treatment plans. In future research and practice, it is necessary to further explore the specific application methods of virtual reality technology in the field of art therapy and the expected outcomes, as well as continuously improve and optimize the related technologies and methods. At the same time, we also need to focus on individual needs and experiences, design more humanized and personalized art therapy programs, and make greater contributions to promoting human psychological health.

In conclusion, the combination of art therapy and virtual reality has important theoretical and practical significance. It not only brings greater possibilities to traditional art therapy, but also provides new directions and motivation for the development and application of virtual reality technology. In the near future, the integration of art therapy and virtual reality will become an important trend in the field of mental health, bringing more hope and possibilities for human happiness and well-being.

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A Review of Research on Foreign Language Enjoyment in Second Language Learning

Lanyu Shi[1,a,*]

[1]*College of Foreign Language, Longyan University, Longyan, Fujian, 364012, China*
a. 100244@yzpc.edu.cn
*corresponding author

Abstract: Positive psychology (pp) is a branch of human psychology that specialises in the study of methods to evoke positive psychological dispositions in people. It advocates a focus on mental health and emotional experience, and on the well-being of people's lives. Pp was introduced to the field of second language acquisition around 2012. The past decade has seen a surge in research and discussion surrounding the emotions experienced by English language learners. Two of the most prominent emotions are foreign language anxiety and foreign language enjoyment (FLE). This study employs a literature analysis to investigate the influence of FLE on second language acquisition. The findings indicate that the degree of FLE experienced by different research subjects varies and that these emotions are correlated with foreign language anxiety. Finally, this study demonstrates How positive emotions affect the acquisition of foreign language proficiency and performance. The primary focus of the study is the influence of FLE on students' SLA abilities. This is a significant area of research that offers valuable insights for educators seeking to create positive learning environments in the English classroom.

Keywords: Foreign language enjoyment, High school students, College students, English learning, Foreign language achievement

1. Introduction

The field of education was introduced to the principles of pp in 2009. Seligman notes that pp advocates the integration of two key aspects: the transmission of happiness and the teaching of skills. The concept of positive education is reflected in the field of teaching English through the establishment of positive learning methods. Prior to the formal incorporation of pp into the discipline of SLA, scholars had already begun to investigate the main influencing variables in pp, including pleasure, emotional intelligence, and interest. These variables have been the subject of research nationally and internationally [1]. As the inaugural scholar to adopt a pp perspective in the field of SLA, Lake elucidated the intimate interconnection between the bilingual positive self, bilingual self-efficacy, and bilingual proficiency. This represents a prospective empirical study of pp in the field of SLA. It demonstrates the formalisation of the concept of Positive Psychology Second Language Acquisition (PosPsySLA) [2]. The integration of PP and language learning has been the subject of research in both domestic and international contexts. However, the term pp has not yet been used explicitly in this country. In 2007, Mao Haoran proposed that FLE may facilitate vocabulary acquisition in a foreign language [3]. In 2015, Yu Weihua posited that emotional intelligence can

enhance the language confidence of English as a second language (ESL) students, thereby reducing foreign language learning anxiety and improving their performance [4]. In 2020, Sung-Chan Lee proposed the main construct of "foreign language academic achievement-happiness", which contributed to the development of the concept of positive language education and the introduction of pp into the process of foreign language learning. In 2022, Li, Cheng-Chen, and Han Ye conducted a study investigating the role of three emotions, namely pleasure, anxiety, and boredom, in predicting the effectiveness of online foreign language classes. The researchers employed a questionnaire to assess the relationship between these emotions and learning outcomes. Nevertheless, the current body of research on pp in the field of second language learning is relatively underdeveloped, with numerous research gaps remaining. Currently, the majority of research on foreign language emotions in China originates from educational psychology, a field that is less directly related to other disciplines such as psychology, language education and others. Also, it can be observed that the majority of domestic foreign language studies are related to English, with a paucity of research conducted on the learning of other foreign languages. At the same time, In the domestic research field, which mostly focuses on college students and high school students, the age range of foreign language pleasant emotions research is still not rich enough. With regard to the research instrument, it is relatively homogeneous, with the majority of the scales used being translated versions from abroad. This raises the issue of the absence of localised variables. A review of the current state of English language learning among students at this stage reveals a prevalence of excessive anxiety among many learners. It is evident that this anxiety can have a detrimental effect on students' foreign language learning. Further research on FLE is also conducive to further exploring the conditions under which students' emotional strengths can be brought into play. This will help English teachers find applicable methods of teaching foreign languages in the classroom, drive students' motivation to learn, and continually improve the overall level of students' foreign language proficiency. This paper examines the definition of FLE, the connection between pleasant feelings expressed in a foreign language and other emotions, the main factors affecting foreign language pleasurable emotions, and the relationship between foreign language pleasurable emotions and students' academic achievement. The analysis is based on a review of the relevant literature.

2. Literature Review

2.1. The Definition of Enjoyment and FLE and Measurement of FLE

For the definition of pleasurable emotions, according to the three-dimensional classification of emotions, pleasure is classified as a positive, activated, activity-centred emotion that is triggered when the activity is controllable and positively valued [5]. The distinction between pleasure and happiness can be elucidated by considering the emotional experience of pleasure. Pleasure can be defined as a positive emotion. This feeling arises when an individual surpasses or breaks through personal limits and achieves higher goals in the face of challenging activities [6]. The definition of foreign language pleasurable emotions was first proposed in 2014 defining it as "a complex emotion that captures the interacting dimensions of challenge and perceptual competence"[7]. Its definition and content were later updated with further explanations: Foreign language enjoyment is a positive emotional state student experience when learning a foreign language. This positive emotional state is conducive to students' foreign language learning and enhances their resilience in the face of foreign language difficulties [7]. In 2017, Teimouri also gave a corresponding definition: a FLE is a positive emotion experienced by a language learner in the process of learning or using the target language, either within the boundaries of a particular classroom setting or in a situation of real life [8].

In 2014, Dewaele and McIntyre were the first two scholars to investigate learners' FLE and created the Foreign Language Enjoyment Scale (FLES), which includes 21 items with ratings on a Likert

scale concerning learners' enjoyment of teacher support, learners' enjoyment of the learning experience and learners' enjoyment of student support. Based on the three-factor model, Li, Jiang, and Dewaele further modified the Foreign Language Enjoyment Scale (FLE) into an 11-item Chinese version and tested it on participants in a Chinese EFL context. The instrument demonstrates high levels of validity and reliability. In the subsequent studies, the researchers employed this scale as a research instrument to assess the proficiency of domestic foreign language learners. The field of SLA research in the context of PP is concerned with the psychological variables that influence language learning. The tools employed in this field are similar to those used in applied linguistics and educational psychology. Dewaele and Li summarise the tools used in emotion research, with the main quantitative tool being the self-report [9]. The most common qualitative tools include in-depth interviews, observations, written materials (such as diaries and other documents), audio-visual materials, etc. Former foreign language pleasure studies are predominantly quantitative, with the majority comprising questionnaires. Qualitative studies, in the form of interviews, constitute a smaller proportion, while mixed studies represent a further minority.

2.2. Relationship between FLE and other Emotions

For those learning a foreign language, the emotions experienced during the learning process are predominantly positive and negative. The majority of positive emotions are reflected in foreign language learning (FLE), while negative emotions are mainly reflected in foreign language anxiety. Over the last few years, there has been a growing number of research investigating a correlation between foreign language anxiety and foreign language enjoyment emotions, both at home and abroad. In 2014, Dewaele and McIntyre developed the Foreign Language Pleasure Scale (FLPS), a 21-item instrument designed to assess positive emotions associated with language learning. The FLPS incorporates eight items from the Foreign Language Classroom Anxiety Scale (FLCA) and reflects a learner's affective response to the learning experience, peers, and teachers. They found a moderate correlation between anxiety and pleasure [10]. In the field of domestic research, studies have been conducted in recent years that investigate the correlation between FLA and FLE. In 2018, Li Cheng Chen conducted the first survey and study on the level of FLE among Chinese students [9]. Jiang and Dewaele, in 2019, proposed a significant negative correlation between FLCA and FLE. The FLCA is primarily predicted by intra-learner variables, whereas the FLE is primarily predicted by teacher-related variables, consistent with existing research from abroad [11]. In a correlational study with high school students as the subject of the study, Zhenyan Gao conducted Pearson's correlation analysis on variables related to foreign language enjoyment and foreign language anxiety. The study showed an overall significant negative correlation between foreign language pleasure and anxiety among Chinese high school students, with a negative correlation value of ($r = .575$, $p = .000$, $r^2 = .33$), and the study showed that the shared variance of foreign language pleasure and anxiety was 33%. A significant negative correlation was also observed between foreign language pleasure and anxiety in different grades. This indicates that the higher the foreign language enjoyment level of high school students, the lower the corresponding foreign language anxiety level [12].

2.3. The Influencing Variable of FLE

As for the factors influencing pleasant emotions in foreign languages, domestic and foreign countries have studied the variables affecting the generation and persistence levels of pleasant emotions in different groups from different perspectives. In 2014, Dewaele designed a scale to assess the level of pleasure in a foreign language with respect to variables such as educational level, age, gender, and global and regional groups. One study on the pleasant emotions experienced by Asian learners observed that North Americans exhibited the highest levels of pleasantness and the lowest levels of

anxiety, while Asians exhibited the lowest levels of pleasantness and the highest levels of anxiety [9]. Principal component analysis was used in a follow-up study by Dewaele and McIntyre on the same dataset, and two dimensions of FLE and social and private dimensions were identified. The aspect is socially reflected in classroom laughter and friendly relationships with teachers and classmates. The private aspect of enjoyment is reflected in inner feelings such as pride, having a good time and a sense of self-achievement [13]. In 2021, Jin Yinxing and Zhang Jun collected information in the form of a questionnaire using the FLES scale as a measurement tool, and 320 students in the first year of secondary school in Shandong Province, China, were the subjects of the study. The study showed that the enjoyment of English learning, enjoyment of student support and enjoyment of teacher support all have varying degrees of impact on students' English pleasure levels. The multidimensional nature of the study's factors suggests that many of the learners' internal and external variables affect their level of FLE. Among the activities and outcomes of English language learning, students in the classroom showed the most obvious results, and interesting classroom activities increased the level of pleasant emotions [14]. 2019 Yan Jiang , Jean-Marc Dewaele A study on the uniqueness of classroom enjoyment among Chinese foreign language learners with Chinese university students. The multiple regression analyses showed that FLE was best predicted (43.2%) by three variables related to the teacher (attitudes towards the teacher, jokes about the teacher and friendliness of the teacher) and less by three learner-related variables (English proficiency, peer standing and attitudes towards English) [15]. Fang and Tang   found that English majors had much higher levels of FLE than FLCA, and they experienced FLE more likely to occur than FLCA. It was also found that participants' FLE was more associated with external variables [16].

2.4. The Relationship between the FLE and the Student's Achievement

Is there a correlation between foreign language pleasurable emotions and language achievement and the language performance achieved by students in second language learning? Whether such positive emotions facilitate second language learners' learning has become a hot research topic in the field of language and education in recent years. Attention has gradually shifted from studying the SLA aspect to focusing on the FLE and the impact of this positive emotion on students' second language acquisition. At present, relevant studies in this field have confirmed to varying degrees the existence of a certain link between FLE and foreign language learning achievement. At home and abroad, the main research subjects are mainly secondary school students and college students. Research has shown that foreign language pleasure is highly and significantly negatively correlated with foreign language boredom (r=-.692**). That is, anxiety increases as boredom rises, and pleasure decreases as anxiety and boredom increase. This result also illustrates that students with higher levels of pleasure will have lower anxiety and boredom and will be more likely to achieve higher grades in English. In addition to this, there is a significant correlation between the emotions involved in learning a foreign language and performance in English. FLE was significantly and highly positively correlated with English achievement (r=.433**), indicating that the higher the level of foreign language anxiety, the lower the level of foreign language pleasure, or the higher the level of foreign language boredom, the lower the English achievement [17]. Dewaele and Alfawzan investigated the impact of FLE and FLCA on the performance of FL learners, consisting of 189 UK secondary school students and 252 Saudi university learners. They found a significant positive correlation between FLE and FL academic performance and claimed that FLE proved to be better at predicting performance than FLCA [18]. Li, in 2020, presented a significant relationship between three academic moods and English performance, showing that students with higher levels of enjoyment were less likely to feel anxious or burnt out, more confident in their English proficiency and more likely to perform well in exams. The "triangular" relationship between pleasure, anxiety and English achievement supports previous research, and this study further highlights the impact of emotions on academic achievement

[19]. Qualitative analysis of the interviews indicated that FLE has had a positive impact on the learning outcomes of English language learners, particularly in terms of the impact of FLE on English learning outcomes, particularly on CET-4 scores, with half of the twelve students interviewed stating that their FLE was related to English learning outcomes. Some students also reflected that FLE can help them to focus on the important contents in English learning, absorb more English knowledge, improve their English input ability, and remember the knowledge deeply and clearly, forming a long-term memory, which is conducive to improving the examination results or improving the output application ability, etc. FLE also enhances students' motivation and interest in learning English. From the interview responses, FLE was associated with improved cognitive processes, including higher levels of attention and better English learning efficiency. Thus, the qualitative findings suggest that FLE positively affects English learning outcomes, which supports the quantitative findings that FLE is a significant predictor of actual English learning outcomes. In addition, the study also mentioned the comparison between the two emotions, FLE and FLCB, between the prediction of English performance, FLE predicted all the actual English academic performance stronger than FLCB; therefore, FLE had a greater impact on English academic performance, which empirically supports that the positive emotion effect outweighs the negative emotion effect on FL academic performance [20].

3. Conclusion

Through the study of this paper, it was found that the entry of pp into the field of SLA has changed the previous research situation in which second language acquisition research was only concerned with negative emotions and has opened up a research perspective on second language acquisition that focuses on positive emotions. Researchers have made many contributions to positive psychology research theory, research methodology, and research topics in the field of SLA, such as the influence of positive single emotion variables such as happiness and flow on second language learning. However, this paper finds that relevant domestic research needs to be in-depth, the richness of measurement tools and types of research is not yet high enough, and the scope of research subjects is still not deep enough and shallow in scope. This suggests future research directions for pleasurable emotions in foreign language learning. Scholars still mainly combine pleasurable and anxious emotions in foreign languages in their research, and there is a lack of research that focuses on pleasurable emotions separately and individually. Research has confirmed the positive effects of foreign language enjoyment on student performance, classroom activity motivation and language learning confidence. However, there is less research on the design and measurement of specific classroom activities and on the achievement of the English language through different activities that stimulate learners' pleasurable emotions. The paper also shows that, in contrast to foreign language anxiety, teachers play a strong role in producing pleasurable emotions in students. Therefore, the study of pleasant emotions in foreign languages has guiding significance for future foreign language classrooms, teachers, and learners. The research should be further executed in the teaching activities of foreign language classrooms to improve the ability to create pleasant emotions in foreign language classrooms and to further improve the overall level of foreign language proficiency and learning ability of Chinese students.

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Applications of Psychological Principles in Game Design: Unveiling the Dynamics and Psychology of Valorant

Yuancheng Xu[1,a,*]

[1]College of Science, Mathematics and Technology, Wenzhou-Kean University, Wenzhou, Zhejiang, 325060, China
a. xuyuanc@kean.edu
*corresponding author

Abstract: "Valorant" is a multiplayer shooter game developed by Riot Games that has gained significant popularity in the competitive gaming community. Players are provided with an immersive gameplay experience with a blend of first-person shooter mechanics, distinctive character skills, and strategic teamwork dynamics. This article explores several elements of Valorant, including agents, game types, weapons mechanics, map layouts, and team strategy through case study and some literature review. What's more, it analyzes the roles and dynamics within teams, investigating their impact on achieving success in gameplay. Moreover, the article explores the elements of risk and safety in Valorant, providing insight into how cognitive and emotional processes influence player decision-making. This examination provides readers with valuable insights into the intricacies of Valorant and its substantial impact on the competitive gaming arena.

Keywords: Valorant, game design, psychological principles

1.   Introduction

Valorant was developed by Riot Games, the company behind the immensely popular League of Legends. Valorant, which was launched in June 2020, rapidly garnered popularity among gamers because of its distinctive combination of tactical shooting gameplay and character-specific powers. The game draws inspiration from classic tactical shooters like Counter-Strike, while also incorporating elements from hero-based games such as Overwatch. This hybrid approach has allowed Valorant to carve out a distinct niche in the competitive gaming landscape.

Since its release, this game has fascinated gamers around the world by combining first-person shooter (FPS) elements with distinctive character attributes. Valorant transports players into a location on Earth that is set shortly, where they participate in conflicts with teams of five people on each side. This article explores the fundamental elements of Valorant, including agents, game types, weapon mechanics, map layouts, and team cooperation. Moreover, it delves into the intricacies of player identities and team strategies, examining the equilibrium between daring and cautious decision-making. The purpose of this analysis is to reveal the complexities of Valorant and elucidate their importance in the field of competitive multiplayer gaming.

The development of Valorant was driven by a desire to create a game that emphasized both strategic depth and mechanical skill. Riot Games aimed to produce a title that rewarded players for their tactical decisions and precise aim, while providing a diverse cast of characters with unique

abilities to add variety and complexity to the gameplay. This combination of factors has made Valorant appealing to a wide range of players, from casual gamers to professional esports competitors.

The success of Riot Games can also be due to their dedication to cultivating a competitive ecology. Since the beginning, the firm has provided consistent updates, made adjustments to maintain fairness, and organized official tournaments and leagues to encourage the game's competitive community. Valorant's emphasis on competitive gameplay has rapidly established it as a prominent presence in the esports scene, attracting elite players and cultivating a committed fan following.

2. Key Elements of Valorant

In order to gain a thorough understanding of the game, it is crucial to initially analyze some fundamental components of the game. By exploring the roles of agents, the primary game mode, the emphasis on gunplay, and the intricacies of map design, one can appreciate how these components work together to create a rich and engaging gameplay experience.

2.1. Agents: The Backbone of Valorant's Strategic Depth

All agents are divided into four main roles: Initiator, Sentinel, Duelist, and Controller. The choice of five agents establishes the framework for team composition and the formulation of strategic plans. Initiators demonstrate exceptional proficiency in instigating confrontations and impeding adversary locations by utilizing crowd management and area denial skills. Sentinels focus on defensive tactics, providing utility for protecting teammates and controlling map territory. Duelists are frontline combatants with offensive abilities to secure kills and maintain map dominance. Controllers have the ability to control and manipulate the map, facilitating strategic positioning and coordinated execution of tactics.

The strategic depth provided by these agents is immense. Each role offers a different approach to the game, encouraging players to think critically about their team composition and how best to utilize their agents' abilities. For example, an Initiator might use their abilities to disrupt enemy defenses and create openings for their team, while a Sentinel might focus on holding key areas and providing support to their teammates. This variety in roles ensures that every game of Valorant is unique, with different strategies and tactics coming into play depending on the agents chosen.

2.2. Game Mode: Search and Destroy

Valorant's primary game mode, Search and Destroy, is the cornerstone of its competitive gaming experience. In this mode, one team takes on the role of attackers, tasked with planting bombs (called "spikes") at designated bomb sites, while the opposing team defends the sites by killing all attackers or attempting to defuse the spikes. The game is played as a series of rounds, and the team that first gets 13 rounds wins the match. Teams take turns in offensive and defensive roles after the first 12 rounds.

Figure 1: Defusing the spike

Search and Destroy's structure promotes strategic depth and tactical decision-making. Teams must carefully plan their approach based on map layout, agent composition, and economic considerations. Successful execution requires coordination, communication, and adaptability as teams deal with complex map controls, objective gameplay, and engagement strategies.

This mode emphasizes the importance of both individual skills and team coordination. Each round is a test of strategy and execution, with teams needing to balance their economic resources, manage their agents' abilities, and adapt to the evolving tactics of their opponents. The dynamic nature of Search and Destroy ensures that players are constantly challenged, requiring them to think on their feet and make quick decisions to outmaneuver their opponents.

2.3. Gun-play and Tactics: Precision and Strategy in the Battle

Valorant puts a heavy emphasis on precise gunplay and strategic positioning, turning encounters into subtle dances of skill and strategy. Each round begins with players purchasing weapons and equipment. Thus, using in-game currency becomes another challenge. This currency is earned through kills, objective games, and round wins. If a team suffers continuous failure, they will also get a currency bonus.

The economy system introduces strategic considerations, as players must decide whether to invest in powerful weapons and abilities to make an immediate impact or to conserve resources for future turns. This dynamic adds depth to the gameplay, as teams must coordinate their purchases and adjust their strategies based on the game's changing economics.

Figure 2: The store interface

Gun-play in Valorant is designed to reward precision and tactical thinking. The game's weapons have distinct recoil patterns and handling characteristics, requiring players to master their chosen arsenal to perform effectively. This emphasis on skill-based mechanics ensures that players are rewarded for their dedication and practice, while the tactical considerations of weapon and ability purchases add an additional layer of strategy to each round.

2.4. Map Design: Creating a Strategic Battlefield

Maps in Valorant are carefully designed to promote strategic gameplay and diverse play styles. Each map has multiple paths, choke-points, and locations, providing opportunities for offense and defense. Understanding the map layout and controlling key areas are critical to success as teams compete for map control and strategic positioning.

Additionally, map design affects agent selection and tactical decisions. Certain agents may perform well in specific map environments. Players must use their knowledge of map layout, line of sight, and covers to gain tactical advantages and outwit their opponents.

Figure 3: The map "Icebox"

Figure 4: The map "Bind"

The variety in map design ensures that each game feels fresh and challenging. Players must adapt their strategies to the unique features of each map, learning the best positions for ambushes, the optimal paths for quick rotations, and the key areas to control for strategic advantages. This constant adaptation keeps the gameplay engaging and forces players to continually refine their tactics.

2.5. Team Coordination: The Essence of Competitive Success

The core of Valorant's gameplay is teamwork and coordination. Effective communication and collaboration are critical to the victory of each game. Teams must coordinate their agent capabilities, synchronize their actions, and make split-second decisions based on changing situations.

Moreover, team coordination is not limited to in-game actions but also includes pre-game planning, in-game analysis, and overall strategy development. Successful teams cultivate a culture of communication, trust, and mutual support to maximize their collective potential and achieve success on the battlefield.

Team coordination in Valorant is essential for success. Each agent's abilities are designed to complement those of their teammates, creating opportunities for synergistic plays and coordinated strategies. Teams that communicate effectively and work together are often able to outmaneuver and outplay their opponents, demonstrating the importance of collaboration and teamwork in achieving victory [1].

3. The Psychology of Risk and Safety in Valorant

The psychology of risk and safety permeates every aspect of Valorant gameplay. The psychology of risk and safety influences player behavior, decision-making, and emotional responses, providing a glimpse into the realm of psychology. Risk perceptions are determined by factors such as the probability of success and the potential consequences of failure, thus guiding strategic choices and engagement tactics of participants [2].

Loss aversion, a principle of behavioral economics, causes participants to prioritize minimizing losses over maximizing gains. It affects players' economic decision-making and risk-taking behavior. In Valorant, players may exhibit loss aversion by being more cautious when risking valuable in-game resources (e.g., health, weapons, and abilities) or when faced with the prospect of losing a round or match.

The balance between risk and safety is a constant consideration for players. The perceived risks and potential rewards of each action influence the decision to engage in combat, use abilities, and retreat. This dynamic creates a complex interplay of decision-making that adds depth to the gameplay and challenges players to think critically about their choices [3].

3.1. Enhancing Social Connections

Many people, both friends and strangers, use Valorant to meet up online. Today, many college students may feel alone because they are learning from home or because of the stress of school life. This is why it's so important to have a place to connect with other people. Students can make more friends by working together with partners from around the world. This can make them feel less lonely and more socially satisfied.

Research has shown that online gaming can foster social interactions and build a sense of community among players. According to Cole and Griffiths, massively multiplayer online games (MMOs) provide opportunities for social interaction and the development of friendships [4]. In Valorant, players work together in teams, communicating and coordinating their actions to achieve common goals. Especially for those who may feel isolated due to remote learning or other factors, this collaborative environment can alleviate feelings of loneliness and enhance social satisfaction.

3.2. The Reasons that Players Cannot Stop Playing First Person Shooters

Valorant, like many first-person shooters (FPS), captivates players by immersing them in fast-paced, decision-making scenarios. As Lennart Nacke, the director of the Games and Media Entertainment Research Laboratory at the University of Ontario Institute of Technology, explains, "Video games are essentially about decision-making. First-person shooters put these tasks on speed. What might be a very simple decision if you have all the time in the world becomes much more attractive and complex when you have to do it split second" [5]. Technological advances have made modern FPS games, such as Call of Duty and the Battlefield series, far more immersive, allowing players to lose their own identities in the game.

Furthermore, it isn't just the first-person perspective that creates this sense of flow; the act of shooting itself is compelling. Nacke noted that the departure from our usual routines, the intense scenarios that are not typically encountered, make first-person shooters especially captivating. We may not necessarily desire to engage in violence in reality; rather, we experience repressed emotions and impulses that require release [5]. Modern life, with its sedentary and often monotonous routines, leaves many craving the adrenaline rush and decision-making challenges that FPS games provide. "If you look at it in terms of our evolution, most of us have office jobs. We're in front of the computer all day. We don't have to go out and fight a tiger or a bear to find our dinner. But it's still hardwired in humans. Our brain craves this kind of interaction, our brain wants to be stimulated. We miss this adrenaline-generating decision-making [5]."

This insight into why FPS games are so engaging helps explain Valorant's popularity. The game's combination of rapid decision-making, strategic depth, and social interaction creates a compelling experience that keeps players coming back for more.

3.3. Adapt and Learn: The Path to Mastery

Over time, players in Valorant adjust their risk perceptions and safety-seeking behaviors through experience, feedback, and reflection. Successful outcomes reinforce effective strategies and risk-taking behaviors, while failures promote opportunities for adjustment and learning. As players gain proficiency, they develop a nuanced understanding of risk-reward tradeoffs, allowing them to make more informed decisions and predict their opponents' actions [6].

The process of adaptation and learning in Valorant mirrors broader principles of skill acquisition and mastery. As players encounter different scenarios and challenges, they refine their strategies and improve their abilities. This iterative process of learning and improvement is a key aspect of what makes competitive gaming so engaging and rewarding.

4.   Conclusion

In conclusion, Valorant demonstrates the complexity of competitive multiplayer gaming. Incorporating strategic depth, tactical precision, and dynamic teamwork enhances the experience. Valorant offers players ample opportunity for challenge and discovery with its varied agent roster, strategic game types, precision gunplay, meticulously crafted levels, and a strong focus on teamwork.

The psychological study of risk and safety in Valorant provides valuable insights into the cognitive and emotional processes that influence player's behavior and their decision-making ability. The interplay between risk perceptions, loss aversion, safety-seeking behavior, and risk-taking tendencies creates a complex relationship that influences strategic decision-making and tactical actions.

As players navigate the complexities of Valorant, they embark on a journey of adaptation, learning, and mastering the game, refining their abilities and strategies to achieve competitive success. Through analysis and reflection, players gain a deeper understanding of the mechanics and dynamics of the game, promoting their growth and development both inside and outside the game.

Essentially, Valorant goes beyond just entertainment and becomes a platform for adventure, discovery, and personal growth. As the interactive experiences in the gaming industry progress, engaging with games like Valorant enhances our comprehension of human behavior and cooperation in digital settings, contributing to the exploration of new ideas and advancements.

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Physical and Mental Development of College Students in the Digital Age

Yiming Wang[1,a,*]

[1]*Ningbo University of Finance and Economics, Hangzhou Bay Campus, 77 Bohua Road, West Section of Binhai 2nd Road, Hangzhouwan New Area, Andong Town, Cixi City, Zhejiang Province, China*

a. ada0328@foxmail.com

**corresponding author*

Abstract: In the context of the digital age, the internet has essentially become a part of college students' lives. Through a comprehensive review, this study systematically summarizes the psychological issues such as anxiety, depression, and feelings of loneliness, as well as physical health problems like neck and back pain, caused by digital technology among college students. It also proposes several positive measures generated by digital technology, such as virtual tourism, online yoga, and digital mindfulness interventions, to enhance college students' digital well-being and promote their physical and mental health development. Future research needs to further adopt human-centered, longitudinal, and follow-up research methods to explore the bidirectional impacts of the internet and clarify measures to balance the advantages and disadvantages of digital technology.

Keywords: digital technology, physical and mental health of college students, VR virtual tourism, online yoga, digital mindfulness interventions

1. Introduction

The China Internet Network Information Center (CNNIC) released the 53rd "Statistical Report on Internet Development in China" in Beijing on the 22nd. The report shows that as of December 2023, the number of internet users in China reached 1.092 billion, an increase of 24.8 million from December 2022, with an internet penetration rate of 77.5%. Among these users, the 20-29 age group accounts for the highest proportion. College students are generally considered a psychologically vulnerable group with low stress tolerance and a heavy dependence on the internet, making them prone to escapism tendencies [1]. Research indicates that electronic devices (e.g., mobile phones, computers) and social media negatively impact the physical and mental health development of college students [2]. For instance, addiction to these devices leads to a lack of social interaction and exercise, dependence on electronic devices, and anxiety and discomfort when away from them [3].

However, in the digital age, the internet can also positively impact the physical and mental health of college students. Based on a literature review, it is evident that research on the positive aspects is currently lacking. Some studies suggest that we can enhance college students' digital well-being through digital psychological education [4], thereby promoting their psychological health development. Examples include VR virtual tourism [5], online yoga [6], and digital mindfulness interventions [7]. Furthermore, big data analysis and social media dynamics [8] can help understand

the physical and mental development of college students. Improving electronic devices to remind students of correct usage posture can also protect and promote their physical health [9].

Although existing researchers have preliminarily explored various factors affecting the physical and mental development of college students in the digital age, there is a lack of systematic review of these research findings. This limitation somewhat restricts progress in this field. Therefore, this paper systematically reviews the literature and research on the physical and mental development of college students in the digital age, aiming to provide insights and references for future research and practice.

2. Literature Review

2.1. Negative Aspects of the Internet on College Students

The internet exacerbates social anxiety among college students. In the virtual world, they can present themselves through carefully edited texts and images, which makes them worry that their real-life status cannot match the "perfect image" in others' minds. This leads to increased reliance on social media, causing unnecessary anxiety and feelings of inferiority. The internet can also cause college students to become addicted to the virtual world, spending a significant amount of time and money, thereby neglecting their studies and real life. This addiction not only affects their academic performance but also adversely impacts their physical and mental development.

Studies have found that excessive internet use negatively affects the physical and mental health of college students. Most college students rely on electronic devices [2][3] and social media for information and communication, making them prone to escaping reality by indulging in the virtual world or venting their dissatisfaction with real life in virtual environments. This behavior not only disrupts the normal social atmosphere online but also potentially affects others' psychological states, leading to the hidden issue of cyberbullying [10]. Moreover, improper posture and excessive use of electronic devices can severely impact college students' physical health [11].

A quantitative study conducted by Gao Yiwen, Liu Chenhui, and Chen Ye on 782 college students from different universities using the Self-rated Health Measurement Scale (SRHMS) and a mobile phone usage questionnaire indicates that schools, parents, and society should advocate healthy mobile phone usage. They should guide college students to control their phone usage time to effectively reduce the negative impact of mobile phones on their physical and mental health [2]. Additionally, a qualitative study by Cheng Dai, Zixue Tai, and Shan Ni involving semi-structured in-depth virtual interviews via WeChat with 70 students from seven universities in different regions of China in November and December 2020 found that college students' dependency on smartphones is not only functional but also emotional, manifesting as anxiety, discomfort, and distress when separated from their devices [3]. Data collected by Chang'an Zhang, Lingjie Tang, and Zhifang Liu from 1,004 college students across 135 universities in China show that cyberbullying can undermine the positive effects typically gained from social media, leading to increased psychological distress, reduced life satisfaction, and heightened symptoms of depression and anxiety [10]. A cross-sectional survey using a semi-structured questionnaire conducted by Muhammad Daniyal, Syed Fahad Javaid, Ali Hassan, and Moien A. B. Khan on 400 participants with an average age of 24.45±3.45 years found that high-frequency mobile phone users reported higher levels of eye strain, neck pain, and back pain compared to low-frequency users [11].

In summary, excessive use of the internet and electronic devices not only causes physical health issues like eye strain and neck pain but also exacerbates psychological distress and cyberbullying, undermining the positive effects of social media. Therefore, promoting healthy device usage habits and optimizing the online environment is crucial for safeguarding the physical and mental health of college students.

2.2. Positive Aspects of the Internet on College Students

In today's information and network era, the internet has become an indispensable part of college students' daily lives. Despite some negative impacts, the positive effects of internet use on college students cannot be overlooked. The internet has not only changed the way college students learn and relax but also enriched their social lives and provided social resources such as innovation and entrepreneurship platforms and mental health support.

Research has found that online social support significantly enhances college students' self-esteem and life satisfaction, effectively reducing depression and feelings of loneliness [12][14]. Additionally, VR virtual tourism has been proven to effectively reduce stress and anxiety, thereby enhancing mental health [5][13]. Digital mindfulness interventions [7], mobile mindfulness meditation (MMM) [15], and online yoga [6] have also been found to significantly reduce anxiety and depression symptoms, improving psychological health levels. Big data analysis and social media dynamic monitoring facilitate timely understanding and intervention in the physical and mental development of college students, helping provide personalized mental health support [8]. Improved design of electronic products, such as adding posture reminder functions [9], can help college students maintain correct posture, thereby alleviating physical discomfort caused by improper use.

Afiya Ali's research, which conducted a quantitative cross-sectional survey on random community samples in New Zealand and the Maldives, found that while online social support did not significantly improve mental health levels, it also did not detract from this relationship. This finding suggests that the impact of the internet on college students is complex and multidimensional, with both negative and positive aspects [12]. Additionally, Paolo, Jerome, and Arianne tested two mediation models with psychological health and distress as outcome variables on a sample of 247 Filipino college students. They found that the internet not only promotes social activities and the expansion of social capital among college students but also enhances their psychological health, reduces psychological distress, and further improves their self-esteem and life satisfaction through online social support and social benefits [14].

Virtual reality (VR) technologies, such as 3D environment navigation, have been shown to induce positive emotions, flow, and emotional engagement, thereby positively influencing behavioral intentions [13]. But Qiang, Chen Qiaoying, and Deng Yinchun conducted a study on the impact of VR technology on the physical and psychological aspects of college students in several universities in Sichuan Province. They found that VR tourism can significantly reduce college students' physical and mental stress. Consequently, they proposed that combining 3D environments with VR technology to form virtual tourism is necessary, advocating for the promotion and application of virtual tourism among college students [5].

Additionally, Li Sun used a multi-stage research method and found that treatment based on mindfulness mobile applications could reduce college students' anxiety. This method proved effective in alleviating their psychological stress and continued to be effective over time, providing students with ongoing motivation to enhance their well-being. Participants also held positive views about these applications [7]. At the same time, mobile mindfulness meditation (MMM) can implement mindfulness meditation interventions through mobile devices such as smartphones and apps to reduce stress and anxiety among college students and improve their well-being [15].

To improve college students' physical fitness and help them experience the benefits of exercise on mental health, Hao Qian and Gao Yanpeng focused on the benefits of yoga and proposed the novel concept of online yoga. Between January 13, 2021, and January 18, 2021, they distributed a survey titled "Changes in College Students' Physical and Mental Health in the Online Environment" via "Questionnaire Star," collecting a total of 302 responses. Data analysis revealed that 90.37% of students had myopia, 42.3% spent more than three hours online daily during weekdays, and 41.6%

spent more than five hours online during holidays. This excessive internet use not only harmed their physical health but also misled them with mixed-quality information, causing frustration and self-denial, which adversely affected their mental health. Yoga, with its rich cultural background and unique practice characteristics, helps college students maintain good physical, mental, and spiritual health, enriching their extracurricular cultural life. The introduction of online yoga allows students to practice yoga anytime and anywhere, maximizing its educational function, promoting physical and mental health, and alleviating psychological pressure [6].

Researchers Haidt and Allen conducted an experiment where they randomly assigned some school districts to prohibit students from using smartphones and social media accounts until around the age of 14. They found that using internet-connected devices for social media and data collection in a proper way could better improve adolescents' mental health and happiness [8]. Similarly, collecting and analyzing data from college students' internet-connected devices and social media can help prevent and address their psychological issues, enhancing their ability to achieve happiness. Analyzing data from fitness apps like KEEP can also provide insights into students' physical health, promoting healthier physical development.

Benden, Mehta, and Pickens conducted a 35-minute online survey of 515 students, analyzing the data to find that their average smartphone usage exceeded 4.4 hours, and they often adopted non-traditional postures while using smartphones. Therefore, using the same devices that college students use to prompt, encourage, and promote correct usage postures is the most likely way to achieve better health outcomes for them.

In conclusion, the proper use of the internet and electronic devices not only promotes the physical and mental health development of college students, such as enhancing happiness through online social support and social benefits but also alleviates psychological anxiety, thereby enhancing the positive effects of the internet.

2.3. Theoretical Analysis of the Internet

In exploring the impact of the internet and electronic products on the mental health of college students, various research theories provide different perspectives to understand and analyze psychological issues, explaining the different psychological mechanisms behind the internet.

Chang'an Zhang et al. used social cognitive theory to investigate how social media affects college students' psychology and subjective well-being. Their research analyzed how college students, without direct experience, mimic behaviors observed on social media, such as comparing their lives with others, leading to feelings of inferiority and reduced life satisfaction [10]. The study also utilized dependency theory to discover that college students' reliance on smartphones satisfies their psychological needs for socialization, entertainment, and information, but it can also lead to psychological dependency, such as separation anxiety [3].

The above two theoretical studies examined the negative impacts of the internet and electronic products on the physical and mental health of college students. However, everything has two sides. In research, self-determination theory has been used to explain the relationship between social media use and mental health, particularly how mindfulness interventions can enhance college students' autonomy, competence, and intrinsic motivation, thereby increasing their sense of belonging and happiness, reducing social anxiety and loneliness, and promoting mental health and personal growth [7]. Meanwhile, the technology acceptance model emphasizes the core role of perceived usefulness and ease of use in technology acceptance. This study analyzed how the acceptance and perceived usefulness and ease of use of mobile mindfulness meditation applications influence the willingness of nurses and other health professionals to use them [15]. College students, being the most receptive to new things [1], are highly sensitive to the usefulness and ease of use of applications. Therefore,

college students can quickly accept new stress-relief methods such as virtual tourism and online yoga, promoting their physical and mental health development.

3.   Conclusion

The impact of the internet on the physical and mental health of college students is complex and multifaceted. The internet has long been an integral part of students' lives, encompassing a wide range of technologies such as smartphones, social media, and VR virtual tourism. With deeper research, it is evident that while digital technology does have some negative effects on the health of college students, it also fulfills their needs for socialization, entertainment, and learning.

