

# Past and Present: An Overview of the Development of Pop-up Books

Haining Huang

Guangzhou College of Technology and Business, Guangzhou 510850, China

StrongerEagle@126.com

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**Abstract:** Pop-up book is a type of reading that uses a "flip" technical organ inside a book. In the West, the pop-up book can be traced back to the 13th century history book "British Chronicles", and then "flip" technical organs in the field of medicine and biology has been practical use. At the same time, transformed into the field of children's literature and widely disseminated, in the 19th century reached the peak of development. War ensued, however, stalling its development in the 20th century. In our country, the pop-up book can be traced back to the Tang Dynasty's dragon scale book, until modern times, the Western medical flipping book in the "Western learning spreading to the East" process into China. After the reform and opening up, the publishing house began to create its own children's books, and made great achievements. Subsequently, "Fun Fun" children's book brand was born and continued to create a large number of Chinese traditional culture of the pop-up books, promoting the development of children's education literature.

## 1. Introduction

What is flap book? In short, it is the reading material that uses the flapping device inside the book. While people reading the book, their flapping behavior will trigger the flapping device, which fully demonstrates the three-dimensional and movable impression of the models, designs, and pictures in the book, and also produces interesting visual interactions with readers in reading. Books that use flapping device like this are the common flap books used in modern preschool education in the country.<sup>[1]</sup>

## 2. The Development of Pop-up Books in the West

### 2.1 Initial Period

The Western flap book originated from the *British Chronicle* written by Mathew Paris (1200-1259) in the 13th century,<sup>[2]</sup> which is the earliest flap book that can be traced back to in the development of the West. Mr. Parris used the flip-flap on his Hand Painted Pilgrimage Map to make the page of the atlas more accommodating. He painted landmarks and illustrations on the map's small add-on page, and the explanatory notes are written on the back of the small attachment. When the reader is flipping through the map, he can open the small supplementary page to view the detailed analysis, and finally fold all the small pages together to make the whole book look like an ordinary book.

From the Western first interactive maps, we can learn that the first use of flap books is not children's literature, but history. Paris invented the flap device to solve the problem of insufficient space in books. At first, the small appendages in the book were only props for historians to process text information, but they laid a foundation for the development of the later flap books in the fields of medicine, biology, children's literature and so on, and played an important role in the history of flap books.

### 2.2 The Transition Period

In the late 14th century, Paris's flap device was used by chance in professional books of medicine and biology, and was widely spread in Europe. Among them, *O Novo Tratamento Naturalista*

(German) was the best-selling encyclopedia of medicine at that time, and was used by Europeans as a teaching aid.<sup>[3]</sup> By reading the anatomy book with folding appendages, researchers can learn the anatomical diagrams of important human organs with movable and three-dimensional effects, so as to clearly grasp the actual situation of human organs. This was the first large-scale printing of flap books in the Middle Ages in Europe, which not only opened up a new development direction for flap books, but also has important educational significance in the medical professional field.

Flap book's transition to the field of children's literature is not accidental, it is the result of multiple social factors in the West. *Kinder-Und Hausmrchen* has been spread among European folk for many years. Until the 18th century, European children's literature gradually emerged due to the invention of lithography, and flap books also changed from technical books to children's story books. Robert Searle, a British publisher, found that there was a blank market for flip books in the field of children's literature, and created the first flipbook in the development history of flap books, which belongs to the field of children's literature- the "flip-match" book, also known as the transfigured book. This is a children toy book that combines flap device and jigsaw games. Searle divided each page of the book into four equal frames, with catchy children's rhymes at the top and illustrations in the middle. Opening any part of the small pages in the middle while reading, they can be combined into different images, which can show more pictures corresponding to the poem. This innovative technology of "Flip" jumped out of the conventional form of children's books and broke through the bondage of ordinary lithographic printing, and triggered many trends in the European children's book market in the 18th century. Nowadays, "flip-match" is still in use in the form of published books.

### **2.3 The Peak Period**

From the beginning of the 19th century to the World War I in the development history of Western flap book, there was a great wave of flap book in Europe. Among them, the particularly well-known "Big Giants" bear the brunt. They are Dean & Son, a 100-year-old family printing business in Britain; Lothar Meggendorfer, an independent creator known as the genius of the flap book; Ernest Nester, a German businessman who built his business from a small printing shop; and Raphael Tuck & Sons, a publisher certified by the British Queen as the royal family's official publisher. Not only that, other small and medium-sized printing houses have also followed the example of large companies, scrambling to get a share in the flap book market.

