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A three-dimensional audiobook design based on the Luo Yue culture of the Zhuang people, "Book Travel in Huashan"

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Abstract:
The illustration design of this three-dimensional book is re-innovated based on the "North Sea Water Color Painting" style. The design features are in line with the development laws of children's psychology. With rich colors, complex illustrations, wonderful storylines, and interactive book forms, it also Follow the development rules and learning characteristics of young children to create theme stories, and then carefully study the graphic symbols, summarize and refine the characteristics and essence of the Huashan blessing elements, extract and modernize the "human pattern totem", and finally Restore the real characters and reserve high-quality picture book resources for preschool children who like Zhuang traditional culture, which is conducive to the promotion and inheritance of local intangible cultural heritage.

In the last part, the results of the research on Huashan rock painting graphics and design application ideas are finally attributed to the creative practice of three-dimensional audio book design, completing the entire process from theory to practical application exploration, and then enhancing the national confidence and identity of the Zhuang people.

Keywords:
Huashan rock paintings; 3D audio book; River God Festival; Luo Yue blessing culture

1.Introduction

1.1 Research Background

The Zuojiang Huashan Rock Paintings, as a rock painting heritage with extremely high historical and cultural value in China and even the world, vividly display the life scenes, religious beliefs, social structure and social structure of the ancient Zhuang ancestors with their unique artistic forms and rich cultural connotations. The relationship between man and nature. In recent years, with the increasing awareness of cultural heritage protection and the advancement of educational innovation, transforming such precious historical relics into children's education carriers, especially book creation, has become the focus of academic circles and educational practitioners. The background analysis of this report aims to sort out the current research status of Zuojiang Huashan rock paintings, elaborate on its potential value in the field of children's education, and

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explore the necessity and feasibility of creating books based on rock painting elements, so as to provide theoretical basis and data support for subsequent related projects. .

1.2.Research purposes

Zuojiang Huashan Rock Paintings, as a regional characteristic of the Guangxi Zhuang people and a world cultural heritage, show the vivid and rich social life scenes of the Luo Yue ancestors of the Zhuang people, and have a strong artistic appeal. Using the visual language of preschool children to create picture books, educational interactions, and intelligent reading guides of ethnic stories as carriers increases the fun and efficient interaction between parents and children, and provides daily reading resources for ethnic traditional cultural knowledge picture books.

1.3.Research Significance

Through the analysis of the patterns in Zuojiang rock paintings, including: antguai patterns, bronze drums, button bells, squatting human patterns, etc., we can deeply explore the story of the Luo Yue ancestors of the "River God Sacrifice" behind the situational humanoid dynamic patterns of the Huashan rock paintings. The picture book is richly innovative based on the "North Sea Water Color Painting" style. The design features are in line with the development laws of children's psychology. With rich colors, complex illustrations, wonderful storylines, and interactive book forms, it also follows the development laws and learning characteristics of young children. , to create theme stories and enhance the national confidence and identity of the Zhuang people.

1.4.Research content and research methods

Collect and sort out relevant cases of product design and research on picture books related to Huashan Rock Paintings in Zuojiang, Guangxi, and establish that the reading target of children's picture books is preschool children aged 3-6 years old; based on product positioning, extract and sort out the Zhuang characteristic patterns and Luo Yue ancestors in the Luo Yue culture of Huashan Rock Paintings s story. The core cultural system of Huashan rock paintings in Zuojiang, Guangxi - the blessing culture of Luoyue ancestors, summarizes its artistic value and implication, refines and summarizes the tonality and visual effects of the product, and considers the use of environmentally friendly and safe materials in the main body of the picture book and paper printing to protect children's physical and mental health .

1.5.Research methods

Through questionnaire survey, literature research, case analysis and other research methods, we collect the purchasing needs of local preschool mothers aged 3-6 for children's picture books with interactive ethnic culture and interest, and integrate the collected data information. Analyze and find user pain points to collect in-depth information about picture book design, analyze excellent picture book works, gain insight into various types of work styles, how to apply them in national cultural three-dimensional picture books, and explore the combination of national style illustrations and three-dimensional picture book design , and use professional software such as PS and AI to design picture books with illustrations that enhance national pride.