Yiwen Gao, Chenhui Liu, and Ye Chen [2] conducted research from the perspective of smartphone usage frequency, revealing a correlation between the frequency of smartphone use and the physical and mental health of college students. Higher smartphone usage frequency is more likely to result in dependency, such as separation anxiety [3]. Therefore, students should reduce screen time to promote mental health development. On the other hand, Abad Santos [14] and others provided another perspective, suggesting that online social support and interaction can enhance students' social skills and self-esteem, offering a new direction for the positive development of existing social media. Additionally, VR virtual tourism [5] and online yoga [6] are not merely means of escaping reality but also effective ways to relieve stress, offering a new approach to modern mental health education. At the same time, the introduction of mindfulness mobile applications [7] and mobile mindfulness meditation (MMM) [15] proves effective in intervening in students' psychological issues and serves as a low-cost preventive measure. These applications can mitigate the negative effects of the internet on students' mental health while promoting their psychological well-being.

In conclusion, digital technology provides numerous conveniences and opportunities for college students, but it also presents several challenges. Despite the high potential risks associated with the internet, carefully designed applications and proper management of students' usage can balance the pros and cons of digital technology. The positive effects and cost-effectiveness of digital interventions [7][15] on college students' mental health will become essential measures and resources in mental health education.

4.   Existing Limitations and Future Research Directions

Upon reviewing the literature, it becomes apparent that the majority of these studies focus on college students from specific regions or with similar cultural backgrounds, lacking a certain degree of generalizability. Future research should adopt more longitudinal and follow-up study methods, expanding the geographic and cultural scope and extending the timeline to explore the relationship between the internet, electronic devices, and the psychological dynamics of college students. For instance, a long-term experiment could analyze data on the psychological changes of participants over different periods to draw conclusions. Given the rapid development of information technology, the technological applications used in existing research may quickly become outdated. Therefore, research methods also need continuous updates, incorporating emerging technological tools and platforms to study college students' mental health issues. Additionally, interviews with different populations, especially in-depth interviews, can supplement existing research by capturing subtle expressions and deeper information that self-assessment scales might miss. Interview methods can enhance participants' perceptual abilities, clearly showcasing emotional experiences interacting with the internet, particularly in the context of health applications. Considering the high attention modern society pays to the physical and mental health of college students and the rapid development of internet technology, which has become a part of students' lives, further exploration of the positive impacts of online activities such as VR virtual tourism and online yoga on college students is

warranted. Interviews can reveal how VR virtual tourism, fitness technologies like fitness trackers, and online fitness courses specifically enhance students' psychological well-being and happiness.

In conclusion, future research needs to broaden the cultural and geographical scope of studies, adopt more rigorous research designs, and consider the characteristics of emerging technologies to examine the impact of the internet on the psychological health of college students. Through these measures, research can more comprehensively analyze the effects of digital technology on students' mental health and design more effective intervention measures and policy recommendations to help students better manage their technology usage, promoting their psychological well-being and overall development.

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Segmentarity in W.H. Auden's The Unknown Citizen

Yijie Zhang[1,a,*]

[1]*Department of English Literature, Capital Normal University, Beijing, 100080, China*
a. elenazhang0924@163.com
*corresponding author

Abstract: Wystan Hugh Auden, an Anglo-American poet, was regarded as one of the greatest writers of the 20th century. His diverse and influential body of work spans various genres and themes, reflecting the complexities and nuances of modern life. Among his notable contributions is the satirical poem *The Unknown Citizen*, which poignantly critiques the reduction of individuals to mere numbers and data under the pervasive surveillance of authorities. This poem serves as a profound commentary on the dehumanizing effects of bureaucratic systems and the loss of individual identity in the face of societal conformity. In this essay, we will delve deeper into the themes presented in Auden's *The Unknown Citizen* by employing the theoretical frameworks of Gilles Deleuze and Félix Guattari, particularly their conceptions of segmentarity, lines of flight, and related ideas as elaborated in their co-authored work *A Thousand Plateaus: Capitalism and Schizophrenia*. Through this lens, we aim to explore how individuals are systematically segmented and monitored in modern society. We will analyze the mechanisms through which societal structures impose rigid segmentarity on individuals, effectively stripping them of their unique identities. Furthermore, we will investigate the potential for individuals to break free from these constraints, utilizing lines of flight to escape rigid societal structures and reclaim their self-identities. This interdisciplinary approach will provide a nuanced understanding of the interplay between societal control and personal autonomy in contemporary contexts.

Keywords: W.H. Auden, The Unknown Citizen, Gilles Deleuze, Félix Guattari, Segmentarity

1. Introduction

Wystan Hugh Auden (21 February 1907 – 29 September 1973), as known as W.H. Auden, was an Anglo-American poet. He is renowned for the variety of themes, forms, and tones in his works. Auden was a prolific writer of prose essays and reviews on literary, political, psychological, and religious topics, and he also worked on documentary films, poetry plays, and other forms of performance. Throughout his career, he was contentious and influential. He received the Pulitzer Prize in Poetry for his 1947 lengthy poem The Age of Anxiety, the title of which became a common phrase representing the modern era. Critical reactions to his work ranged from contemptuous to passionately affirmative. Following his death, his poems spread to a considerably larger audience via films, radio, and popular media.

Shortly after he moved to America, one of his greatest poems *The Unknown Citizen* was published in 1939. The poem was initially published in *The New Yorker* on January 6, 1940, and then in book form in *Auden's Another Time* (Random House, 1940). *The Unknown Citizen* is a parody of an elegy

to memorize a man who has died recently known only by a combination of letters and numbers, JS/07/M/378. The poem's speaker concludes that this man is nothing less than a model who never challenges or deviates from societal norms. However, through depictions of his seemingly perfect life, the poem expresses satirical and critical attitudes towards the standardization of modern society and the loss of identities of individuals. The poem is implicitly the work of a government agency at some time in the future, when modern bureaucratic trends have reached the point where citizens are known by.

To analyze *The Unknown Citizen*, we should first introduce Gilles Deleuze and Félix Guattari whose theories will be our solid foundation. Gilles Deleuze is a French postmodernist philosopher, and his friend Félix Guattari is a French philosopher, psychoanalyst, and social activist. They co-write *A Thousand Plateaus: Capitalism and Schizophrenia* first published in 1980, which is a seminal work for post-structuralism and postmodernism. The book provides a comprehensive and multilayered examination of numerous philosophical, social, and cultural issues, with a particular emphasis on the relationship between capitalism and schizophrenia. It consists of a set of interconnected essays and conceptual frameworks that question standard habits of thought and provide alternative perspectives on the world. This book's most important concepts are rhizome, segmantarity, lines of flight, deterritorialization, and so on, which evaluate diverse social phenomena and systems. We will mainly adopt the concepts of segmentarity and lines of flight.

In this essay, we will have two parts: one is to introduce the main concepts like segmentarity in *A Thousand Plateaus: Capitalism and Schizophrenia* that we will use to analyze *The Unknown Citizen;* the other is to discuss how individuals in modern society are segmented both molarly and molecularly and how to think outside the square, to regain identities through rigid segmentarity, and to make creation by the help of lines of flight.

2.   Conformity in The Unknown Citizen

When we read *The Unknown Citizen*, the first thing we notice must be the code of the marble monument erected by the government on which there is no name. The dead man seems unknown, but a set of codes still represents him. There is no description of his face, appearance, etc., all is of his "correct" life. Reports from the Bureau of Statistics show that he is a good citizen, even a "saint" because he conducts well and has no complaints. The poem begins with the lines, "He was found by the Bureau of Statistics to be / One against whom there was no official complaint." setting the tone for the bureaucratic and impersonal nature of the tribute[1]. He is a good server of the Greater Community, a good worker for the factory; he pays dues; he is popular among friends; he reads newspapers and watches advertisements appropriately…he completely follows the trajectory of social standards. Auden uses a variety of statistical and official reports to describe the citizen's life, noting his conformity and compliance with societal expectations. The poem lists his achievements and behaviors, such as having the "right" number of children, buying the "right" products, and never causing trouble, all without ever revealing anything about his personal feelings, thoughts, or individuality.

Though the poem appears to praise the life of the deceased "unknown citizen," it does so only because this individual exemplified an obedient, non-questioning life. It seems that only in this way one's life is happy and successful. Through ironic depiction, Auden criticizes the reduction of human life to mere data points and the loss of personal identity in a highly regulated, surveillance-oriented society. The poem's closing lines, "Was he free? Was he happy? The question is absurd: / Had anything been wrong, we should certainly have heard " underscore the poem's central critique: the state's inability to measure true human experience and the inadequacy of bureaucratic metrics in capturing the essence of a person's life[1].

In this poem, Auden shows a critical attitude toward the standardization of modern society that keeps telling citizens how to live a "right" life. People seem to have the right to choose how they live, but as we see in this poem, it is an illusion. Standards set by authorities tell people what to do. Moreover, all his traces of presence are transformed into electronic statistics under the government's prevailing surveillance. During his lifetime, he is anonymous and important. After his death, there is no epitaph on his tombstone, even no name, no description of his traits or hobbits, or anything else, only a combination of letters and numbers representing him. In this sense, he is no different from others, with no self-identity. At the end of the poem, right or wrong is what matters, while freedom and happiness are less than nothing, which is impossible in a society that closely monitors its members. When identity is already lost, will life be happy or free?

3. Segmentarity in A Thousand Plateaus

3.1. Molar and Molecular Segmentarity

"We are segmented from all around and in every direction. The human being is a segmentary animal. Segmentarity is inherent to all the strata composing us[2]." We are segmented in many aspects: for work, we are segmented as a worker within the huge machine of social production; for life, we are segmented as a dweller within a community. However, we are separated from what we are in primitive times. In primitive times, binary opposition is powerful, like man and woman. However, it is generated by machines and assemblages in a more flexible way that is more complex and is not binary. As Levi-Strauss demonstrates, a dualist organization never stands on its own in this kind of society. It is modern society that functions like this. Meanwhile, so many independent circles in circular segmentarity are at the same center as different roots in a central tree. Various power centers fall into a single point, then the central power comes into being, as "apparatuses of resonance" going through all vertical power circles, which primitive society does not. In addition, in linear segmentarity, each segment has an inclination of assimilation, i.e. homogenization. The Roman Empire imposes "a linear reason of state". It is rigid and loses inner dynamics, but it is easier to divide and code. Overall, these kinds of segmentarities belong to arborescent systems. In arborescent systems, which structuralism linguistics advocates, trees' knots embody binary traits, roots embody the center with resonance, and branches embody sets of codes and division. Thus, Deleuze divides patterns of segmentarities into rigid ones and supple ones according to their main differences, with one arborified and the other rhizomatic, which has no fixed hierarchical knots and is of decentralization and multi-direction. The arborescent system based on binary oppositions for thousands of years features a highly rigid segmentarity and hierarchical unification and has an ultimate power center. In contrast, the rhizomatic system features fluidity, diversity, and variation in the form of a stratum.

But it is not appropriate to directly cut the cake into two parts. They are entangled and "every society, and every individual, are thus plied by both segmentarities simultaneously: one molar, the other molecular[2]." Take man and woman as an example: although humans are divided into two sexes molecularly, there is still a woman like a man or a man like a woman and any other micro and molecular relations.

3.2. Lines of Flight

Deleuze holds that besides the line of rigid or molar segmentarity and lines of supple segmentariy, there are also lines of flight. Lines of flight, or "lignes de fuite" in French, refer to paths of escape that individuals or entities take to break away from established structures, systems, or modes of thought. They are the avenues through which creativity, transformation, and deterritorialization occur. In Deleuze's framework, these lines are not merely routes of escape but are dynamic processes that disrupt the status quo, leading to new forms of organization and existence.

Deleuze and Guattari's seminal work, *A Thousand Plateaus*, elaborates on this idea extensively. They argue that social, political, and personal systems are composed of various strata or layers, which often become rigid and oppressive. Lines of flight represent the forces that escape these rigid structures, enabling new possibilities and reconfigurations. For Deleuze, these lines are inherently positive and productive, as they facilitate the continuous creation of new realities.

The concept is deeply intertwined with Deleuze's notion of deterritorialization. In this context, deterritorialization refers to the process by which established territories or realms of thought are dismantled, allowing for reterritorialization, the formation of new, more fluid territories. Lines of flight are the mechanisms driving this deterritorialization, pushing against the boundaries and constraints of traditional territories.

Like the nomads on the grasslands, lines of flight are of fluidity and agency bringing deterritorialization referring to escaping from fixed social, cultural, and other boundaries. As for central power in modern society, molecular penetration has become a way to control and surveil every unit and individual. To break through the constraint of molar or rigid segmentarity blocking and impeding, lines of flight are needed.

4. Segmentarity in The Unknown Citizen

4.1. Segmented life

In *The Unknown Citizen*, Auden portrays a man whose life is meticulously documented and categorized by various bureaucratic institutions. The poem's structure itself reflects the rigid segmentarity of the subject's life. Each line catalogs an aspect of his existence, from his employment to his consumer habits, presenting a segmented and compartmentalized view of human life.

Segmentarity, according to Deleuze, involves the division of society into distinct segments that regulate and control individuals' behavior. The poem's citizen is a model of conformity within these segments. He is described as a "saint" in the eyes of the state, a perfect embodiment of the expected norms and values[1]. His life is divided into measurable, observable units that the state can easily monitor and evaluate: he worked for Fudge Motors Inc., never caused trouble, paid his dues to the Union, and bought a newspaper every day.

In the poem, the unknown man is highly segmented. His life has been divided linearly into specific units: work, marriage, insurance, healthcare, etc. Every aspect is digitized and controlled by a bureau or an institution. His life is under rigid or molar segmentarity. Every bureau is a center of power. Power centers vertically resonate with one another and finally, become a centralized greater machine. It has a set of standards telling people what are supposed to do. In the poem, what political opinions he should hold, how many children he should have, and many other such things are already decided by the authorities. In every segment, the individual is fixed and hijacked by social norms and has no strength to revolt. Through segmenting, this centralized arborescent system becomes an abstract machine that over-codes and binarizes us (we have right deeds or wrongdoings) and leads us toward a society of homogenization where individuals have little freedom.

4.2. Molecular Control

We are under molecular control in mainly two ways: in one way, we gain something we want according to social norms, such as fame, wealth, friendships, etc. Like the man in the poem, he is a good worker, his standards of living are good and he is popular among his friends. In fact, what he gets are parts of means to control and to let people feel satisfied for a period of time. Friendship, wealth, fame, etc. are instrumental powers, that not only can be tools to surveil and judge others, but even making ourselves integrated as a part of the whole mechanics[3].

In another way, it molecularly controls us through fear. Part of the sense of security comes from the clear rules of binarization in modern society, relying on which we live a regular life and have a set of standards to conform. Like the unknown man, it does not matter whether he is happy, but he follows what society teaches him to do, so he is successful in every segment of social norms. And everyone around him takes responsibility for surveilling, judging, and disciplining which they themselves go through. The more we fear the judgment of others, the more rigid we become.

Through psychological control, the values molecularly creep into people's minds. This arborescent system dominates how people think, and everyone already knows and is assumed to know what it means to think[4]. Gradually individuals lose their characteristics, their tastes, their thoughts, and finally their self-identities like the unknown man. In the poem, he follows social standards for his whole life. But for his happiness and freedom, which is really what identifies him? Nobody knows. The man with no identity represents unthinking hollow modern men of conformity under the surveillance and control of central authorities.

4.3. Power of Lines of Flight and Deterritorialization

To break through, lines of flight that ruling authorities keep blocking to maintain the abstract machine of over-coding is needed. It is the desire to appear in the crack of molar systems and has the enormous power of deterritorialization[2]. In *The Unknown Citizen*, the absence of any personal or emotional detail about the citizen suggests a potential line of flight. The state knows everything about his external life but nothing about his internal experiences, desires, or discontent. This gap in knowledge highlights a space where the citizen could possess a hidden interior life, untouched by state surveillance and control. This unknown aspect of his identity could signify resistance to the totalizing grasp of the bureaucratic apparatus.

The poem's final lines pose a crucial question: "Was he free? Was he happy?" These questions imply that despite the exhaustive records and surveillance, the most essential aspects of the citizen's existence—his freedom and happiness—remain uncharted[1]. This ambiguity points to the possibility of lines of flight, where the true essence of a person's life escapes the confines of societal segmentation.

Although we are segmented and over-coded by the abstract machine, lines of flight consist of another kind of abstract machine of decoding and deterritorialization providing possibilities for change and creation. This power of deterritorialization gives us a new train of thought beyond common sense, with which we have the strength to challenge established norms and hierarchies and expand new ways to create and express. Therefore we get to know who we are and find our positions in this world.

However, we must notice that segmentarity of the modern society is a double-edged sword. To some extent, it brings us some sort of order and regularity. In *The Unknown Citizen*, the ultimate goal is not to break current orders but to think concerning differentiation beyond current modes of thinking and re-find our identities in progressing society. In the meantime, we should be on the alert for extremity that leads to despair and destruction in pursuing lines of flight.

5. Conclusion

Wystan Hugh Auden exerted a major influence on the poetry of the 20th century renowned for his versatility and technical prowess. His work spans themes of politics, love, religion, and human nature, making him relevant across various contexts. Auden's early poetry addresses social and political issues, while his later work delves into psychological and philosophical questions. His influence extends beyond poetry to plays, essays, and opera libretti, showcasing his broad cultural impact. Known for his mastery of form and style, Auden's work continues to resonate due to its profound exploration of universal themes and human experiences.

The Unknown Citizen is one of W.H. Auden's most famous poems, written in 1939. The poem is a satirical commentary on the modern, bureaucratic state and the dehumanization of individuals within it. It presents a fictional epitaph for an unnamed, ordinary citizen, referred to only by a government identification number. *The Unknown Citizen* depicts a man as a model who is always compliant with social standards and expectations, but ironically reduced to statistics and finally anonymous and insignificant. It is a true portrayal of modern men like every one of us pursuing success in common sense.

In this essay, we mainly use conceptions of segmentarity, lines of flight, etc. in their co-authored work *A Thousand Plateaus: Capitalism and Schizophrenia* to analyze *The Unknown Citizen*. From the analysis above, we find that modern people are highly segmented in every aspect of modern society that is of both molar and molecular segmentarity. Values and norms of centralized authorities molecularly penetrate individuals for every word and action and set standards for them to lead a right and successful life. However, we should learn to think outside the box by lines of flight that bring the power of deterritorialization and try to create, and challenge established rules and norms to find out what we really want to live for. This is what really identifies us, I suppose.

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Research on the Spread of Memes and the Positive Mental Health of Adolescents in the Internet Environment

Ziyi Tang[1,a,*]

[1]*Huaiyin Middle School, Huai'an, Jiangsu Province, 223001, China*
a. 1162327645@qq.com
*corresponding author

Abstract: With the proliferation of social media and Internet culture, playing memes has emerged as a primary mode of communication among teenagers, demonstrating their ability to interpret text and recreate language. Teenagers transform and use Internet memes in the rapid development of the Internet, constantly carry out innovative transformation and creative development in the development of Internet culture, draw inspiration from learned idioms and allusions and daily life practice, adapt, add, innovate, and form new forms of expression, so as to provide themselves with entertainment and the operation of mental thinking. This new activity promotes positive mental health and aids in the holistic development of teenagers. The purpose of this paper is to explore the influence of playing memes on adolescents' positive mental health in the Internet environment, using a literature review and case analysis. The study found that moderate participation in meme-playing activities under the correct guidance can enhance the sense of group belonging and social interaction among adolescents, thereby promoting their mental health development.

Keywords: Memetics, Internet, Meme culture, Adolescent group

1. Introduction

Internet memes are a cultural trend that has emerged from the Internet's development. Due to the rapid iteration of information technology, the Internet has permeated all aspects of young people's lives, and various forms of expression such as memes, videos, images, and texts have also transmitted, replicated, and evolved meme culture. Language, behaviour, and media can transmit meme culture. According to the 2023 Research Report on Minors' Internet Usage in China, there were over 200 million juvenile netizens in China with an internet penetration rate of 97.2%, reaching 95.1% among primary school students[1]. In recent years, the popularity of the Internet as a new network culture has led to the emergence of network language as a prominent feature in The Times. It not only serves as a means for teenagers to establish social connections and seek validation but also plays a significant role in their mental well-being. Certain popular memes with vulgar or negative content, on the other hand, may provide entertainment but can also have adverse effects on teenagers' daily communication and studies. This means that teenagers should pay more attention to the degree of play, avoid injury abuse, treat the Internet language with respect to its essence, respect differences, and understand personality.

This paper, grounded in meme theory, delves into meme creation and dissemination, examines how playing memes affects teenagers' subjective well-being when using the internet from a social

psychology perspective, and investigates the mechanisms that enhance group belonging and improve virtual social participation in relationships. Through a rigorous logical structure, this paper clearly shows the influence of internet memes on teenagers' positive mental health. Furthermore, it not only deepens the understanding of internet meme culture, but also provides a new perspective for teenagers' mental health education.

2.   Literature Review

Richard Dawkins introduced the concept of a meme in his book *The Selfish Gene*. Similar to biological evolution, memes are units of genes that transmit, replicate, and evolve through cultural dissemination. Memes are the fundamental units of cultural evolution. Any replicable cultural element, such as faith, ideas, style, customs, music, etc., can be considered a meme. Memes can be disseminated and inherited through language, behavior, tradition, media, and other means. Like genes, memes also possess characteristics of replication, variation, and selection. Memes can be People can reproduce memes through communication and dissemination, and different selection pressures in different environments can cause them to mutate during transmission. The dissemination and evolution of memes significantly contribute to the formation and development of culture. It also provides a framework for explaining cultural dissemination, cultural variation, and cultural evolution. The concept of memes is very important for studying cultural phenomena, social behavior, and communication media. The core idea of memetics, a science that studies meme replication, propagation, and evolution, is that different memes adapt to their social and cultural environment to varying degrees[2]. Memes, as a cultural form of internet memes, have sparked a unique trend in teenagers' internet culture in terms of language expression ability. "Meme" has roughly three types of connotations: first, it refers to a joke that is "straight" in crosstalk; second, it refers to plot fragments that fall into three categories: funny fragments, hidden foreshadows, and frequently appearing fragments; and third, it refers to the unspoken network language, which is content that is difficult to understand on the internet without explanation[3]. Meme culture is a form of network buzzwords that are part of contemporary culture. Meme culture often criticises and satirises the political and social status quo in a humorous and fashionable way, which is an indispensable part of internet culture[4]. Through the transmission and interaction of internet memes, individuals who "understand" and "can" memes come together to form a new community, known as a "memes" culture. This culture fosters information exchange, emotional sharing, and identity formation through the internet[5]. As a buzzword within the circle, "meme" does not have the same wide dissemination and popularity as network buzzwords[6]. People form different circles because of their values, interests, and surroundings. Although contemporary network culture seems to be "decentralised" and "no main trend", it has also produced countless small circles. Often, a discourse barrier exists between these small cultural circles. Although different circles can communicate, they may not adapt and understand each other. The "meme" they create within their own small circles is a direct result of the enclosure process. As a result, the "meme" has evolved into a distinct identification sign, indicating that they belong to the same cultural circle as others. When using memes, people can disregard life's rules and express their emotions through them. In other words, hot memes create a carnival that transcends class. The carnival netizens in the internet culture lack rank, status, and identity, akin to a grand masquerade party. Everyone is friendly and casual, allowing them to express themselves in a way that does not align with their usual identities. They also have the freedom to engage in activities they have never dared to undertake, with no abstinence or restrictions[7].

Youth culture defines a meme as a classic passage that is repeatable or interpretable[5]. By imitating and deducing existing hot memes and related materials, individuals can establish a common language and symbol system in a specific group[8]. In addition to reflecting the psychological state of contemporary youth and focusing on hot issues, the youth group's meme culture also enables

teenagers to release pressure and seek emotional resonance in their communication, with entertainment serving as the value orientation, resonance as the basic premise, and integration as the fundamental goal. The youth groups behind the "meme" culture build the "language game" based on their common interests, appeals, value orientations, and other factors. This behaviour, along with the cultural landscape it presents, essentially represents a type of youth culture that embodies emotional, social, and complex characteristics[9]. Just like the contemporary hot topic "Kong Yiji literature," the wave of "Kong Yiji literature" spreads young people's doubts about the significance of education and their confusion about career development. The continuous fermentation of "Kong Yiji literature" will have a complex impact on the establishment of correct values and the social development of young people[10]. Simultaneously, some intriguing memes serve as concentrated representations of specific social phenomena and collective demands of certain groups, reflecting objective reality, satire, and education. For example, 996, 007 (996 means a work system that starts at 9 a.m. and ends at 9 p.m. and works six days a week; 007 refers to working from 00:00 of the day to 00:00 of the next day, seven days a week) objectively reflects the workplace problems of huge work pressure and serious disorder in young people's lives, thus triggering intense social discussions. It also prompts young people to think about the significance of work. Another illustration is the portrayal of "bricklayers" and "experts," a satirical depiction of high-ranking intellectuals disengaged from social reality. This portrayal provokes young people to scrutinize these highly educated individuals and challenges their blind obedience. The "rectification of the workplace" in the post-00s also mirrors practitioners' perspectives on resource allocation and other related issues.

3. The Transmission Route of the Internet Memes

Internet memes exhibit varying trends over time, evolving from traditional text-based formats to contemporary iterations including emojis, videos, audio clips, and other multimedia forms. The evolution primarily reflects attributes such as diversification, rapid iteration and updating, swift transmission speeds, and extensive reach.

The rapid development of the internet has also led to the rise of social media, which has spread memes in various ways. Social media platforms, for example, are important communication channels for internet memes. Social media platforms such as TikTok, Twitter, and Bilibili are the main channels and birthplaces for the spread of memes. These platforms have a large population flow, a large user base, rapid information transmission speed, and automatically push content according to personal interests. So once a meme becomes popular on social media, it can spread in its corresponding circle in a short time. Additionally, social media platforms, functioning as virtual networks, provide a platform for individuals to freely share and disseminate information. Netizens mainly engage in "participatory" communication, while media platforms mainly engage in "reporting" communication. The mutual flow between different channels and different circles stimulates and promotes the formation of the "fission effect." It has further boosted the popularity and spread of internet memes.

Furthermore, communication tools such as WeChat and QQ play an important role in meme spread. Every day, users communicate or share a variety of memes, facilitating their spread. At the same time, post bars and other forums are also important places of origin and dissemination. Due to people's strong desire to express themselves, the forum presents memes in a simple and entertaining form, encouraging discussion. Due to its rapid creation and spread, once a popular meme emerges, netizens swiftly disseminate and share it, subsequently disseminating the intriguing meme to their social circles. Bloggers typically adapt, imitate, or rework secondary dissemination as a strategy to increase traffic and draw attention. This secondary dissemination not only re-exposes internet memes, but it also facilitates their further spread on the internet.

4.   The Association between Online Meme Play and Positive Mental Health in Adolescents

With the rise of the internet and social media, memes, as a special expression of network culture, have become popular among teenagers, forming a unique youth culture. It attracts teenagers' attention with humor, exaggeration, and a unique expression. The phenomenon of online memes is also becoming more common, and there is a close correlation with teenagers' mental health.

The online meme phenomenon refers to all kinds of memes on the internet, such as popular movie and TV drama lines, network buzzwords, and so on. Teenagers find it easy to utilize the numerous memes that circulate on the internet. Playing memes has become a way for contemporary teenagers to participate in life and express their attitudes. Short and concise "memes" have a better expression effect than long words. Teenagers are one of the primary groups that play memes online, sharing and discussing them on social media as a way to express their opinions and emotions. Because teenagers are under the pressure of academic, interpersonal, and daily life, they are eager to vent their negative emotions, and the meme has humorous, ironic, self-deprecating, and other comedic effects. When teenagers participate in a meme activity, they can relieve anxiety and release pressure through the fun brought by humor, ridicule, and parody.

First, playing memes can help adolescents relieve stress and seek positive emotional experiences. Playing memes can bring humour, teasing, and fun and help adolescents relieve anxiety and release stress. This behaviour generates a positive emotional experience, which naturally reinforces the behaviour and encourages its continuation. Teenagers in modern society face significant academic and life pressure, but meme culture, a lighthearted and humorous form of language expression, can temporarily alleviate this pressure, fostering a relaxed spirit of relaxation and emotional release. For example, on the eve of the exam, some students will take an online meme oath: "The best way to eliminate fear is to face fear; persistence is victory," in order to motivate morale and relieve the pressure before the exam. If you want to make fun of something gently, you can sometimes use meme culture.

Secondly, engaging in memes can cater to the social needs and experiences of teenagers: they express their preferences and attitudes through the use of buzzwords and popular memes, while some teenagers showcase their individuality and uniqueness through these memes, thereby establishing themselves as the center of social interaction and gaining acceptance from a wider audience. The conformity effect causes teenagers to conform to the group in order to avoid the loneliness that comes with being separated from it.

In addition, playing memes also contributes to the formation of adolescents' self-concept and helps them seek group identity. Teenagers adapt to their peer group through playing memes and feel accepted by the group, which is of great significance to their self-concept development and group identity. This not only strengthens the communication between friends but also makes the language expression more interesting. Memes also serve as a form of identity, particularly within their respective circles, where individuals use specific memes to define their sense of group belonging.

However, the impact of online memes on teenagers' mental health is two-sided. On the one hand, proper teasing can relieve stress, enhance social interaction, and help alleviate feelings of loneliness and anxiety. On the other hand, there are also potential negative effects. Excessive addiction to online memes may lead to social estrangement, and if the intrinsic value of memes involves vulgar content, it may also cause a distortion of values and outlook on life.

5.   Conclusion

This paper focuses on the positive effects of memes as a specific expression in youth culture. Playing memes can help teenagers relieve pressure and seek positive emotional experiences. Playing memes can satisfy teenagers' social needs and experience of conformity. However, emphasizing the positive

effects of memes is not a simple linear effect, but rather a mechanism that introduces new ideas and strengthens interpersonal relationships. The meme carnival actually serves as a means for the youth group to foster a sense of group integration and a sense of belonging within the community.

More longitudinal research and analysis will be anticipated in the future because the cross-sectional data used in this study may underestimate changes in the longitudinal study. This study exclusively focused on language-expression memes, providing a theoretical framework for creating memes such as videos and emojis. Future research should incorporate additional cultural forms of memes and encourage more individuals to delve into the beneficial effects of internet memes on mental health as they emerge as a new form of youth culture.

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Analysis of Factors in College Enrollment Using Regressions

Shaoming Zhi[1,a,*]

[1]*College of Arts and Science, New York University, New York, US*
a. sz3378@nyu.edu
*corresponding author

Abstract: College enrollment, the process in which families make investments for the future, individuals receive higher education and seek self-improvement, and an aspect closely related to the lives of everyone in a modern society. The trends of college enrollment have been fluctuating due to various factors throughout history, mostly due to socioeconomic factors. In this article, multiple linear regression models are constructed to analyze and evaluate how some possible factors are correlated with the fluctuations of college enrollment in the United States each year from 1973 to 2022. Data for dependent and independent variables were gathered from government and non-profit organization websites such as the Federal Reserve Bank of St. Louis, the United States Census Bureau, and the Educational Data Initiative. The results have shown that many factors are influencing the fluctuations, with GDP and income being the main factors; this article provides a supporting role in making admission policies and country developments.

Keywords: College, College Enrollment, United States

1.   Introduction

Analyzing college enrollment patterns is one of the most direct and effective ways of testing the education that a society has. The amount of people attending college can be affected through many aspects, just as it reflects many aspects as well. Modeling college enrollment can assist in analyzing economic developments, understanding how accessible higher education can be, seeing how willingly households are to send their family members for investments during different socioeconomic statuses, and making policies on education, admission, or funding.

The topic of college enrollment has been a continuous topic discussed by the academic world, and numerous studies have been conducted to understand it more. For instance, research on college enrollment and decision-making during recessions of 2008 and 2020 was done by Barr and Turner, and Dworak, respectively [1, 2]. Jung and Shrestha discussed the effects of financial acts of government on college enrollment, and Manoli and Turner gathered income data and its impacts on college enrollment [3, 4]. Juszkiewicz broke down the details of college enrollment, gender ratio, and completion rate trends for a time series of ten years, and Perna quantified the racial and ethnic group distributions in college enrollment [5, 6].

Most of the existing articles regarding college enrollment focus on only one or two impacting variables. This article aims to examine college enrollment in the entire United States for a time series of fifty years, from 1973 to 2022, with a balanced data set. The results have shown that among five

independent variables, GDP, income, and unemployment rate have statistically significant impacts on college enrollment, and GDP explains most of the variances in college enrollment.

2. Data and Methods

Data in the entire United States from 1973 to 2022 on GDP, median income, tuition, the proportion of the age 5-19 population to the whole population, and unemployment rate were collected from websites including but not limited to the Federal Reserve Bank of St. Louis, the American Institute for Economic Research, and the United States Census Bureau. The reason behind selecting these types of data as independent variables is that the wealth and affordability of colleges directly affect the number of people enrolled in them. Knowing the relative affordability of college with respect to social wealth for fifty years will be beneficial for households, educational institutions, and the government.

Using the data gathered, a time series was constructed in an Excel worksheet. A process of removing the factor of inflations was also applied. With the integration of R, linear regressions were conducted using said data: package "readxl" was utilized to convert the Excel worksheet into a data frame [7]. The built-in "lm" function was applied, and four models were designed. The number of college enrollments was set as the dependent variable; GDP, median income, tuition, the proportion of the age 5-19 population to the whole population, and unemployment rates were set as independent variables. The outcomes, including coefficients, standard errors, p-values, and significance were obtained by using the package "stargazer" [8]. The equations are shown below.

$$log(CollegeEnroll) = \beta_0 + \beta_1 log(GDP) + \varepsilon \tag{1}$$

$$log(CollegeEnroll) = \beta_0 + \beta_1 log(GDP) + \beta_2 log(Income) + \beta_3 log(Tuition) + \varepsilon \tag{2}$$

$$\begin{aligned} log(CollegeEnroll) = \beta_0 &+ \beta_1 log(GDP) + \beta_2 log(Income) + \beta_3 log(Tuition) \\ &+ \beta_4 YouthPercent + \varepsilon \end{aligned} \tag{3}$$

$$\begin{aligned} log(CollegeEnroll) = \beta_0 &+ \beta_1 log(GDP) + \beta_2 log(Income) + \beta_3 log(Tuition) \\ &+ \beta_4 YouthPercent + \beta_5 Unemploy + \varepsilon \end{aligned} \tag{4}$$

Each variable represents their respective following: CollegeEnroll is the number of people enrolled in college in the United States. GDP is the Gross Domestic Product of the United States, in billions of dollars. Income refers to the median household income of the United States, in dollars. Tuition is the average tuition of all private and public colleges across the United States, in dollars. YouthPercent is the proportion of the age 5-19 population to the whole population in the United States, in percentage. Unemploy is the unemployment rate across the United States, in percentage.

3. Results

The regression summary using stargazer is summarized as follows in Table 1. The data for college enrollment, GDP, median income, average tuition, youth percentage, and unemployment were extracted from Educational Data Initiative, Federal Reserve Bank of St. Louis, United States Census Bureau, BestColleges, USA Facts, and Federal Reserve Bank of St. Louis, respectively. [9, 10, 11, 12, 13, 14]

Table 1: Regression of College Enroll on Variables

	Dependent Variable: log(CollegeEnroll)			
	(1)	(2)	(3)	(4)
log(GDP)	0.264***(0.011)	1.061***(0.109)	0.924***(0.233)	0.904***(0.195)
log($Income$)		-1.120***(0.153)	-1.038***(0.197)	-0.857***(0.193)
log($Tuition$)			0.070(0.104)	0.002(0.081)
$YouthPercent$				0.007(0.007)
$Unemploy$				0.019***(0.003)
Constant	14.171***(0.096)	18.592***(0.607)	18.396***(0.678)	16.982***(0.967)
Observations	50	50	50	50
R^2	0.928	0.966	0.967	0.982
Adjusted R^2	0.926	0.965	0.964	0.980
Residual Std. Error	0.060 (df = 48)	0.042 (df = 47)	0.042 (df = 46)	0.032 (df = 44)
F-Statistic	615.695***	672.387***	443.124***	469.584***

Notes: The numbers in parentheses next to a value represent standard error, or degrees of freedom if noted. Trailing asterisks represent the level of significance: one asterisk represents p<0.1, two represent p<0.05, and three represent p<0.01.

The logarithm of some variables is taken before being used in the regression, as doing so has many benefits. When a variable, such as GDP, is numerically large, the amount of change for increasing one unit of that variable is not enough to be shown by three decimal places. When the logarithm of a large variable is used in a regression, it can show the impact of percent changes in the variable, which makes the coefficients easier to interpret. Moreover, not all variables are perfectly linear and have constant residuals. A logarithmic regression can reduce the negative effects of nonlinearity and heteroskedasticity [15].

The main independent variable GDP shows a statistical significance and positive correlation in model (1), and GDP alone was able to provide an adjusted R2 of 0.926. Then, as the second variable Income was introduced in model (2), both are significant, and income has a negative correlation and GDP maintains its positive correlation. In models (3) and (4), the introduction of new variables does not alter the significance and sign of GDP and Income. Though YouthPercent and Tuition have some effect on college enrollment, those effects are statistically insignificant. Unemployment, on the other hand, shows a significant, positive correlation with college enrollment.

Note that interpreting the constant (the intercept when holding all independent variables zero) is meaningless because even though having no youths and zero GDP, income, tuition, and unemployment rate at the same time for a society makes sense mathematically, it is almost impossible that any society would be in such a situation by common sense. And regarding this research, the United States is unlikely to undergo such a situation.

4. Discussion

GDP and college enrollment in the United States are positively correlated. GDP, or Gross Domestic Production, measures the number of consumptions, investments, government spending, and net exports over a given period [16]. In other words, GDP measures all economic activities within a country and reflects how much the government is thriving overall. An increase in GDP means that the economic activities mentioned above are increasing, leading to the citizens having better living conditions. And since the living conditions are improving, more families are capable and are willing to send their children to college for better education.

Median income and college enrollment in the United States are negatively correlated. Firstly, there have been high-salary jobs that do not require a college degree throughout time, such as firefighters, truck drivers, and mechanics. Besides that, many new types of jobs began to exist; as technology became more and more advanced, social wellness became better and better, and online resources became more and more accessible. Social media content creators, digital art designers, web designers, and developers are examples of newly emerged, high-salary jobs if one has talent or can self-study.

There is a nonzero but statistically insignificant correlation between tuition and college enrollment in the United States. The coefficient value is 0.002, which means that tuition for college is quite inelastic. Families that are capable and determined to send their children to college will not change their decision with a change in the amount. Additionally, as GDP and income have been in rising trends from 1973 to 2022, it is likely that spending used on subsidies, financial aid, or scholarship programs for college students has increased as well, which makes college more affordable despite having the same tuition.

