

# Exploring the Sense of Space Formed by the Use of Comprehensive Materials in Book Design

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## ABSTRACT

Modern book design has various forms. In order to give readers a better reading experience, the use of comprehensive materials is a common element in books, which can not only enrich the sense of touch and vision of books, but also provide readers with a multi-dimensional spatial experience. This article starts from multiple perspectives such as the craftsmanship of comprehensive materials, the use of materials, and how they are organically combined with the internal and external structures of books to achieve a better reading experience of books, and explores the space expressive ability generated by the use of comprehensive materials in the book's slipcase, spine, and content space design, as well as the beauty and rhythm of the book.

**Keywords:** Book design, Comprehensive materials, Sense of space.

## 1. INTRODUCTION

The existence of books has a history of thousands of years, and the design of books is constantly changing and advancing while preserving the tradition. With the development of people's reading needs and aesthetics, traditional paper books can no longer meet the needs of the public's aesthetics. The fast-paced life makes more and more people think that purely paper books are boring and lack of interest in reading. Therefore, how to stimulate readers' interest in reading and enhance their reading experience has become the top priority of books in addition to conveying content. Especially today when the demand for paper books is constantly being replaced by e-books, studying the innovation and creativity of book design is a topic worthy of in-depth discussion and research.

Books are the carriers and disseminators of information. The designer's job is not simply to list the text on paper, but to think about how to better convey the connotation of the book to the readers accurately and profoundly. The space design of a book is a way to better present the content of the book to the readers. Both its internal space and external space have great design possibilities. Mr. Kohei Sugiura has also put forward this point of view: he regards books as the three-dimensional

like buildings, believing that books are also spaces with countless surfaces. This article will take the book "Welcome to Our World" (《以爱之名》) designed by the authors as an example to propose their understanding of how comprehensive materials can enrich the spatial relationship of books and provide design ideas for other designers.

## 2. THE CONCEPT OF COMPREHENSIVE MATERIALS AND THEIR APPLICATION IN BOOKS

The use of materials in books is through some special processes, such as hair, linen, metal, wood, specialty paper and other materials, combined with ordinary paper, making the books more decorative aesthetics and visual impact. Due to the diversity, flexibility, and innovation of their media materials, comprehensive materials not only meet the artists' pursuit of breakthrough and innovation in artistic creation, but also meet the diversified needs of the constantly changing public aesthetics<sup>1</sup>. [2] Combining appropriate materials with the connotation expressed by books, books can better create the atmosphere of works. For example, wood

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1. Liu Yizi. Research on the Application of Comprehensive Materials in Picture Book Creation [D]. China Academy of Art, 2016.

can embody a simple and unpretentious feeling; metal products can reflect the coldness, hardness and sense of distance; cotton and linen products can reflect a gentle and soft feeling. Different textures, thicknesses, and even the unique taste of materials can stimulate readers' emotional resonance, allowing readers to better integrate into the world depicted in the book. In addition to tactile and visual resonance, books can also use the neglected space of books through organic combination with other materials. For example, materials are connected in series between different papers, or some graphics of books are directly pasted with physical materials, or slipcases are expressed through comprehensive materials, so that books can change from a simple two-dimensional plane expression to a three-dimensional space. And in this way, it shows the spatial beauty of books, provides readers with unlimited possibilities, and promotes the content of articles to be better obtained by readers. This is the beauty of the combination of comprehensive materials and books.

### **3. THE MULTI-DIMENSIONAL CREATION OF COMPREHENSIVE MATERIALS IN BOOKS**

There are various ways to innovate comprehensive materials in books. The combination of different materials and books, and the aesthetic and emotionality of the materials themselves complement the connotation of the books, gracing the books. In addition, the multi-dimensional creation of comprehensive materials in books cannot be ignored. Comprehensive materials use the external space, such as the three-dimensional design of the slipcase, the innovation of the cover, and the interspersed relationship of the internal paper space, etc., to make the book change from two-dimensional plane to three-dimensional space.

#### **3.1 External Space Design**

Mr. Lv Jingren mentioned in his "Jingren Shuyu" (《敬人书语》) that the designer Kohei Sugiura believed that the books and other things concerned with books cover all things in the world and all things in the universe. The text is superimposed on the page, the information level progresses, and the text content penetrates from the outside to the inside, from the plane to the three-

dimensional, and from space to time<sup>2</sup>. [3] Therefore, in the process of book design, it is a must to first pay attention to the external design. The external space design will affect the reader's first impression of the book. Through the grasp of the content of the book, many designers will design in terms of the external position of the slipcase, spine, book cover, etc. In addition to traditional shapes, experimental book designs such as irregular shapes combined with comprehensive materials have subverted the public's perception of traditional book shapes.