1.6.Design innovation

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The blessing culture of the Luo Yue ancestors is used in the form of children's three-dimensional audio picture books to show children the auspicious cultural stories passed down by the ancestors of the Zhuang people. We deeply dig into and organize these cultural elements about the Zuojiang Huashan rock paintings, and let these long-standing images, patterns, and colors pass through The specific and delicate design is translated into books, allowing children to gain aesthetic pleasure.

2.Current status and case analysis of the application of national cultural three-dimensional audiobooks

The Zuojiang Huashan Rock Paintings are located on the cliffs on both sides of the Zuojiang River and its tributary Mingjiang River in Chongzuo City, Guangxi. They are an important carrier of Luoyue culture. Its cultural connotations are rich and diverse, including religious sacrifices and expressions of beliefs. The Huashan Rock Paintings depict a large number of The collective sacrificial scene, with characters in different postures and holding utensils, reflects the Luoyue ancestors' spiritual sustenance in ancestor worship, awe of natural gods, and prayers for a good harvest and peace. These images bear witness to the religious ritual activities and spiritual life of ancient Luoyue society.

As parents pay more attention to early childhood education and become more aware of the inheritance of national culture, the demand for children’s pop-up books with elements of traditional Chinese national culture continues to grow. With exquisite illustrations and delicate paper art, some three-dimensional books also introduce digital technologies such as AR (augmented reality). The picture books realize the interaction of reality and reality, which enhances the fun and educational effect of reading. This type of picture book creation focuses on themes such as myths and legends, folk stories, traditional festivals, folk customs, and intangible cultural heritage from various regions and ethnic groups in China, and a series of three-dimensional books with distinctive national characteristics have been developed. For example, telling the Dragon Boat Festival story of the dragon boat race, showing the Zhuang hydrangea making process, recreating the Miao silver jewelry forging process, etc., through three-dimensional structures and dynamic mechanisms, children can intuitively and vividly perceive and learn national culture.

3.Analysis of similar picture book design cases

3.1.Picture book design of "Ma Le Visits the World"

Regarding the story of "losing fire" and going to the horizon to "invite the sun", "Le" means "son" in the adverbial form. The work mainly tells the story of how in ancient times, mountain monsters snatched away fire, and the Zhuang people's homeland fell into darkness. The grains did not grow, and the people were in dire straits. A pregnant woman from the Zhuang ethnic group went through all kinds of hardships and raised her newborn child "Le" on the way to find fire. Le inherits his mother's will, and on the way to search for fire, he fights hand-to-hand with a mountain monster, swallows fire and turns into a fireball to destroy the mountain monster, and then turns into the sun himself, exchanging life for the light of the earth. This picture book integrates epic and vigorous, delicate emotions and joyful emotions with unique national colors, fully demon-

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strating the colorful national customs in Guangxi and the Zhuang people's pursuit of light, brave and firm national character.(Figure 1)



Figure 1 Picture book design of "Male Visits the World" Illustrated by: Li Xiaoyu and Li Jingxin,Picture source: Photographed by the author

With its ingenious content design, diversified interactive forms and significant educational value, children's interactive pop-up books have achieved a deep integration of learning and fun interaction, and have won wide recognition from the market and users. It not only provides new ideas and tools for children's enlightenment education, but also provides useful reference for the innovative and integrated development of the children's book publishing industry.

3.2.Development and Design Analysis of Stereo Audiobooks

3.2.1 Psychological characteristics of preschool children;

Preschool children are in the stage of perceptual action thinking. They think mainly through intuitive images and like to understand the world through hands-on operations and observation of physical objects. The rich three-dimensional structure and dynamic elements of three-dimensional audio books are exactly in line with this psychological characteristic, which can stimulate children's desire to explore, help them intuitively perceive story scenes and conceptual knowledge during hands-on reading and touch interaction, and promote their spatial perception and hand-eye coordination. Development of abilities.