There is a nonzero but statistically insignificant correlation between the proportion of the age 5-19 population to the whole population and college enrollment in the United States. Peer competition is a significant factor, and the increase in population outruns the increase in capacity of colleges. As more youths are present, in both numbers and proportions, the criteria for entering college are rising as well. Therefore, as entering college is becoming more and more challenging, many families may choose to have their children pursue different futures in life if their children cannot enter college.

The unemployment rate and college enrollment in the United States are positively correlated. An individual is considered unemployed when that individual is jobless and searching for a job [16]. There are many college students who are actively looking for part-time jobs and interns aside from college work. Those students are considered unemployed, as they are following the same procedure as formally applying for a full-time job. Besides, when the unemployment rate is high, it can also mean that the economy of the country is not ideal. In such cases, attending college instead of working or looking for a job can be better off for many people.

GDP is the main factor contributing to the fluctuations of college enrollment, as it has a statistically significant and positive correlation, and as shown in model (1), it alone has an adjusted R^2 of 0.926. Other factors such as income and unemployment rates are also statistically significant, with the former having a larger impact. The proportion of the age 5-19 population to the whole population and tuition have a nonzero but statistically insignificant correlation.

5. Conclusion

In summary, the usage of regression models to test the trends of college enrollment sufficiently shows statistical significance that reflects socioeconomic factors. Affecting variables such as GDP, income and unemployment rate explains the fluctuations of college attendance throughout the United States during the late 20th century and the early 21st century. It is essential that the data are well-analyzed by households, colleges, and governments to make decisions and make the future of humanity brighter.

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Creating Real Situations, Developing Thinking Tools

—Design and Implementation of the Interdisciplinary Project "Autumn Museum" for Lower Grades of Primary School

Jin Zhou[1,a,*]

[1]*Capital Normal University; Beijing, China*
a. zhoujin1996924@163.com
*corresponding author

Abstract: Children's expressive abilities need to be gradually built. In the lower grades of primary school, real situational tasks should be used as the teaching environment, students' task inquiry activities as the main line of learning, and language interaction between teachers and students as the teaching technique. The ultimate goal is to enhance individual language experience centered on students' pragmatic abilities. By using situational tasks as the main line, continuously providing students with tools for expression, and achieving the learning objective of children's creative expression through a structured language construction process. This paper develops and designs an expressive literacy course based on the first semester Chinese textbook for first graders.

Keywords: Situation, Interdisciplinary Learning, Thinking Tools.

1.   Introduction

1.1.   Emphasizing Individual Language Experience of Students

The formation of students' individual language experience is always in dynamic language practice, and how students' language learning occurs is a significant focus. The 2022 curriculum standards frequently mention, across various content sections, that learning happens in real and meaningful contexts and challenging tasks. All learning activities are based on students' autonomy, voluntariness, self-awareness, and self-consciousness. How do students engage in language learning? The curriculum standards clearly describe the actual learning situations in the Chinese language curriculum. The core literacy cultivated by the compulsory education curriculum standards is accumulated and constructed in active language practice activities and demonstrated in real language use situations. This means that the more complex the language context students enter, the richer the language practice activities they experience, and the more targeted and operational their individual language experience becomes.

1.2.   Requirements of the Curriculum Standards

Interdisciplinary learning is prominently reflected in this excerpt from the new compulsory education curriculum standards: "Guide students in Chinese language practice activities to connect in-class and

out-of-class, school and community, broaden the fields of Chinese language learning and use; around meaningful topics in academic learning and social life, engage in reading, sorting, inquiry, and communication activities, and in the process of comprehensively applying multidisciplinary knowledge to discover, analyze, and solve problems, improve language and text application skills." [1] Teachers should utilize the ubiquitous Chinese learning resources and practice opportunities, guiding students to pay attention to experiences related to family life, campus life, and social life, enhancing their awareness of learning and using Chinese in various contexts. They should guide students to learn language and text application skills in diverse everyday life scenarios and social practice activities, fully exploring the application of Chinese literacy in interdisciplinary learning. The interdisciplinary project "Autumn Museum" fully integrates Chinese, mathematics, science, labor, and art subjects.

The Chinese curriculum should guide students in real language use situations, accumulating language experience through autonomous language practice activities. Students' language learning should originate from the real need for language use in life and serve to solve real-life problems. This approach stimulates students' interest and enthusiasm in exploring and solving problems. Based on real needs and problems, focusing on problem exploration and resolution, this fully embodies the practical essence of the Chinese curriculum. It also reflects the language practice learning atmosphere and environment created by a practical language classroom. Such situational designs are generally based on textbook content and contextual features. [2]

1.3. Authentic Learning Tasks

Learning tasks arise in specific contexts and aim to achieve particular goals by comprehensively applying the relevant knowledge and skills acquired to solve real problems. The task activities mentioned in the 2022 curriculum standards indicate that teachers no longer focus on instruction and mechanical practice but start with teaching content. This approach is based on authentic language use contexts, integrating listening, reading, and writing activities, and setting challenging learning tasks. Students are given clear task objectives and engage in activities such as sorting, inquiry, and collaboration to solve real problems, thereby cultivating their language use abilities. [3]

In this process, tasks are set in specific contexts, the goals aim to solve real problems, and activities are the means to complete the tasks. In this design, the activity goals of the Autumn Museum are broken down into individual learning tasks, allowing students to develop their Chinese literacy progressively through these tasks.
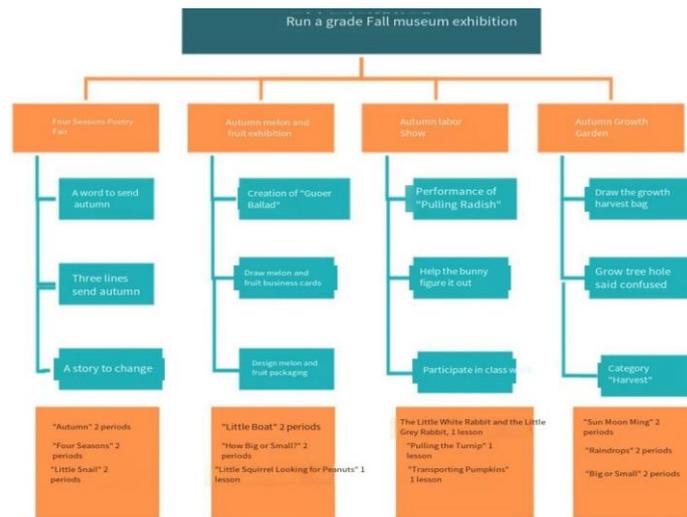
Figure 1: Interdisciplinary project "Opening an Autumn Museum"

2. The Value and Practical Path of Creating Learning Situations

2.1. Three Elements of Learning Situations

To explore how to create real and meaningful Chinese learning situations, it is first necessary to clarify the core elements of a learning situation. Drawing on relevant research findings and practical experiences from both domestic and international sources, I believe that teaching objectives are the soul of a learning situation. A Chinese learning situation should consist of three core elements: the background that serves the objective, the problem corresponding to the objective, and the task to achieve the objective.

2.1.1. Background Serving the Objective

The background serving the objective refers to the themes, characters, things, events, and their relationships that are selected, edited, and assembled based on the current learning objective. This background can be a real social event, a piece of text, or an image. The background is the material for constructing the learning situation, but it is not equivalent to the learning situation itself.

2.1.2. Problem Corresponding to the Objective

The problem corresponding to the objective refers to the problems or conflicts set in the constructed specific scenario based on the current learning objective. These problems and conflicts determine whether the learning situation can trigger the students' cognitive process and are the core of constructing the compelling structure of the learning situation. True learning occurs when students mobilize all their experiences, prior knowledge, and strategies to overcome one or a series of obstacles.

2.1.3. Task to Achieve the Objective

The task to achieve the objective refers to the concretization and gradation of the solution methods for the problems and conflicts set based on the current learning objective. This means the specific things that students are clearly required to do within a specified time and according to certain requirements in the learning situation. In task design, it is sometimes necessary to provide students with certain learning scaffolds to facilitate their gradual completion of tasks from shallow to deep.

2.2.   The Path and Practice of Creating Learning Situations

First, the textbook resources, such as the texts "Autumn," "The Four Seasons," and "The Little Snail," are used to create contextual roles, allowing children to better immerse themselves in the content. The situation is the context involved in classroom teaching content. In specific first-grade Chinese language teaching, based on the psychological cognitive characteristics of first-grade students, a step-by-step teaching strategy of "concrete perception—emotional experience—thought expression" is clarified using the textbook. Through the learning theme and practical activities of the Autumn Poetry and Prose Exhibition, interdisciplinary learning situations, literary experience and cultural participation situations, and daily life situations are created to stimulate students' enthusiasm for literary reading and creative expression.

Overall, the situational settings of the three texts under the autumn theme are combined with the seasonal theme of autumn in the curriculum, relying on the typical scenes of children's existing life experiences and campus life, and providing detailed interpretations of the language characteristics and textual features of "Autumn," "The Four Seasons," and "The Little Snail."

2.2.1. Setting Situations Based on Students' Cognitive Characteristics

The situational setting for "Autumn" is "The Magician of Autumn." At the beginning, the teacher creates a situational task for the students, asking them to collect and illuminate nine magic gems given by the Magician of Autumn and embark on a journey to find the magic of autumn with the magician. Using language, students experience an immersive situational experience, discovering the hidden magic in autumn. Through individual reading, group reading, and comparative reading, students gradually and independently feel the magical changes brought by autumn. Continuing to use the situation to guide students' learning, they further discover other magical changes of autumn. At this time, students transform into leading geese, thoughtful geese engaging in immersive role-based reading, and experience emotional reading by assuming roles. Finally, students discover many more hidden magical changes in autumn, realizing that the magic of autumn changes everything in nature. The magician reappears, inviting the students, accompanied by music, to present autumn poetry to autumn. In this fairytale-like scene, students' interest is greatly stimulated.

2.2.2. Setting Situations Based on Chinese Language Elements

The situational setting for the text "The Four Seasons" is "The Magician of the Four Seasons." At the beginning of the class, the role of "The Magician of the Four Seasons" is created. She is a magical magician who waves her wand and conjures up many little elves such as grass buds, lotus leaves, grain spikes, and snowmen. Then, the children, wearing headpieces of the little season elves, perform a role-play reading of the elves of the four seasons, experiencing an immersive role-playing activity. Finally, "The Magician of the Four Seasons" reappears and issues a challenge task: to present a poem for each season. The children transform into little elves of the various seasons and create seasonal nursery rhymes. In short, through various situations, the children engage in repeated role experiences, personal participation, and situational performances. This immersive learning experience within the situations stimulates their enthusiasm for literary reading and creative expression.

2.2.3. Setting Situations by Connecting to Life

"The Little Snail" is a story about the changes of the four seasons, where the tool used is the creation of a story using three magical elements discovered and proposed by the children based on their learning of the story. First, "turning fragments into a whole," where students realize that the story unfolds in the order of the seasons through a picture, also gaining an understanding of the cyclical

pattern of the seasons. Second, "comparative observation," where students grasp that each season has its representative scenery with distinct characteristics. Third, recognizing that the story unfolds with the repeated phrase "crawling, crawling" of the little snail, highlighting the recurrence of key phrases in the language of the picture book. In this process, the value of the situation is fully explored, and students step by step engage in learning within the situation, enhancing their expressive literacy.

3. Building and Practicing Tools Based on Chinese Literacy

3.1. Visualization Tools for Thinking

In the sub-task "Four Seasons Poetry Meeting," situational creation is carried out to inspire children's desire to express. How can we ensure that every child has something to say and can articulate complete and even aesthetically pleasing sentences? This requires the teacher to set up specific and appropriate tools.

3.1.1. Tool One: Pictures

"Autumn" serves as the introductory lesson, where the first magical tool is a large number of vivid and intuitive pictures. These pictures, sourced from life and the campus, help students observe and discover the changes brought by autumn, providing them with content to talk about. The second magical tool is constructing sentence patterns for students to follow. The core of the "Autumn" text is the word "change," and the most basic sentence pattern in the text serves as the minimum goal for students' expressive output, guiding them to focus on the changes of autumn while encouraging and respecting their diverse and free-form verbal expressions. "The Four Seasons" is a playful nursery rhyme with a strong rhythmic sense, and performing recitations is a form of creative expression. Suitable rubrics guide children to add expressions and actions to interpret the little poem. This helps students accumulate classic language patterns and develop a good sense of language. The second magical tool for "The Four Seasons" is also sentence construction, but it progresses from the single autumn sentence. First, children discover similarities and try using reduplication to say a sentence, then notice differences and practice by imitation. Using two different sentence patterns, they create three-line oral poems; an optional format is provided where children choose representative items of the seasons and make name cards for them, encouraging them to engage in written creation through drawing and writing.

3.1.2. Tool Two: Senses

In life, beauty is not lacking; what is lacking is the eyes to discover beauty. Perceiving beauty actually requires us to engage all our senses. Utilizing the five senses can help students broaden their thinking, experience deeply, and inspire diverse cognition. In this process, their language expression will also evolve from being monotonous to becoming enriched.

Additionally, teachers guide students to create "Four Seasons Magic Name Cards," encouraging children to share their completed cards with friends, thereby expanding their cognition and language skills. Such writing and drawing activities allow children to connect life with literature, expressing their emotional experiences through artistic and literary forms. The mastery of beautiful language requires accumulation, replication, and reinforcement, which engraving these forms onto paper will deepen children's impressions and continuously immerse them in literary environments indoors.

3.1.3. Tool Three: Sequence and Repetition

"The Little Snail" is a story about the changing seasons. The tools constructed by the teacher are the three magic techniques for creating stories, which were proposed by children based on their

exploration of the story. First is synthesis from the parts, using a picture to help students understand that the story unfolds in the sequence of the four seasons, while also fostering a regular recognition of the seasonal changes, which cycle endlessly. Second is comparative observation, understanding that each season has its representative scenery with distinctive features. By this point, our children have already grasped the basic concept that "the succession of the seasons creates the diverse beauty of nature." Third is discovering that the story unfolds as the little snail "crawling, crawling," which replicates key sentence patterns in picture book language. Using these three magic techniques, telling the story of the school's four seasons to the little snail is the core task of this lesson.

The specific operational process involves the teacher dividing the students into groups of four, distributing pictures of the school's four seasons. Group members need to observe and arrange the sequence of seasonal changes. They should then carefully observe the pictures they receive to discover the characteristics of the scenes depicted. Finally, using sensory tools, they transform these observations into key sentence patterns and connect them. They then share their work on stage, presenting the four seasons composite images through posters, and creating stories about the school's four seasons.

3.2. Design and Application of Evaluation Tools

In a "language practice-oriented classroom," it is essential to establish an integrated classroom operation mechanism of "teaching - learning - assessment" based on pragmatic teaching objectives. This ensures that the individual language experiences of students, centered on pragmatic competence, are genuinely enhanced. Pragmatic assessment is not only an important component of students' language practice activities but also provides precise feedback on students' pragmatic current status and fosters precise reflection on their language practices.[4] In a "language practice-oriented classroom," precise feedback and reflection require designing evaluation scales from two perspectives: first, the linguistic expression level, which assesses whether the application of pragmatic knowledge enhances students' current language proficiency, coherence, specificity, and clarity; second, the language communication level, which evaluates whether oral and written language align with role identities, whether the tone and wording match task contexts, and whether the content persuades and captivates the audience. Pragmatic assessment is divided into two levels: self-assessment by students, reflecting on and evaluating themselves against the evaluation scales, and peer assessment, where students engage in interactive discussions within small groups, and more importantly, across the entire class, introducing task scenarios, assuming role identities, and providing real-time evaluations of pragmatic communication effectiveness.

Learning a language and applying it involves a gradual process. Initially, individuals may have limited language knowledge and poor pragmatic skills. However, as they grow older, their language knowledge expands continuously, their pragmatic practices accumulate, and their pragmatic skills gradually improve and strengthen. [5]

4. Conclusion

In interdisciplinary tasks at the elementary school level, the design of core tasks, the development of specific sub-tasks, and their implementation all require frontline teachers to fully grasp students' cognitive characteristics. They should view student development from various dimensions of life, create appropriate and realistic contexts, and under the impetus of tasks, develop tools that facilitate student learning. This aims to enhance student competence and establish a practice-oriented classroom, ultimately helping students improve their problem-solving abilities.

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Impact of Stigma Towards Mental Illnesses and Measures to Reduce Stigmatization

Yiting Chen[1,a,*]

[1]*Jinhua New Oriental Academy, 258 Changqingteng Road, Jinhua, China*
a. yiting1118@outlook.com,
*corresponding author

Abstract: There is a chance for anyone to experience mental illness. Despite this prevalence, there are still many social misconceptions, stereotypes, prejudices, and even discrimination against mental illness and those who experience it. Mental illness stigma is the bias and discrimination that results from the perception that a person or group has traits that are perceived to be different from and unacceptable to others. Because of the stigma, seemingly ordinary social lives, jobs, and different rights can become difficult for people with psychiatric experiences. This article will look at destigmatization, which is how to remove stereotypical images of mental illness and examine the causes and solutions of stigma.

Keywords: Destigmatization, Mental illness, Mental diseases, stereotype.

1. Introduction

Psychological disorders are very common in contemporary society, and there are people in any group who suffer from psychological disorders. Many people are not very familiar with the term mental illness. From a scientific perspective, mental illness is caused by brain dysfunction, which undermines the integrity of human brain function and the unity between individuals and the external environment. Patients with mental illness may have abnormalities in their consciousness, emotions, willpower, behavior, and other aspects, which can prevent them from maintaining a normal mental life, and even engage in behaviors that harm themselves and the community, such as suicide or homicide. In today's society, the main mental illness patients are mostly teenagers, and the most common mental illnesses that teenagers suffer from are depression and anxiety [1]. Anxiety disorder is characterized by experiencing anxious emotions, while depression is characterized by continuous and long-term low mood. These two mental illnesses are the most common, popular, and familiar to people, so when people hear these two words, they will associate them with negative emotions. Regardless of age, when people hear the word 'mental illness' or even' mental illness', their first thoughts are of mentally ill individuals, idiots, or fools. But the fact is that mental illness is just a disease that, like other illnesses, requires treatment and care. Compared to other diseases, mental illness seems less dangerous because it is not contagious. But due to people's continuous belittling of it, the term 'mental illness' has been stigmatized, which has led many people to have different views on this term and this group of people. This has led to many mental illness patients finding it difficult to accept themselves thus exacerbating their condition. Eliminating stigmatization not only allows people to recognize mental illness but also allows them to accept and protect this group, thereby enabling patients with mental illness to recover from their conditions. In this literature review, the main focus will be on

raising awareness of stigmatization and removing it from those with stereotypical images, to protect this group of patients with mental illnesses.

Stigmatization is a dynamic process in which a group imposes human inferiority complex on another group and maintains it. It shapes the negative characteristics of that group, thereby masking other characteristics and becoming an indicator that essentially corresponds to the characteristics of that group. Stigma is composed of multiple behaviors, including labeling, stereotypes, social isolation, social status impairment, and discrimination, and can only exist when one group in society has the right to impose the aforementioned behavioral elements on another group; Stigma manifests as stereotypes, biases, and discrimination, encompassing cognitive, emotional, and behavioral components. In short, stigma is a negative label that can have a series of negative effects on the holder. [2] The signs of stigmatization are easy to identify, and once this special relationship is formed, it will continue to develop and eventually become cultural bias, and solidified values are difficult to eliminate in the short term. In other words, the stigma established in society can easily transform into structural cultural fixation. If people's attention to stigma targets becomes a part of daily life, then no field of life can escape its influence. Ultimately, even if relevant institutions use a significant amount of social, economic, and political power, it is difficult to "correct" stigmatized objects. Mental illness has two extreme myths and stigmatization, with healthcare professionals including psychiatrists having biases against patients with mental illness. Their views may be influenced by clinical, social, and cultural factors. Although psychiatrists believe that diagnostic results are not a form of stigmatization, they still pay great attention to responding to patients in the least affected way by stigmatization. They tend to believe that stigmatization is inevitable given the nature of certain mental illnesses. In the context of China, concealing diagnoses seems to be a common approach. Stigmatization can distort people's normal risk perception structure, leading to fundamental damage to the positive image of things, people, or institutions. In serious cases, the standards of justice, fairness, and safety in daily life will be unreasonably overturned, and most people only focus on the abnormality of the event and the despicable consequences. It is precisely because people have insufficient understanding of mental illness that even psychiatrists have certain biases against patients with mental illness. Due to a lack of understanding, these biases have developed into stigmatization, which has also created negative images of mental illness in people's minds. [3]

2.   Types of Stigma

There are many classifications of stigmatization, including: First, Public stigmatization and self stigmatization based on the target of the stigmatization. Public stigma refers to the stigmatization of a group by the general public; Self stigmatization refers to the internalization of stigmatization by individuals, resulting in stereotypical influences, discrimination, and other behaviors towards themselves. Second, According to the visibility of stigma, it can be divided into visible stigma and hidden stigma. Third, According to the perception of stigma by the stigmatized person, it can be divided into explicit stigma and implicit stigma. External stigma is a stigma that individuals themselves can perceive; Implicit stigma is a stigma that an individual is unaware of but has an impact on the individual at a subconscious level. In addition, stigmatization may also affect individuals who have close relationships with the stigmatized person, and this type of stigmatization is known as co-stigmatization, which can also have a negative impact on the stigmatized person. The following three points provide a detailed introduction to these three types of stigmatization. And analyzed the causes of these three stigmatizations.

First, Previous research on public stigma has mostly focused on the impact of public stigma on peer relationships among adolescent mental illness patients. Research has shown that compared to adolescents with asthma, adolescents with ADHD and depression often face more stereotypes and discrimination from their peers; The willingness of participants to engage in activities with

adolescents with psychological disorders is lower, and their relationship distance and physiological distance are also farther. Companions of adolescents with mental illness believe that they are more likely to engage in antisocial and violent behavior, and attribute this negative behavior more to the affected adolescents themselves, holding negative attitudes and biases towards them, and even engaging in bullying. In 2016, researchers constructed a 7-factor model to describe peer stigmatization behavior towards diseased adolescents, which includes risk, enthusiasm and ability, sense of responsibility, negative attributes, prejudice, classroom discrimination, and friendship discrimination. Peer relationships have a significant impact on the happiness and sense of belonging of adolescents. Children who frequently encounter peer rejection often lead to negative outcomes and may exhibit externalization problems, such as violent behavior and antisocial behavior. Peer rejection and low-quality interpersonal relationships may lead children to experience more depression and loneliness, and may lead to learned helplessness, thereby reducing or even stopping social behavior; These results are also likely to exacerbate the interpersonal problems faced by stigmatized teenagers, creating a vicious cycle. [4]

Second, Self stigmatization: The general population itself has negative stereotypes about mental illness, and mental illness patients may be discriminated against as a result. Long term exposure to such an environment may lead to internalization of these negative stereotypes, causing individuals, especially adolescents whose self-concept has not yet matured, to develop negative self-concept. Teenagers with higher levels of self stigma often have lower levels of self-esteem, lower levels of self-worth and happiness compared to other normal peers, and often report more severe depressive emotions, which can reduce their self-efficacy, generate negative attributions, lead to decreased performance, lack of interpersonal communication, and seriously affect their physical and mental health development. In addition, self stigmatization can also make sick teenagers feel different from others, feel ashamed or embarrassed. These negative feelings can affect an individual's attitude towards medication and related mental health services, as well as their interpersonal relationships. Teenagers with illnesses believe that using medication can exacerbate their feelings of being different from others, thereby reducing their compliance with medication use; Or even less willing to actively seek relevant mental health services, which can hinder their recovery from mental illness. Teenagers with illnesses may fall into a vicious cycle of lacking social support in order to avoid the impact of stigma and reduce their ability to establish interpersonal relationships with others. On the other hand, they may be more inclined to seek individuals who face psychological problems or stigma similar to themselves when choosing friends. Research has shown that peers who also suffer from mental illnesses can better empathize with each other, support each other, and thus overcome stigma issues. But some teenagers also mentioned in interviews that they are transmitting negative emotions to each other, and this peer relationship may also hinder their own recovery.

Third, Joint stigma, on the other hand, parents themselves have the decision-making power over whether sick adolescents can receive relevant medication treatment and psychological counseling and other mental health services. If parents have misconceptions about mental illness, it is likely to delay the recovery of affected adolescents, even worsen their condition, or lead them to face more pressure and develop more serious negative emotions. The higher the degree of stigmatization of mental illness by parents, the more inclined they are to keep their children away from peers with mental illness, and these parents are also more difficult to detect their children's mental illness, resulting in their children not being able to receive timely help. This attitude of parents may make adolescents with mental illness more inclined to conceal their own problems, and may also be unable to identify their own problems early due to a lack of interaction with peers who also suffer from mental illness, reducing their likelihood of receiving relevant help earlier. Suffering from stigmatization from family members may also lead to adolescents with illnesses being more prone to experiencing various conflicts with family members, resulting in more negative emotions such as anxiety and depression; In addition to

the lack of social support from family members, there is less interaction with peers, teachers, and other proactive coping strategies such as going out for exercise and gathering with friends during the epidemic period. As a result, social support may also be limited due to the epidemic. Therefore, teenagers with illnesses are more helpless and more likely to develop some negative coping strategies, such as addiction to mobile phones. Therefore, during the epidemic, the negative emotions accumulated by affected adolescents in the face of stigma may worsen their own condition and even pose a risk of self-injury and suicide.[5]

2.1. Causes of stigma

People often discuss how serious the stigmatization of mental illness is, but they have never thought about how it is formed. Through investigation, it was found that the main reasons for the stigmatization of mental illness are as follows: First, Sense of responsibility. In fact, patients with mental illness also have a sense of responsibility, and they are no different from ordinary normal people when they are not sick. The so-called sense of responsibility refers to mental illness patients being afraid of affecting others around them when they are not sick. Many times, mental illness patients need to take responsibility for their own conditions, including when they are sick. But not everything can be chosen, and they cannot control themselves even in a state of illness. Therefore, everything they commit after falling ill will be held accountable by others, resulting in them receiving not sympathy but shame and stigma. Second, The uncertainty of mental illness, as it is difficult to treat, creates uncertainty. People are unsure when the illness will improve, when it will recur, or when it will recur after recovery. This leads to people who come into contact with mental illness being more resistant due to these uncertainties, which naturally leads to stigmatization of mental illness. Third, Risk: There have been many cases where patients with mental illnesses have harmed strangers without reason during the onset of the disease. Therefore, many people tend to avoid encountering mental illness patients again when they see this news, because they are afraid that this random violent behavior will happen to them. However, in fact, they are not dangerous during the non-onset period, but they need more care and treatment.[6]

2.2. Factors that Influence the Level of stigma

The main reason for stigmatization is: First, Responsibility, which means to what extent the public believes that a person's psychological problems are due to their problems. People believe that the greater the responsibility of patients, the more likely it is to cause negative public evaluation, and the more people cannot produce empathy [7]. For example, people believe that colds are caused by viruses, and depression and anxiety are caused by their own fragile and sensitive inner selves. Therefore, no one will discriminate against a person with a cold but criticize a depressed person. Second, Risk level, indicating to what extent people believe that patients with mental illness pose a threat to themselves. Of course, the more dangerous one feels, the stronger the prejudice. Mass media has an indelible 'contribution' in this dimension. In biased news reports, it is often seen that suspects are in a period of mental illness and do not have the capacity for criminal responsibility when committing crimes (psychological problems are easily used as excuses to escape legal sanctions). Patients with psychological disorders appearing in movies and TV dramas are all facial expressions, either crazy or foolish. Third, Rarely, the public believes that the less common a certain psychological problem is, the more severe it is and the higher its degree of stigmatization. This may still stem from humans instinctively developing a fear of things they do not understand. For example, for those unfamiliar with the term 'dissociative identity disorder', their imagination of it may be to the extent that 'the patient will suddenly become a perverted homicidal maniac and then suddenly return to normal without remembering anything'. Forth, The degree of infection. Because many ordinary

people do not know anything about mental illness, they may feel that it is an "infectious disease". They will feel that mental illness is contagious, just like the common cold. As long as both sides are close to each other, they will get sick. The real infectious disease is stigma rather than mental illness. So, when a person has uncertainty about mental illness, what he says will affect the judgment of people around him on mental illness, spreading from one generation to another, and stigmatization arises in the middle. People's fear of the extent of disease transmission is also amplified. Gradually, people also have misunderstandings about mental illness, which leads to people being very resistant to mental illness, but when they hear this word, they want to avoid it. [7].

2.2.1. Measures to reduces Stigmatization

By "decontaminating and nominating" mental illness, it can reduce the huge psychological gap caused by illness, reduce patients' sense of shame, and provide an inclusive diagnosis, treatment, and care environment for mental illness patients and their families. This is also a form of medical humanistic care. The lifting of psychological shackles may bring back mental patients who are hovering on the brink of suicide, and may also add a sense of calm and confidence to their work and life. Therefore, it is urgent to "decontaminate" mental illness. There are different ways to remove the stigma. The first and fundamental approach is to promote the development and progress of this society. Whether people are patients with mental illness, scholars, relatives, or friends of patients, they should stand up and speak up for mental illness to oppose these biases and discrimination. Only in this way can the public opinion of our society be gradually changed, and our society can progress. If this society advances one day earlier, millions of children will suffer less. This society has made progress one day earlier, and the struggles we have experienced can prevent us from repeating the same mistakes. The second option is to offer educational courses at all stages of the school, which is the easiest way to do so, such as offering psychological counseling classes or coaching. This course allows the coach to take time to talk about some content about de-stigmatization, starting with an introduction to mental illness and ending with de-stigmatization. And this course must be set as a compulsory course, that is, its necessity is the same as that of Chinese, mathematics and English, but the number of periods can be appropriately reduced, for example, there are only two classes a week. Through the establishment of such courses, people can make children aware of this problem from an early age. As they grow older, their education varies, and their thoughts differ from those of the older generation's parents. Therefore, stigmatization can be removed. [8]. The third method is very effective but also has a certain degree of "challenge". To put it better, it is protest, while to put it worse, it is riots. Throughout the entire history of China, many dynasties' reforms, equality treaties, and festivals began with uprisings. Although people will see many examples of failure and their outcomes are also very pessimistic, this does not mean that they cannot uprising. In today's society, The Internet can bring us a lot of traffic, and events of all sizes will be played on different websites and social media. Protester marches can bring huge traffic. Although the government will stop them promptly, at that time, the news of the "decontamination and branding" march had already been circulating on the internet. Most people will take care of this news and spread it to the people around them. Although it can attract attention, it can also bring certain negative effects. Some people may feel that it is precisely because of the unreasonable control of mental illness that this farce has occurred. This not only does not achieve the desired effect but also has the opposite effect, making the stigmatization more deeply engraved in people's minds. Even so, it can have a certain degree of decontamination and branding effect. [9]

3.   Future Directions

Overall, there is relatively little research on stigma issues among adolescents with mental illness at present, and many of the effects of stigma on them often come from research results of adult participants. The main problems with existing research include: First, Relatively limited research scope. At present, researchers mostly focus on public stigma and self stigma, and there is relatively little research on other types of stigma.[10] The research objects are mostly focused on peer relationships among adolescents, and there is less exploration of other research objects and other stigmatized behaviors. Second, Insufficient research depth. The existing research methods on the impact of public stigma on adolescents are relatively simple, mainly through designing short stories and using questionnaires and other methods to understand the views of adolescents on their peers with psychological disorders. However, the specific ways in which adolescents generate such stigma and how these stigma affect them through specific psychological mechanisms remain unanswered. In terms of research on self stigma, existing studies often use qualitative research methods, but the conclusions drawn are often common sense and do not delve deeply into the psychology of adolescent self stigma. Third, Lack of theoretical framework. Although there are already some theoretical frameworks in the field of stigma research to explain the mechanisms of stigma, such as label theory, modified label theory, etc., these theories themselves are based on adult research results, and adolescent groups have their own characteristics. Therefore, existing theories may not be suitable for adolescents, and further development of relevant theoretical frameworks for adolescent groups is needed.[11]

Future research should focus on the following points: First, From previous studies, it has been found that not every teenager with mental illness will encounter stigma problems, and this proportion is not low. Therefore, the differences between adolescents affected by stigma and those not affected by stigma are worth further exploration by researchers. Second, The specific mechanism by which stigma affects adolescents is still unclear, and future research should further explore how stigma specifically affects the psychology and behavior of adolescents. There is a theoretical connection between public stigma, self stigma, and associated stigma. However, the actual nature of this connection, whether they interact and lead to various problems among adolescents, is also a gap in existing research. Third, Consider further exploring the long-term mechanisms of stigma's impact on adolescents through longitudinal research design and mixed design.[12]

4.   Discussion and Conclusion

The stigmatization of mental illness has a certain impact on this society, and removing stigmatization can lead to a better society. There will be no parents saying that their child is sick, and no teachers rejecting their child because they have mental illness. There, all patients with mental illness will not remain silent due to fear of colored glasses. There, mental illness will no longer be a curse. There, those who suffer from severe mental illness will be accepted by society and live a dignified life. If people can all speak up about this disease without hesitation in the future, our entire social public opinion will change. What changes with it is a child's subconscious as they grow up. If a child, from childhood to adulthood, hears and sees many mental illness patients and thinks it's normal and indifferent, will he remain silent when he gets sick? My parents will still tell him, 'Don't tell anyone,' won't they? In this society, the child's recovery rate will definitely be much faster than today. So, people must break the silence, must recognize that they can change a certain concept of this society. They are not only promoting social progress but also saving people and life and death. By "decontaminating and nominating" mental illness, it can reduce the huge psychological gap caused by illness, reduce patients' sense of shame, and provide an inclusive diagnosis, treatment, and care environment for mental illness patients and their families. This is also a form of medical humanistic

care. The lifting of psychological shackles may bring back mental patients who are hovering on the brink of suicide, and may also add a sense of calm and confidence to their work and life. Therefore, it is urgent to "decontaminate" mental illness.

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Causes of Interlanguage Fossilization and the Coping Strategies

Yuhu Li[1,a,*]

[1]*School of Foreign Languages, Jiangsu University, Zhenjiang, Jiangsu, 212013, China*
a. 2257430384@qq.com
*corresponding author

Abstract: Interlanguage fossilization is an important topic in the study of second language acquisition, which involves changes and solidifications in the language acquisition process that learners develop while learning a second language. The purpose of this paper is to explore the concept of interlanguage fossilization, its causes and its implications in language teaching and education. This paper firstly introduces the concepts of interlanguage language and fossilization, and then focuses on the causes of this phenomenon, including both intra-individual and external environmental factors. Then, the paper puts the impact of the interlanguage fossilization phenomenon in language teaching and education, and how to prevent or slow down the occurrence of it through effective teaching strategies into discussion. Through an in-depth study of interlanguage fossilization, the language acquisition process of learners could be better understood, thus contributing more effectively to the development of language teaching and education.

Keywords: interlanguage, fossilization, teaching strategies, second language acquisition, linguistics.

1.   Introduction

Research in the field of second language acquisition has made significant progress in exploring several aspects of the language acquisition process in learners. However, one of the important but not yet fully explored topics is the phenomenon of interlanguage fossilization. Interlanguage fossilization, according to Selinker in 1972 [1], refers to the phenomenon of gradual fossilization of language structures such as linguistic items and grammatical rules when learners acquire a second language. At present, although some studies are focusing on the causes and effects of it, the understanding of its specific mechanisms is still limited, and there is also a relative lack of research on teaching strategies. The purpose of this paper is to probe into interlanguage fossilization in depth and analyze it in terms of concepts, causes, effects and teaching strategies. Specific issues include the definition and characteristics of interlanguage fossilization, the factors affecting it, and how to slow down or avoid it through effective teaching strategies. The research method mainly adopts the literature review method to analyze the previous research results and theories. This study is of great significance. Through a deeper understanding of the phenomenon of interlanguage fossilization, it can provide more effective guidance and support for language teaching and education, as well as provide new insights and directions for second language acquisition theory and practice. In the future, this study

will hopefully help to reveal the mechanism of interlanguage fossilization and propose more precise teaching strategies, thus promoting learners' language development.

2.   Causes of Interlanguage Fossilization

There are several causes for second language learners to develop interlanguage fossilization, including internal and external ones. Generally, the internal causes include age, motivation, mother language transfer, and negative emotional feedback, while the external causes mainly refer to learning strategies, and teachers' influence [2].

2.1. Internal Factors

The critical period hypothesis in interlanguage fossilization, according to Lennerberg and Lamendella, refers to the fact that there exists a specific window of time in the process of language acquisition, known as the critical period, during which learners are more sensitive and effective in the acquisition of the target language. During this critical period, it is easier for learners to form accurate linguistic structures, while in the subsequent period, language acquisition will become more difficult.

The critical period hypothesis is largely based on observations of the rate of language acquisition and achievement demonstrated by children when learning their mother tongue, and the challenges and constraints faced by adults when learning a second language. According to Lennerberg, the period that is most suitable for people to learn a foreign language is before youthhood (generally from 12 to 15). A learner's risk of developing fossilization could surge if he fails to acquire native speakers' ability in foreign language learning [3].

In the context of interlanguage fossilization, the critical period hypothesis factor refers to the fact that if learners fail to obtain sufficient target language input and acquisition experience before the critical period, it may lead to the occurrence of fossilization. In other words, if learners miss the critical period, start learning the second language late, or are exposed to insufficient quality of linguistic input before the critical period, it may increase the risk of fossilization.

In addition, some studies have also pointed out that even if there is no obvious critical period when adults learn a second language, learners are more sensitive to the acquisition of the target language in the early stages of learning, and the linguistic structures formed at this time are more likely to be solidified in the subsequent process, which may affect the occurrence of interlanguage fossilization.

A learner of a second language could ask himself a simple question: what is the purpose of learning a second language? The two main aspects of motivation in language acquisition are learning a language for instrumental purpose and for comprehensive purpose respectively. Learning for an instrumental purpose refers to the fact that learners learn a language in order to achieve some practical goals, such as getting better job opportunities in the workplace or improving the quality of life. Learning for a comprehensive purpose, on the other hand, refers to the fact that learners learn out of interest and identification with the target language culture and society. These two types of motivation play different roles in the learning process and influence learners' attitudes and behaviors.

Learning for instrumental purposes is especially important in the early stages of language acquisition. A learner may start learning a language because of a practical need, such as to pass an exam like CET-4 or final examination or to cope with an interview.[4] This kind of motivation can lead learners to invest more time and effort in learning and to be more persistent in the face of difficulties. However, if one relies solely on instrumental motivation, once they achieve their instrumental purpose, they may lose interest in the learning process, leading to a decrease in motivation.

In contrast, learning for a comprehensive purpose focuses more on the learner's interest in and identification with the target language culture and society. When learners' knowledge of the target

language gradually deepens and they begin to experience the fun and fulfilment of language learning, integrative motivation will become an important driving force for learning. Through understanding and experiencing the culture of the target language, learners will be more engaged in learning, and at the same time more willing to accept challenges and break through their language barriers.