##### **3.1.1 Slipcase**

The slipcase is the first impression that a book shows to the public. The ancients said that "The book has packaging, just like a person wearing clothes, one can see the clothes and know the family style, and then understand the elegance and nobility". Books can express emotions first through the design of slipcases. Whether it is a simple paper box design or combined with the use of comprehensive materials, the comprehensive material slipcase can not only add a sense of form to books, but also better show the sense of space. For instance, in the slipcase designed by the authors ("Figure 1"), combining iron railings and rectangular wooden boxes, the design becomes a small cage. The interior of the slipcase is just like a real architectural space. When the book is placed in it, it is no longer simply putting a paper book in the slipcase, but as an element being placed in a space. The contrast between the irregular raised rough graininess of the iron products and the smooth texture of the wooden box in the longitudinal direction creates a sense of space that impacts forward and conceals backwards in the vision. At the same time, in the process of touching, one can feel the special texture of the comprehensive material. The combination of vision and sense of touch makes the slipcase break through the traditional plane space design.

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2. Lv Jingren. *Jingren Shuyu* [M]. Chongqing: Chongqing University Press, 2018.6:46.



Figure 1 The slipcase designed by the authors.

The partitioned arrangement of iron railings reveals the space inside the slipcase. Through the gaps, one can see the books contained therein. From the outer slipcase, the cover of the internal book can be seen, forming a space span from the outside to the inside, just like when one visits the building, he or she explores the internal space structure of the building from the gaps in the windows. This is the three-dimensional sense of space formed by the authors' use of the different textures and mutual composition of the comprehensive materials on the slipcase, letting the readers also feel the interest of exploring the interior from the outside in the book slipcase, and stimulating readers' interest in reading.

### 3.1.2 Cover

The cover design is one of the most important parts of a book. The cover is responsible for the display of the title and other information, so designers will spend a lot of energy designing the cover of the book. The shape of the book is three-dimensional, and a single cover is only a two-dimensional graphic design. However, taking the cover, back cover and spine as the overall shape will increase the capacity of the book due to the flow of time and space<sup>3</sup>. [4] The design forms of cover graphics emerge in endlessly and change a lot, but it is precisely because of the various graphic designs on the market that it is difficult for readers to feel surprised by simple graphic design, and it is also difficult to have more innovative breakthroughs. In addition to the graphic design, the authors' book cover and back cover design has added a copper lock catch ("Figure 2"). Although it is small, it serves as a finishing touch. Another reason for adding a metal element to the cover is to

prevent the book from disjoining with the heavy slipcase. At the same time, the metal mottled feeling is in sharp contrast with the red and black cover, which also reflects the cruelty and coldness of animal performances. Its implication is related to the content in the book, showing the connotation of animals being imprisoned. A more important design consideration is that the use of copper components adds a raised space to the completely flat cover, breaking the space of the cover upwards, and extending the space of the cover upwards.



Figure 2 A copper lock catch added.

### 3.2 Internal Space Design

The multi-dimensional internal space of the book is formed by the deconstruction or reorganization of the inner pages, which can present interlaced and superimposed spatial forms. This special spatial structure brings a variety of emotional experiences to readers during the reading process<sup>4</sup>. [5] Through the internal design of the book, each individual page has its own relative independence and limitations, and they all live on their own plane. If they are designed as a single individual, then there will be a skip between the pages of the book; when they are bound in a book, through the connection of materials, they are no longer a single subject but constitute a whole, a three-dimensional reality indeed. At the same time, the unlimitedness of the interior space design of the book cannot be ignored, so the possibility of the interior space design of the book must be obtained through comprehensive materials.

3. Mao Debao. Book Design [M]. Shanghai: Shanghai Pictorial Press, 2005: 54.

4. Jiang Zhongzhi. The Artistry and Commerciality of Book Cover Design [J]. Packaging Engineering, 2010, 31(20): 97-99.

### 3.2.1 *The Spatial Effect of the Texture of the Composite Materials*

The special texture of the composite materials can not only add visual aesthetic feeling to the books, but also make readers make associations. To achieve this, designers must grasp the unity of material attributes and text content. As a means of expressing the content of books, materials must be used by books<sup>5</sup>. [6] The choice of this material texture is determined by the content of the book. In the process of reading the book, the text content and the special texture cooperate with each other, allowing the reader to enter the spatial latitude of the association, so that the reader can have more imagination or memory of the book content through the two. In addition, the special texture of the comprehensive materials makes the books more realistic. For example, if wood material is added to the inner pages of a book, the reader may feel like a real wood product in the process of leafing through the book. In the authors' book design, in order to better let readers experience the pain of a whale being locked in the glass of the aquarium, the authors chose a picture of a whale hitting the aquarium glass ("Figure 3"). In order to allow readers to better experience the feeling of despair of the whale and to restore the scene more realistically, the authors chose to add a piece of red cellophane to the picture, which is like the glass in the aquarium. This piece of comprehensive material complements the picture, combining the sense of space of the whale hitting the glass through the special material of cellophane and ordinary paper, and the sense of space is extended through two different textures. At the same time, the coldness and hardness of cellophane allows readers to combine the picture in the process of touching the book, as if they are in the space of the scene. The texture of the composite material is different from ordinary paper in the reader's touch process, thus breaking through the plane of pure book paper.