3.2.2 Characteristics of preschool children's use of picture books;

When preschool children read books, they often need adult companionship and guidance. The built-in audio content of the stereo audiobook not only includes vivid storytelling, but may also include multiple elements such as songs, dialogues, and sound effects. These elements not only reduce the pressure on parents to tell stories, but also provide rich interactive materials for parents and children to read together. At the same time, the automatic playback function of audiobooks helps cultivate children's independent reading habit. Even

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when adults are unable to accompany them, children can learn independently by following the audio.

4. Analysis of the symbolic language of the three-dimensional audiobook "Book Tour in Huashan"

4.1.Analysis of formal characteristics of characters

The images of people in the rock paintings only outline the overall characteristics, omitting the features of facial expressions such as eyes, nose, and mouth. There are two presentation methods: upright and sideways. The frontal portrait occupying a prominent position has a maximum height of 2.4 meters. The posture is squatting with legs spread apart, hands bent and raised at the elbow, and there are many knives, swords and other objects around the waist: The frontal portraits are usually surrounded by some sideways portraits. Most of them are 50 to 90 centimeters tall. Most of them squat with their legs bent and their elbows raised. Whether they are frontal portraits or sideways portraits, they all stand in rows. The direction is consistent and the movements are neat and orderly. (Figure 2)



Figure 2 Figures in Zuojiang Huashan Rock Paintings (Part)

Picture source: self-drawn by the author

4.2 Analysis of the formal characteristics of livestock images

The animal images in Huashan rock paintings are mainly dogs, all facing sideways and trotting. (Figure 3)

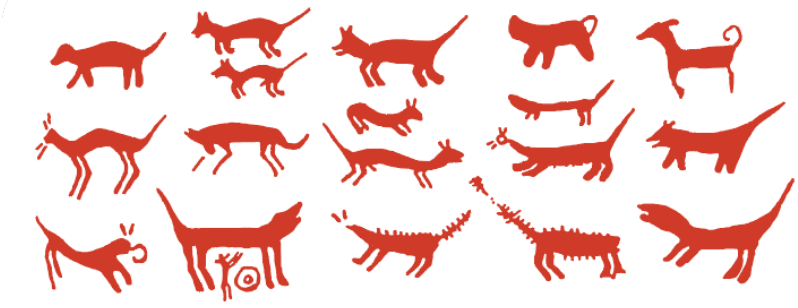


Figure 3 Animal images in Zuojiang Huashan rock paintings (part)

Picture source: self-drawn by the author

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5.Picture classification expression of Zuojiang Huashan rock painting symbol combinations

5.1. Pictures and scenes related to celebration activities

Huashan rock paintings are the product of Luo Yue's creation. The portraits in the paintings are all the prototypes of frog totem worship in the shape of frogs. These portraits are not only arranged in an orderly manner according to certain rules, but also have the same or similar shapes, plus different combinations. It presents a rhythmic beauty of overlapping up and down and undulating left and right. On the whole, the arrangement of many sideways portraits has certain regularity. For example, the portraits on the left are all facing to the right, and the portraits on the right are all facing to the left, or one row is facing left and the other row is facing right. They were dancing to the drums, chanting witchcraft scriptures, incantations or singing. (Figure 4)



Figure 4 Scenes related to celebration activities in Zuojiang Huashan Rock Paintings

Picture source: self-drawn by the author

5.2.Scenes about reverence for nature

All the Zuojiang rock art images are painted with red paint, which reflects the Luo Yue ancestors' respect and praise for life. Whether it is the blood shed when hunting wild beasts or the iron-blooded years of ethnic struggle, red means sacrifice and bravery. Painting with red paint serves as a warning and a warning to future generations, and continuing to paint in red for so many years is actually a tribute to life. (Figure 5)



Figure 5 Scenes about respecting nature in Zuojiang Huashan rock paintings

Picture source: self-drawn by the author

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6. Design plan for the research and application of the three-dimensional audio book "Book Tour in Huashan"