If one wants to learn a second language well, he should his attitude toward the target language, otherwise, he would find it hard to deal with fossilization. A famous example would be Professor Chien-Shiung Wu, a late scientist who spent 56 years in the U.S. since 1936 when she was only 24 years old. She used English as a tool all her life to conduct scientific research instead of communicating, so she found her language difficulties in the early years insurmountable throughout her entire life [3,5].

Negative native language transfer refers to the phenomenon that in the process of learning the target language (L2), the characteristics of the learner's native language (L1) interfere with the target language, resulting in language errors. This kind of negative transfer may be manifested in various aspects such as pronunciation, grammar, vocabulary and pragmatics, and is an important concept in the study of L2 acquisition. Among these aspects, the most important one lies in the pronunciation field, namely foreigners.[6]

Negative transfer at the phonological level can lead to learners' long-term pronunciation errors in the target language. Phonemes and pronunciation rules in the native language can interfere with learners' target language pronunciation, preventing them from accurately grasping the phonetic features of the target language. These errors will solidify in long-term use and form the phenomenon of fossilization. For example, when learning English, Chinese students don't usually pay enough attention to long and short vowels, as they do when speaking Chinese.[7]

Negative transfer of grammatical structures is also one of the important reasons for fossilization. Grammatical rules of the native language will be transferred to the target language, leading to the recurrence of grammatical errors. For example, learners may unconsciously apply syntactic structures from their native language to the target language, forming sentence structures that do not conform to the norms of the target language. The errors resulting from this kind of transfer are not corrected in the long period of language use and gradually solidify as part of the mediated language.

Negative transfer at the lexical level can also lead to the phenomenon of fossilization. When learners use the target language, they are often influenced by the vocabulary and expression habits of their native language, leading to errors in vocabulary use. For example, direct translation of vocabulary or expressions in the native language may not be applicable in the target language, and these errors are also fossilized in long-term use.

Ellis believes that communication transmits not only emotion but also information. Feedbacks of such transmission can have a positive, neutral or negative psychological impact on both parties (teacher and student). Different responses will have different degrees of positive, neutral or negative enhancement on second language learners. This is another reason why fossilization forms. In other words, it can be called "communicative pressure", which is particularly common in the oral communication of foreign language learners. Because speakers could be in an extremely tense or relaxed mode during communication, and they could make a lot of mistakes in their speech because of such mentalities. As a result, they may return to a "degraded" state, which is a manifestation of fossilization [2]. A typical example can be observed in Chinese English class, where students are afraid to speak for fear of being mocked by classmates or even teachers.

2.2. External Factors

When learning a second language, fossilization due to improper learning strategies is quite common. Sims suggested that during the process of acquiring a first language, using inappropriate learning strategies can lead to the fossilization of different linguistic elements, such as phonological,

morphological, syntactic, lexical, psycholinguistic, or sociocultural aspects. Learning strategies include both general approaches and specific techniques used in acquiring a second language. However, the former is more likely to cause fossilization in language competence. While effective learning strategies help in processing language input and improving the quality of second language acquisition, some learners may overuse these strategies, leading to issues like overgeneralization, simplification, incomplete rule application, and insufficient knowledge of the second language. [8]

Sims pointed out that the repeated use of ineffective strategies, which do not help in completing a language learning task, can hinder a learner's progress. He concluded that understanding the link between fossilization and learning strategies is vital for addressing persistent errors as we better understand the role of information processing in second language acquisition.

Building on this, learning strategies include various methods, management techniques, and activities used during the learning process, encompassing cognitive, metacognitive, and social strategies. Selinker argued that learners' choice of strategies is influenced by their cultural background. For example, Chinese learners of foreign languages often rely on dictionaries or classmates for help rather than consulting teachers, which reflects Chinese cultural norms.

Fossilization due to learning strategies is especially common among learners. In their learning process, learners often simplify the target language, with syntactic structures being one of the most commonly simplified aspects. [7]

The proficiency and teaching approach of a teacher directly influence the learning outcomes of foreign language students. The teacher must possess comprehensive and precise knowledge. If the teacher conveys any incorrect information to the learners, this misinformation can become ingrained in their understanding, leading to interlanguage fossilization. This process makes it exceedingly difficult for learners to correct errors once they have taken root, thereby impeding their progress and proficiency in the language. [3]

Furthermore, the teaching methods employed by the instructor play a significant role in shaping the learner's engagement and motivation. Innovative and interactive teaching techniques, such as the use of multimedia tools, immersive language experiences, and practical conversational exercises, can greatly enhance the learning experience. On the other hand, outdated or overly rigid teaching practices can lead to disinterest and a lack of motivation, which can severely hinder the learning process.

Additionally, a supportive and encouraging learning environment is essential. Teachers who provide regular, constructive feedback help learners track their progress and identify areas for improvement. This positive reinforcement fosters a safe space for learners to take risks and make mistakes, which are crucial for language acquisition.

Ultimately, the combination of a teacher's depth of knowledge and effective, engaging teaching methods significantly impacts the success of foreign language learners. Investing in the continuous professional development of teachers is essential to ensure high-quality language education and successful learning outcomes.

3. Coping Strategies for Interlanguage Fossilization

Although there are different types of factors that contribute to interlanguage fossilization, the author also rise some countermeasures for second language learners and teachers to overcome such effects.

3.1. Stimulating Learners' Intrinsic Motivations

In order to solve the dilemma of transition language rigidity caused by second language learners' learning emotions, second language teachers need to cultivate students' intrinsic motivation and interest in learning.

Teachers can choose different teaching contents and methods according to the learners' psychological characteristics.[9] For example, in the initial classroom, teachers can show students the charm of the second language itself, present the lifestyle of native speakers of the second language, and the peculiarities of the culture to attract students' interest, and at the same time, pay attention to reduce the shock of the language and culture, and reduce the amount of serious and complex content; as students grow older, the content of the curriculum becomes more diversified and systematic, the Chinese-English contrastive teaching mode can be used, and the content can be linked to subjects such as politics and history. As students grow older, the curriculum content can be diversified and systematized, and the Chinese-English contrasting teaching mode can be adopted, and the teaching content can be linked and contrasted with subjects such as politics and history, which not only achieves the integration of the curriculum, but also enables the students not to reject the teaching content, and at the same time, to a certain extent, it can consolidate continuously the learning content of the two subjects in contrast. As a foreign language teacher, we also need to understand students' negative emotions such as anxiety and the rigidity of the transition language, so as to reduce learners' rejection and enhance their confidence and interest in foreign language learning.

3.2. Reducing The Negative L1 Transfer

Negative transfer is a significant factor contributing to fossilization. When learners' proficiency in a second language is insufficient for self-expression, they naturally rely on their native language. Consequently, some scholars argue that second language learners should not be required to use the second language until they have received enough language input to express themselves clearly without depending on their native language. Otherwise, inappropriate expressions may become fossilized. Therefore, to minimize negative transfer from the native language, it is essential to ensure adequate language input. Learners need to build and enhance their language knowledge through reading and intensive training, ensuring their second language proficiency is sufficient to support self-expression and thereby reduce interference from their native language. [10]

4. Conclusion

This paper firstly probes into causes of interlanguage fossilization including age, motivation, negative native language transfer, negative affective feedback, learning strategies, and teacher's influence. To varying degrees, these factors hinder learners' language progress and stagnate their language proficiency.

The age factor suggests that young learners are more likely to acquire a new language while adult learners are more likely to fall into fossilization. In terms of motivation, the lack of intrinsic motivation often leads to learners' inability to sustain their engagement in language learning, which in turn affects language acquisition. Negative native language transfer refers to the influence of the learner's native language in the use of the target language, resulting in language errors and solidification. Besides, Fossilization is also exacerbated to a certain extent by inappropriate learning strategies, negative affective feedback, and teachers' teaching styles.

In order to deal with the problem of mediated language fossilization, this paper also proposes some effective solutions: intrinsic motivation should be stimulated to enhance learners' interest and motivation by setting clear learning goals and providing positive feedback. Besides, reducing the negative influence of the mother tongue on the target language, and improving the learners' mastery of the target language by reinforcing the target language usage environment and cultural learning also make contribute to reduce the negative effect of second language learning.

To sum up, interlanguage fossilization is a complex phenomenon that requires comprehensive consideration of various factors. By implementing appropriate strategies and methods, the

fossilization phenomenon can be effectively slowed down or overcome, and the effect of language learning can be improved. It is hoped that this paper can provide valuable references for language educators and learners and promote the further development of language acquisition research.

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Research on Tourist Destination Image Perception Through Web Text Mining

-- Taking the Chang'an Twelve-Hour Scenic Spot as an Example

Yuchen Sun[1,a,*]

[1]*Yanshan University, Qinhuangdao, China*
a. 962548324@qq.com
*corresponding author

Abstract: This paper employs the Internet text mining analysis approach and ROST CM-6 software to extract tourists' genuine perception of the scenic spot in Chang'an from many Internet comments, and undertakes in-depth research on their perception of the tourist destination image. In contrast to traditional research methods, this constitutes an innovative research approach. It can grasp tourists' sentiments and the trend of social public opinion more comprehensively and in a real-time manner. The results reveal that: (1) 78.99% of the tourists hold a positive attitude towards the scenic spot, particularly highlighting the considerable contribution of cultural performances and immersive experiences to the appeal of the scenic spot; (2) The congestion and queuing issues within the scenic spot have also elicited negative feedback from 10.14% of tourists, suggesting that there is scope for improvement in management; (3) By establishing a tourism image perception evaluation system, subdivide tourists' perception factors, conducting a comprehensive analysis of the characteristics and differences of tourists' image perception in all aspects of the scenic spot, and proposing targeted improvement suggestions to assist in optimizing the perceived image of the tourism destination.

Keywords: Chang 'a Twelve-Hours scenic spot, web text, tourism image perception.

1.   Introduction

Tourism destination image refers to the overall perception and expectation that tourists hold towards the tourism site, and it is also the centralized manifestation of tourism resources at the tourism location. Briefly, the tourism destination image is an abstract state of the actuality of the tourism site [1]. For a considerable period, the research on the image of tourism destinations has been a research hotspot for scholars both domestically and internationally [2]. The perceived image of a tourist destination will, to a significant extent, influence the travel decisions and travel behaviours of potential tourists, and even have an impact on the selection of tourist destinations [3]. The more favourable the tourist's perceived image of the destination is, the higher the possibility for it to become the destination of the tourist [4], and the greater the disparity between the perceived image of the destination and the tourist's expectation, the lower the likelihood of being chosen [5].

In the early 1970s, Hunt's doctoral thesis "Image as a Factor in Tourism Development" at Colorado State University in the United States initially mentioned the term "tourism destination image", which is regarded as the earliest literature on tourism image research [6]. Since then, Chinese and Western scholars have increasingly focused on research regarding the image of tourist destinations and achieved fruitful research outcomes [7]. Through empirical research, Crompton defines tourism destination image as a conglomeration of people's beliefs, opinions, and impressions about the destination [8]. Regarding the classification of tourist destination image, Gunn suggested that tourist destination image could be divided into organic image and induced image [9], while Baloglu and McCleary classified tourist destination image into three parts, namely cognitive image, affective image and overall image [10]. Domestic scholars Zhang Qi, Chen Ke and Ma Fawang analyzed and evaluated tourist destination images from three aspects: cognitive image, emotional image and recommendation intention [11]. Based on Seyhmus Baloglu's "cognitive-emotion" model, this paper considers that tourist destination image perception consists of cognitive impressions, emotional impressions and overall impressions; thus, it will be analyzed in detail from these three aspects.

With the swift advancement of Internet technology and the extensive prevalence of mobile devices, information assumes an ever-growing significance in people's lives. The conventional forms of the travel industry have been gradually supplanted by online travel platforms (OTAs). For contemporary tourists, they are more inclined to obtain information, share information, and express opinions via online travel platforms. During the process of sharing their travel perceptions, tourists have virtually constructed an immense information network with a substantial number of genuine online comments, travel notes, and other web texts, which not only furnish the foundation for potential tourists to select tourist destinations but also offer a novel research perspective and large-scale data support for domestic and foreign scholars to investigate the image perception of tourist destinations. Regarding foreign research, Choi, Lehto, and Morrison examined the perceived image of Macau as a tourist destination by using the text from travel websites belonging to Google and Yahoo as research objects [12]. Stepchenkova and Morrison acquired the perceived image of Russian tourism destinations by analyzing the content of the tourism websites of the United States and Russia [13]. William investigated the perceived image of the Seoul tourist destination by comparing the disparity between Internet information and traditional media [14]. In terms of domestic research, Gao Jing, Zhang Yonggang, and Zhuang Dongguan carried out a study on the perceived image of four coastal tourism cities in China through text analysis and correspondence analysis based on the comments of netizens on Ctrip and Tongcheng [15]. Based on online text data, Wu Baoqing, Wu Jinfeng, Wu Yujuan, et al. analyzed Xi 'an's tourism image perception by employing content analysis and correspondence analysis [16]. Song Binghua, Ma Yaofeng, and Gao Nan used text analysis to sort out and summarize online travel notes and comments and extract the tourism image perception of Pingyao Ancient City [17]. Ao Changlin, Li Fengjiao, Xu Lishan, et al. took Harbin City as an example and analyzed the cognitive image, emotional image, and overall image perception of six ice and snow tourist attractions in Harbin based on the online review data of several OTA platforms, such as Baidu Travel, Ctrip, and Hornet's Nest[18].

To conclude, the "cognitive-emotion" model has been fundamentally acknowledged by the academic community within the domain of researching the image of tourism destinations. Moreover, user-generated content (UGC), such as online remarks and travel diaries, serving as network data, possesses an extensive scale for investigation. Thus, this paper will gather the tourism review data on the Twelfth Hour of Xi'an Chang'an Scenic Spot on Ctrip and analyze the network text analysis approach, thereby comprehending the tourists' cognitive image and emotional inclination of the scenic spot, summarizing the characteristics of the perceived image of the tourist destination, and offering suggestions for the moulding of the tourist image of the scenic spot.

2.   Research summary

2.1.   Comprehensive description of the study area

Chang'an 12 Hours is the very first immersive Tang-style street living block in China, situated in Mandi Square, east of Datang Sleepless City, Qujiang New District, Xi'an, Shaanxi Province, possessing a total area of 24,000 square meters. The entire block integrates the IP of the TV series "Twelve-Hours of Chang'an" and the cultural essence of the Tang-style market. Crafting the aesthetic style of Chang'an City of the Tang Dynasty, it is adored and pursued by tourism enthusiasts and attracts tourists from all corners of the world to come to Xi'an to experience and perceive the cultural charm of the ancient capital [19]. Chang'an Twelve-Hours was designed by the art director Yang Zhijia of the film and television drama "Chang'an Twelve-Hours" and the original art design. The project consists of three floors, featuring a total of 24,000 square meters of three-dimensional commercial space as the medium, encompassing Chang'an snacks, theme cultural creations, distinctive performing arts, immersive games, cultural private rooms, scene experiences, and other diversified "original Tang" formats. The 12 Hours of Chang'an infused the IP of the TV series "Twelve-Hours of Chang'an" and the cultural context of the Tang Feng market, combined with the traits of the original drama. With the themes of "Saving Stars and Moon · Enjoy Chang'an", "The Beauty of Harmony · Elegant Chang'an", and "The Calyce Phase Hui · Evening Banquet Chang'an", it creates the original Tang city life experience space, the Tang-style theme of mutual entertainment and leisure space, and the theme of cultural banquet experience space. Moreover, with the "Tang food, eat, dress up, Tang-style elegant set, miniature Chang'an, scene performance, cultural feast" six immersive fields as the core, enabling visitors to be transported to the Tang Dynasty in Chang'an 12 Hours in an instant and relish the Tang style and Tang allure. Chang'an 12 Hours theme block was included in the first batch of the national smart tourism immersive experience new space cultivation pilot list and is the sole selected project in Shaanxi Province [20].

2.2.   Data origin

As a prominent online travel service provider in China, Ctrip has effectively integrated the high-tech industry with the traditional tourism sector, adopted an operational mode combining the Internet and traditional tourism, and enjoys significant customer advantages. It is a model for the development of Chinese online tourism enterprises, particularly comprehensive online tourism enterprises [21]. In contrast to Long, Tongcheng and other OTA platforms, it is discovered that Ctrip has the largest number of online comments on the theme block of Chang 'an 12 Hours, with abundant and unrestricted content, a vast amount of data, the most enriched comment content, the highest quality, and more genuine and credible opinions, which can be investigated throughout the year [22]. Hence, it is reliable to select Ctrip as the data source. This paper utilizes crawler technology to capture the text of visitors' online evaluation of Chang'an 12 hours on Ctrip from May 1, 2022, to May 9, 2024. After eliminating invalid comments, a total of 2092 valid network evaluation texts were acquired, and the collected network texts were investigated and analyzed.

2.3.   Research Methodology

In this paper, ROST CM-6 software is employed as a tool for web text analysis, and the collected web text data is analyzed systematically in terms of high-frequency word frequency analysis, keyword analysis, tourist emotion analysis, semantic network analysis, etc.

2.4. Text processing routine

During the text processing procedure, the collected 2,092 comments were transformed into plain text format and imported into the software. After redefining the word segmentation list and the word segmentation filter list, the word segmentation operation was conducted, and the pure comment text after word segmentation was achieved, totalling 85,294 words. Firstly, the word frequency analysis was implemented. Firstly, the word frequency statistics filter glossary was redefined, some irrelevant or meaningless words were filtered out, and some unique words were added. Then, the pure comment text after word segmentation was imported into the software for word frequency analysis, and the high-frequency glossary was obtained. Secondly, based on the obtained pure review text and high-frequency word list, the emotion analysis of tourists was carried out to obtain the statistical results of emotion distribution, and the frequency and importance of words were visually represented through visual views. Subsequently, the social semantic network analysis was conducted to obtain the semantic text feature words and lexical-semantic network visualization. Finally, the image perception evaluation system of Chang'an's 12 Hours Scenic Spot was summarized to clarify the overall image perception of tourist destinations.

3. Web text analytics

3.1. Analysis of high-frequency lexical items

By employing the word frequency analysis functionality of ROST CM-6 software, high-frequency words were extracted from the purely commented text after word segmentation, enabling the acquisition of tourists' overall image perception of the destination. Take the top 100 high-frequency words in the collected online comment text as an example for analysis.

Table 1: Glossary of High-frequency Online Comments Regarding Chang'an for 12 Hours.

High-frequency word	Word Frequency	High-frequency word	Word Frequency	High-frequency word	Word Frequency	High-frequency word	Word Frequency
Performance	567	Sense of experience	105	Chang'an	57	completely	39
photograph	500	like	103	minute	56	Immersive experience	38
Not bad	384	Lots of people	95	characteristic	55	Immersive	37
inside	376	sian	93	everyone	53	delicious	36
perform	333	Attractions	93	atmosphere	53	convenient	36
place	246	In advance	92	feel	53	Makeup	36
No	226	The Twelve Hours of Chang'an	91	once	52	Not recommended	35
worth	211	serve	88	felt	51	best	35
program	197	personnel	88	commerce	51	tourism	35
A lot	193	child	87	Wonderful	51	overall	34
experience	189	recommend	86	actor	50	delicacies	33
feel	185	mall	82	fare	50	culture	32

Table 1: (continued).

Hanfu	185	No	80	Neon feather coat	50	abundant	32
Tickets	178	Tang costume	78	visitor	49	attitude	31
line up	176	environment	77	The Tang Dynasty is a prosperous	48	consume	30
fit	175	block	73	Myself	48	People are crowded	30
Clock	159	playful	70	Datang never sleeps	48	makeup	30
Get in	152	Out of the film	70	super	47	scenery	28
hour	131	Datang	68	Tang dynasty	46	Twelve-Hours	27
So so	127	Scenic spot	68	collectivity	45	Spring Festival	26
suggestion	123	Play	67	The same	43	Afternoon	25
snack	116	indoors	66	Pretty	42	photograph	25
pretty	113	Costume	66	clothes	41	Arrangement	25
Worth	113	Price	65	outside	40	choose	25
Time	113	Through	65	interaction	39	commercialization	24

Through the analysis of 100 high-frequency words in the table, it can be observed that words such as "performance", "performance" and "program" occur frequently, signifying that the 12 Shi Chen Scenic Area of Chang 'an is characterized by cultural performances; The frequent appearance of words like "12 hours of Chang 'an" and "nishangyuyi" highlights the immersive experience and cultural representation features of the 12 hours of Chang 'an scenic area; Verbs like "take a picture", "punch a card" and "take a picture" reflect tourist behaviours within the scenic spot, demonstrating the visual allure of the 12 hours of Chang 'an Scenic Spot and the attributes of being an Internet-famous photography spot. Words such as "Chang 'an", "Datang Flourishing era" and "Datang never Night City" indicate that the 12 hours of Chang 'an Scenic Spot possess a profound Tang cultural heritage. Moreover, words like "Hanfu" and "Tang suit" reflect tourists' particular interest in the immersive experience of Tang culture and the environment. Words including "convenience", "service", "attitude", "cost performance", etc. describe the tourism facilities and high-quality tourism services of the 12 hours of Chang 'an Scenic Spot. Words like "crowded", "queued" and "crowded" reveal the congestion issue of the 12 hours of Chang 'an Scenic Spot during the tourist peak period.

3.2. Sentiment analysis

Text sentiment analysis is a process involving the analysis, processing, induction and reasoning of subjective texts with emotional hues. Owing to the Internet's advancement and the rising number of subjective texts with emotional tints, sentiment analysis has garnered escalating attention from scholars and research institutions. As an emergent research subject, sentiment analysis holds significant research and application value [23]. In this paper, the ROST CM-6 software is adopted to analyze the sentiment of online comment text regarding the Chang'an 12 Shi Chen Scenic Spot.

Table 2: Results of Emotion Analysis of Online Comments on Chang'an 12 Hours.

Emotional category	Occupy a certain proportion(%)	Segmentation category	Occupy a certain proportion(%)
Positive sentiment	78.99	Regular(0—10) Moderate(10—20) Elevation(over 20)	21.01 25.36 32.61
Neutral sentiment	10.87	—	—
Negative sentiment	10.14	Regular(-10—0) Moderate(-20—-10) Elevation(over -20)	4.35 2.90 1.45

As can be observed from the outcomes of emotion analysis, (1) Overall emotional tendency: The majority of the emotional responses are positive, suggesting that the products or services of the 12 scenic spots in Chang 'an have received highly favourable evaluations from tourists. (2) Depth of positive emotions: A significant proportion of highly positive emotions exist, indicating that a large number of positive emotions are extremely positive and provide strong feedback. (3) The presence of neutral emotions: Despite being relatively scarce, the presence of neutral emotions implies that a part of the feedback is neither decidedly positive nor negative, and this portion may contain more prosaic or relevant remarks. (4) Distribution of negative emotions: Although the proportion of negative emotions is the lowest, it is worthy of note that the combined proportion of moderately and highly negative emotions exceeds 4%, suggesting that there are still several challenges for the continuous improvement and optimization of the scenic area. Especially in those crucial areas that have elicited significant dissatisfaction among tourists, this not only involves the precise identification of the existing issues but also a deep understanding of the gap between visitors' expectations and experience. It further encompasses measures on how to effectively address these problems. From the online comments of tourists, the following aspects can be extracted: Firstly, tourists perceive differences in cost performance. Although some tourists praise it highly, others consider the adult ticket price to be overly expensive. In light of this, scenic spots can contemplate providing more levels of ticketing options. Secondly, the perception of service quality varies, and the attitude of some service personnel in the scenic spot is poor. The scenic spot should enhance staff training and daily management to guarantee tourists' travel experiences. Thirdly, there is a difference in the perception of the overall atmosphere of the scenic spot. Some comments pointed out that the commercial atmosphere in the scenic spot is intense, there are numerous shops, and the play space is relatively limited. The scenic spot can adjust the layout appropriately to ensure the balance between cultural display and commercial activities, increase more cultural interactive experience areas, and reduce the congestion caused by commercialization. By ameliorating the existing problems, the Chang 'an 12 Shi Chen Scenic Area can maintain its attractiveness as a popular tourist destination and further enhance tourist satisfaction.

3.3. Semantic network analysis refinement

In this paper, the ROST CM-6 software is employed to conduct semantic network analysis, and the computer is utilized to present and elucidate the word relations [24], thereby obtaining the lexical-semantic network analysis visualization diagram of the tourists' online comments regarding the Twelfth Hour Scenic Spot of Chang'an. Each line is interlinked with related words. The words such as "performance", "performance", "inside" and "taking photos" are situated at the core of the figure, indicating that tourists' comments mainly revolve around these words, and they are also the most crucial image perception of the 12th Hour scenic spot in Chang'an. The sub-core position of words

such as "no", "many", "good", "Hanfu" and "place" represents the further comprehension of core words and the image perception of the majority of tourists to the scenic spot; The words in the outer layer of the graphics are the further elaboration of the core words and sub-core words, which constitutes the image perception state of a few tourists to the scenic spot.

The core words are "performance" and "inside", and the number of straight lines formed between the two constitute the most crucial nodes in the graph. "Good-looking - performance - worthy - recommendation" reveals that tourists acknowledge the performance projects in the scenic area, and also intimates that cultural performance is a highlight of the scenic area; "Inside - suitable - punch a card - take a photo - out of the film" "like - take a photo - suggestion - go in - inside" accentuates the attributes of the 12 hours of Chang 'an scenic spot as a web-celebrity photo punching destination, but also discloses the tourism motivation of some tourists; "Inside - queue - hour - minute", "inside - take photos - many people", "in advance - queue - show" suggests that Chang 'an 12 hours in the scenic area is relatively crowded, and at the peak it might require a long time to queue; "Performance - feeling - time travel" and "Hanfu - performance - experience - good" emphasize the characteristics of cultural performance and immersive experience in scenic spots; "Hanfu - performance - program" "Tang costume - photo - beautiful" manifests that the scenic spot holds a strong historical and cultural heritage.

3.4. Tourism image perception

This paper classifies and summarizes high-frequency keywords into 5 main categories and 12 sub-categories (Table 3). The five main categories encompass tourism attractions, tourism experience, tourism environment, tourism consumption and services, and tourism evaluation and suggestions. From the perspective of tourism attractions, history and culture: This category focuses on tourism attractions related to history and culture, such as "Tang Dynasty" and "Nishang Yuyi", associated with ancient civilization and traditional art; experience activities: Including "performance", "show" and "immersive experience", such activities enable tourists to personally experience and participate in the cultural activities of the destination, enhancing the interaction and entertainment of tourism. Others: Comprising "taking photos", "taking pictures" and "taking photos", indicating the tourists' need to record the journey and preserve beautiful images, which is particularly significant in today's social media sharing culture. From the perspective of tourism experience, cultural experiences: Such as "Hanfu", "Tang costume", and "ancient costume" and other keywords, emphasizing the tourists' fondness for traditional clothing, "atmosphere", "feeling" and "immersion" reflecting the tourists' aspiration for deep cultural immersion. Tour experience: Words like "commercialization", "inside" and "place" indicate tourists' attention to the degree of commercialization of the scenic spot. From the perspective of the tourism environment, the location environment: "Xi 'an", "Chang 'an Twelve-Hours" and other terms indicating the geographical location and cultural background of the destination; the environment of the scenic spot: "Crowded" and "overcrowded" reflecting the congestion problems that the scenic spot may confront; "Indoor", "outdoor" and "block" depicting different viewing environments within the scenic area. From the perspective of tourism consumption and service, consumption items: "Tickets", "snacks", "food", "cost performance", "consumption" and other words, reflect the economic considerations of tourists during the tourism process, paying attention to whether the cost is reasonable and if they can obtain the corresponding value experience; service quality: Including "service", "personnel", "attitude", "makeup", "clothes" and "environment", these terms emphasizing the quality of tourism service in the scenic spot and mirroring the tourists' anticipation of high-quality service. From the perspective of tourism evaluation and suggestions, positive evaluation: "Good", "attractive", "suitable", "recommended" and other words, demonstrating the positive feedback of tourists on the travel experience. Negative comments: Words such as "not worth", "average" and "not recommended" reflect tourists' dissatisfaction with the travel experience.

Tourist advice: "In advance", "suggested", "arranged" and "selected" describe the tourists' needs and their expectations of tourism services when planning their journey, underlining the importance of planning and personalized selection.

Table 3: Tourism Image Perception Evaluation System and Semantic Text Feature Words.

Major category	Subcategorization	Partial high-frequency words
Tourist destinations	History and its associated culture	Tang Dynasty, finishing Yuyi, culture, history
	Engage in the activity of experience.	Performance, performance, immersive experience, experience
	Others	Capture images, create images.
Travelling Experience	Cultural encounter	Hanfu, Tang costume, ancient costume, atmosphere, feeling, immersion
	Touring Experience	Commercialization, inside, place, scenic spot, punch in, go in, hours, minutes
Tourism surroundings	Location and environment	Xi 'an, Chang 'an Twelve-Hours
	Picturesque environment	Many people, crowded people, indoor, outdoor, block
Tourism consumption and service offerings	Consumer item	Tickets, snacks, food, cost-effectiveness, consumption
	Quality of Service	Service, personnel, attitude, makeup application, apparel, environment
Tourism assessment and recommendations	Favorable comment	Excellent, pleasant, appropriate, advisable, superb, attractive, palatable, convenient, optimal, plentiful
	Negative assessment	Unworthy, mediocre, not advisable
	Tourist Guidance	Proceed, counsel, organize, select

4.   Conclusions, proposals, research limitations and prospects

4.1.   Conclusion

The conclusions are as follows: (1) The majority of the tourists hold positive emotions towards the 12 Shi Chen Scenic Spot in Chang'an, accounting for 78.99%, and the proportion of highly positive emotions is relatively large, indicating that the tourists have an extremely positive and strong assessment of the scenic spot. Although negative emotions account for merely 10.14 per cent, the combined proportion of moderate and high negative emotions exceeds 4 per cent, demonstrating that there is scope for improvement in certain aspects, such as potential congestion and long queues. (2) Visitors' comments centre around words like "performance" and "inside", reflecting that cultural performances within the scenic area are a crucial factor in luring tourists, but also revealing the popular characteristics of the scenic area as a location for taking photos. Additionally, words such as "Hanfu", "experience" and "crossing" emphasize the allure of immersive experience and traditional culture, signifying that the scenic spot has successfully created a distinctive cultural ambience of Tang style and enhanced tourists' sense of historical and cultural experience. (3) The tourism image perceived by tourists is summarized into five principal categories: tourism attraction, tourism experience, tourism environment, tourism evaluation, tourism consumption and service, and tourism evaluation and suggestion. Specifically, the tourist attractions of Chang'an 12 Shi Chen Scenic Area

mainly encompass historical and cultural experiences, interactive experience activities (such as performances, and immersive experiences) and photo punching, which satisfy the dual needs of tourists for traditional cultural exploration and social sharing; Tourists' attempts on traditional attires such as Hanfu and the experiences of immersive cultural atmospheres express their aspiration for deep participation in culture; The location and cultural backdrop are recognized, but there is also feedback on the issue of congestion within the scenic spot; Tourists are more sensitive to the price and cost performance of consumption items and have higher requirements for service quality. The positive evaluation focuses on the attractiveness, suitability and recommendation intention of the scenic spot, while the negative feedback reminds the scenic spot to pay attention to the value perception and management efficiency, and the tourists' suggestions centre on the planning and personalized selection of tourism activities. (4) Regarding innovation, the research adopts Internet text mining technology and big data to extract tourists' genuine perception of the Chang'an 12 Shi Chen Scenic Spot from a vast number of online comments. This constitutes an innovative research approach which can grasp tourists' emotions and social public opinion trends more comprehensively and in real-time compared to traditional research methods. By establishing a set of tourism image perception and evaluation systems, this paper divides the complex tourism experience into five categories: tourism attraction, tourism experience, tourism environment, tourism consumption and service, tourism evaluation and suggestions, and twelve sub-categories. This structured classification facilitates in-depth analysis of the specific aspects that tourists are concerned about and provides a scientific framework for tourism destination management. Through sentiment analysis and semantic network analysis, it not only quantifies tourist emotions but also reveals the key points of the tourist experience by extracting core words, providing intuitive and in-depth insights into the building of tourist destination perception image.

4.2. Proposal

To optimize the image perception of the tourist destination and enhance tourist satisfaction, based on research and analysis, the following suggestions are proposed for the 12th Hour Scenic Spot in Chang'an: (1) Enhance the performance quality and intensify the immersive experience: Considering that "performance" is one of the core elements of tourist perception, the scenic spot should consistently strengthen and enrich the content of the performance, guarantee the quality and professionalism of the performance, increase the diversity and duration of the performance to accommodate the preferences of diverse tourists, reduce queuing during peak hours, and take into account that "immersive experience" and "sense of travel" are highly appreciated by tourists. The scenic spot can further develop interactive experience projects related to Tang culture, enabling tourists to immerse themselves more deeply in the ancient life of the Tang Dynasty; (2) Optimize the visitor experience and upgrade service quality: In response to negative image feedback such as "excessive crowds" and "queuing", the scenic spot should implement a more effective tourist flow management and reservation system to alleviate congestion and enhance tourists' sense of experience. Additionally, the scenic spot should intensify staff training and improve the service attitude and professional skills, especially in the service links of "makeup" and "clothes" that tourists have direct contact with, thereby providing a more intimate and professional service experience. Elevate tourist satisfaction; (3) Strengthen the attributes of the photo check-in: Considering that the photo check-in is an important tourism activity for tourists, the scenic spot should establish more distinctive photo areas, provide high-quality photography services or prop rentals (such as Hanfu, Tang suits), and optimize the light layout to improve the quality of tourists' "shots"; (4) Balance the relationship between commercialization and cultural protection: Given the "commercialization" issue in tourists' image perception of the scenic spot, the scenic spot should pay attention to maintaining the cultural authenticity during the development of commercial projects, appropriately control commercial

elements, ensure that the cultural atmosphere is not diluted due to excessive commercialization, and ensure respect for history and culture.

4.3. Research Deficiencies and Prospects

There exist certain drawbacks in this study: Despite the substantial amount of online text data available, potential sample bias might persist. For instance, younger users tend to be more disposed to leaving comments online, which could result in the analysis outcomes not fully embodying the viewpoints of all tourists. Although sentiment analysis software is capable of providing quantification of emotional tendencies, tourists' subjective evaluations are influenced by numerous factors, such as personal experience and expectation, thereby limiting the accuracy and depth of sentiment analysis to a certain extent. Future studies could further broaden the scope of data collection to encompass more tourism platforms and social media and even complement the data via offline questionnaire surveys to enhance the diversity and representativeness of samples. Utilize more advanced natural language processing and machine learning algorithms to enhance the accuracy of sentiment analysis, and concurrently employ more complex social network analysis models to deeply explore tourist behaviour patterns and psychological motivations. Incorporate multidisciplinary theories such as psychology, economics, and sociology to investigate the motivation underlying tourist behaviour and the formation mechanism of tourist destination image, to obtain more comprehensive and profound research results. Translate the research findings into specific management strategies and operational guidelines, offer practical suggestions for tourism destination marketing, service improvement, and tourism experience design, and promote the practical application of the research results in collaboration with the government and tourism enterprises.

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Comparison of Compulsory Education Between China and Britain

Yuhan Gao[1,a,*]

[1]Sino-British International School, University of Shanghai for Science and Technology, Shanghai, 200020, China

a. gayuhan@icloud.com
*corresponding author

Abstract: The different political landscapes and historical contexts of China and the UK have given rise to unique features within their compulsory education frameworks. In the Chinese school system, the authority of the teacher is paramount, a didactic approach prevails, and a one-size-fits-all strategy is often applied, a process akin to the force-feeding of knowledge. In stark contrast, the British educational ethos tends to encourage students' individual passions and originality, and emphasises personal growth and development. This research seeks to shed light on the differences between the compulsory education systems of these two nations through an in-depth comparative examination of four key aspects including definition, Curriculum, teachers and social. The ultimate aim of this analysis is to make constructive recommendations that could refine and strengthen the educational structures of both countries, thereby supporting their continued progress and development. The two countries can combine their compulsory education models to make up for the shortcomings in their respective education systems.

Keywords: Comparison of compulsory, Chinese education, British education, Education system, Education quality.

1.   Introduction

According to the Oxford Dictionary, education is the process of fostering or sharpening personal knowledge or understanding, the development of virtues, ethics and community attributes, and is, an undeniable force in enlightening the mind and enhancing knowledge and skills in various fields [1]. Currently, nations across the globe recognise the pivotal role of education in societal development, and strive to equip learners with essential cognitive skills and foster sophisticated thought processes for the betterment of society [2]. As representative cultures of East and West, China and the UK have their own characteristics, which have profound implications for compulsory education. The compulsory education systems of China and the UK are very different in terms of definition, curriculum, teacher allocation and social impact.

A detailed comparative analysis of the key elements of compulsory education in China and the UK highlights the differences and similarities between the two countries, and provides a valuable reference and inspiration for promoting international exchange and cooperation in education. The comparative study of the compulsory education systems of the two countries promotes mutual learning and teaching in the field of education, and promotes common progress in the development

of education in all countries of the world. Through in-depth knowledge and comparison between the Chinese and British compulsory education systems, the educational community can deepen its understanding of global trends in the development of compulsory education, and provide lessons and experience to build a more scientific and effective education system.

2. Definition of compulsory education

Compulsory education, as defined by UNESCO, refers to educational programmes in which children and young people are legally obliged to participate, usually specified by a certain number of grades or age range.

In China, compulsory education has four main characteristics [3]. First, it is provided free of charge by the state to ensure that every child has access to basic education. Second, it is mandatory for school-age children and adolescents, with parents responsible for ensuring their attendance. Thirdly, compulsory education is inclusive, covering all children and young people regardless of gender, race or socio-economic status. Finally, there is uniformity in the formulation of educational programmes and curriculum standards by the state to ensure consistency in the content and quality of education provided. Mandatory schooling in China spans a period of nine years, consisting of six years of primary education, followed by three years of junior high school, and culminating with three years of senior high school. As a socialist nation, China upholds the principle that the people are the ultimate authorities in the country. The primary objective of compulsory education is to elevate the overall national quality, foster social equality, and protect the fundamental rights of its citizens.

In contrast, in the United Kingdom, mandatory education kicks off at the age of 5 and concludes at 16. The British educational system is segmented into four phases: early years, primary, secondary, and further education. Notably, the UK's educational framework is distinguished by its variety, offering a diverse array of school choices, encompassing state-run, private, and independent institutions that provide a broad spectrum of educational avenues. And parents possess the liberty to select the most appropriate educational establishment for their child, which introduces an element of choice in the education sector. In addition, following the Foundation Stage, students are at liberty to opt for academic or vocational paths, which shows the adaptable nature of the educational structure. Throughout various phases of their academic voyage, students engage in standardized evaluations like GCSEs to gauge their educational advancements. Concurrently, the British educational system emphasizes the overall growth of students and the cultivation of their varied passions [4].