Figure 3 A whale hitting the aquarium glass.

### 3.2.2 *The Sense of Space Formed by Comprehensive Materials and Paper*

The spatial relationship formed by the combination of different materials and paper is more intuitive. For example, a common pop-up book uses specialty paper or special materials to form a three-dimensional space between the upper and lower paper. In the process of leafing through of readers, the space gradually unfolds. The designer uses comprehensive materials as an intermediate element to connect the paper and the neglected space in the process of leafing through the paper, creating a three-dimensional space standing vividly revealed on the paper for the book design. Through this kind of design, for readers, the inner pages of a book are no longer a separate individual, but a design product that takes into account both the book itself and the space associated with it as it is leafed through.

For example, the authors added two comprehensive materials to the book design: the connection of red wool with illustrations on the pages of the book, and the three-dimensional box constructed by specialty paper. By the pulling of the red wool, a simple material runs through the two pages of paper. The intertwined red wool extends from the text on the previous page to the animal doll illustration on the next page, making use of the space in the two pages of books ("Figure 4"). The two-page plane becomes a three-dimensional structure. The red wool pulls the animal doll illustration on the next page and combines with the text content on the previous page to more intuitively reflect the theme of the text and illustration, namely, the animals performing are puppets manipulated by humans. The red wool used to give a warm and soft feeling. But in the book design of the authors, the red wool forms a sharp contrast with the black texture. The use of the red

5. Zhou Mei. Visual and Tactile Sensation in Book Design — from Qian Zhongshu's "Synaesthesia" to Kohei Sugiura's Theory of "Five Senses" [J]. *Literary and Artistic Contention*, 2010(08): 144-146.

silk thread here is like the blood of an animal's wound, rendering a run-down and cruel sense.



Figure 4 The intertwined red wool extends from the text on the previous page to the animal doll illustration on the next page.

Making three-dimensional pages in books is also a common way for designers to build space in books, and it is also the interior design of books that most directly reflects the spatial sense of comprehensive materials. The pop-up book produces a three-dimensional effect mainly through the interactive behavior in the process of leafing through it. As readers leaf through it, the three-dimensional shape standing vividly revealed on the paper breaks through the limitations of the plane and produces a series of interactions with readers, giving the book more possibilities<sup>6</sup>. [7] In the process of designing the book "Welcome to Our World", the authors integrated the pop-up book into the book content, combined black specialty paper with wood grain paper, and built a paper cage ("Figure 5"), which revealed animals' fearful and sad eyes. The black specialty paper symbolizes the black cage, and the wood-grain layering closes the gaps in the cage, revealing red eyes from it. The readers can first feel the eye-catching visual impact of red and black, and a cage-like space standing on the paper at the moment of opening this page. This technique of expression breaks through the shackles of the two-dimensional plane and enters the three-dimensional world, expressing the meaning of the book more intuitively than graphic illustrations, leaving a deeper impression on readers, and letting the viewer imagine through pairs of fearful eyes in the gap between black and wood that there are really many cruelly treated animals inside, which may trigger infinite associations and thinking. This is the use of three-dimensional space in the interior

of the book, which surpasses the impact of the space brought by the graphic layout design.



Figure 5 A paper cage.

#### 4. CONCLUSION

In a visually dominated commodity society, books, as a kind of ideological and cultural transmission, inevitably need to increase their visual charm to attract public attention. Enriching the book space through comprehensive materials and allowing books to span time from two-dimensional plane to three-dimensional or even to four-dimensional space brings a new design direction for book design. The construction of the space in the book by comprehensive materials can bring a stronger visual impact to the book, more intuitively convey the connotation of the book to readers, break through the barriers of traditional books, and make more use of the spatial relationship of books that have been ignored by people, which can not only enrich the connotation of the book, but more importantly, bring readers an unexpected sense of surprise when reading, and trigger readers' associations when they touch different materials. This unwittingly forms a kind of interaction between books and readers. American designer Victor once said: "Design for mankind". Designers design books from the perspective of multidimensional space, not only to provide designers with ideas that can be used for reference when designing books, but also to bring new experiences to human reading.

#### AUTHORS' CONTRIBUTIONS

This paper is independently completed by Xiaohan Zeng.

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