6.1.Stereo audio book cover design steps

When designing the cover sketch, the author also wanted to reflect the brave image of the little boy Lesai, so in the composition, I chose the side image of the little boy Lesai on the left side of the picture, with Lesai facing the east where the sun rises and looking at the rock wall. , the sun rises on a new day, and the sunshine of victory shines on his face, depicting Le Sai's joy after protecting the villagers and rescuing the village with his own bravery. The background is the extremely representative landscape of Guangxi, which is also the background of this original story, Zuojiang Huashan. There are red frog-shaped figures painted on the high rock walls, which express the theme of the story and the perseverance and bravery of the Zhuang people. (Figure 6)

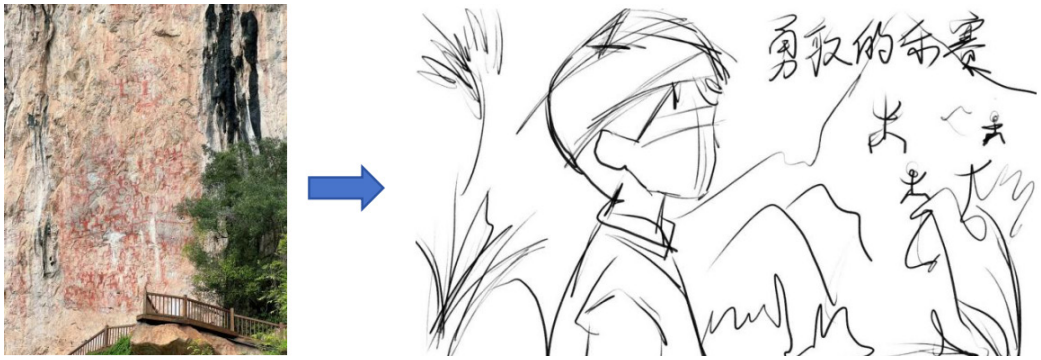


Figure 6 The initial cover sketch design of the three-dimensional audiobook "Brave Music"

Picture source: self-drawn by the author

6.2.Completed cover draft of the three-dimensional audiobook "Book Tour of Huashan"

The illustration style is an innovative watercolor painting method based on the North Sea watercolor painting style, using a warm and imaginative hand-painted style. The main color is blue-green. The cover illustration describes the little boy Lesai who saved the villagers and relatives through his bravery and perseverance. Don't be afraid of danger and don't run away from it. Only after going through wind and rain can you see the rainbow. On the cover, the sun of victory hits Le Sai's face, his eyes are full of hope, and the characters are colorful. (Figure7)

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Figure 7 The finished cover of the three-dimensional audiobook "Brave Music"

Picture source: self-drawn by the author

6.3.Illustration design steps for stereo audio books

In the early days of creating children's picture books, the author used the rules of perspective, line direction and element layout in the composition to form a visual path from left to right and top to bottom. At the same time, the author also visually guided readers to explore through details such as the character's eyes and finger directions. Every corner of the screen. In addition, elements of different sizes, shapes, and colors are distributed in illustrations to achieve dynamic balance, which can not only maintain the harmony of the picture, but also add interest. The contrast between light and dark, dynamic and static can enhance the visual impact and make important information stand out. Based on the story script of Brave Lesai's original picture book, the subsequent inner pages were streamlined to 28 pages. The illustrations were designed according to the written environment description, character dynamics, etc., and the nationally representative Guangxi landscape scenes, the protagonist and others were added to the picture. To depict the details of the Zhuang people, I first drew the first draft with pencil on A4 paper. (Figure 8)



Figure 8 "Brave Music" three-dimensional audiobook illustration sketch design (part)

Picture source: self-drawn by the author

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6.4.The overall color design of the illustrations of the three-dimensional audiobook "Book Tour in Huashan"