Starting with its educational ethos, China's compulsory education system prioritises a standardised curriculum and centralised governance to ensure consistency and equity. In contrast, the UK's approach to compulsory education celebrates diversity and responds to individual needs, offering students and their parents a wider range of options. Next, in terms of implementation, China enforces a uniform curriculum and government oversight to ensure educational quality and equity. The UK system, on the other hand, tends to encourage the individual talents of each pupil, giving families greater freedom in their educational choices. Finally, in terms of objectives, China's compulsory education system aims to democratise primary education, improve the nation's intellectual calibre and lay a solid foundation for young people's academic and personal lives. The UK's goals go beyond basic education, focusing on fostering creativity and critical thinking while supporting each student's personal journey.

3.   Comparison

3.1. Curriculum

This essay explores the differences in the compulsory education frameworks of China and the United States by examining the structure of their respective curricula.

3.1.1. Difference

Rooted in historical and societal foundations, China has long established a set of core academic disciplines, including Chinese language studies, mathematics and English, as the essential pillars of its educational system. These subjects account for a significant proportion of the total schooling experience, with the 2011 National Compulsory Education Curriculum Plan, promulgated by the Ministry of Education, stipulating that primary school students should devote 35%, 33% and 20% of their total study time to Chinese, maths and English respectively. In junior high schools, the percentages rise slightly to 40%, 37% and 23% in the same order [5]. This approach reflects China's rigorous academic ethos, where curriculum design is heavily influenced by standardised examinations that serve as gateways to prestigious universities. Consequently, this intense focus on exam preparation can inadvertently sideline the holistic development of students, reducing some to mere learning automatons. By contrast, the British educational paradigm gives students the freedom to tailor their learning journey to their own unique interests and passions. Beginning in primary school, students are introduced to a wide range of subjects, including history and science, which are carefully developed in subsequent years. This model, pioneered in the US, not only equips students with practical life skills, but also gives them the freedom to explore and nurture personal interests, fostering well-rounded individual competencies.

Moreover, when it comes to pedagogical styles, traditional Chinese education is predominantly didactic, with a strong emphasis on knowledge transfer and memorisation. On the other hand, the US educational approach relies heavily on proactive student engagement and the cultivation of critical thinking through exploratory and inquiry-based learning experiences. The UK places greater emphasis on active student participation and inquiry-based learning, encouraging students to ask questions and find answers. These differences not only reflect educational ideas and values from different cultural backgrounds, but also have a profound impact on students' learning and development.

3.1.2. The reason for the difference

A significant factor contributing to the disparity in educational content between the two nations stems from their divergent educational objectives. The cornerstone of China's academic approach is rooted in rigorous, closed-book assessments, with the pivotal college entrance examination often considered a transformative juncture in a person's life. This phenomenon reflects the broader goal of Chinese education: to sift through the population for exceptional talent and dramatically alter an individual's social standing, placing a premium on a student's prowess in acing tests[6]. Conversely, the UK adopts a multifaceted approach to student evaluations, featuring a variety of methods that encompass essay compositions and practical workshops, among others. The British counterpart to China's Gaokao are the A-level exams, which serve as a gateway to university education. Unlike the Gaokao, A-levels can be retaken, and they have the potential to supplant the high school certificate. Reflecting this difference, UK education prioritizes fostering the comprehensive growth and multifarious abilities of its students[7].

3.2. Teaching staff

Both China and the United Kingdom are committed to high quality education in terms of the quality of teachers in compulsory education, and are committed to producing students who can meet the needs of the society of the future through continuous reform and innovation. Teachers in both countries play a crucial role in their respective education systems, and their professional development and teaching practices have a crucial impact on improving the quality of education.

In the discussion of the comparison between the provision of compulsory education teachers in China and the United Kingdom, an analysis is conducted mainly from multiple perspectives, including the educational level, education and training system and teaching methods of teachers, teaching.

3.2.1. Educational level

Both countries recognise the importance of professional qualifications for compulsory school teachers, requiring them to have at least a bachelor's degree and a background relevant to the subject they teach. In China, a distinction is made between active (in-service) teachers and those who don't currently teach (out-of-service)[8]. The latter category enjoys a lower entry barrier, allowing college students to take the Teacher Qualification Examination. Success in this exam, coupled with networking and occasionally gifts, can open the door to a teaching position, although this process does not consistently ensure teaching excellence. On the other hand, the UK has strict criteria for teacher qualifications. Prospective teachers must hold an undergraduate degree plus a Postgraduate Certificate in Education (PGCE/PGDE) or gain Qualified Teacher Status (QTS) through an accredited teacher training programme, a rigorous journey that significantly hones their teaching skills[9].

3.2.2. Education and training system

In China, the route to becoming a teacher is rigorous, requiring the passing of a National Teaching Qualification Examination for a teaching certificate, as well as an extensive internship and professional development programme. Meanwhile, the UK's approach to teacher training is very practical, requiring newly qualified teachers to spend a year under the tutelage of experienced educators to fully prepare them for the classroom[10].

3.2.3. Teaching methods

In the context of Chinese primary education, there is a pronounced tendency towards teacher-led classrooms that emphasise rote learning over analytical skills. According to Jin and Cortazzi, Chinese classrooms are vibrant with engagement, yet they focus on the absorption and regurgitation of information. This approach arguably stems from Confucianism, fostering a culture where knowledge is quietly accepted and theory is prioritised over practical experience[11]. Take language teaching, for example, where grammar trumps conversational skills. This teacher-centred model reflects a wider disregard for student autonomy in learning, and elevates the role of the teacher to an almost sacrosanct level. The quintessential student, through this lens, is diligent, resilient and focused on cultivating the right attitude toward learning rather than honing specific skills. In a system that values exam results, it's assumed that a positive attitude toward learning will naturally lead to academic success and mastery of skills. Teacher-led instruction is therefore championed as the route to excellence, with a student body more invested in passing exams than in the learning journey. Testing reigns supreme, with most school effort directed towards exam preparation. In contrast, British educators have historically championed critical thinking and

autonomy, guiding students towards the acquisition of knowledge through exploration and hands-on learning[11].

3.3. Social aspect

This part compares the different education systems of the two countries, and the influence of social mobility and welfare policies on compulsory educational affairs under different systems.

The compulsory education system is regarded in the People's Republic of China as an important part of the social welfare system aimed at ensuring that all school-age children have equal access to education. Although there is still much debate about the effectiveness of the system in promoting class mobility, recent research has shown that while compulsory education has raised the overall level of education in society, its effectiveness in reducing the gap in educational equity is not obvious. Together with the proliferation of out-of-school tutoring facilities, the educational gap between socio-economic levels tends to widen, a trend that potentially undermines the positive role of schools in promoting educational equity [12]. Compulsory education in the UK, on the other hand, is part of a wider welfare state paradigm designed to compensate for financial shortfalls in education. The Butler Education Act of 1944 established a three-tiered system of education that guaranteed compulsory education for all school-age children. The British welfare system, with its focus on providing necessary support to individuals as a right, has played a key role in shaping social policy and laying the foundations for social services such as education[13].

Social mobility is shaped by the structure of the education system and the broader social policy framework. Social mobility and social welfare policies are closely linked, and together they shape equality of opportunity and social equity within a country. High levels of social mobility mean that individuals have a greater chance of being able to improve their economic and social status through their own efforts and talents. Social welfare policies, on the other hand, support disadvantaged groups and improve the well-being of society as a whole by providing basic services such as education.In comparing the compulsory education systems in China and the UK, the reason for choosing to focus on social mobility is that it reflects whether a country's education system is able to provide equal opportunities for all students. High social mobility means that even if an individual is born at the bottom of society, it is possible for an individual to gain opportunities for social advancement through education. When comparing the compulsory education systems in China and the UK, focusing on social mobility can reveal whether the education system is effective in removing the constraints of economic and social context on personal development, thereby achieving the goals of social equity and equal opportunity. In China, although the compulsory education system aims to equalise education, there are significant inequalities in the distribution of educational resources and quality between urban and rural areas, which to varying degrees limit the opportunities for upward social mobility for rural children. The British welfare state system aims to create a relatively level playing field, but the educational streaming mechanism, a three-tier education system through grammar schools, secondary modern schools and technical schools, has also been criticised for exacerbating social stratification and failing to provide equal opportunities for social mobility. The UK's social welfare system, based on the Beveridge Report, is much broader and provides comprehensive social security, including education[13]. In contrast, China's social security system is still in its infancy compared to the UK, although it is developing and actively waiting to reduce educational inequality.

Overall, both China and the UK have made compulsory education an important part of their social welfare policies. There is a close interplay between compulsory education policy, social welfare policy and social mobility. For example, good compulsory education policies can help reduce social inequalities and increase social mobility by improving the quality of education and equality of opportunity. At the same time, sound social welfare policies can indirectly promote

social mobility by providing basic protection for vulnerable groups, reducing poverty rates, and providing individuals with better educational opportunities.However, there are major differences between the two countries in the way it is implemented and its impact on social class mobility. China's education system has made remarkable achievements in popularising education, but still faces the problems of the urban-rural education gap and the uneven distribution of non-formal education resources. The UK education system, with its broader welfare state, has a longer history of providing universal education, but continues to struggle with educational stratification and class mobility. Both countries continue to improve their policies to better serve their populations and promote social justice through education[14].

Compulsory schooling policies in both the United Kingdom and the China reflect the importance that each country attaches to education as a social good and to the promotion of social mobility. Both countries are constantly striving to promote social equity and mobility through education policy, although the challenges they face and the specific strategies they employ differ.

4. Conclusion

The People's Republic of China and the United Kingdom have each demonstrated a different focus in the implementation of compulsory education. China has focused on strengthening uniform educational standards and providing universal access to basic knowledge and skills, while the UK has tended to increase the richness and diversity of the curriculum and support individualised pathways for students. Both governments have sought to reduce educational inequalities based on social and class differences by optimising education policies and resource allocation.So this essay has achieved the original research purpose. The blueprint for education reform in both China and the UK should focus on improving the overall standard of education and promoting the practice and improvement of educational equity.

Unfortunately, this paper has a number of shortcomings. Firstly, it relies solely on literary sources and lacks any empirical research, so it lacks a solid factual basis. In addition, the scope of the comparison is rather narrow. To increase the reliability of future work, it would be wise to include first-hand data, such as experimental surveys and questionnaires. Secondly, it is advisable to broaden the range of comparative perspectives in order to provide a more comprehensive and accurate analysis.

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The Application of Language Acquisition in English Teaching

Hairong Liang[1,a,*]

[1]*School of English Education, Quanzhou Normal University, Quanzhou, 362000, China*
a. 3302710159@qq.com
*corresponding author

Abstract: With the continuous informatization and internationalization of modern society, English has received more and more attention. No matter in primary school, junior high school, senior high school or college English education, people attach great importance to the cultivation of students' comprehensive English ability and comprehensive level, and believe that English teaching is an indispensable factor in the development of modern education. From a macro point of view, English is a special subject, which is widely used in modern society, and many fields involve the use of English, so it is crucial to strengthen English education for students. To promote the English education of students in different stages of our country, appropriate teaching methods and teaching systems should be adopted. But there will be some problems in the meantime. For students at any stage, it is not enough to only master the mother tongue, which does not allow students to better develop in the fierce social competition in the future. In order to better enhance their own competitiveness, they should also adopt the correct teaching methods and teaching methods for students of different ages.

Keywords: Language Acquisition, Second Language Acquisition, Language Teaching, English Teaching.

1.   Introduction

Language acquisition is an important part of human cognitive development and social interaction, and it involves how children master the complex structure, rules, and usage of language from scratch. Since the beginning of the 20th century, linguists, psychologists and educators have begun to conduct in-depth research on the process and mechanism of language acquisition. With the advancement of technology and the development of interdisciplinary research, our understanding of language acquisition continues to deepen. At present, remarkable progress has been made in the study of language acquisition. Using experiment, observation and investigation, researchers describe and analyze the various stages of language acquisition in detail. In particular, driven by emerging fields such as neurolinguistics and computational linguistics, we are beginning to be able to explore more deeply the relationship between language acquisition and brain development, cognitive processes, and the application of language acquisition to computer simulation and artificial intelligence. Although language acquisition research has made rich achievements, there are still many research gaps. For example, the mechanism by which mother tongue influences second language acquisition is not fully understood; There is also a lack of in-depth research on the language acquisition of special

children (such as autism, language retardation, etc.). In addition, with the acceleration of globalization, the problem of language acquisition in a multilingual environment needs to be further explored.

The purpose of this study is to investigate the process and influencing factors of language acquisition in children under multilingual environment. Specifically, this paper will focus on the following questions: What is the order and speed of language acquisition in children in multilingual environments? How does the interaction between different languages affect language acquisition? How do external factors such as family, school and social environment affect children's language acquisition?

This study will adopt a combination of qualitative and quantitative research methods. First, this study will collect relevant data through questionnaires and interviews to understand the language acquisition of children in a multilingual environment. Secondly, this study will use statistical analysis methods to process and analyze the collected data in order to reveal the rules and influencing factors in the process of language acquisition. Finally, this study will combine literature review and case study methods to discuss and explain the research results in depth.

This research has important theoretical significance and practical value. At the theoretical level, through the study of children's language acquisition in multilingual environments, this study can further enrich and develop the theory of language acquisition, and provide new perspectives and evidence to explain the nature and mechanism of human language. At the practical level, this study helps us to better understand the influence of multilingual environments on children's language development and provides a scientific basis and guidance for family education and school education. In addition, the results of the study can provide policymakers with decision-making references and promote the formulation and implementation of multilingual education policies.

In conclusion, the study of language acquisition not only helps to deeply understand the mystery of human language, but also provides useful enlightenment and guidance for education and social practice. In the future, with the continuous innovation of research methods and the in-depth development of interdisciplinary research, we have reason to believe that language acquisition research will achieve more fruitful results.

Language acquisition. The symmetry of "language learning". It refers to people's natural, subconscious and gradual mastery of a language in a speech environment [1].

Language acquisition is important, it can impact on individuals, society and culture.

This essay will introduce three aspects: The first is about the chronology of language acquisition. The second is about the process of language acquisition. Third, is what should we pay attention to in the process of language acquisition [2].

2.   The Understanding of Language Acquisition

In the process of language acquisition, many linguists around the world have contributed their unique views. Chomsky proposed that language is essentially the product of the inner activities of the speaker, and newborns are born with the potential to learn language, so we do not need to over-correct the language mistakes they learn at the beginning, because these mistakes will be corrected naturally as they grow older and practice daily life.

At the same time, Krashen emphasized that the core of language acquisition is an internalization process, which means that learners need to internalize the grammatical and pragmatic rules of a language and make them an indispensable part of the brain mechanism. He further pointed out that foreign language learning is significantly influenced by two kinds of environments: one is the natural environment, where learners unconsciously absorb language knowledge through natural contact with the language; The second is the classroom environment, learners in the formal classroom environment, through conscious learning process to master the language.

Based on the above views, it is not difficult to find that both native language and foreign language are acquired through a certain learning process, but the learning environment and specific ways are different.

3.   The Chronology of Language Acquisition

The fetus in the mother begins to receive verbal stimulation, especially the mother's voice and heartbeat, at the age of 4 months. The period from birth to about 2 years of age is a critical period for language acquisition. At this stage, children begin to imitate the pronunciation of their parents and others. They can understand and duplicate gestures and movements to show comprehension [3]and learn vocabulary and grammar rules. In this stage, it's important to focus on cultivating children's sense of language, that is, language perception ability [3]. From ages 2 to 6, children begin to understand and use more complex language structures, including sentences, tenses, voices, etc. They use short phrases and simple sentences to communicate. What's more, they are more eager to work with peers [4].

At this stage, the child's cognitive ability should be improved, and the ability to distinguish sounds should be gradually cultivated to establish the child's phonetic awareness. From the age of 6 to adolescence, children further improve their language skills and begin to use more complex language to express their thoughts and feelings. During this period, people continue to learn new vocabulary and language rules, adapt to new social situations, and constantly improve their language skills. They ask for clarification and ask content-based questions at this stage.

In a word, Infancy is the key period of language acquisition, infancy is the important period of language acquisition, and adolescence and adulthood are the consolidation and strengthening stages of language acquisition [5].

When children develop their first language, it is an automatic, subconscious process. Children usually don't need explicit guidance to develop their first language. Here, the process of "language acquisition" is taking place. This also applies to bilingual or multilingual children, who learn more than language from birth [6].

In contrast, if a child is a sequential bilingual, they will require explicit teaching to support their second language's development. This process is known as "language learning" [6].

Through continuous learning and use, people can gradually master and improve their language ability, so as to better express their thoughts and emotions. People are not born to speak but need to learn and acquire language as they grow up. Because the process of language acquisition is important so we should pay attention to the process.

4.   The Focus in the Process of Language Acquisition

For an English teacher, it is important to learn how to teach students English well. For Chinese students, English is a second language acquisition. First, they need to know the differences between Chinese and English. Such as their letters are pronounced differently. Second, Chinese is made up of strokes, while English words are made up of letters. Structurally, English is a subject-first language with a strong emphasis on sentence structure. But Chinese is a topic-first language, with more emphasis on the situation and the transmission of information through the establishment of the situation. And in terms of expression, Chinese pay more attention to circuitous and gradual, beginning and ending, often stating the reason first and then concluding, while English is more straightforward. Based on the differences between Chinese and English, teachers use Language acquisition to teach students.

It's important to create a good language environment:

Language acquisition theory suggests that learners need to be exposed to and learn a language in a real context. What's more, providing rich language stimulation for children, including communication with children helps children build a language foundation at an early stage.

Therefore, in English teaching, people can try their best to create a natural English environment, such as providing English news and playing English movies and music, so that students have the opportunity to learn and understand English in a real context.

Stimulate learning motivation, give patience, and support and encourage children to express themselves:

Language acquisition theory points out that learning motivation is a key factor in successful language acquisition. Encouraging children and giving them the patience to express their needs and feelings verbally can help children improve their language skills, reduce their stress and improve their self-confidence [7].

Therefore, in English teaching, this paper will stimulate students' learning interest and motivation by rewarding, encouraging, guiding and other ways to improve their learning enthusiasm and participation. In the process of learning the language, language acquisition theory emphasizes the communicative nature of language and pays attention to correcting the child's grammar and pronunciation mistakes.

Therefore, we should pay attention to helping the child form correct language habits and the cultivation of students' language communication ability in English teaching, including listening, speaking, reading, writing and translating skills. English corner, role play, speech and other activities are organized to improve students' oral expression ability, and enhance their self-confidence and English application ability [8].

Language acquisition theory holds that independent learning ability is the key to successful language acquisition. Therefore, this paper focuses on cultivating students' autonomous learning ability in English teaching. For example, some teacher encourages children to read and learn independently, help them build a reading habit and interest and also help students master learning strategies and improve their learning efficiency by providing learning resources, making learning plans and organizing cooperative learning.

Teach children to understand and respect different cultures and languages, and help them understand language and cultural differences around the world. This helps children develop an open and inclusive way of thinking.

With the rapid development of modern information technology, teaching technology has also ushered in remarkable progress. The extensive application of modern teaching technology has brought a variety of teaching resources to English classrooms, which greatly support teachers to effectively use them to carry out teaching work, and thus significantly improve the quality of teaching.[9] In the actual English teaching process, teachers can use modern teaching technology to assist teaching, and skillfully use multimedia means to create a vivid teaching situation, in order to stimulate students' learning interest and enthusiasm. At the same time, when using multimedia in classroom teaching, teachers should give full play to its guiding and guiding role to ensure that students can better play their subjective initiative in this process, and realize the positive change of education subject from teachers to students.[10]

5.   Conclusion

There are various factors influencing children's language acquisition in a multilingual environment. The order and speed of children's language acquisition are different in different language environments, and the interaction between different languages will affect language acquisition. Similarly, external factors such as family, school and social environment will also affect children's language acquisition to varying degrees.

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The Painting of Dreams: An Effective Expression of Reality

Tan Feng[1,a,*]

[1]*Accademia di Belle Arti di Venezia, Fondamente Zattere Allo Sprito Santo, 423 Venezia, Italy*
a. fengtan3348903255@gmail.com
*corresponding author

Abstract: This paper discusses, from the perspectives of aesthetics and psychology of literature and art, how artists can effectively express reality through dreams in their paintings. The discussion primarily revolves around several key questions. On one hand, it explores why artists choose dreams as a subject for their creations, why dreams represent a form of reality, and why paintings should also express reality. On the other hand, it acknowledges that while dreams can serve as an intuitive visual representation, they often feature absurd and chaotic scenarios. This paper aims to help art practitioners see the psychological logic of dreams in order to find the truth deep within their hearts. It also discusses how using dreams as a subject can visually present reality and emotionally resonate with the audience.

Keywords: Painting, Dreams, Reality, Psychological Distance, Methods of Expression.

1. Introduction

Painting exists as a means to express emotions, thoughts, and explore reality. What is the reality that it should express, and how should it be sought? How can one strip away the external appearances of things on a flat surface to convey this reality? These questions have become core issues that many artists pursue throughout their careers.

In contemporary times, this exploration has become even more complex. In an era of multicultural integration, reality seems to have become more elusive. However, dreams offer us a unique window, allowing us to transcend the confines of the material world and perceive and express the realities hidden behind everyday life.

2. Stripping Away External Appearances

Since ancient Greece, philosophers have explored the concept of reality. At first glance, the material appearances we perceive through our external senses seem real. However, people do not only live in a world of material appearances but also in a mental world, which is far more real and profound than the material facade. Plato posited that the world is divided into three levels: the highest is the realm of forms, where true reality resides; the second is the material world, which contains material appearances that imitate true reality; the lowest is the world created by artistic activities, which imitate material appearances and thus are imitations of imitations, making it the least real. The forms he referred to transcend the material and perceptual worlds and are the true source of reality. They represent the essence of perfection, wisdom, truth, and morality. Plato's forms were deified, and truth became an existence beyond the perceptual material world, accessible only to a few wise individuals. [1] This view was naturally influenced by the political and social conditions of Plato's time, yet it

does not hinder the recognition of what lies beyond material appearances—what this paper refers to as the mental realm. The mental realm represents our personal experiences and subjective feelings towards the material world, which might be closer to the essence of reality than our knowledge of external appearances. This suggests that our understanding of the material world is limited and relative, and the essence of reality may transcend our perceptions and appearances.

In reality, true reality exists in our minds. The mind is the source of human knowledge; without it, knowledge would lose its foundation. "Mind" refers not only to natural consciousness but also to a force capable of creating civilization. When detached from material production, it can create art, religion, philosophy, and more. Although the mind is not a material entity, our knowledge, our skills in material production, and our evaluations and concepts of things are all derived from the mental realm, not merely from the external appearances of the material world. In other words, the material appearances we perceive in the external world are produced and created based on the existence of the mind. Immanuel Kant, the founder of German classical philosophy, stated:

"Erkenntnis has two main stems, possibly originating from a common, unknown root: Sinnlichkeit and Verstand. Through the former, objects are given to us; through the latter, they are thought."[2]

These two stems are what Kant referred to as "transcendental intuition" and "empirical perception." According to Kant's theory, all our understanding comes from experience; without prior experience, we have no knowledge. We use transcendental conditions such as time and space as the foundational structures for perceiving and understanding the world, and we use empirical perception to experience and understand the knowledge we acquire. Even though, as Kant said, experience is conditional and limited, leading to variations in our perception of the world, it does not prevent us from sensing the existence of the external sensory world in this way. We are not merely entities that exist physically; more importantly, we are entities of mental thought. We obtain the energy to sustain our physical existence through the external material world, and the true meaning of sustaining our physical entities is to maintain the existence of the mind. If we can understand the reality of our physical entities through material appearances, we should also realize that only by deducing from reality can we attain true reality.

After affirming the reality of the mind, the reality of transcendental intuition as the foundational structure of cognition is also confirmed. Intuition serves as the basic framework for our perception and understanding of the world, existing within our cognition independently of any specific sensory experiences. We can intuit all external things, and our intuition of external objects is not influenced by acquired education. When we engage with objects, intuition is the most primitive and simple form of "knowing," the purest form of sensation, akin to the state of unity between the self and the object described in Eastern philosophy. The renowned Italian philosopher Benedetto Croce stated in his book, Aesthetic as Science of Expression and General Linguistic:

"Intuitive knowledge can exist independently of rational knowledge. Concepts that are blended into intuitive products, insofar as they are blended, cease to be concepts because they have lost all independence and autonomy; they were once concepts, but now they have become elements of intuition."[3]

For instance, when a writer describes the wind, the writer's wind is not the geographer's wind. Although it inevitably involves knowledge and concepts, it primarily conveys the deep intuition of the heart, bypassing sensory perception and conceptual understanding. This is our intuition of the wind, our genuine emotion, and our true and pure understanding of the world. This intuitive experience is a form of reality. It is only through such self-awareness that we can expand the scope of our knowledge and enrich the content of our understanding. Croce wrote:

"An artwork, though full of philosophical concepts, may have more richness and depth than a philosophical treatise; similarly, a philosophical treatise, though it may contain abundant descriptions and intuitive elements, remains fundamentally a conceptual work. Despite the presence of those

concepts, the complete effect of the artwork remains an intuitive product; and despite the presence of intuitive elements in the philosophical treatise, its complete effect remains conceptual."[3]

Thus, without intuition, we might not even be able to sense beauty, let alone define it. Art, as a practice of spiritual experience, embodies the foundation of human civilization, representing pure reality without material content.

3. Painting and Reality

Painting is not merely a reproduction or imitation of physical phenomena; it expresses intuition and can convey the essence of reality itself. As Professor Wang Defeng stated:

"Art is the original manifestation of truth." Zhu Guangqian said that the "aesthetic experience" is an experience of intuition, where the object of intuition is the "image," so the "aesthetic experience" can be described as "intuitive imaging." This has been recognized as a fundamental principle by aestheticians since Kant. [4]

When we are at an art exhibition and see a piece that we admire, it seems to momentarily occupy all of our consciousness. This choice of a favored piece comes from "aesthetic experience." Some argue that while viewing a piece, we also analyze the images within it, thus connecting aesthetics with perception. Indeed, we may initially be attracted to a work by an image in the painting, and this initial attraction is unrelated to aesthetics; it is more about psychological stimulation and response. Any subsequent interpretation of the image is merely speculation about the author's intent, which has little to do with beauty. The aesthetic experience is realized when, after being stimulated, we remain captivated by the artwork, feeling as if we have instantaneously entered the painting and shifted to another space-time, which is what is meant by "intuitive imaging." The Department of Basic Art at Tsinghua University's Academy of Arts invited Professor Deannimo from the Massachusetts College of Art and Design for two weeks of intuitive painting instruction and conducted a series of tests. These included untitled instant reactions and intuitive tests related to music. The results showed that painting for more than 30 seconds cannot be considered purely intuitive, as rational and experiential traces become more apparent with longer painting time. Under conditions of instant reaction, human intuition is at its purest, as only things produced without room for thought can be truly intuitive, unconscious, or a genuine subconscious expression without visual interference. Experimenters easily enter certain emotional states and are most susceptible to inducement. [5] The purpose of aesthetics is never utility or meaning; neither visitors nor creators are physicists. The reality of intuition is neither a material existence nor can it form objective knowledge or be intuitively understood through objective knowledge. Knowledge obtained through rational thought requires intuition as its basis; otherwise, it is not pure, original knowledge but rather knowledge influenced by numerous factors, ultimately refined and polished. Intuition is not a simple physiological pleasure; it is our purest initial recognition of external things. As a self-sufficient and self-determined existence, intuition is practiced, expressed, communicated, and exchanged through art.

Painting differs from other forms of expression. As a medium, painting aptly practices intuition and carries the responsibility of embodying "intuitive forms." Today, painting has finally moved beyond its role as a mere recording tool. When such functional aspects are no longer the focus, painting gains greater significance and value through the transmission and expression of aesthetics. Works that focus solely on function and appearance can be quickly generated by artificial intelligence. At this point, painting should not merely replicate reality but instead break free from practical and material constraints to express something beyond the tangible. The advantage of painting in directly conveying aesthetic value relates to the concept of "psychological distance." Mr. Zhu Guangqian explains the role of "psychological distance" in aesthetic analysis in his work Psychology of Literature and Art:

"Psychological distance is the distance a person achieves when breaking free from practical utility to reach beyond the material."[6]

For example, for someone living in a coastal city, the seaside may just be a daily route to work, with the sea breeze being too humid and the beach too crowded. For a visitor from elsewhere, however, the ocean is a beautiful painting. The distance between "a daily route" and "a beautiful painting" is what is known as psychological distance. Thus, "psychological distance" refers to the space one can achieve by breaking free from practical utility to reach beyond the material. When the distance is too close, it is inevitable to fall back into the reality of the world from the aesthetic realm. Painting, as a two-dimensional art form, appropriately creates a distance between material appearances and aesthetic experience.

4.   Intuition, Dreams, and Expression

The experience of beauty is essentially an experience of intuition, and the object of intuition is the "form." Aesthetic experience can be described as the intuition of form. As a two-dimensional mode of expression, painting inherently involves the discussion of form, and discussions about painting cannot avoid discussions about its subject matter. Since painting should move beyond merely replicating reality and return to a more pure "aesthetic experience" to express intuition, what subject matter can better convey intuition? Dreams are capable of doing so.

Freud noted: "We should now understand that these appearances are products of certain subconscious imaginations, and they may also be products of sexual impulses."[7]

Dreams are products of the subconscious and usually carry strong emotional connotations. The relationship between the subconscious, dreams, and intuition is complex, and any absolute interpretation would be unscientific. However, we can affirm that there is a direct connection between them and the most authentic cognition within the mental realm. Human mental activity is continuous and uninterrupted. From intuition to perceptual awareness, consciousness, over time, leaves behind sensitive memories that move into the subconscious and influence intuition. Thus, intuition is, to some extent, a product of subconscious stimulation.

We should recognize that human mental life is an uninterrupted, continuous process. During this process, a vast amount of sensory impressions are stored in the brain as memories. Some of these still have a strong influence on our senses today, allowing us to feel their presence, which is conscious awareness. Others, as time passes, have their sensory impact gradually diminish until they disappear, becoming part of the subconscious mental activity.[8]

It is evident that intuition is almost a rapid cognitive process of the subconscious. Like the subconscious, intuition represents the most genuine knowledge we have when there is no time for logical reasoning about things. Therefore, there are two reasons why dreams are chosen as a means to express "reality" in painting. First, the absurdity of dreams creates a "psychological distance" that is neither too close nor too far. Second, dreams are a result of intuitive action and emotional expression; although dreams are chaotic, they are still a form of reality.

To appreciate beauty and return to the realm of aesthetic experience, one must transcend the practical meaning of objects. This is the "psychological distance" mentioned earlier concerning aesthetic issues. Psychological distance is the space a person achieves by breaking free from practical utility to reach beyond material reality. It is the distance between observing and defining the appearance of things and engaging in aesthetic appreciation. Since distance implies varying degrees of proximity, to immerse oneself in the world of aesthetic experience, one must not be too far or too close. For instance, a person living by the sea sees the ocean every day and cannot escape the concept and significance of the sea, making the distance too "close" for appreciating beauty. Conversely, a visitor from inland who encounters the sea becomes immediately enchanted, achieving the appropriate psychological distance. If the distance is too "far," everything lies outside our cognitive

range and is unknowable, making it impossible to reach the realm of aesthetic experience. Only a "neither too close nor too far" distance allows for the appreciation of beauty. Artists, unlike others, not only can transcend the practical utility of objects to appreciate beauty but also can step out of their role as mere imitators, being both subjective and objective. This is precisely what dreams accomplish.

The images in dreams do not exceed the scope of our cognitive experience, but they do transcend the appearances of daily observations and belong to the realm of the mind. This allows dreams to effectively capture the "psychological distance" in aesthetic activities. From a creative perspective, the content of a work is the manifestation of the artist's innermost self. When creating, if we wish to "step outside ourselves and see ourselves," dreams provide an excellent means to achieve this. However, dreams are often regarded as unreal, which seems contrary to our intention to express reality. In reality, while dreams are non-material and do not belong to the external sensory world, they are still a form of reality. We often perceive dreams as unreal partly because they detach from the material world of external senses, and partly because they seem illogical and absurd. Let us first address the issue of dreams being detached from the external sensory world but still possessing reality. We have already confirmed the reality and importance of "the mind" as an indispensable part of human existence. Dreams, as products of the mind and expressions of the subconscious, belong to the realm of the mind and cannot be denied their reality simply because they lack physical substance. Next, let's discuss the issue of dreams lacking logic. Firstly, we cannot prove that something lacking logic is inherently unreal, as this would be an unscientific stance. Secondly, dreams do not actually lack logic. The perception that dreams lack logic arises because they do not adhere to causal relationships. Instead, dreams align more with a result-first causation, where the result is experienced before the cause is apparent. In the real world, we usually have a cause that leads to a result. However, in dreams, due to their complete subjective control by consciousness, the cause is arranged to achieve the result. Thus, dreams are responses to stimuli, bypassing our logical thinking and directly expressing the purest desires and conflicts of the inner self. This is similar to intuition, which is often a form of cognition that bypasses logic and analysis. Dreams can be seen as a deep form of intuition, offering insights into our inner emotions and conflicts. Since we do not deny the reality of intuition, we should not deny the reality of dreams. By using dreams to convey intuition, artists can transcend material constraints while simultaneously re-engaging with materiality. In new aesthetic activities, choosing dreams as a subject achieves an appropriate "psychological distance." Dreams are absurd, lacking logic, and difficult to fall into the superficial appearances of things. They embody true emotions, making it easier to create aesthetic experiences that resonate with intuition. In fact, the immersive beauty we experience when appreciating a painting is itself a form of illusion, a kind of dream.

5.   Conclusion

Dreams are a visual manifestation of intuition and the subconscious, representing a form of genuine cognition in the mental realm with minimal external interference. Dreams begin with intuition and embody the concept of "result-first causation." The reason dreams appear unreal is that they do not adhere to causal relationships. In the world of dreams, there is not a cause followed by a result; rather, a thought emerges in the subconscious as the result, and then we construct a cause to bring about this result. This is why dreams can seem absurd. The absurdity of dreams provides an appropriately balanced "psychological distance" for visual presentation, allowing viewers to awaken their sensory memories and achieve emotional resonance during appreciation. By analyzing dreams, artists can both "step outside themselves and see themselves" in their creative process. Thus, dreams serve as a genuine experience and a visualization of intuition, enabling artists to effectively convey real emotions through their work.

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Exploring the Multiverse: Understanding Its Implications in Philosophy

Yihui Li[1,a,*]

[1]United World College of the Adriatic, Via Trieste, 29,34011 Duino-Aurisina (TS), Italy

a. florayihui@163.com

*corresponding author

Abstract: Although numerous theories supporting the concept of a multiverse have been proposed, observational proof remains elusive. The introduction of a multiverse would fundamentally transform the understanding of humanity's position in the world and the universe. This paper investigates the existence of a multiverse and its ramifications within the domains of philosophy and religion. It challenges conventional notions of knowledge and its interpretation within a scientific framework. While direct observation may never be attainable, compelling factors and existing evidence, such as the fine-tuning problem and inflationary cosmology, strongly indicate the plausibility of such an existence. Consequently, this paper builds upon established scientific theories and examines the reshaping of epistemology, ethics, and the philosophy of religion, advocating for novel approaches to defining knowledge and expanding the boundaries of traditional scientific inquiry.

Keywords: multiverse, fine-tuning problem, quantum mechanics, philosophy.

1. Introduction

The exploration of the multiverse has become a subject of profound interest among scientists and philosophers alike. Within the realm of cosmology, the multiverse theory postulates the existence of a vast ensemble of parallel universes, each operating under its own set of physical laws and conditions. This essay embarks on an intellectual journey into the intricacies of the multiverse, delving into its theoretical underpinnings, implications, and the philosophical and scientific inquiries it engenders. It also underlies the potential ramifications in expanding the understanding of reality, and the intricate questions it raises at the intersection of science and philosophy; at the same time, it aims to suggest that such existence is a means to an end rather than an end in itself. It opens the door of ponderance in many fields rather than giving a direct answer to the uncertainties that exist in the philosophy of science and our general understanding of the universe. Though this exploration extends and branches into several fields, the question will ultimately guide scholars back to reflect upon what is meant by humanity and how such belief in the multiverse would affect the human existence.

This essay argues and justifies the belief of a multiverse, though it may remain to be observationally unproven. From a philosophical lens, a multiverse theory is able to resolve the present coincidences like the fine-tuning problem. Moreover, elucidating the interplay between a concept that resides at the intersection of science and philosophy and its relevance to daily existence entails comprehending its implications in regard to morality, ethics, and religion. This endeavor involves

questioning the foundational assumptions in these domains and establishing connections to everyday life.

2.   Contextual background

To assess how likely a multiverse is to exist, it is first necessary to understand what is meant by that term. Several competing multiversal models have been developed.[1] The multiverse might be comprised of an infinite number of universes sitting in regions of space far beyond the boundaries of the known universe, as envisaged by Alan H. Guth in the inflationary scenario.[2] Alternatively, it could be made up of universes that exist at different points in time, as per the cyclic model of Paul J. Steinhardt and Neil Turok.[3] It is also possible that alternate universes exist in the same space but in a different branch of the quantum wave function, as advocated by Hugh Everett.[4]

Perhaps the most scientifically accepted idea of a multiverse is tied to the concept of inflationary cosmology. Following the Big Bang, the universe expanded rapidly and exponentially in a process called cosmic inflation. The mechanisms governing this process remain mysterious, but one of the best explanations developed so far relies on eternal inflation. That model suggests that the universe ceases to expand in certain bubble-like pockets of space. These pockets then develop into new universes because spacetime continues to expand away from them, leaving them isolated. Infinite universes are generated because the space between the bubbles, which is still inflating, makes room for more bubbles to form. Because this process has occurred since the Big Bang and will continue to occur, the universe humans inhabit represents just one out of an infinite multiverse of bubbles. These bubbles would not all share the same properties as our own — each universe that emerges would do so with its own laws of physics, collection of particles, arrangement of forces, and values for fundamental constants.[5]

Another compelling multiverse theory relies upon Everett's many-worlds interpretation of quantum mechanics, a model arising from a mathematical explanation of how matter behaves. Quantum physics is built on the idea that many properties of matter – such as location and speed – are not pre-determined but random. Quantum mechanics suggests that multiple states of existence for subatomic particles are possible simultaneously; a "wave function" encapsulates all such possibilities. When any given particle is observed or measured, the wave function "collapses" into a single reality.[6] The many-worlds interpretation of this phenomenon suggests that measurements taken are not the only values possible. Rather, as the fundamental ontology of the physical world rests on the quantum state, all different branches of this quantum state represent different classical worlds. This approach gives good and indirect evidence for the existence of such a quantum mechanical multiverse.[7]

3.   Approaching the Multiverse Problem

The basic problem of a multiverse proposal rests not on the uncertainty of its existence, but on proving this theory altogether in the scientific field. This ties into the problem of the cosmic visual horizon. Due to the speed of light, all the parallel universes lie outside the observable horizon and will remain beyond observation, regardless of technological advancements.[8] Thus, the proposal of a multiverse is beyond falsifiability, and no conventional means would work to prove it.[9] There are even strong objections arguing that the multiverse shouldn't be considered science, like the dictum of Karl Popper, which held that a theory should be falsifiable to be scientific.[10]

Though there is no hope of testing it observationally, of the diverse number of multiverse theories, all suggest the spacetime that has been observed is not the only reality. Theoretically, if cosmic inflation and quantum field theory both hold true, then the existence of some sort of multiverse seems likely. But as a concept that lies on the edge of science and philosophy, its existence matters not in

the disputes of the scientific world but in a perceptional supposition that grants individuals the freedom to imagine all the possible implications that arise from this idea.

4.   Implications

4.1.   Epistemology

The uncertainty surrounding the multiverse proposal is not a misfortune; rather, it compels individuals to accept its undeterminable nature and challenge the traditional notions of scientific inquiry by positing the existence of unobservable and inaccessible parallel universes. This inquiry extends epistemologically as such existence questions the very definition of scientific knowledge and creates space to redefine it. From the ancient Greeks, knowledge has been classically defined to be a "justified true belief."[11] In this context, the multiverse, for now and in the near future, will remain to be "unjustified" due to the lack of observational evidence. While the multiverse is disputed regarding its status as knowledge, its existence should not rely solely on empiricism when there are sufficient reasons to believe in such existence.

From an anthropic lens, the universe is fine-tuned for life and a multiverse solves the fine-tuning problem. Out of the infinite possible ways the values of the fundamental constants can range from, the physical constants in the universe humans inhabit have just the right values needed to allow complex structures and living things to thrive, like the mass of electrons, the strength of gravity, or the lifetime of neutrons. Viewing the universe as one among the infinite universes provides a tidy explanation for this apparent coincidence when tracing back to the early history of the universe, where individual universes are influenced by random fluctuations of quantum mechanical origin. Our universe appears to be one of the logically possible universes and to be in the conditions that make it viable for life to emerge.[12]

Another way to see the fine-tuning problem is to attribute this apparent coincidence to the contemplation of an observer, as the anthropic principle described. It suggests that the reason the observed universe has specific values for fundamental constants is that conscious observers can only exist in a universe that allows for their existence. In other words, if the values were different, the emergence of intelligent life would not be possible, and humans would not exist to contemplate fine-tuning. Therefore, it is not surprising that humans find themselves in a universe with the necessary conditions for life. It is a consequence of the selection bias imposed by the existence of conscious observers, resolving the fine-tuning problem. [13] The anthropic principle further brings attention to the fact that observations and scientific theories are inherently limited by the conditions and properties of the universe. It challenges scientists to consider whether the current understanding of the fundamental laws of nature is a result of a selection bias and whether it can be generalized to all possible universes.

Exploring both the anthropic principle and the fine-tuning problem encourages scholars to reflect upon these principles, as they examine the lens of a multiverse theory and contemplate the formation of the universe and its significance in relation to our place within it. To believe in the existence of a multiverse is to push the limits of knowledge. It prompts reflections in better understanding human's role in the universe, the causes for existence, and potential reasons the constants and physical laws are the way they are. These beliefs and inferences are philosophically valid. And the exercise of the imagination is an equally valid way of producing knowledge that roots itself in beliefs. Under such a controversial topic, the difference between knowledge and belief can become blurry, as the pursuit of knowledge in this instance is beyond the application of empirical methods. It is the belief in a multiverse that determines the extent of knowledge that can be obtained; thus, the belief itself should be reconceptualized in fresh light to redefine knowledge.

4.2. Ethics

Aside from epistemological considerations, there are ethical motivations for invoking a multiverse. A major debate in ethics relates to the concept of free will. Various arguments have been posited for and against determinism. The most theoretically compelling version of hard determinism is grounded in the laws of physics: it suggests that whatever occurs can be predicted by applying knowledge of physical laws, which are universal and immutable. The implication is that every decision individuals make is predetermined because each comes in response to various predictable interactions between forces and matter. The only strong argument against this model is tied to a non-multiversal interpretation of quantum randomness, which suggests that subatomic outcomes cannot be predicted since the same laws generate different results. Individuals are therefore unable to predict which decisions will be made by resolving all equations in advance. However, believing in Everett's multiverse and accepting this interpretation, which assumes that all possible outcomes of quantum events occur in different parallel universes, leads to the conclusion that quantum interactions are not random. Consequently, the concept of free will would be negated, as there would exist no capacity to make independent choices. Life would be fundamentally devoid of purpose, as every decision made would be replicated in an infinite number of alternate ways across parallel universes.

It is possible that this kind of pointlessness would cause an increase in immoral activity. This is because, when people stop believing they are free agents, they stop seeing themselves as blameworthy for their actions. However, in practice, this pointlessness would be unlikely to change human behaviour. Multiverses are not the only threats to the idea that life has meaning. The unplanned, evolutionary development of human beings and the inevitability of deaths both suggest that existence is devoid of any essential meaning. However, having no essential meaning does not mean having no meaning at all.

Albert Camus's work on absurdism demonstrates a distinction between essential and acquired meaning; his model frames human experience as the search for rational meaning in a fundamentally irrational world.[14] He uses the myth of Sisyphus to explain how meaning can nonetheless be generated. In the myth, Sisyphus is punished to roll a boulder up a hill for eternity. He never quits, according to Camus, because he accepts the absurdity of his task but derives his own meaning from it. Every time he rolls the ball up the hill can be configured as a spiteful victory against Zeus. He sticks at it because he imbues it with value. At the end of the *Myth*, Camus says that we have to 'imagine Sisyphus happy'. It is a failure in scale to say life is meaningless because humans make meaning on a small, personal scale, whereas the world is absurd only on a global, or cosmic, scale. To perceive oneself as one of the infinite iterations is to view humanity from a different lens and to derive meaning for who we are in this universe.

4.3. Religion

From a religious Christian perspective, an infinite multiverse fundamentally complicates ideas about God. Christians see God as an omnipotent, omnibenevolent being.[15] Were there infinite multiple universes, God could not be all-loving since every possible outcome would occur, including many involving great suffering. Some universes would have less suffering than ours, while others would have more deaths, grief, distress, loneliness, and illnesses. If God were responsible for them all, the concept of omnibenevolence, as traditionally understood, would be called into question. Humans could not be living in the best of all possible worlds, as Leibnitz suggests.[16] If kindness is defined only as what God does throughout every universe – not some idea independent of him – and many of these universes have intense amounts of what we deem suffering, then our understanding of kindness becomes totally relative. If there were infinite versions of universes with every possible outcome

occurring, God could not be omnipotent because he could not create a universe where an event would not happen, or a decision had not been made.

On the individual level, such proof would undermine the idea of having a personal relationship with God. If there are infinite versions of any given person, the extent to which any one version engages with God becomes infinitesimal. Moreover, if infinite versions of an individual exist simultaneously, and each iteration represents the sum of all possibilities, an individual would acquire godlike attributes. However, despite these conceptual challenges, the drive to seek divine consolation may still continue whether or not individuals believe in such existence.

From the perspective of a Buddhist, the multiverse existence may not affect any of the core beliefs in the religion or the practices of individuals. Seeing human life as a cycle of suffering and rebirth and believing in the process of enlightenment to escape the cycle casts no effect on the present existence and experience of whether or not infinite iterations of an individual exist. Suffering is inevitable according to the Buddha, and it is created by desire, but could be avoided through enlightenment. This would not be affected by the belief in a multiverse since human suffering will not be reduced and cannot be avoided simply because of the belief in other versions of each individual. The experiences across different universes are irreplaceable. That said, such belief will not affect the present experiences in any way. The Buddhists will still be likely to practice meditation and engage in ethical conduct the way they do to act for goodness for future rebirths. This thought experiment will likely redirect attention back to the current living, as one acknowledges that what matters the most are the present experiences.

The belief in a multiverse and its implications in different religions can vary greatly; for Christianity, it may challenge the most fundamental conceptions of the divine and question the creation of universes as a part of the multiverse, while for other religions like Buddhism, it is merely a thought experiment to ponder upon, at most touching upon the afterlife for individuals to question where their rebirth would put them in – to be in the present universe or to be a part of a completely new system.

5. Conclusion

In this paper, the multiverse problem has been approached from a new angle: in the grey area between science and philosophy, between knowledge and belief. It has proposed a new way of understanding knowledge when ideas like the multiverse lie beyond the conventional way of classification and understanding. To believe in its existence is a prerequisite to obtaining new knowledge; to accept the uncertainty that revolves around it is what grants imagination to extend into realms of philosophy and religion. Lastly, the exercise of imagination along with such belief enables individuals to personally relate and gain a new understanding of ethics and religion, more broadly, in relation to the origin of humanity itself. Acknowledging the universe among the infinite possibilities entails recognizing the multitude of potential implications it can entail. This, once again, emphasizes that the only aspect within one's control is the unaffected present. Therefore, regardless of the existence of infinite iterations of individuals or the empirical proof of a multiverse, the breakthroughs in thought are undeniable.

The idea of a multiverse will continue to be debated in the scientific community and among philosophers. For the science world, such understanding is likely to spur breakthroughs in both methodology and theoretical understanding in the search for a unifying equation of the observed reality, like the presently focused research on string theory and quantum gravity. For philosophers, this discussion will likely continue and emerge around other topics like the nature of causality, the potential of parallel or alternate histories, and the implications for concepts such as determinism and free will. Last, as a concept that engages great minds in science and humanities, it calls for an

interdisciplinary collaboration between physicists, mathematicians, philosophers, and cosmologists, which may lead to fruitful exchanges in interdisciplinary research.

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Research on the Cultivation Mode and Path of Innovation and Entrepreneurship Ability of Computer and Electronic Engineering College Students under the Background of Artificial Intelligence

Xuezhu Liu[1,a,*]

[1]Department of Mechanical and Electrical Engineering, Shenmu Vocational and Technical College, Yulin City, Shaanxi Province, 719300, China

a. 631126241@qq.com

*corresponding author

Abstract: As a disruptive technology, artificial intelligence has affected global economic development on multiple levels. With the widespread application of artificial intelligence technology in various industries, the market demand for artificial intelligence technology and applications continues to grow, providing college students with opportunities to participate in emerging industries. College students can create new products and services and achieve technological innovation with the continuous development of artificial intelligence technology. This paper adopts the method of literature review, and combines the existing artificial intelligence background to explore the possibility of using artificial intelligence as an auxiliary tool for cultivating college students' innovation and entrepreneurship ability. Combining cutting-edge theories with a variety of practical explorations, this paper finally forms a set of methodologies for computer and electronic engineering college students to complete learning and entrepreneurial practice through artificial intelligence in the stage of university education.

Keywords: Artificial intelligence, computer and electronic engineering, innovation and entrepreneurship, practice, education.

1. Introduction

Artificial intelligence (AI) has now developed into a cutting-edge discipline in the field of science and technology, and has had a huge impact on the world. Countries around the world have invested a lot of resources in cutting-edge research, technology development, and education and training in AI [1]. In 2016, the White House Office of the United States released a report titled 'Preparing for the Future of Artificial Intelligence', which discussed how AI has accelerated technological, social, and economic changes, and the need for the US government to increase investment in AI education and training and research and development to cope with the impact of changes on all aspects of society [2]. In 2017, the State Council of China released a report titled 'New Generation Artificial Intelligence Development Plan', which proposed the guiding ideology, strategic goals, key tasks, and safeguards for the development of China's new generation of AI by 2030. And as such, it aims to build China's first-mover advantage in the development of AI, thereby accelerating the pace of

building an innovative country and a world science and technology power [3]. The report also proposed to build an open and collaborative AI science and technology innovation system, cutting-edge basic theories, and key common technologies [3]. In addition, in 2018, the European Commission released a report entitled 'Artificial Intelligence-A European approach to excellence and trust', which elaborated on the EU's views and strategies on the development of AI, and aims [4]. 'Artificial Intelligence-A European approach to excellence and trust' is aimed at positioning Europe as a global leader in AI research, development, and deployment. The report outlines a framework for fostering AI innovation while ensuring that it is developed and used responsibly, ethically, and transparently [4].

As countries around the world promote the globalization of AI, it will have a certain impact on the world's economic and social forms in the future. The demand for employees with basic operational and repetitive operational skills will continue to decline, while the demand for talents with complex logical thinking, dialectical thinking and other abilities will rise sharply. From the perspective of economic development, the globalization of AI has promoted a significant increase in production efficiency and the optimization and upgrading of industrial structure. Traditional labor-intensive industries are gradually replaced by automation and intelligence, while emerging high-tech industries have become an important driving force for economic growth. This makes economic development more dependent on technological innovation and knowledge updating, thus putting forward higher standards for employees' technical requirements.

The gap between the needs of society and enterprises and college students, and the market opportunities brought about by the rapid development of AI, determine that the current training of cutting-edge scientific and technological talents and AI talents is very important and urgent for college students' innovation and entrepreneurship education. As the backbone of future AI talents, college students majoring in computer and electronic engineering should cultivate their ability to find the way to innovation and entrepreneurship from the new market pattern. Therefore, this paper proposes a scientific and effective model for cultivating college students' innovation and entrepreneurship ability through theoretical analysis and case analysis, aiming to solve the deficiencies of college students' innovative thinking ability, entrepreneurial spirit and practical ability, especially college students majoring in computer and electronic engineering. The research in this paper provides theoretical support and practical guidance for college students' innovation and entrepreneurship education, which is helpful to cultivate more talents with innovative thinking and entrepreneurial spirit to meet the needs of social and economic development.

2. Artificial Intelligence-related Courses

In recent years, many universities have opened courses related to AI, which can effectively help students understand the cutting-edge technologies of AI.

2.1. Stanford University

The Department of Computer Science at Stanford University offers a number of courses related to AI, including but not limited to machine learning, natural language processing, computer vision, etc. Machine Learning course provides a broad introduction to machine learning and statistical pattern recognition, including supervised learning, unsupervised learning, learning theory, reinforcement learning and adaptive control[5]. In Natural Language Processing with Deep Learning course, students will gain a thorough introduction to both the basics of Deep Learning for NLP and the latest cutting-edge research on Large Language Models (LLMs) [6]. Deep Learning for Computer Vision is a course that a deep dive into the details of deep learning architectures with a focus on learning end-to-end models for these tasks, particularly image classification[7].

2.2. Massachusetts Institute of Technology

MIT offers a number of courses related to AI, including machine learning, natural language processing, computer vision, etc. AI introduces representations and algorithms used to build AI systems in robotics, language, vision, etc. Over the past decade, interest in machine learning research has spiked drastically, with advancements in deep learning being a significant driving force. Indeed, deep learning has transformed many areas in computer science including computer vision, natural language processing, and reinforcement learning.

And to popularize machine learning, the university offers short courses, such as a 3-day course on embedded machine learning concepts that focuses on exploring ML concepts such as speech and gesture recognition. Lectures and instructor-led labs combined with Infineon PSoC 6 development kits and shields develop students' ability to create ML projects.

2.3. Commonality of course settings

In the study of the current computer course settings in major universities, it was found that the current trend of course settings is that the course settings of computer AI courses have maximized the use of interdisciplinary integration, such as combining with psychology, biology, economics and other majors, in order to broaden students' horizons and enhance problem-solving skills. In addition, these courses all emphasize the importance of combining practice with theory. Most top universities' AI courses will add certain practical links, such as project assignments and internship opportunities, so that students can apply theoretical knowledge to practical problems and improve their hands-on and problem-solving abilities.

The combination of basic theoretical knowledge and practice, cross-disciplinary integration and other course optimization measures have improved the overall quality of students after graduation, and they can transform their abilities into employability in a short period of time. At the same time, diversified vision and solid technical capabilities also provide excellent basic conditions for students to innovate and start businesses after graduation.

3. Innovation and entrepreneurship education in higher education

3.1. United States

Universities in the United States generally attach great importance to innovation and entrepreneurship education, and cultivate students' innovation awareness and entrepreneurial ability through a variety of curriculum systems and practical activities.

Many famous universities offer a wealth of innovation and entrepreneurship courses, which often cover multiple aspects such as innovation theory, innovation methods and innovation practice. For example, the Y-Prize competition of the University of Pennsylvania. This competition simulates the real market environment and allows students to learn how to transform ideas into business plans in practice [8]. Stanford University designed the "Startup Garage" course for students who are interested in entrepreneurship. By building corresponding business scenarios, students can master the process and risks of business operations in the simulation of implementing their business plans [9]. In addition, the entrepreneurship courses offered by the University of Maryland are also very rich, covering all aspects from innovative ideas to company development.

In addition, American universities attach great importance to the transformation of scientific research results and the incubation of student enterprises. Universities will provide certain fund support and venue support for student enterprise incubation. Take the University of Maryland International Technology Incubator as an example. The University of Maryland has three business incubators, which were established in 1987 and have actively promoted the transformation of

scientific and technological achievements of teachers and students for more than 20 years. By 2023, more than 1,000 companies have been successfully incubated, including Medimmune, Martek and other large companies with a current output value of billions of dollars. [10]

3.2. Europe

European universities are also actively exploring innovative and entrepreneurial education models. The "Entrepreneurship Centre" of the University of Cambridge provides a series of entrepreneurial training programs, including entrepreneurial camps and entrepreneurial challenges, aiming to cultivate students' innovative thinking and entrepreneurial skills[11]. At the same time, the University of Dublin provides students with a full range of entrepreneurial training and support systems through the Innovation Academy and the entrepreneurial incubator Nova UCD. The entrepreneurial incubator (Nova UCD) provides various services for students to start companies, and will conduct market evaluations on the designs and research results of teachers and researchers, providing venues and opportunities for innovative entrepreneurship while providing specific plans and suggestions[12].

3.3. China

China's top universities are also working hard to improve and optimize innovative and entrepreneurial education. Among them, Tsinghua University provides students with personalized entrepreneurial guidance and support through the Maker Practice Education Center and the mentor team[13].

In addition, some universities have established entrepreneurial incubators, laboratories and practice bases to simulate the real market environment and provide students with opportunities to practice entrepreneurship. For example, the "College Student Innovation and Entrepreneurship Practice Base" jointly built by Ocean University of China and Qingdao Industrial Technology Research Institute provides professional entrepreneurship training and guidance to help students transform their ideas into viable business plans [14]. The School of Innovation and Entrepreneurship of Dalian University of Technology has built a joint school-enterprise training platform, namely the AI innovation and entrepreneurship training platform. The platform takes AI as an opportunity and "deep learning" as the entry point to cultivate students' innovation and entrepreneurship practical abilities from all aspects, including theoretical knowledge teaching, practical hands-on ability training, scientific research and innovation ability training, enterprise training opportunities, and teamwork ability training [1].

What is the relationship between innovation and entrepreneurship education and artificial intelligence-related course settings?

4. Discussion

Based on the current application of AI in the industry and the social demand for AI to change living conditions, computer and other related majors have become important areas for talent training in major universities in various countries. Based on the current employment pressure and the social demand for technical talents and industries, college students in computer AI and other technical fields have become important training targets for innovation and entrepreneurship education in universities. As an important field for industry and talent incubation, the commercialization of research results related to machine learning and computers is the main means for universities to cultivate college students' ability to find the path of innovation and entrepreneurship from the new market pattern.

In view of the above analysis, a scientific and effective model for cultivating college students' innovation and entrepreneurship ability requires universities to provide professional help and guidance from curriculum optimization to entrepreneurial ability training, so as to fundamentally improve college students' innovative thinking ability and practical ability required for entrepreneurship. Efficient entrepreneurial ability training for college students in computer and electronic engineering majors is of great significance to the training of talents in schools and societies around the world.

In addition, the development of AI combined with different industries can also promote industrialization reform in society, increase economic diversity, improve the quality and level of life of citizens, and meet the development needs of society and economy in many aspects.

5. Conclusion

Universities need to set up AI courses based on their own advantages, through interdisciplinary, practical and theoretical methods, so that students can get all-round training and development. The requirements for talents in the era of AI are highly consistent with the goals of innovation and entrepreneurship education. This education model aims to cultivate innovative and entrepreneurial talents who can adapt to the AI era. These talents need to have high-level qualities and abilities and be able to carry out interdisciplinary innovation in the field of AI. The cultivation of college students is a strategic and far-reaching topic in any country. Only by mastering the core technology and the spirit of innovation can we find opportunities in the ever-changing global market. This article's summary of global AI innovation and entrepreneurship courses may not be comprehensive, and it cannot truly summarize all aspects of AI in the field of innovation and entrepreneurship around the world. It is necessary to continue to go deep into the courses to understand and discover. Future research will focus on how each sub-field of AI can play a role in innovation and entrepreneurship, and ultimately form a methodology for linking with the market.

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A Narrative Review of the Use of Formative Assessment in China's University Education

Wenting Li[1,a,*]

[1]*Institute of Foreign Language and Literature, Nanjing Normal University, Xianlin Street, Nanjing, Jiangsu, 210046, China*
a. 05211620@njnu.edu.cn
*corresponding author

Abstract: Education is a key factor in the realization of self-worth and national progress. How to train and develop the young generation is the fundamental problem of education. Assessment is important to develop education, because it drives students learning. At present, terminal assessment has always been a key part of education system, which pays too much attention to the overall outcome but ignores the students' subjectivity and initiative in the learning process. This kind of assessment suppresses students' creativity. Therefore, it is necessary to explore a new assessment system more suitable for modern teaching. Formative assessment is an assessment conducted over a period of time. It means that students are evaluated during the learning process, not just after the learning process. It collects information on children with a view to using it from time to time to guide and shape their learning. Formative assessment, on the other hand, is an assessment method that involves using a variety of assessment tools to assess various components of learning, including not only thought processes but also behaviors, personality traits, and flexibility. Formative assessments are also conducted over time. This approach will be more comprehensive and representative of the learner as a whole. It begins with teachers and administrators making decisions about learners' year-end grades and promotions.

Keywords: formative assessment, university, education.

1. Introduction

Formative assessment, also known as assessment for learning, is a pedagogical approach that focuses on providing students with ongoing feedback to improve their learning outcomes. Rather than simply evaluating students' performance at the end of a course or semester, formative assessment contains the continuous monitoring of student progress throughout the learning process. By providing feedback that is timely, specific, and actionable, formative assessment can help students better understand their strengths and weaknesses, identify areas for improvement, and ultimately achieve greater success in their academic pursuits.

The importance of formative assessment is widely recognized in educational circles around the world. In China, for example, the government has placed a strong emphasis on improving the quality of university education in recent years, with a particular focus on developing students' thinking ability, innovation capability, and problem-solving skills. Formative assessment is seen as a key tool for

achieving these goals, as it can provide students with the support, they need to develop these important competencies.

Despite the growing interest in formative assessment in China's university education system, there is still much to be learned about its current state of practice and effectiveness. While some studies have explored the use of formative assessment in specific courses or programs, there has been little systematic research that examines its broader implementation across the university system. This narrative review aims to fill this gap by examining the existing literature on the use of formative assessment in China's university education, with a focus on identifying the challenges and opportunities that come with implementing such practices.

To conduct this review, the author conducted a comprehensive search of academic databases and online resources for relevant studies published in Chinese and English. The author included studies that examined the use of formative assessment in Chinese university education at any level (e.g., undergraduate, graduate), in any discipline, and using any form of assessment (e.g., written assignments, oral presentations, group projects). The author also considered studies that examined the impact of formative assessment on students' academic achievement, engagement, and motivation.

2. Formative Assessment: Definition and Function

Formative assessment is an essential tool for improving learning outcomes in education. Formative assessment can be defined as a process of gathering and using information about students' learning to improve teaching and learning [1]. Unlike summative assessment, which evaluates students' learning at the end of a unit or course, formative assessment is an ongoing process that occurs throughout instruction [1].

The function of formative assessment is to provide teachers with information about students' understanding of a particular concept or skill. This information can be used to adjust instruction and provide students with feedback that helps them improve their learning [2]. By identifying areas where students are struggling, teachers can provide targeted support and adjust their teaching strategies to meet students' needs.

Formative assessment also plays a critical role in promoting student engagement and motivation. By providing students with feedback on their progress, formative assessment can help students see the value of their efforts and feel a sense of ownership over their learning [3]. This can lead to increased motivation and a willingness to take risks and engage in deeper learning.

Moreover, formative assessment can promote student metacognition, or the ability to reflect on and regulate one's own learning [4]. By providing students with opportunities to reflect on their learning and receive feedback, formative assessment can help students develop a deeper understanding of their own learning processes and strategies.

In conclusion, formative assessment is a critical tool for improving learning outcomes in education. Its function is to provide teachers with information about students' learning and to promote student engagement, motivation, and metacognition. By using formative assessment practices effectively, teachers can help students achieve their learning goals and develop the skills and knowledge they need to succeed.

3. China's University Education: Current Status and Sociocultural Factors

China's university education system has undergone significant transformations in recent years, reflecting the country's rapid economic and social development. China has a highly centralized education system, with the Ministry of Education (MOE) overseeing the management and funding of universities across the country [5]. Currently, there are over 2,800 higher education institutions in

China, including both universities and vocational schools [6]. The number of enrolled students has also increased dramatically, from 3.4 million in 1998 to over 41 million in 2019.

Despite these impressive numbers, there are significant challenges facing China's university education system. One of the key issues is the quality of education. While China has made significant investments in its education system, the quality of education remains a concern [5]. There is also a persistent problem of educational inequality, with students from wealthier families having greater access to high-quality education [7].

Sociocultural factors also play a significant role in shaping China's university education system. For example, there is a strong emphasis on academic achievement in Chinese culture, with students often feeling pressure to excel academically [8]. This can lead to high levels of stress and anxiety among students, which can negatively impact their mental health and well-being.

Moreover, there is a strong emphasis on traditional values and ideology in Chinese universities, which can limit academic freedom and intellectual diversity [9]. This can lead to a lack of critical thinking and creativity among students, which can limit their ability to innovate and adapt to changing circumstances.

In conclusion, China's university education system is facing significant challenges and opportunities. While the system has made impressive strides in terms of access and enrollment, quality and equity remain major concerns. Sociocultural factors such as academic pressure and a focus on traditional values also shape the system. Addressing these challenges will be critical for China to continue to develop a robust and innovative education system that prepares students for the demands of the 21st century.

4. Formative Assessment Practices in China's University Education: Teachers' Perceptions

Formative assessment is a course that involves collecting information about student learning in order to provide feedback and alter guidance to perfect student achievement. In China's university education system, teachers' perceptions of formative assessment practices are an important factor in the effective implementation of this approach.

Research has shown that formative assessment practices are not widely implemented in China's university education system. For example, one study found that while most teachers in China were familiar with the concept of formative assessment, few actually used it in their teaching [10]. This lack of implementation has different kinds of factors, including a lack of training and support, as well as cultural and institutional barriers [10].

In addition to these barriers, there are also cultural factors that can impact teachers' perceptions of formative assessment practices. For example, traditional Chinese culture places a strong emphasis on rote memorization and standardized testing, which can make it challenging for teachers to adopt a more flexible and student-centered approach to assessment [11]. Moreover, the hierarchical nature of Chinese society can make it difficult for teachers to challenge the status quo and advocate for change [12].

Despite these challenges, there are also promising examples of teachers successfully implementing formative assessment practices in China's university education system. For example, one study found that a group of English language teachers in China successfully incorporated formative assessment practices into their teaching, resulting in improved student outcomes [13]. These teachers cited the importance of training and support in their successful implementation of formative assessment practices.

In conclusion, teachers' perceptions of formative assessment practices play a critical role in the effective implementation of this approach in China's university education system. While there are significant barriers to adoption, including a lack of training and cultural factors, there are also promising examples of successful implementation. Addressing these barriers and providing training

and support for teachers will be critical in promoting the widespread adoption of formative assessment practices in China's university education system.

5.   Formative Assessment in China's University Education: Students' Perceptions and Experiences

While research has primarily focused on teachers' perceptions of formative assessment practices in China's university education system, it is also important to consider students' perceptions and experiences.

Research has shown that students in China's university education system have mixed perceptions and experiences of formative assessment practices. For example, one study found that while many students were familiar with the concept of formative assessment, few had experienced it in practice [10].

Moreover, traditional Chinese culture places a strong emphasis on rote memorization and standardized testing, which can make it challenging for students to embrace a more flexible and student-centered approach to assessment [11]. Students may also feel pressure to conform to traditional assessment practices in order to succeed academically.

Despite these challenges, there are also promising examples of students who have embraced formative assessment practices in China's university education system. For example, one study found that a group of students in a computer science course responded positively to formative assessment practices, citing increased motivation and engagement [14]. These students emphasized the importance of feedback and the ability to monitor their own learning progress.

In conclusion, students' perceptions and experiences of formative assessment practices in China's university education system are mixed. While there are significant barriers to adoption, including a lack of implementation by teachers and cultural factors, there are also promising examples of students who have embraced formative assessment practices. Providing more opportunities for students to experience formative assessment and promoting a more student-centered approach to assessment in China's university education system will be critical in promoting widespread adoption of this approach.

6.   Feedback in Education

Formative assessment is an approach to assessment that emphasizes the provision of feedback to students in order to improve their learning outcomes. Feedback is a critical component of formative assessment in China's university education system, but its implementation can be challenging due to cultural and institutional factors.

Research has shown that feedback is an important component of formative assessment in China's university education system. Feedback can take many forms, including verbal or written comments, grades or scores, and suggestions for improvement [15]. Effective feedback can help students identify their strengths and weaknesses, monitor their own learning progress, and improve their academic performance [16].

However, the provision of feedback in China's university education system is not without its challenges. One significant barrier is the cultural emphasis on face-saving, which can make it difficult for students to accept critical feedback [15]. Additionally, the traditional lecture-based teaching style in China's universities can limit opportunities for meaningful feedback, particularly in large classes [16].

To address these challenges, researchers and educators in China have been exploring innovative approaches to feedback in formative assessment. For example, one study found that peer feedback, where students provide feedback to each other, can be an effective way to overcome cultural barriers

to feedback [15]. Another study found that using technology, such as online forums and interactive quizzes, can provide students with more immediate and personalized feedback [16].

In conclusion, feedback is a critical component of formative assessment in China's university education system. However, cultural and institutional barriers can make the provision of effective feedback challenging. Innovative approaches, such as peer feedback and technology-enhanced feedback, can help overcome these barriers and promote more effective formative assessment practices.

7. Conclusions

This narrative review has highlighted the significance of formative assessment practices in China's university education system. While there are several challenges to the implementation of formative assessment, including a lack of understanding, limited training and support for instructors, and a focus on grades, there are also several opportunities for improvement.

The review has shown that formative assessment practices can enhance students' learning outcomes by promoting a culture of learning and enabling instructors to tailor their teaching methods to meet individual student needs. It has also revealed that there is a growing interest among university administrators and policymakers in supporting the implementation of formative assessment, which could lead to increased resources and support for instructors.

To ensure the effective implementation of formative assessment practices, there needs to be a concerted effort to promote a culture of learning through formative assessment, develop and implement effective formative assessment practices, and encourage collaboration and communication among stakeholders.

Promoting a culture of learning through formative assessment involves educating instructors and students about the benefits of formative assessment and providing opportunities for ongoing training and support. It also involves changing the perception of assessment from a tool for evaluation to a tool for learning.

Developing and implementing effective formative assessment practices can be achieved through the development of clear guidelines and standards for formative assessment, as well as the provision of resources and support for instructors. Additionally, there needs to be ongoing evaluation of the effectiveness of formative assessment practices to identify areas for improvement and to ensure that they are achieving the desired learning outcomes.

Encouraging collaboration and communication among stakeholders involves collaboration between instructors, administrators, and policymakers to develop policies and initiatives that support the use of formative assessment, as well as collaboration between instructors and students to ensure that formative assessment practices are aligned with students' learning needs and goals.

In conclusion, the implementation of formative assessment practices in China's university education system has the potential to enhance students' learning outcomes and to promote a culture of learning. While there are challenges to overcome, there are also opportunities for improvement. By promoting a culture of learning through formative assessment, developing and implementing effective formative assessment practices, and encouraging collaboration and communication among stakeholders, people can ensure that China's university education system is providing students with the best possible education and preparing them for success in the future.

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The Impact of Commuting Happiness on Career Calling and Its Mechanism of Action

Jingxuan Xu[1,a], Zhanhong Deng[1,b], Weijiong Wu[1,c,*]

[1]*Guangdong University of Technology, Guangzhou, China*
a. 1697589596@qq.com, b. 1426367086@qq.com, c. wuweijiong@gdut.edu.cn
*corresponding author

Abstract: Career calling is a key focus in the fields of vocational psychology and management psychology. However, current research primarily centers on education, media, and corporate management, with relatively few studies examining the commuting domain. To explore the impact of commuting happiness on career calling and reveal its underlying mechanism, this paper surveyed 370 Chinese employees. The findings indicate that factors such as commuting happiness, job satisfaction, and environmental uncertainty influence the formation of career calling. A positive correlation exists between commuting happiness and career calling. Moreover, job satisfaction mediates the relationship between commuting happiness and career calling, while environmental uncertainty moderates the effect of commuting happiness on job satisfaction. This study highlights the significant influence of commuting happiness on career calling and offers recommendations for society, businesses, and individuals on how to manage and enhance career calling.

Keywords: Career calling, commuting happiness, job satisfaction.

1. Introduction

As work environments rapidly evolve, work has become an indispensable part of modern life, and career calling has garnered increasing attention. However, current research on career calling primarily focuses on fields such as education, media, safety management, corporate management, and university student education, with limited research on the commuting domain. This study aims to explore the impact of commuting happiness on career calling and to uncover its mechanism of action, providing theoretical support for enhancing employees' career calling [1]. Previous studies have identified various factors influencing career calling, such as demographic factors, personal characteristics, organizational environment, and national and societal needs. For example, Torrey and Duffy examined the impact of religious beliefs on individuals' career calling. Some scholars have found through demographic research that there is a positive correlation between employees' years of work experience, industry status, self-perception, and career calling, while factors such as gender, age, income, and education level show no significant correlation with career calling [2]. In terms of personal characteristics, Esteves and Lopes discovered that increasing personal challenges and structural resources can effectively enhance an individual's sense of career calling [3]. However, none of these studies have examined the impact of commuting on career calling.

In terms of the impact of commuting on work, Jachimowicz explored how commuting affects work-related outcomes. He found that when employees exhibit low levels of self-control or

experience high levels of work-family conflict, an unpleasant commute may lead to job dissatisfaction, which could eventually result in quitting [4]. Birgitta Sandberg discovered that past commuting experiences influence current commuting behavior, while future and long-term happiness exert a more prolonged impact on commuting behavior [5]. Wu Weijiong et al. argued that recovery activities during commuting have a dynamic influence on work passion [6]. Amponsah-Tawiah, Emre, and Elci found that commuting stress reduces employee job satisfaction and performance while promoting aggressive behaviors, tardiness, and absenteeism [7]. However, these studies did not examine the relationship between commuting happiness and career calling.

This study investigates the influence of commuting happiness on career calling, along with its mechanisms of action and moderating factors. As illustrated in Figure 1, we first consider commuting happiness as the independent variable and career calling as the dependent variable. Based on self-determination theory, which posits that employees who fulfill their psychological needs for autonomy, competence, and relatedness will experience higher levels of happiness and life satisfaction [8], we propose Hypothesis 1: Commuting happiness has a significant positive impact on employees' career calling. Next, we explore the mediating role of job satisfaction. According to self-determination theory [9], if employees satisfy the three psychological needs of autonomy, competence, and relatedness, they will experience higher levels of happiness and life satisfaction. It can therefore be inferred that meeting these psychological needs during commuting can enhance job satisfaction. Accordingly, we propose Hypothesis 2: Job satisfaction partially mediates the relationship between commuting happiness and career calling. Lastly, we examine the moderating role of environmental uncertainty. Scholar Song J discovered that due to factors such as resource constraints, information asymmetry, and decision-makers' limited capabilities, companies and employees often find it challenging to accurately predict changes in the external environment. This leads to delays and errors in decision-making and actions [10]. Thus, we propose Hypothesis 3: Environmental uncertainty moderates the impact of commuting happiness on job satisfaction.
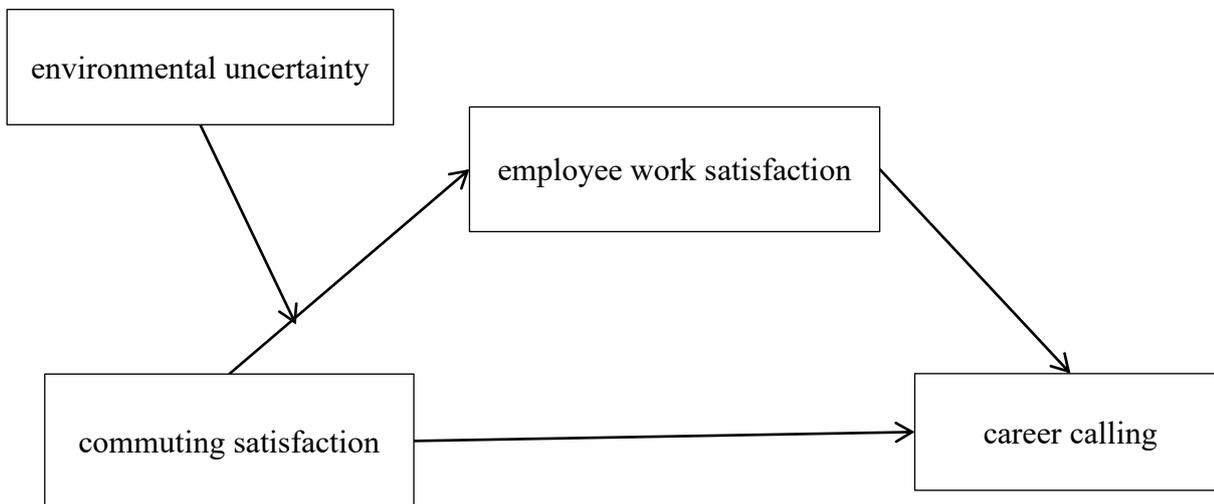
Figure 1: Hypothetical Theoretical Model

2. Research Methodology

2.1. Data Sample

The participants in this study were employees with work experience. The questionnaire was designed based on various scales, using the "Questionnaire Star" platform for distribution. It was randomly disseminated through online communication via WeChat. Prior to the survey, participants were

informed about the purpose and content of the study, and their participation was voluntary. The researchers assured the participants that the questionnaire would remain anonymous and only be used for academic research. Participants were asked to complete the questionnaire based on their true feelings. A total of 370 questionnaires were collected. The demographic characteristics of the sample are shown in Table 1. Through an analysis of gender, marital status, age distribution, work duration, and commuting methods, it was determined that the data from the questionnaires largely align with real-world situations and logical expectations.