The overall color design style of the illustrations is an innovative watercolor painting method based on the style of North Sea watercolor paintings, using a warm and imaginative hand-painted style. The colors change at different stages of the story to enhance emotional expression. In the early stage, warm colors are used to show the harmony of the forest. In the middle period, it turns to cold colors to reflect crises and challenges. Finally, it returns to warm and rich colors, symbolizing the victory of courage and hope. The color is mainly blue-green, which expresses the representative landscape characteristics of Guangxi's ethnic group and highlights the background of the story of the picture book along the Huashan Mountain along the Zuojiang River. The tone of the picture changes from dark to promote the development of the story. Dark clouds cover the city, white waves surge into the sky, and wild beasts attack and destroy the village. These pictures are gray. Faced with sudden natural disasters, people are caught off guard and suffer heavy losses, so they naturally feel panicked. Later, as things took a turn for the better, the tribesmen were rescued and regained their confidence, their mood naturally became brighter. The floods receded and the weather improved, so the colors of the picture also became brighter and more vivid. The transparent nature of watercolor is very suitable for creating a sense of layering and depth in the picture. Green represents vitality and growth, and yellow symbolizes wisdom. Through the superposition of colors, different spatial effects can be created near and far, making the scene more vivid and three-dimensional, and guiding children to experience the three-dimensionality in picture books. The world, the color of the illustrations and the content expressed in the picture book are unified, making the picture book holistic. (Figure 9)



Figure 9 The overall color design of the three-dimensional audiobook illustration of "Brave Music"Picture source: self-drawn by the author

6.5.“Design renderings

After the preliminary preparation work was completed, the author began to adjust the overall picture book. The author completed the illustration coloring and later detail processing in professional drawing software.

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Add simple questions or thinking prompts to the edges or bottom of the picture book, such as "Do you think Le Sai can find the totem?" "What do you think is Le Sai's bravest moment?" "If you were Le Sai, how would you face it? Flood monster? ""Find the totem fragments on this page to help Lexai resist the flood monster". These interactive elements can stimulate young readers' thinking, deepen their understanding of the moral of the story, promote the development of emotion and cognition, and achieve the educational significance of picture book reading. Use the form of adding a bottom frame to adjust the fit of the story text and illustrations to achieve the final effect. The following are some of the final drafts of the design of the children's three-dimensional picture book "Brave Le Sai". (Figures 10 to 12)

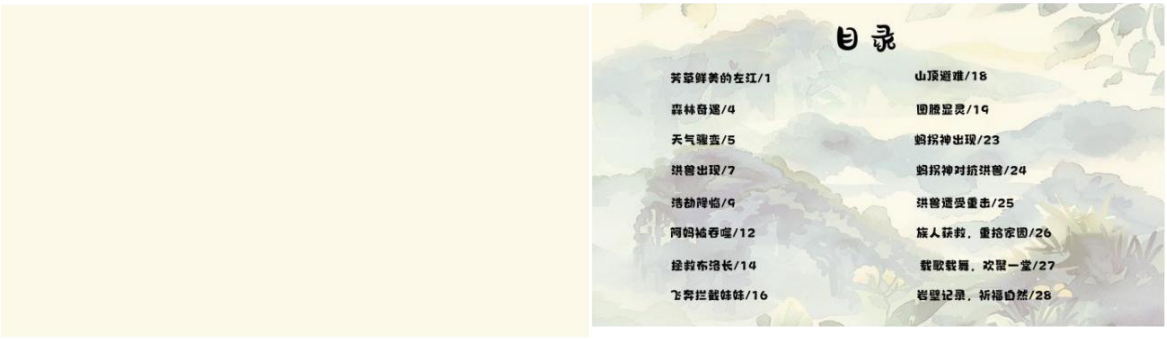


Figure 10 The final draft of the three-dimensional audiobook "Brave Music" (Table of Contents)

Picture

source: self-drawn by the author



Figure 11 Interior page design (part) of the three-dimensional audiobook "Brave Music"



Figure 12 The final draft of the three-dimensional audiobook "Brave Music"

Picture source: self-drawn by the author

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The final copywriting layout of the three-dimensional audiobook "Brave Lesai": After completing all the drawings, the author imported the pictures into the computer for typesetting in AI software, and added the dialogue between the little boy Lesai and his parents, language details, narration and other text Presented on the image, the large number of text requirements in the original story of the picture book were streamlined, and a white translucent bottom frame was added at the bottom when typesetting the text, so that the text and the image can be integrated without causing conflict and occlusion between the two, thereby avoiding It causes trouble for readers to see clearly. (Figure 13)