Table 1: Sample Characteristics of This Study

Name	Option	Frequency	Percentage (%)	Cumulative Percentage (%)
Gender	Male	148	40.0	40.0
	Female	222	60.0	100.0
Age	Below 25	182	49.2	49.2
	26-35	76	20.5	69.7
	36-45	68	18.4	88.1
	Above 45	44	11.9	100.0
Years of Work	Less than 1 year	158	42.7	42.7
	1-3 years	60	16.2	58.9
	3-5 years	56	15.1	74.1
	More than 5 years	96	25.9	100.0
Commuting Time	Less than 20 minutes	110	29.7	29.7
	20-40 minutes	108	29.2	58.9
	40-60 minutes	92	24.9	83.8
	More than 60 minutes	60	16.2	100.0
Main Commuting Method	Walking	76	20.5	20.5
	Bicycling	72	19.5	40.0
	Driving	76	20.5	60.5
	Bus or subway	136	36.8	97.3
	other	10	2.7	100.0
	Total	370	100.0	100.0

2.2. Variable Descriptions

Commuting Happiness refers to employees' overall evaluation of the quality of their commuting experience and function. It is measured using the Commuting Happiness Scale developed by De Vos et al., which includes three dimensions: intense positive emotions, calm positive emotions, and cognitive evaluations. The scale consists of nine items and is measured on a 6-point Likert scale (from 1 = strongly disagree to 6 = strongly agree) [11].

Career Calling is measured using the Chinese version of the Career Calling Scale developed by Zhang Chunyu [12]. This scale consists of 11 items and includes three dimensions: altruistic contribution, guidance and meaning, and value. It is scored on a 5-point scale, ranging from 1 = "completely disagree" to 5 = "completely agree," with higher scores indicating a higher level of career calling.

Job Satisfaction is measured using the Job Satisfaction Scale, which was adapted from the Michigan Organizational Assessment Scale developed by Cammann, Fichman, Jenkins, and Klesh. The scale consists of three items [13].

Environmental Uncertainty is evaluated using Colquitt's Environmental Uncertainty Scale [14].

3. Research Results

3.1. Descriptive Statistical Analysis

3.1.1. Reliability Analysis

The reliability test was conducted by calculating the Cronbach's alpha coefficient to assess the internal consistency of the scales. According to widely accepted academic standards, when the Cronbach's alpha coefficient exceeds 0.9, it indicates excellent reliability of the test or scale. A coefficient between 0.8 and 0.9 suggests good reliability, while a coefficient above 0.7 is considered acceptable. If the Cronbach's alpha coefficient is below 0.7, the data's reliability is considered questionable, and the questionnaire may need to be redesigned or adjusted.

As shown in Table 2, the Cronbach's alpha coefficient for Commuting Happiness is 0.906, for Career Calling is 0.911, for Job Satisfaction is 0.915, and for Environmental Uncertainty is 0.956. All four dimensions have a Cronbach's alpha value greater than 0.8, indicating that the questionnaire demonstrates a high level of reliability.

Table 2: Reliability Analysis

Dimension	Cronbach's α Coefficient	Number of Items	Sample Size
Commuting Happiness	0.906	9	370
Career Calling	0.911	5	370
Job Satisfaction	0.915	6	370
Environmental Uncertainty	0.956	8	370

3.1.2. Confirmatory Factor Analysis

This study involves four core variables: Commuting Happiness, Environmental Uncertainty, Job Satisfaction, and Career Calling. To verify the discriminant validity of these core variables, confirmatory factor analysis (CFA) was employed. After comparing three-factor, two-factor, and single-factor models, the four-factor model demonstrated the best fit for the data, with all indicators meeting the established standards. Moreover, the standardized factor loadings for each measurement variable exceeded 0.6 and were statistically significant, further confirming their strong measurement relationships. Thus, the four core variables—Commuting Happiness, Environmental Uncertainty, Job Satisfaction, and Career Calling—exhibit good discriminant validity.

Table 3: Discriminant Validity Analysis Results

Model	x2	df	x2/df	CFI	TLI	RMSEA	SRMR
Four-Factor Model: a, b, c, d	610.346	344	1.774	0.941	0.935	0.065	0.052
Three-Factor Model 1: a+b, c, d	1183.116	347	3.410	0.814	0.797	0.114	0.078
Three-Factor Model 2: a, b, c+d	940.651	347	2.711	0.868	0.856	0.096	0.069
Two-Factor Model: a, b+c+d	1430.192	349	4.098	0.759	0.739	0.130	0.097
Single-Factor Model: a+b+c+d	1947.139	350	5.563	0.645	0.616	0.157	0.109

Note: a represents Commuting Happiness; b represents Environmental Uncertainty; c represents Job Satisfaction; d represents Career Calling. Sample size = 370.

3.1.3. Descriptive Statistical Analysis

As shown in Table 4, the descriptive statistics for the sample data, including the minimum, maximum, mean, standard deviation, and variance for each variable, are presented.

Table 4: Descriptive Statistics

Name	Sample Size	Minimum	Maximum	Mean	Standard Deviation	Variance
Commuting Happiness	370	1.444	5.000	3.239	0.882	0.778
Career Calling	370	1.000	5.000	3.196	1.026	1.053
Job Satisfaction	370	1.333	5.000	3.235	0.953	0.908
Environmental Uncertainty	370	1.250	5.000	3.455	1.259	1.586

3.2. Correlation Analysis

In research, Pearson's correlation coefficient (r) is commonly used to quantify the correlation between variables. An r value between 0 and 1 indicates a positive correlation, while an r value between -1 and 0 indicates a negative correlation. An r value of 0 implies no linear relationship between the variables. A correlation coefficient $|r| > 0.7$ indicates a strong linear correlation between two variables, while $|r| < 0.3$ indicates a weak linear correlation.

As shown in Table 5, the correlation coefficient between Environmental Uncertainty and Commuting Happiness is 0.660, and the correlation between Commuting Happiness and Job Satisfaction is 0.618, indicating a strong positive relationship among these variables with statistical significance. Additionally, the correlation coefficient between Job Satisfaction and Career Calling is -0.428, showing a moderate negative relationship with statistical significance.

Table 5: Correlation Analysis

	Commuting Happiness	Career Calling	Job Satisfaction	Environmental Uncertainty
Commuting Happiness	1	0.500**	0.618**	0.660**
Career Calling	-0.500**	1	-0.428**	-0.507**
Job Satisfaction	0.618**	-0.428**	1	0.680**
Environmental Uncertainty	0.660**	-0.507**	0.680**	1

Note: n=370,*p<0.05、**p<0.01

3.3. Hypothesis Testing

3.3.1. Main Effect Analysis

To test the impact of Commuting Happiness on Career Calling, a linear regression analysis was conducted. The detailed results are shown in Table 6. The R^2 value is 0.250, indicating that the factor of commuting happiness explains 25.0% of the variance in career calling. Furthermore, the F value is 61.125, with a corresponding p value significantly less than 0.05, demonstrating that the model

passed the F-test, which suggests that commuting happiness has a certain impact on career calling. In conclusion, the regression coefficient of commuting happiness is -0.582, with a t value of -7.818, both statistically significant. This highlights that commuting happiness has a clear negative impact on career calling, thus confirming Hypothesis 1.

Table 6: Main Effect Analysis

	Regression Coefficient	β	Standard Error	t
Constant	5.081	—	0.250	20.335**
Commuting Happiness	-0.582	-0.500	0.074	-7.818**
R²			0.250	
Adjusted R²			0.246	
F			61.125***	
Dependent Variable: Career Calling				

Note: n=370,*p<0.05、**p<0.01

3.3.2. Mediation Effect Analysis

To test the mediating effect of Job Satisfaction between Commuting Happiness and Career Calling, a bias-corrected bootstrapping test was performed with 5,000 samples. The detailed results are shown in Table 7 and Table 8.

The test results confirmed that the mediation effect is both present and significant. The 95% confidence interval for the direct effect is [-0.629, -0.260], which does not include zero, and the 95% confidence interval for the mediation effect is [-0.318, -0.003], also excluding zero. Therefore, Job Satisfaction plays a partial mediating role in the effect of commuting happiness on career calling, confirming Hypothesis 2.

Table 7: Regression Analysis of Commuting Happiness on Career Calling

Variables	Career Calling		Job Satisfaction		Career Calling	
	β	t	β	t	β	t
Commuting Happiness	-0.582	-7.818***	0.668	10.642***	-0.444	-4.75***
Job Satisfaction	—		—		-0.206	-2.381***
R²	0.25		0.382		0.273	
Adjusted R²	0.246		0.376		0.261	
F	61.125***		113.255***		34.178***	

Note: n=370,*p<0.05、**p<0.01

Table 8: Mediation Effect Analysis of Job Satisfaction

Effect Type	Effect Value	Standard Error	LLCI	ULCI
Total Effect	-0.582	0.074	-0.729	-0.435
Direct Effect	-0.444	0.094	-0.629	-0.260
Indirect Effect	-0.138	0.080	-0.318	-0.003

Note: n=370,*p<0.05、**p<0.01.

3.3.3. Moderation Effect Analysis

Table 9: Moderation Effect Analysis

	coeff	se	t	P	LLCI	ULCI
Commuting Happiness	0.2972	0.0703	4.2294	0.000	0.1585	0.4359
Environmental Uncertainty	0.5961	0.0713	8.3630	0.000	0.4554	0.7368
Commuting Happiness×Environmental Uncertainty	0.6230	0.0715	6.5583	0.000	0.2583	0.5934

In the statistical analysis of the mediation-moderation model, moderation effect analysis is used to test how a variable influences the relationship between two other variables. In this study, the moderation effect analysis is used to examine the degree to which Environmental Uncertainty moderates the relationship between Commuting Happiness and Job Satisfaction. Simply put, moderation effect testing helps researchers understand under what conditions the relationship between an independent variable and a dependent variable changes.

In moderation effect testing, statistical methods such as regression analysis or analysis of variance (ANOVA) are typically used to evaluate the influence of the moderating variable on the relationship between the independent and dependent variables. By testing whether the moderating variable changes the strength or direction of the relationship between the independent and dependent variables, researchers gain deeper insights into the relationships under different conditions, allowing for a more comprehensive explanation of the study's results. As seen in the moderation effect test graph (Table 9), the Bootstrap 95% confidence interval does not contain zero, indicating that the moderation effect is significant. Thus, Environmental Uncertainty plays a moderating role in the impact of commuting happiness on job satisfaction, successfully confirming Hypothesis 3.

3.3.4. Moderated Mediation Effect Analysis

To test the moderating effect of Environmental Uncertainty on different levels of Job Satisfaction, a bias-corrected bootstrapping test was conducted with 5,000 samples. The detailed data is shown in Table 10. At low levels of job satisfaction, the 95% confidence interval includes zero, indicating that the mediation effect is not significant at this level. However, when job satisfaction is at the average level, the 95% confidence interval no longer includes zero, showing that job satisfaction has a significant effect as a mediating variable, with an effect value of -0.060. When job satisfaction reaches a high level, the 95% confidence interval also does not include zero, confirming that the mediation effect remains significant, with an effect value of 0.0583. In summary, the mediation effect of job satisfaction shows some variability at different levels, suggesting that Environmental Uncertainty has a moderating effect on the mediation process.

Table 10: Moderated Mediation Effect Analysis

Mediating Variable	Environmental Uncertainty		Effect	SE	95%CI
Job Satisfaction	M-1 SD	2.66	0.1975	0.0482	[0.0886,0.2770]
Job Satisfaction	M	3.75	0.1279	0.0461	[0.0314,0.2068]
Job Satisfaction	M+1 SD	4.83	0.0583	0.0669	[0.0999,0.1571]

4.   Discussion

4.1.   Research Significance

This paper explores the relationship between Commuting Happiness and Career Calling. The findings from this study demonstrate that commuting happiness affects career calling, job satisfaction plays a significant mediating role, and the moderating effect of environmental uncertainty is supported.

First, this study found that commuting happiness has a positive impact on career calling. Previous research on the factors influencing career calling has been limited to demographics, personal characteristics, and organizational environments, without investigating the domain of commuting. Based on Self-Determination Theory, the hypothesis was formulated, and the study employed a survey method to discover the importance of commuting happiness in influencing career calling. This finding not only validates Self-Determination Theory but also expands the research on factors influencing career calling, providing a new perspective to this area of study.

Second, the study found that job satisfaction plays a partial mediating role in the relationship between commuting happiness and career calling. Prior research has shown that job satisfaction has a significant influence on career calling, and there is a positive correlation between commuting happiness and job satisfaction. This study further confirms the mediating role of job satisfaction in the relationship between commuting happiness and career calling, and it analyzes the mechanism through which commuting happiness impacts career calling.

Third, the study found that environmental uncertainty moderates the mediating effect of job satisfaction in the relationship between commuting happiness and career calling. Previous studies have shown that environmental uncertainty moderates the relationship between commuting happiness and career calling. Furthermore, environmental uncertainty can moderate the relationship between commuting happiness and job satisfaction. Based on Self-Determination Theory, Hypothesis 3 was proposed, suggesting that environmental uncertainty moderates the relationship between job satisfaction and commuting happiness. The research results also validated this hypothesis, clarifying the boundary conditions under which commuting happiness affects career calling. Additionally, this result provides organizations with effective management strategies, suggesting that improving employee job satisfaction and career calling can be achieved by addressing environmental uncertainty.

4.2.   Research Limitations

This study has certain strengths, but it also exhibits some limitations. For example, in terms of data, the sample size collected through the questionnaire is relatively small, and the participants are mostly concentrated among younger individuals. Additionally, the frequency of questionnaire distribution was limited. Regarding the research focus, while this study innovatively explored career calling from the perspective of commuting happiness, commuting happiness is only a small part of the commuting domain. Therefore, the impact of other aspects of commuting on career calling remains to be further explored by future scholars.

5.   Conclusion

Commuting Happiness significantly influences Career Calling. The mediating effect of Job Satisfaction is also significant, making it an important mechanism through which commuting happiness affects career calling. Furthermore, the moderating effect of Environmental Uncertainty is supported; when environmental uncertainty is high, the positive effect of commuting happiness on career calling decreases.

While this paper provides valuable insights, there are areas for improvement. For instance, although the study innovatively examined career calling from the perspective of commuting

happiness, commuting happiness is only one aspect of the larger commuting domain. Further research is needed to explore the broader impact of commuting on career calling. Additionally, the sample size of this study, consisting of only 370 participants, may be a limiting factor. This number might not be sufficient to provide highly accurate or generalizable results. Increasing the sample size in future studies would likely yield more meaningful and reliable outcomes.

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A Probe into the Role of Educators in Moral and Ethical Education

Yanhan Liu[1,a,*]

[1]*University of Glasgow, University Ave, Scotland, United Kingdom*
a. lllyyyhhhstian@gmail.com
*corresponding author

Abstract: This paper explores the role of educators in moral and ethical education. Historically, educators have always recognized the importance of moral education, emphasizing the great responsibility of educators in promoting students' moral development and moral decision-making. Through a comprehensive literature review, the study analyzes the dual roles of educators as ethical role models and rule-makers and enforcers. The focused research of Narinasamy et al., and Campbell, is carefully and critically analyzed in this paper to understand how educators' own behavior and classroom rules affect students' moral development. The analysis reveals the significant influence that educators have on shaping students' moral perspectives and the overall moral climate of the educational environment. In addition, the paper explores the impact of multicultural backgrounds and educators' personal values on their role in moral education, and recommendations for future research also highlight the need to address outstanding questions about cultural influences and educators' personal values. The findings highlight the important role of educators in moral education and suggest directions for further research to improve the effectiveness of ethical teaching practices.

Keywords: Moral and ethical education, Educator' role, Teacher influence.

1.   Introduction

The concept of education as a moral endeavor has a rich historical lineage, with Lao Tzu, Confucius, Plato and others providing compelling arguments and evidence supporting the significance of moral education. In contemporary society, the role of educators in moral and ethical education is increasingly acknowledged. Moral and ethical education in the classroom is gaining importance among politicians and educators [1]. Given that educators hold a position of considerable influence in the lives of their students, they become central figures in the development of moral valences and ethical principles. As the social landscape continues to evolve, the advantages of moral and ethical education are widely well known, leading to an increasing public demand for schools to impart these values more directly and efficiently [2] [3], creating new opportunities and challenges for educators.

The primary objective of this paper is to explore the role that educators play in moral and ethical education. Specifically, it aims to probe the responsibility that educators have in fostering moral development and ethical decision-making in their students. This research carries significant implications for the development of educational practice and ethics policy, as understanding the role that a teacher assumes as an ethical educator can better capture the essence of teaching ethics [4]. To

achieve this, the paper will provide a literature review of influential research on the theme of the educator's role in moral education, critically analyse and clarify the key studies, give recommendations for future research and make a conclusion.

2. Literature Review

The literature on moral and ethical education is rich and diverse, reflecting a growing interest in moral education among academics, educators, parents and the general public. Consequently, the role and responsibility of educators in moral and ethical education as a key issue has also been continuously defined and discussed. This section briefly identifies two key and selected sources in two areas: educators as role models and educators as rule makers and enforcers in moral and ethical education. These studies have produced an effective aid to my understanding of what role educators can play in moral and ethical education.

A common theme in much of the existing literature is the importance of educators as moral role models in moral and ethical education. This perspective is emphasized by Narinasamy et al. in their study *Teacher as Moral Model - Are We Caring Enough?* [5]. They argue that educators serve as moral role models by demonstrating caring and ethical behaviours, highlighting the significance of caring, empathy, and positive teacher-student relationships in moral education [5]. By observing the case of a teacher named Bing in a school in Malaysia, the researchers confirmed the positive impact of teachers as role models on students' moral development. Using educators as role models to shape students' development is considered as an important approach to fostering moral ethics [5]. Educators are encouraged to be aware of the important roles they play, cultivate caring and communicative relationships with their students and understand the significance of creating an environment that is conducive to moral growth [5].

Another impactful aspect is Campbell's study on the ethical role of teachers [4]. This study delves into conceptual and empirical issues related to the moral and ethical underpinnings of teaching practice, reflecting on the ethical roles of teachers in the formal classroom and in informal daily life [4]. Through the authors' study of two classes in a primary school in Canada, one identified roles of teachers in the classroom are that of moral and ethical rule makers and enforcers. These rules may not always be overt and might been developed for ease of administration or student safety. However, these hidden ethical principles can serve as moral messages, indicating to students the importance of fairness, honesty, kindness, and mutual respect [4]. One teacher interviewed by Campbell claimed that it was her responsibility to build and enforce these rules in each classroom. Although different teachers have different approaches to setting and enforcing rules, they take on this role in order to teach students more effectively about ethics and create an equitable and friendly classroom environment [4].

3. Critical Analysis

Narinasamy et al. and Campbell's work significantly influenced my research of the role educators play in moral and ethical education. It became obvious that educators hold a central position in shaping students' moral values and contribute to the overall ethical and moral climate of the school. Education is already a huge work imbued with moral values [1], there is no longer any doubt about the debate about whether teachers should teach ethics or not, and this has laid a positive foundation for this research.

3.1. Educators as Moral Models

In Narinasamy et al.'s study, the objective was clear, namely to explore the concept of the teacher's role as a moral education role model, providing valuable insights into this role of the teacher and the

meaning of classroom care [5]. The core of this study was a seven-month case analysis in which the main participant was a Malaysian teacher named Bing, along with four students who were involved to provide feedback on how Bing was perceived in the minds of the students. The case study approach has the advantage of allowing an in-depth exploration of the teacher as an ethical role model, providing a realistic and comprehensive understanding of events and teacher-student relationships in the classroom [6], as well as providing valuable insights into the application of ethical caring in real-world educational settings. In the study, the authors used interpretive paradigm to analyse Bing's experiences and perspectives in the school setting, focusing on Bing's own approach as a role model in moral education and its impact on students' moral development, facilitating a deeper understanding from a participant's perspective.

However, the study is not without limitations. While Bing's case contributes rich real-life experiences, its lacks universality as Bing's experiences are situated within specific cultural, educational and social contexts, which may limit the eventual wider applicability of its findings. Lack of representativeness is also a drawback, as Bing is a unique individual and the authors also state that "she is different from other teachers", making it unique and not representative of the entire group. Moreover, potential biases and subjective views of the involved members in the study is also a shortcoming. For instance, the researchers deliberately selected four students to give their feedback on Bing, it may reflect the researcher's subjectivity. These four students and Bing may have been influenced by their own subjective perceptions as well.

The researchers' adherence to ethical guidelines can be seen in their pre-study preparations, where they sought the consent of the head teacher, the teachers involved, and the parents of the students prior to the commencement of the case observations, as well as letters of approval from two authoritative organizations, which safeguarded the right to informed consent of these participants. The researchers were also very respectful of Bing's schedule, prioritizing the personal time of the participants and ensuring the personal freedom of the research participants. The transcription of all interviews and transcripts and the repeated checking of the obtained data with the participants also demonstrated the honesty and objectivity of the researchers and their commitment to the research results, which is in line with professional ethics. However, the study had gaps in ethical considerations related to the feelings of the students involved. Including students' consent was not sought before the study, recording in class may invade students' privacy, having a 30-minute interview with each student may make them stressful. These deficiencies in ethical considerations elevate the potential risks of research [7].

3.2. Educators as Moral Rule-Maker and Enforcer

Campbell et al.'s study aimed to explore the moral and ethical roles of teachers in the educational setting, fostering deeper thought on teaching ethics in classroom [8]. This paper employs qualitative research, specifically using life history and participant observation methods to examined two different Grade 2 classes in a culturally and ethnically diverse school in Canada, providing valuable and authentic examples. Due to the complexity of moral and ethical aspects in education, issues in this area cannot be resolved alone through theory. Empirical observation and exploration are necessary to enable researchers to delve into and clearly present the details of classroom dynamics as teachers become different roles. The personal experiences of two teachers, Tatiana and Farideh, offer rich insights into how teachers' role in moral education emerges from empirical investigations of classroom interactions. Recognizing the diversity of moral and ethical education, the researcher applied the theoretical lens of social constructionism, highlighting the impact of philosophical concepts on moral and ethical education and the complexities of the roles assumed by educators in influencing students.

In terms of ethical considerations, the researchers bend themselves to acknowledged, understood, and respected the diversity of participants' ethical perspectives. They made efforts not to change justice with their own subjective ideas when confronted with complex moral and ethical concepts arising from the different roles of teachers in teaching ethics. Nonetheless, the individual subjective perceptions of the researchers and participants cannot be ignored, While the authors recognize this, specific measures to reduce researcher bias and subjectivity are not discussed, which may affect the validity and transparency of the findings. Such issues can affect the authentic experience of the participants, negatively impacting their rights and interests, violating ethical considerations, as well as diminishing the study's credibility.

It is worth noting that although this study made several conclusions about the roles teachers can take on in moral education through numerous real-life examples, the conclusion that had the greatest impact on me is the one addressing 'the teacher as a moral rule-maker and enforcer in the educational process'. Therefore, this analysis will primarily focus on this conclusion. The study underlines the critical position of teachers in moral rule-making and enforcement, asserting that the existence and enforcement of rules are crucial for conveying moral messages to students. Although teachers share a belief in similar moral principles, there are variations in the actual practice of this role and attitudes towards student engagement across teachers, affecting the effectiveness of the rules and the moral development of students. While this viewpoint is robust and supported by real cases and researchers' analyses of classroom data, some gaps and contradictions are evident. For example, Tatiana stated that ethical rules existed in her classroom, but the researcher never heard these rules directly mentioned or quoted in the actual classroom. This may affect students' understanding of moral rules, leading to disagreements due to individual subjectivity and independence. Refinement could still be made in this area. Furthermore, Farideh stated that after setting moral rules, she prefers to let students solve their problems on their own. This approach may be considered insufficiently caring in moral education. Caring is particularly important in moral education. In addition to teaching ability, qualities such as a teacher's sense of caring and trust are generally desirable to students [9] [10] [11]. As Arthur [12] points out, students perceive their ethical and moral stance through the genuine caring of the teacher during studying process. Lack of caring may diminish the positive impact of teachers when they assume the role of rule makers and enforcers in ethical education, influencing students' trust and compliance with ethical rules.

4. Suggestions for Next Steps

By analysing the above research on the role of educators in moral and ethical education, 'the educator as a role model in moral and ethical education' and 'the educator as a rule maker and enforcer in moral and ethical education' have been critically explored. But as Connell [13] suggests, the concept of a good teacher is constantly evolving and proves nearly impossible to measure directly. In view of the complexity and universality of moral and ethical education, the discussion around the role of teachers in moral education is still relatively underserved. Lots of key questions have not been adequately answered, which means that the pressing need for further research.

4.1. The Influence of Multicultural Background

In the contemporary society, the swift pace of globalization and the continuous integration of different cultures provide educators with challenging multicultural contexts and the variations in the role of educators across different cultural settings remain an issue that still has some cognitive gaps. Existing evidence indicates that every child's thinking patterns evolve through self-generated, changed and defined in interaction with the environment [14]. Consequently, educators must not merely impart knowledge in a rigid manner in one mode, but must support this environmentally based "self-

generation", which means that the role of the educator in moral education has to be intercultural. This question can be addressed with a fieldwork approach, where specific differences in the ethical roles of educators in diverse cultures can be systematically collected through observations, interviews, and surveys.

Peru is a valid example where differences in the role of educators in moral education in different cultures can be studied in depth due to it is a typical culturally diverse country. The Peruvian Ministry of Culture's Database of Indigenous Civilizations recognized in 2017 that there are at least 55 indigenous peoples in the country [15]. Such a social context undoubtedly requires an intercultural dimension to the moral education of Peruvian students. In Peru, students from mainstream hegemonic cultural social background may tend to view their culture as the absolute truth and hold prejudices against the cultures of other groups [16]. Therefore, the issue of multiculturalism should be included in the classroom and discussed from an ethical point of view organized by educators, with the primary aim is to help students understand the existing between groups and realize that empathy and respect should be maintained when facing these differences. In this process, educators may be able to act as an intermediary and guide in moral education for students from mainstream cultural backgrounds, helping them to understand cultural diversity and guiding them to make the right moral choices. For other students from non-mainstream and disadvantaged cultural backgrounds, educators may transform into motivators and supporters of moral education, promoting a more democratic, equal, and inclusive moral education.

Despite the benefits of such a research process, there are challenges. Researchers must be sensitive to cultural bias because if each cultural background cannot be treated fairly and equitably in the research process, the robustness of researchers' claims will be reduced, and the research results produced will be affected by subjectivity. Recruiting researchers with expertise in different cultural backgrounds to form diverse research teams may help to address this challenge [17]. Additionally, it is also a difficulty to thoroughly consider the ethical privacy of all people involved in the research, and researchers must maintain ethical standards at all times to protect the well-being and privacy of participants.

4.2. The Influence of Educator's Values

Beyond the issues that may arise from external environmental factors, the internal factors related to educators themselves should not be overlooked. Hence, further exploration is needed into the impact of educators' personal values and beliefs on the roles they assume in moral education. As noted in the studies by Narinasamy et al. and Campbell referenced in the literature review, educators can be substantial influences on students' moral education by serving as moral role models and as rule makers and enforcers. Quality teachers are individuals whose pedagogy is rooted in values and beliefs fostering caring, positive teacher-student relationships built on trust and upheld by high standards of professional ethics [18]. For educators, their personal values and beliefs shape their own understanding of ethical standards and indirectly influence their approach to moral education and their role responsibilities in moral education.

In order to find new evidence that can address this question, identifying representative examples is the first and most important step. Researchers can then use a combination of observation, surveys, and interviews with educators to corroborate the observed evidence and to draw the multifaceted roles educators play in teaching moral to students. Researchers should also look for multiple case studies involving educators with diverse values to enrich data and enhancing the universality of findings. Considering the subjective nature of individual thoughts, this approach also facilitates the potential risks that may arise in this study and can ensure the reliability of educators' perceptions of their self-values.

5.   Conclusion

This paper employs a qualitative research approach through literature review and literature analysis illustrate the complex and indispensable role that educators play in moral and ethical education, aiming to understand the multifaceted responsibilities assumed by teachers when imparting moral principles in the classroom. It must be acknowledged that there are some limitations in this study, as a non-empirical research methodologies was used, this study heavily relied on existing literature. This dependence creates some potential drawbacks, including selection bias of the literature, weak timeliness, strong subjectivity, and a lack of empirical evidence, thereby limiting this study's ability to offer a detailed understanding of individual issues.

Through research, this paper affirms the key role of educators as role models in shaping the moral and ethical character of the next generation and the restraint of students in moral norms. This paper also analyses the influence of external multicultural background and internal different personal values on the theme, explores the changeable role and responsibility of educators in moral and ethical education.

This would be a fruitful area for further work. Subsequent studies in this area could delve deeper into the factors influencing the educators' role in relation to the context of the times, complexing exploration through interdisciplinary collaboration.

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A Multidimensional Interpretation of A New Story of the Stone Based on Corpus Analysis

Yiran Hu[1,a,*]

[1]*College of Liberal Arts, Guizhou University, Guiyang, China*
a. 3250911087@qq.com
*corresponding author

Abstract: As a traditional science fiction novel, A *New Story of the Stone* blends old and new elements. This study employs quantitative descriptions to reveal that the novel's language is rich, vivid, and concise. In terms of narrative features, the novel inherits the traditional Chinese chapter-novel structure and maintains a strong focus on scene descriptions. However, it also reflects Western influences by paying attention to the portrayal of characters' psychological activities. The novel's social utility is pronounced, as it celebrates the dissemination of advanced technology, pursues the ideal society, reflects on societal improvements, and critiques the current society and backward traditional culture.

Keywords: Corpus, A *New Story of the Stone*, Quantitative Analysis.

1. Introduction

Wu Jianren's New Story of the Stone is among the earliest examples of science fiction in China. The author revitalizes the classic by depicting the protagonist, Jia Baoyu, experiencing various encounters after traveling to the late Qing Dynasty. In the novel, Jia Baoyu is portrayed as a young man with a nationalistic sentiment who pursues science and seeks to save the country. While the novel offers a grand vision of the "new China" through technological advancements, it also carries strong themes of patriotism and self-improvement, reflecting the complexity of contemporary intellectual thought. It is considered a "masterpiece of late Qing science fiction" and a prominent example of the literary style of the late Qing Dynasty [1]. The technological fantasies, social critique, political ideals, and cultural implications presented in New Story of the Stone have attracted considerable attention, but quantitative explorations of its multiple meanings remain scarce.

Corpus linguistics is an empirical science that studies texts through corpus retrieval tools. In recent years, this method has been widely applied in literary studies. On one hand, it allows for objective and quantitative analysis of a work's textual features, themes, and character portrayals from a rational perspective. On the other hand, it provides readers with a more comprehensive and intuitive understanding of important information and thematic content. Technology supports the qualitative analysis of texts with data, making it more objective and persuasive. In China's literary research, the combination of quantitative and qualitative research through corpus linguistics has primarily focused on foreign texts, with less emphasis on Chinese texts. This paper aims to build a corpus of 215,204 characters based on previous studies and analyze the vocabulary frequency and characteristics of New Story of the Stone using Python programming and AntConc software. The goal is to explore the

novel's linguistic features and multiple meanings to provide an objective interpretation of its themes and expand the application of corpus and computational methods in modern literary studies.

2.   Overall Characteristics of the Text

Based on the original text of *New Story of the Stone*, a corpus of 158,009 characters was created (excluding non-novel elements such as the cover, preface, postscript, edition, imprint, directory, back cover, author preface, and the novel's end notes including time, place, and concluding remarks). After segmenting the text using the Jieba library, a total of 83,026 vocabulary items were identified. The different stylistic features formed in the author's language expression are reflected in the quantitative characteristics, with differences in the frequency of language units demonstrating the novel's linguistic features.

2.1. Linguistic Characteristics

Firstly, *New Story of the Stone* exhibits rich and flexible vocabulary, characterized by diversity. In terms of lexical metrics, the text shows a high vocabulary richness. Vocabulary richness is an important dimension describing the breadth of the author's word usage in a text, indicating the number of different word types in a given length of corpus, which reflects the readability of the text to some extent. The proportion of hapax legomena (words that occur only once in a text) is an important indicator of vocabulary richness. Hapax legomena in the entire vocabulary can reflect the uniqueness of the vocabulary. [2] To reduce the influence of text length on uniqueness rates, this paper uses the logarithmic uniqueness rate as a quantitative indicator of lexical uniqueness, calculated as follows:

$$\frac{\log (Number\ of\ Unique\ Words)}{\log (Total\ Word\ Count)} \times 100\%$$

The logarithmic uniqueness rate of *New Story of the Stone* is 80%. Based on previous studies of some Chinese corpora, Yang Jiang's narrative essays have a higher vocabulary richness, with a logarithmic uniqueness rate of only 78.6%. In comparison, the novel's vocabulary is evidently richer. This richness is related to the novel's theme: Baoyu's new experiences and perceptions require a wide range of vocabulary to describe numerous new things and concepts. Moreover, descriptions such as "the entire warship gleamed like a ball of white fire," "the electric lamps on the vehicles resembled countless stars," and "the large ones are like Guangdong oranges, and the small ones are like round eyes" [3] illustrate the author's use of varied vocabulary to vividly and understandably depict new things.

Although the novel's vocabulary richness adds some difficulty in reading, Wu Jianren, from Baoyu's "time-traveler" perspective, describes these new phenomena and concepts in familiar, local, and colloquial language, making the novel's language clear and accessible. The average word length in the novel is approximately 1.44, indicating that the novel frequently uses simple monosyllabic words rather than complex ones. The search results show that long words are not common in *New Story of the Stone*, and the language is concise, reflecting the traditional vernacular style.

Therefore, the novel's language is characterized by richness, flexibility, conciseness, and vividness.

2.2. Narrative Characteristics

New Story of the Stone inherits traditional narrative techniques while incorporating some Western and modern elements, presenting a sense of modernity. As a revised novel with numerous new elements, its traditional aspects are evident from the high frequency of certain traditional terms. The novel follows a traditional chapter-based format. The term "next episode" appears 37 times, and "let's

hear" and "let's say" appear 50 times. The frequent use of phrases like "let's say" reflects the author's omniscient narrative perspective, indicating that the novel adheres to traditional structural constraints.

The term "only see" appears 162 times in the text. On one hand, it reflects the omniscient narrative perspective typical of traditional chapter-based novels. On the other hand, it often introduces concrete scene descriptions, such as "only see the strange rocks towering like mountain landscapes" and "only see the cave entrance with a block of strange stone, translucent and intricate" [3]. These scene descriptions are poetic and vivid, resembling ancient Chinese landscape writing [4]. The frequent use of "only see" shows that *New Story of the Stone* retains the Chinese literary tradition of detailed scene depiction.

In narrative terms, *New Story of the Stone* also shows the influence of foreign novels with extensive psychological description, reflecting a degree of modernity. Psychological description is relatively weak in traditional vernacular novels, with only a few works (e.g., Jin Ping Mei, Dream of the Red Chamber) including some psychological portrayal [5]. In modern times, influenced by foreign novels, psychological activity depiction has started to receive more attention from writers. The term "in the heart" appears 44 times, often followed by descriptions of characters' psychological activities, such as "in the heart secretly amused" [3]. Psychological description in the novel goes beyond monologic discourse, presenting characters' emotions and states.

3. Social Functionality

3.1. Popularizing Advanced Science

New Story of the Stone describes and introduces many advanced scientific technologies from Baoyu's "alien" perspective, expressing recognition of science and technology, and hopes to rejuvenate China through technological power. Searching for words related to "wonder," such as "strange thoughts," "strange devices," "rare," and "strange shapes," reveals that these terms are evenly distributed in the text, appearing 142 times, with a dispersion of 0.889.

Table 1: Distribution of Words Containing "Wonder" in the Text

Freq	NormFreq	Dispersion	plot
149	1716.427	0.889	

The "wonder" here refers to "steamships," "warships emitting white light," "machines that can create air," "elevators that can ride the clouds," "technologies that can create weather," and "Western medicine that needs dissection." The recurring "wonder" throughout the novel vividly introduces advanced scientific products and affirms and praises the flourishing science capable of creating "wonder devices." The author describes the astonishing changes over decades, narrating not the history of twenty-four surnames but the life changes of ordinary people.

Among the advanced technologies most enthusiastically described in *New Story of the Stone* are weaponry. The terms "guns" and "cannons" appear 214 times. The defeat in the Opium War made Chinese people acutely aware of the formidable power of Western weaponry, leading to a surge in translations of books about Western arms. Between 1840 and 1860, there were as many as 22 books introducing Western weaponry knowledge [6]. However, *New Story of the Stone* does not wholly praise weaponry; it expresses opposition through Baoyu's voice, criticizing modern war's cruelty and revealing its horrors, such as "recently, those cruel countries have made a chlorine gas cannon that hides chlorine gas in shells, causing unknown numbers of deaths when exploded" [3].

3.2. Social and Political Ideals

The terms "civilization" and "barbarism" are used 167 times in the text, reflecting the novel's contemplation of social and political issues. In the twenty-second chapter, the character Baoyu enters a "civilized realm," which embodies the author's ideal society. Regarding the political system, after the twenty-second chapter, the term "despotism" appears 9 times. The novel discusses the three types of political systems in the world—despotism, constitutionalism, and republicanism—stating that while there is debate about constitutionalism and republicanism, no one supports despotism, yet the author's setting is a despotic regime. This contrasts with the common ideal of "constitutionalism," which was greatly hoped for by late Qing intellectuals, who confidently viewed Western constitutional monarchy as a new reference for the nation-state's path forward [7]. Instead, Wu Jianren places his hopes in a "civilized despotism." After the twenty-second chapter, the term "moral education" appears 8 times. This concept, central to the educational content of the civilized realm, reflects the author's political ideal of a morally governed society with Confucian overtones. The term "barbarism" appears 38 times, indicating Wu Jianren's emphasis on traditional morality in response to the widespread moral decay of his time, showing a strong critical consciousness.

Regarding sovereignty, the term "power" appears twelve times. The novel emphasizes the need to "eliminate despotism" and achieve "gender equality." In Wu Jianren's ideal, both men and women possess their own sovereignty; people of all races, such as the red, black, and brown races, each have their own sovereignty; and the country's "extraterritorial rights have also been reclaimed.

3.3. Realization of Reform Aspirations

The author also explores and answers questions about how to reform society and achieve his social ideals. The term "question" appears 248 times in the novel. Baoyu, as an "ignorant" character, frequently poses pointed questions. Terms like "why" and "what for" appear 34 times, often followed by Baoyu's inquiries into various phenomena of the late Qing era. Examples include questions about foot-binding, the use of watches, the necessity of foreign ships, and the reasons for certain practices. These questions reflect the author's criticism of backward phenomena such as foot-binding, the lack of self-reliance among Chinese people, and blind imitation of Western practices. The author believes that for society to reform, Chinese people should liberate their thoughts, abandon outdated customs, become self-reliant and bold, and learn Western technologies to engage in practical industry rather than blind imitation.

The terms "book" and "newspaper" appear 284 times. Baoyu, in his exploration of the late Qing period, shows a strong preference for learning through books. After reconciling with Xue Pan, he frequently seeks books and newspapers from him, spending his days reading and avoiding leisure activities with Xue Pan. The extensive use of the term "book" implies that the author views education through books as another means to achieve reform, by enlightening new ideas and spreading new technologies.

4. Criticism and Reflection

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5. Conclusion

As a traditional science fiction novel, *New Story of the Stone* blends old and new elements. The quantitative analysis reveals that the novel's language is rich, vivid, and concise. In terms of narrative characteristics, the novel maintains traditional chapter-based structure and extensive scene descriptions while incorporating modern psychological depictions influenced by Western literature. The novel has strong social functionality, showing an appreciation for advanced technology, a pursuit of an ideal society, reflections on social reform, and critiques of contemporary society and outdated traditional culture. However, the critiques of issues like opium and foot-binding are somewhat superficial, and no solutions are proposed. Despite advancements in psychological depiction, the complexity of character psychology and subjective experience remain unchanged. This paper aims to provide objective data support through quantitative analysis to aid qualitative analysis and inspire new thinking in the application of computational methods in modern literary studies. Due to limitations in both technology and analysis, this study seeks to broaden the application of corpus-based methods in modern literature, offering some preliminary insights for scholars using computational methods in literary research.

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Global Media Integration: Sino-US Co-productions in the Age of Globalization

Yiru Chen[1,a,*]

[1]*King's College London, Strand, WC2R 2LS, The United Kingdom*
a. Yiruruu1120@gmail.com
*corresponding author

Abstract: In recent years, one of the hottest topics in film development has been co-production. It is an effective channel for connecting the non-Western film market with the international film market, as well as a new option for international film companies such as Hollywood in the age of media globalisation. Current media globalization has significantly weakened the hegemonic position of cultural empires, and Hollywood, as the most typical Western cultural hegemonic collective, has actively sought co-production with other countries to maintain its international reputation status. Regardless of whether American hegemony persists, this essay argues that co-productions provide new opportunities and growing opportunities for the global media industry. This study will begin with a definition of globalisation and Sino-US production, followed by a discussion of the challenges and benefits of Sino-US cooperation. Following that, using 'The Great Wall' and 'Iron Man 3' as case studies, discuss the global impact of Sino-US media cooperation.

Keywords: co-production, film industry, International collaboration, global culture.

1. Introduction

International collaboration is the essence of filmmaking. Filmmakers looking for exotic locations and unique storylines have long travelled the world to produce their films, and in the process, they frequently enter "co-production" filmmaking mode[1]. As a result, co-production has become one of the most hot-debated topics in film development in recent years. Co-production is a cooperation model in which two or more countries invest in and share film copyright and market revenue. And to distribute benefits and share risks according to the cooperation strategy, such as investment method, capital ratio, settlement method, and so on[2]. While co-production has spiritual and cultural significance, such as cultural dissemination and globalisation, most film companies choose co-production to maximise the benefits of the film industry, and profit is the primary driving force in international co-production. The co-production is being expanded in two directions because of this driving force. The first is production cooperation, emphasising that from the actual production level of the film, the joint creation of various countries or regions may have the requirement in the integration of each country's cultural content, as well as the aesthetics of the audiences in the two countries. The second type of cooperation is operational cooperation, which focuses on film investment and operation methods.

This essay focuses on the collaboration between Chinese film companies and Hollywood. According to the National Radio and Television Administration's "Regulations on the Administration

of Chinese-Foreign Co-production Films," only co-produced films with joint investment, co-production, mutual benefit, and joint risk-taking by Chinese and foreign countries can be regarded as domestic films and distributed in mainland China. Those that do not meet one of these four criteria can only be considered imported films, and the number of those films imported into the Chinese film market is limited each year. To summarise, co-production is defined in this study as a type of film collaboration in which firms from two or more countries co-invest, co-produce, share benefits, and share risks.

Furthermore, because of their scale of distribution and visibility of global cultural flows, films have a strong cross-cultural attribute, making them the most observable cultural commodities in global cultural flows, and Hollywood is the most typical example of media globalisation[3]. Some researchers use cultural imperialism to explain Hollywood's development in the context of media globalisation. They believe that in the process of global cultural flow, Hollywood has formed a hegemonic culture, suppressing and limiting the development of other cultures, as well as a 'media empire' cantered on American culture[4]. However, the growth of Hollywood has also aided the establishment and development of the film industry in other countries[5]. Because of the globalisation of the media industries, Hollywood has transformed its film production into "co-production" to reach a larger global market and maintain its dominance in the global film industry. In addition, the Chinese film market is a critical component of Hollywood's globalisation strategy. In recent years, the Chinese film market has grown rapidly, surpassing the United States to become the world's second largest film market[6]. However, due to the complexities of the Chinese film market, such as the strict content review system and aesthetic differences between Chinese and Americans, collaboration between Hollywood and Chinese film companies is fraught with danger. In this context, the debate over the Sino-US co-production model has both practical and research implications.

2.   The challenge of Sino-US productions

Sino-US co-production is an approach to follow the trend of media globalisation. Furthermore, Hollywood's desire for the Chinese market is strong, as is the Chinese film industry's desire to go international. However, the cultural and linguistic differences between China and the United States, as well as the Chinese government's strict policies and immature cooperation model, have created significant challenges for the implementation of China-US co-production. The cultural and linguistic differences between China and the United States, as well as the Chinese government's strict policies and immature cooperation model, have created significant challenges for the implementation of China-US co-production.

The first difficulty stems from linguistic differences. The film industry consistently underestimates the effect of language differences, but sound and subtitles are two of the most important aspects of a film's integrity, and they are easy to spot[7]. The question of which language to use in filmmaking has become a serious one. Chinese director Huang Jianxin, for example, refuses to make English-language films. However, foreigners are frequently "lost in translation" when watching Chinese-language films[7]. Furthermore, most of the the world's audiences are accustomed to English-language films, and many foreign audiences are not interested in films that require subtitles to understand.

The second challenge is the cultural divide between China and the United States, regardless of political attitudes between China and the West, there are significant differences in the cultural products acceptance among people in various countries, which may diminish but cannot disappear[8]. On the one hand, the Chinese leadership is hostile to Western culture, particularly Hollywood culture, and they see the culture and values propagated by Hollywood films as a form of 'cultural imperialism'[9]. On the other hand, due to different daily habits, Chinese moviegoers and American moviegoers are interested in different types of movies. For example, Chinese audiences prefer

historical dramas, whereas American audiences prefer science fiction films. Take, for example, Chinese director Zhang Yimou, whose early films depicting the country's impoverished, immoral sex were beloved by American audiences but banned in China. However, his later commercial film, which was a box office success in China, was criticised by Western audiences as a "vulgar film combining business and politics"[10]. To summarise, cultural differences can lead to different expectations for movies[9], making it difficult to meet the expectations of audiences from different countries in a co-production.

Furthermore, differences in political ideology and censorship make collaboration between China and the United States difficult. Transnational films that collaborate must undergo increasingly stringent cultural and awareness scrutiny before entering the global market[11]. Especially in the Chinese film market, where there is no grading system. To protect its national culture, the Chinese government must strictly censor all films released in the country[12]. Specifically, films regulated by the China Film Co-production Company (CFCC) must adhere to the restrictive principles of the Chinese Constitution, which include, but are not limited to, stories about demons or supernatural phenomena, crime circumstances, and demeaning the People's Liberation Army and the police. According to the CEO of the CFCC, censorship of film content is very important, and stories and scenes about violence, pornography, religion, and discrimination against other countries will be removed or modified. She stated that, "We don't want to see images of China involved in drug trafficking or brawls on the streets. We want to see a 'bright' image of China in movies after the Chinese economic reform." Some American filmmakers argued that refusing to portray a negative image of China in co-productions or refraining from mentioning certain historical events would limit Sino-US co-productions. However, racism and white supremacy preferences do exist in Hollywood film culture. In Sino-US co-productions, for example, white males frequently play the protagonist and the hero roles in the story.

Not only is the Chinese government's strict censorship of content a major challenge for Sino-US cooperation, but so are strict regulations on "co-production." The CFCC allows only 34 foreign films to be imported into the Chinese market each year, and the revenue-sharing system allows producers of these imports to receive 25% of the total revenue. However, co-productions are not subject to quotas and can be released as domestic films, earning up to 43% of total revenue. Thurs, Hollywood studios are eager to enter the Chinese market through co-productions to maximise profits while reducing competition from other foreign films. However, the CFCC has gradually increased the requirements for "co-productions," such as the proportion of investment, the proportion of Chinese actors, and the proportion of Chinese elements, which is another challenge for Sino-US co-productions[13].

3. The Benefits of Sino-US Productions

Despite numerous challenges, Sino-US cooperation remains a trend in the context of globalisation, because co-production benefits national economic development, soft power development, and global talent training.

First, in today's media, movies are portrayed as powerful and effective tools for nation-building, implying that Sino-US cooperation can boost China's cultural soft power and cultural dissemination. According to Kokas, China's co-production with Hollywood is motivated in part by a desire for Chinese films to "become visible" to a global audience, or to gain recognition, prestige, and influence outside of China[14]. Furthermore, Sino-US co-production is part of the Chinese film industry's early 2000s strategy of 'borrowing a boat to go overseas'. Its goal is to transform China's film industry, export Chinese culture, and strengthen China's soft power[15].

For Hollywood, the co-production model has resulted in more money and the elimination of the need to compete with other foreign films for a small import quota. For the first time, mainland China's

box office revenue surpassed that of the United States in 2020, making it the world's largest movie market.

Furthermore, co-production between China and the United States has facilitated talent communication between the two countries and cultivated globalised film professionals. Several global filmmakers have been cultivated as a result of Sino-US productions. They do not make a living in China or the United States, but instead work in trans-international film production[14].

To summarise, American filmmakers are attempting to unlock the Chinese market through co-production, while China is attempting to unlock the global market through the same mechanism.

4. Case studies

4.1. The Great Wall

Zhang Yimou's 'The Great Wall' is a notable example of Hollywood film co-production with Chinese film companies. 'The Great Wall' is a Sino-US co-production co-produced by Hollywood's Legendary Pictures and Universal Pictures, Dalian Wanda, and China Film Group. Because the film is supervised by the CFCC from production to distribution, it is considered a local Chinese film, and the distribution does not require it to be introduced as an imported film, so it is consistent with the Sino-US co-production film defined by this research. 'The Great Wall', Hollywood's first entry into the Chinese market through Sino-US co-production, underperformed at the box office. The film will eventually lose more than $75 million, with Universal Pictures liable for at least $10 million in damages. Although it underperformed both domestically and internationally, it outperformed other popular Chinese-language films in the US film market, grossing more than $45 million, second only to 'Crouching Tiger, Hidden Dragon'[14]. As a result, 'The Great Wall' is useful for studying the challenges and benefits of Chinese-American Co-production.

'The Great Wall' is a martial arts monster film set in ancient China that tells the story of European mercenaries who travel to medieval China in search for gunpowder and assist the Chinese army in repelling an invasion of monsters from beyond the Great Wall[16]. The film revolves around the meeting of Eastern and Western cultures as the selling point, which is co-produced by the Hollywood production team and CFCC. The cast includes well-known Hollywood and Chinese actors, and the film is directed by Zhang Yimou, a prominent member of China's fifth generation of directors. In addition to the actors and directors, the majority of the film's creative team is from Hollywood and includes well-known industry professionals. Furthermore, this US$150 million Sino-US co-production has several main goals, one of which is to promote and upgrade the Chinese film industry in the international market. The second one is to assist Hollywood in opening up the Chinese market and entering it in the form of local Chinese films. The third goal is to demonstrate Chinese cultural values to the rest of the world and strengthen Chinese culture's soft power. And, in this age of globalisation, create opportunities and space for transnational film production.

Furthermore, there are two major reasons for the failure of 'The Great Wall'. The failure of the choice of film actor is the first one. The male actor in the film is white Hollywood actor Mark Damon, and the story in the Chinese background uses 80% English dialogue, which may detract from the film's natural atmosphere. Furthermore, the casting of this film exemplifies the trend in Chinese-Hollywood Co-productions of using Hollywood actors as "vases" to attract international audiences to Chinese films[12]. It did, however, reinforce 'White supremacy' and 'Colourism' resulting in the marginalisation of darker-skinned actors. Constance Wu, an Asian-American actor, emphasised that "the racist myth that only white people can save the world should be dispelled. We like our skin color and culture, have our own stories, and do not need white heroes to save us"[15]. Furthermore, the fact that white male protagonists appear in more than half of Sino-US co-productions suggests that, while the Chinese market is appealing to the Western film industry, 'Cultural imperialism' and 'Cultural

hegemony' still exist[12]. Another reason for the failure of 'The Great Wall' could be the 'bluntness' of its story. At the time of filming, director Zhang Yimou believed that 'The Great Wall' would strike a balance between cultivating the Chinese culture's dignity and catering to the Western imagination. However, Western critics graded the co-production as a failed blend of sci-fi and oriental mystical elements, and Chinese viewers were also dissatisfied with its blunt commercial positioning[16]. The director, Zhang, wanted to emphasise China's strong military power and cultural heritage, but he avoided a detailed historical retelling. He purposely blurred the historical period and political information, and just introduced the nature of China's political rights through a flat narrative that may bore audiences.

'The Great Wall', on the other hand, embodies some of the advantages of Sino-American collaboration. The production of 'The Great Wall', for example, includes some film talents and stars from several well-known films. Through this, it has cultivated some film workers who are now involved in Sino-US co-productions. As an example, E. Bennett Walsh, executive producer of 'The Great Wall,' has more experience working in China than many Hollywood producers with the same level of qualifications in the filming of Sino-US co-productions, which will serve as a foundation for his subsequent cross-border efforts in the era of media globalisation.

4.2. Iron Man 3

'Iron Man 3' is a 2013 American superhero film based on Marvel Comics that serves as the seventh instalment in the Marvel Cinematic Universe. In 2012, China Disney and American Marvel Studios announced a Sino-US partnership to finish the film. DMG Entertainment, the main production company, stated that the filming will take place in China, with the Chinese actors participating. If the collaboration is successful, Iron Man 3 will be the first superhero film produced jointly by China and the United States. However, due to the 'fake co-production,' the film did not meet China's co-production film standards. 'Iron Man 3' was eventually cancelled as a domestic film and could only be imported into the Chinese market as a foreign film.

Exploring the failed Sino-US co-production experience of Iron Man 3. Their goal is to circumvent the allocation of foreign films, drain Chinese domestic investment, and endanger local Chinese films. Although the Chinese government has increased the revenue share ratio of imported films, the annual quota remains limited. Co-production is still a popular way for Western film companies to enter the Chinese market. However, some Western film companies are wary of incorporating too many Chinese elements into their production. According to a China Daily article titled "Don't Be Coaxed by Hollywood," Chinese audiences should not ignore the fact that "Iron Man 3" was implanted with Chinese elements for box office performance, and this is 'Fake co-production' mode. Despite filmmakers' promises to film live-action films in China, Shane Black, the director of Iron Man 3, stated that neither he nor any of the film's stars would visit China. "Basically, we set most aspects of the film in China, but we won't shoot there; instead, we'll use post-production technology."

Furthermore, DMG has not been truthful in its portrayal of Chinese actors. Iron Man 3 was released in two versions, one for global audiences and one for Chinese audiences only, with Chinese actors Wang Xueqi and Fan Bingbing appearing only in the Chinese version. Even in the Chinese version, the proportion of Chinese actors is minor. Wang's official bio also refers to him as 'a lackey among lackeys'. According to Wang's interview, when he was invited to film Iron Man 3, his role was described as a challenging main role. However, DMG appears to have broken this promise. Furthermore, the film's antagonist, 'The Mandarin', is a Chinese wizard who is skilled in Chinese kung fu in the comics. DMG cast a white Hollywood actor in the role. "We don't want the audience to stereotype the character 'Mandarin,' and we just wanted to make him a character with Chinese elements," the crew explained. This is obviously an unconvincing claim. In 2012, Zhang Pimin,

deputy director of the CCFC, stated that China will eliminate fake co-productions, and only films that have truly imported Chinese culture will be eligible for co-productions.

5. Implications

In the context of contemporary globalisation, Hollywood filmmaking has become an example of 'cultural appropriation,' in which cultures and themes from other countries are incorporated into filmmaking[17]. The rise of co-production has increased the popularity of Hollywood in other cultures. Furthermore, Hollywood is no longer a national cultural institution, but rather seeks opportunities to co-produce with film companies from other countries to create transnational films that will appeal to more diverse global audiences. In Addition, China's economic clout in the film industry has an impact on Hollywood's hegemonic position. Su claims that the increase in the number of US-China co-productions, as well as high-profile Chinese investments in the US film industry, indicate a shift in global power relations and a restructuring of the global media structure[15]. The Chinese film market's role in terms of audience size and financing has grown, and Hollywood has established 'Chinese standards' in financing, film type, and cast selection. As a result, the global film industry has become less influenced by Hollywood's cultural hegemony, and films have become more diverse and transnational.

Even though Hollywood films have become increasingly transnational, cultural imperialism can still be found in co-production films. Cultural imperialism in film is frequently conceived of as the dissemination of hegemonic messages, manifested in the adoption of specific depictions of ideas, warfare, gender, and race in films to maintain their cultural hegemony within them. Cultural imperialism manifests itself in the co-production of characteristic local cultures of other countries, which are frequently "de-culturalised," and the 'Individual Heroism' of the United States is added[18]. Furthermore, sci-fi movies, disasters, monster invasions, and superheroes have been identified as major themes in Hollywood films. These elements can still be seen in the two Sino-US co-productions films "The Great Wall" and "Iron Man 3.". Furthermore, hegemonic ideas about skin colour and racism are present in co-productions, which are frequently manifested through the extensive use of white male actors. However, while American cultural imperialism persists in transnational co-productions, American's ability to convey something meaningful about American society and culture vanished as a result of media globalisation.

6. Conclusion

This paper examines the advantages and disadvantages of co-production, as well as its impact on the global media industry. This study argued, using two typical Sino-US co-productions as case studies, that the main challenges of co-production stem from the differences in culture, language, and political ideology between countries. And the Chinese government's stringent review system for co-productions is also one of the major challenges. Co-production, on the other hand, has numerous advantages. It contributes to the country's soft power and the development of the film industry, as well as the cultivation of transnational film talents. The global film industry benefits from co-production because it weakens American cultural hegemony and brings Hollywood films more in line with popular culture. However, this study has several limitations, including ignoring China's changing political relationship with the United States and making no recommendations on how to proceed with the co-production. Future research in this area could consider the changing relationship between the two countries and make recommendations for the future development of co-production.

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Research on the Application of Soundscape Design in Domestic Suspense Films: A Case Study of *Lost in the Stars*

Tianzi Zhang[1,a,*]**, Tiantian Deng**[2,b]

[1]*School of Economics and Trade, Hebei Finance University, No. 3188 Hengxiang North Street, Lianchi District, Baoding City, Hebei Province, China*
[2]*Sichuan Tourism University, No. 459 Hongling Road, Longquan Street, Longquanyi District, Chengdu City, Sichuan Province, China*
a. 2968277255@qq.com, b. 306633080@qq.com
**corresponding author*

Abstract: This paper takes the soundscape design of domestic suspense films as the research object, aiming to explore the classification, case analysis, and production process of soundscapes in domestic suspense films, and to propose innovative strategies. Firstly, by defining and classifying film soundscapes, the characteristics of soundscape design in domestic suspense films are summarized. Secondly, through a specific case study of *Lost in the Stars*, the application and effect of soundscape design in domestic suspense films are analyzed. Next, the production process of soundscapes in domestic suspense films in the digital cinema era is introduced, including sound design, simultaneous recording, post-production, mixing, and playback stages. Finally, innovative strategies for the soundscape design of domestic suspense films are proposed. This research aims to provide theoretical support and innovative ideas for the practice of soundscape design in domestic suspense films.

Keywords: Domestic suspense films, Soundscape, Film sound design.

1.   Introduction

In recent years, domestic suspense films such as "The Dead End," "Cock and Bull," and "Burning Ice" have become increasingly important in the Chinese film market. These films have not only achieved impressive box office results but have also garnered significant attention at major film festivals both domestically and internationally. Sound is a crucial element in domestic suspense films. Current academic research on sound design in domestic suspense films largely focuses on individual sound entities and has not adequately addressed the phenomenon of soundscapes or interpreted their unique spatial characteristics.

Therefore, this study aims to explore the mechanisms and patterns of soundscape design in domestic suspense films, integrating soundscape theory with film sound design theory through an interdisciplinary approach. Using soundscape theory as the primary framework and *Lost in the Stars* as the analytical text, this research investigates the mechanisms and patterns related to soundscapes and space in the sound design of domestic suspense films. By systematically studying the soundscape design of domestic suspense films, this research can provide technical support and creative ideas for film production. It offers spatial insights into the historical heritage, regional characteristics, and cultural significance of domestic suspense films. Furthermore, examining the sound art within the

context of domestic suspense films from a soundscape perspective has practical significance for enhancing sensitivity to sound awareness and fostering a humanistic approach to listening. It allows the audience to discover that a suspense film can not only be seen but also heard, and the ultimate truth of a suspense film may lie hidden in the details of its sounds.

2. Overview of Soundscape Theory

2.1. Overview of Soundscape

The concept of the soundscape was popularized by Murray Schafer, who mentioned it in his 1977 book "The Soundscape: Our Sonic Environment and the Tuning of the World." The term "soundscape" is borrowed from the concept of the landscape and refers to all the sounds perceived by people within a particular area. Schafer's soundscape theory divides soundscapes into keynote sounds, signal sounds, and sound marks. Keynote sounds, also known as background sounds, serve as the background for other sounds and depict the fundamental sound characteristics of the living environment. Signal sounds have a signaling function and draw attention due to their inherent alerting role, such as bells, whistles, horns, and alarms, but they do not have the regional and temporal characteristics of keynote sounds. Sound marks, referred to as soundmarks in sound design, are sounds that have distinctive features of a particular place, including natural and artificial sounds [1].

2.2. Classification of Film Soundscapes

In film works, since sound is not confined by the frame, a film soundscape refers to the overall sound environment composed of sound elements within a specific space and time. It includes both natural environmental sounds and sounds produced by human activities.

Film soundscapes can be categorized into natural soundscapes, human activity soundscapes, musical soundscapes, and special effects soundscapes. Natural soundscapes include sounds from nature, such as wind, rain, and bird calls. These sounds can create tranquil, tense, or terrifying atmospheres, enhancing the audience's psychological pressure and driving the plot forward. For example, in a thriller, the deep sound of the wind and eerie bird calls can make the audience feel the protagonist's isolation and fear, further intensifying the film's suspenseful atmosphere.

Human activity soundscapes are another common type, encompassing sounds produced by human activities, such as voices, vehicle noises, and construction sounds. These sounds can enrich the film's background information, guiding the audience to focus on details and better understand the plot. For instance, in an urban film, the bustling street sounds and the noise of vehicles can vividly recreate the busyness and congestion of the city, helping the audience immerse themselves in the story.

Musical soundscapes are another frequently used sound element, creating a sound environment through background music, theme songs, and other musical elements. Music can enhance emotional expression, guide the audience's emotional direction, and help them better experience the film's artistic charm. For example, in a romantic film, soft background music and a touching theme song can enhance the audience's feelings of love, making them more engaged in the storyline.

Additionally, special effects soundscapes are also commonly used in film production. Through sound effects like gunshots, explosions, and illusionary sounds, the visual impact can be enhanced, improving the audience's viewing experience and revealing the suspenseful elements of the film. For example, in an action film, realistic gunshots and explosions can make the audience feel the intensity and tension of the battle, further strengthening the film's action atmosphere.

2.3. Characteristics of Film Soundscapes

Expanding Spatial Soundscape Design: Through the supplementation and expression of sound, the lack of visual information in the picture can be compensated for, providing the audience with a richer sensory experience. Good soundscape design can enhance the realism of sound and image, increasing the compatibility between them, thereby allowing the audience to more deeply feel the atmosphere and emotions of the film, and improving the sense of immersion.

Emotion-Driven Soundscape Design: Soundscape design is not only meant to supplement the shortcomings of the visuals but also to evoke the audience's emotions. In high-emotion films such as suspense and horror movies, the shaping of the soundscape can use changes in sound effects and the use of music to add color to the visuals, making the audience more invested in the storyline and providing a more spine-chilling sensory experience.

Soundscape Design that Recreates Specific Eras: By focusing on the cultural expression of sound, soundscape designers can recreate the historical and cultural context of specific films. For example, in films depicting ancient war scenes, by simulating the sounds of ancient battlefields, such as the sounds of fighting and marching armies, the audience can better feel the sense of the era, enhancing the film's authenticity.

3. Case Study of Soundscape Design in Domestic Suspense Films: *Lost in the Stars*

As a hit film in the summer of 2023, *Lost in the Stars* not only captivated audiences with its gripping narrative techniques and suspenseful elements but also successfully portrayed the image of a cold-hearted husband. The film skillfully integrates the complexities of male-female relationships into the plot, aligning with contemporary societal issues and resonating widely with audiences. Its high-quality production, particularly the soundscape design, adds significant artistic charm to the film.

3.1. Exaggerated and Deformed Soundscapes

Soundscapes play a crucial role in evoking audience emotions and adding a sense of suspense to the visuals. This sense of suspense is mainly achieved through the clever use of keynote sounds, signal sounds, and sound marks in material selection, loudness, frequency range, and spatial design. Especially in films with strong emotional tension, such as suspense and horror movies, exaggerated and deformed soundscapes often stimulate the audience's imagination, creating a sensory experience that is even more terrifying than the actual visuals.

In *Lost in the Stars*, the film continuously enhances its suspenseful atmosphere through the sound design of time-related props like pendulums and diving watches, as well as the intensified sounds of dangerous animals like snakes, scorpions, and jellyfish.

3.2. Enhancing Dynamic Impact

In the mixing process, increasing the contrast between the film's quietest and loudest sounds can enhance the layering and contrast of the sound. This method creates more noticeable sound differences in the listener's ears, capturing their attention and interest.

Creating an auditory sense of "unknown" and "shock" is also a crucial goal in mixing. Through clever sound design and processing techniques, unexpected sound effects can be created in the film, giving the audience a sense of mystery and tension. For instance, special sound effects can simulate strange sounds or sudden audio stimuli, providing the audience with an unexpected scare.

Additionally, mixing can make the film's sound more dynamic. By reasonably adjusting parameters such as volume, balance, and spatial effects, the sounds in the film can become richer and

more vivid audibly. This dynamic presentation allows the audience to feel the changes in scenes and plot, increasing their engagement and immersion.

An important goal in mixing is to bring the audience closer to the film's characters, enhancing their sense of involvement. By finely tuning and processing the sounds in the film, especially those detailing everyday life when the character He Fei wakes up, such as the rustling of skin or clothes and breathing sounds, the audience can feel as if they are right beside He Fei, experiencing the plot together with him.

Finally, in the film's climactic stages in the latter half, mixing can employ heavy, grand sounds to highlight the sense of suspense. By increasing low-frequency sound effects or volume, a strong impact can be delivered at key moments, further enhancing the suspenseful atmosphere. The intensity and shock of these sounds can make the audience feel the tension and dramatic atmosphere, improving their viewing experience.

3.3. Organic Integration of Musical and Special Effects Soundscapes

The coordination between sound effects and music in the film is highly harmonious, gradually blurring the lines between the two. Especially in car chase scenes, sound effects and music coexist seamlessly. To ensure that the audience can clearly catch the actors' dialogue, relatively static segments are interspersed within the chase scenes. This design allows the audience to feel the tension of the chase while not missing important plot details due to excessive noise.

In terms of music, the film cleverly uses rhythmic drum beats to appropriately reflect a sense of tension and relaxation. This rhythm complements the tense atmosphere of the chase scenes, further enhancing the audience's emotional experience. Additionally, the sound design incorporates rich car engine sounds to boost the overall immersion. To heighten the passion and urgency of the chase, the film specifically lowers the pitch of the pursuing car engines and mixes in sounds reminiscent of beastly roars.

This design of sound effects and music showcases a new trend where the film's sound system no longer needs to rely on traditional songs to attract the audience. Instead, music and sound effects can more purely serve the narrative of the film. By closely integrating sound effects and music, sound designers can better create the appropriate atmosphere and emotions, further enhancing the viewing experience. This trend marks the increasing importance and creativity of sound effects and music in film production.

3.4. The Metaphor of Natural Soundscapes

The beach dinner and the lighthouse argument are two significant dramatic scenes that utilize sound to emphasize the presence of Li Muzi. In these scenes, the sound of waves and the lighthouse's signal repeatedly appear, symbolizing Li Muzi's presence. These sounds serve not only as background music but also as a metaphor for Li Muzi's inner turmoil.

In the beach dinner scene, the sound of the waves interacts with the characters, creating a dialogue between them. The rise and fall of the waves complement the tension in the dialogue, enhancing the confrontation between the characters through the variation in sound. The intensity of the waves changes according to the content and emotions of the dialogue, as if responding to the missing Li Muzi. This sound introduction allows the audience to deeply feel the tension and inner conflicts between the characters.

Moreover, the sound becomes a guide for Li Danfeng. He aims to express Li Muzi's inner turmoil through the sound of the waves. The ebb and flow of the waves inspire his creation, helping him better understand and interpret Li Muzi's emotional state. The introduction of this sound is not just for creating an atmosphere but also for revealing the complex emotions within the character.

Overall, the use of sound in the beach dinner and lighthouse argument scenes is crucial. The recurring sound of the waves and the lighthouse signal, and their interaction with the characters' dialogues, not only increases the dramatic tension but also deepens the audience's understanding of the characters' inner turmoil. Additionally, the sound serves as a guide for Li Danfeng's creation, helping him better express Li Muzi's emotional state. Through sound design, the conflicts and emotions in these scenes are vividly presented.

3.5. The Direct Role of Language

In the film, language is used as the primary auditory expression to portray character images. Language conveys information that cannot be observed by the eyes. Through dialogue and speech, the relationships, motives, and emotions between characters can be deeply understood. Moreover, the precision and ambiguity of language give vocal narration a concrete quality [2].

An example in the film is when Chen Mai suspects He Fei of causing Li Muzi's disappearance. Language becomes a key factor in driving the plot. Without clear verbal identification, Chen Mai cannot see his close friend, highlighting the importance of language in communication and understanding. Only when He Fei mentions the keyword "Mosha Lighthouse" does Li Muzi reappear in the audience's view.

The confrontation scene in the hospital ward showcases the tension and urgency of language. Through the continuous use of the word "say," the dialogue between the characters reveals the tense atmosphere and their eagerness to solve the problem. Especially when He Fei utters the keyword "Mosha Lighthouse," the audience's dislike for him becomes more profound and resolute. This scene demonstrates the significant role of language in character portrayal and emotional expression.

4. Soundscape Production Process of Domestic Suspense Films in the Digital Cinema Era
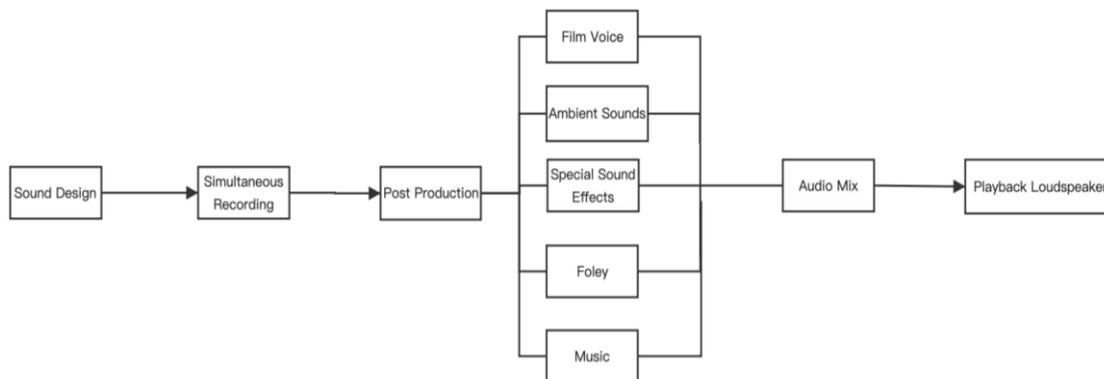

Figure 1: Soundscape Production Process of Domestic Suspense Films

4.1. Sound Design

In domestic suspense films, sound design must be meticulously conceived and arranged according to the plot's needs. Firstly, sound design needs to accurately convey the environment and atmosphere within the film. By selecting appropriate background music, ambient sound effects, and sound effects, the audience can experience the realism and tension of specific scenes in the movie.

Secondly, sound design can reveal hidden information and clues within the film through the use of sound effects, increasing the suspense for the audience. For example, specific sound effects can be used to hint at a character's true identity or to express their internal conflicts and emotional states.

Moreover, sound design can enhance the film's rhythm and tension through the manipulation and adjustment of sound effects. By adjusting parameters such as volume, speed, and pitch, the audience can feel the tense atmosphere at critical moments, increasing the film's appeal and watchability.

Finally, sound design can improve the audiovisual experience by coordinating sound with the visual elements. Precisely matching the rhythm and actions of the visuals can provide the audience with a more realistic and immersive viewing experience.

4.2. Synchronous recording

Synchronization recording is a crucial part of the soundscape design in domestic suspense films. It refers to the method of recording sound simultaneously during the filming process [3]. This method of recording voices and action sounds can shorten the production cycle.

In recent years, the technical level of synchronization recording has continuously improved. With advancements in technology, modern recording equipment can better reduce noise and enhance sound clarity, allowing the audience to hear the actors' dialogues and environmental sounds more clearly. Additionally, the professional skills and experience of the sound recordists are also key factors in ensuring the quality of synchronization recording.

4.3. Post-Production

Post-production holds a pivotal role in the soundscape design of domestic suspense films, encompassing the meticulous handling of dialogue, music, sound effects, and foley. In this phase, through detailed audio editing and processing, a more realistic and captivating soundscape can be constructed, significantly enhancing the audience's audiovisual experience. Specifically, the processing of dialogue, music, and sound effects, as well as the use of foley, are indispensable elements [4].

In terms of dialogue processing, this primarily involves the adjustment and restoration of conversations. Through sound enhancement, noise reduction, and equalization, dialogue clarity can be ensured while accurately conveying the characters' emotions and advancing the plot. Music plays a crucial role in suspense films, capable of creating atmosphere and evoking emotional resonance. Thus, appropriate music selection and editing in post-production are particularly important. Suitable music can effectively create a tense and suspenseful atmosphere, guiding the audience into the film's context. Additionally, the addition and adjustment of sound effects are key to enhancing the film's realism and immersion. For instance, by introducing ambient sound effects and special effects, an immersive auditory experience can be created, allowing the audience to delve deeper into the film's narrative.

Foley technology also plays an indispensable role in post-production. By re-recording sounds for scenes lacking real recordings, the content of the film can be made more complete and coherent. Foley includes but is not limited to the simulation of specific object sounds and the enhancement of ambient sound effects, all of which contribute to the coordinated unity of sound and visuals.

4.4. Mixing

Mixing is a crucial step in the soundscape design of domestic suspense films. It involves integrating and adjusting various sound elements to achieve the best effect in the film. The purpose of mixing is to enhance the viewing experience and emotional expression of the film through a reasonable balance of sound and spatial positioning.

During the mixing process, it is first necessary to classify and layer each sound element, including dialogue, music, sound effects, etc. Then, according to the plot and emotional needs of the film, sound balancing and mixing are performed. By adjusting parameters such as volume, sound position, and direction, each sound element is reasonably distributed and positioned in space, enhancing the film's realism and immersion.

Mixing also involves processing the audio quality, such as noise reduction, restoration, and enhancement. By reducing noise and interference, and improving the clarity and quality of sound, the audience can better hear dialogues and detailed sounds, thus better understanding the plot and characters' emotions.

Moreover, mixing needs to consider the dynamic range of the audio and the application of audio effects. Through the reasonable adjustment of volume changes and the use of audio effects, such as reverb, echo, and editing, the sound becomes more vivid and three-dimensional, enhancing the film's atmosphere and dramatic effect.

4.5. Re-recording

In the re-recording stage, sound designers mix different audio elements. Re-recording is the process of blending various audio elements together, ensuring they are coherent throughout the film. Sound designers adjust volume, balance the proportions of different audio elements, and handle sound positioning and spatial effects based on the film's requirements and desired effects. Through proper re-recording, the audience can become more immersed in the film's storyline.

During the re-recording stage of soundscape design in domestic suspense films, coordination with the visuals is also essential. Sound designers work closely with the film's director and editors to ensure that the sound and visuals are well-coordinated, allowing the audience to better experience the film's atmosphere and emotions during viewing [4].

5. Innovative Strategies in the Soundscape Design of Domestic Suspense Films

In domestic suspense films, incorporating modern technology into sound design can present audiences with a more realistic, striking, and immersive auditory experience [5]. Virtual Reality (VR) and Augmented Reality (AR) technologies can offer a more three-dimensional and immersive experience in soundscape design. By using VR technology, audiences can experience the sound environment of the film as if they are physically present in the movie scenes. AR technology can combine virtual sounds with real-world scenes, creating a richer and more diverse soundscape effect.

Additionally, the development of sound synthesis and sound effects design also provides more innovative possibilities for soundscape design. Sound synthesis technology can generate various sound effects, making the soundscape more diverse and personalized. Sound designers can use modern sound effect libraries and audio processing software to create more realistic and captivating sound effects, enhancing the suspenseful atmosphere and emotional expression.

In future developments, the integration of modern technology in sound design can bring more possibilities and imaginative space to domestic suspense films, creating a more realistic and captivating viewing experience.

6. Conclusion

Through the analysis of the current state of soundscape design in domestic suspense films, it is found that the soundscape design in domestic suspense films has characteristics such as expansion space, emotional orientation, and the restoration of a sense of the era. Additionally, through the analysis of soundscape design cases in domestic suspense films, it is found that the soundscape design in domestic suspense films mainly enhances the suspenseful atmosphere and immersion by using

methods such as exaggerated and distorted sound effects, enhancing dynamic impact, and integrating musical soundscapes with sound effects.

In the digital film era, the production process of the soundscape in domestic suspense films has become more complex and refined. From sound design, synchronous recording, post-production to mixing and re-recording stages, each step requires professional technology and meticulous design. The improvement and optimization of these processes help enhance the quality and effect of the soundscape in domestic suspense films.

In future developments, integrating modern VR and AR technologies can bring more possibilities and imaginative space to domestic suspense films, creating a more realistic and captivating viewing experience.

Hopefully, through these discussions, we can provide some theoretical reference for the sound creation of domestic suspense films, thereby promoting the innovative development of soundscape design in domestic suspense films.

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