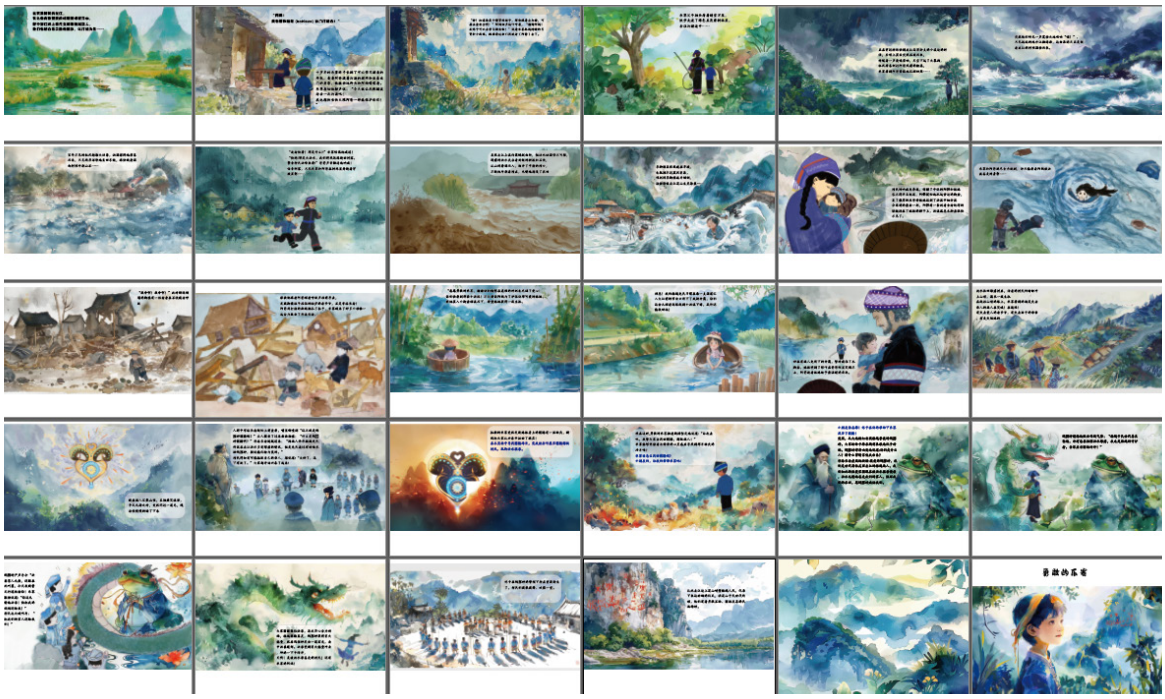


Figure 13 The final copy layout of the three-dimensional audiobook "Brave Music"

Picture source: self-drawn by the author"

Three-dimensional audiobooks attract visual attention through three-dimensional shapes and bright colors, while the audio content activates auditory perception, achieving all-round mobilization of vision and hearing, which is conducive to the construction of children's brain neural networks and the in-depth processing of information. Three-dimensional design makes abstract knowledge concrete, such as the forms of animals and plants, the structure of buildings, natural phenomena, etc., so that children can learn in simulated real situations and enhance their understanding and memory. With corresponding audio accompaniment, it is easier to form a coherent knowledge chain. Children can trigger dynamic effects by pulling, rotating, jigsawing, etc., and use a reading pen to tap on the text stickers to trigger audio accompanying reading. This sense of interactive participation greatly increases the fun of reading and helps maintain lasting interest in learning.

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Figure 14 Display of the actual three-dimensional audiobook and derivatives of "Brave Music"

Picture source: self-drawn by the author

After the completion of the three-dimensional audio book design work of "Brave Le Sai" Zhuang Luo Yue Culture, the author began to enter the final picture book illustration application design process. Figure 14 is the physical display of the three-dimensional book, the three-dimensional structure display of the book, and the stationery category in the application part. Including notebooks, postcards, canvas bags, stamps, office supplies include mobile phone cases, coasters, and mouse pads, and daily necessities include handbags, silk scarves, and umbrellas.

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