In this situation, Dean & Son created many new flap book with novel forms and designs, among which the publication series *Pantomime Toy Books: Cinderella* is the most representative one. This series of fairy tale books combined Robert Searle's idea of "flip-match" and flap device to change the costumes, actions and even the scenes of the story characters, and it was called "Transformation Book" at that time.<sup>[4]</sup> The publisher rewrote the content of the fairy tale book through the form of flap book, and carried out a new design of the flap device. The touchable magic is directly arranged into the interactive device. The "transformation" effect of Cinderella in the fairy tale book is no longer only in the minds of children, they can feel the exquisite design by the "transformation" device. This breakthrough original creation has upgraded fairy tales, and made the magical special effects in the book appear on paper. It has been loved by many children in Europe and is also of great collection value for flap book lovers.

### **2.4 The Watershed Period**

The development of flip books in the West has been quite eventful. When the creative market enters its golden age, there are always setbacks. Just as flap books entered the market of children's books in Europe, the World War I broke out in a way that industry and publishing houses could not have anticipated. Nester's studio was forced to shut down due to the fact that Germany was unable to export flap books during World War I. Simultaneously, the Dean & Sons was acquired by companies in fierce market competition. The "Four Giants" of flap book were badly hurt. After the war, publishing houses have revived and started to invest in production and innovative design of the content, and even sell their products at reduced profits. Unfortunately, the trend was gone. The

short-lived prosperity was outweighed by the Great Depression, and the economic crisis brought the major publishing houses into difficulties in the market again. Then came the World War II. The "Four Giants" were acquired one after another, and many publishing houses were bombed. The original design manuscripts and collections of flap books were all destroyed in the war.

Under the war, the flap book has stagnated in the development of the West. Until modern times, Lapbook emerged in the American market accidentally. Now, the flap book is back on its feet around the world. However, a large number of new content and new forms of flap books have flowed into the market, which makes the printing and processing in US become overloaded and malfunctioning. As a result, American publishing companies began to establish overseas processing plants in China, Singapore, Colombia, Ecuador and other countries, which laid a foundation for the development of China's flap book industry in the future.

### **3. The Development of Pop-up Books in China**

#### **3.1 Inception Period**

In China, flap books can be traced back to the Tang Dynasty's Longscale-bound books. The "*Public Mistakes Filling the Missing Rhyme*", now treasured in the Palace Museum, is the last Longscale-bound book preserved in China.<sup>[5]</sup> The Longscale-bound book is an ancient book with the binding form of "dragon scale-bound", which means that the pages of the book are staggered and pasted on a long bottom volume, which can be unfolded and rolled up regularly when flipping through, and finally appear in the form of a scroll.

Ministers in ancient times were required to carry scrolls with them when they met the emperor. When the content of the elaboration is too more, it is extremely inconvenient to read. Therefore, the royal bookmakers turned the scrolls into staggered books, which reduced the carrying volume of the scrolls and made it convenient to read. In addition, the palace workers also added the unique colored paintings of the Tang Dynasty in it. When the book is unfolded, it will show a lifelike golden dragon. And if there is wind to turn the pages of the book, the pages of the book will "dance" gently, and the dragon on the painting will fly on the paper as if it were alive. When flipping through, each page will constantly change as it is flipped, giving people an immersive illusion.

Longscale-bound books are an ancient handicraft flap book, which has a long history of more than one thousand years. It is a profound culture that cannot be reached in the development of western flap book. It not only loaded the history of the development of Chinese characters, but also condensed the wisdom of the ancient Chinese craftsmen, and integrated the exquisite skills and clever thinking, so that the book has a living soul in the five thousand years of Chinese culture.

#### **3.2 Before the Reform and Opening-up**

From the end of the Ming Dynasty to the modern history of China, there was a historical process of "Western learning spreading to the East", which had a huge impact on China. Many academic thoughts from Europe and America poured into China, including Western philosophy, thought, technology and system, etc. In the early period of the Republic of China, academic books in many fields from Europe came into China, including professional books of the flipping device.

Also, the medical professional book "*Lively Human Anatomy*" was introduced into the medical field that is struggling to explore in China at this stage. The book is a three-dimensional display of the internal organs and bone structure of the human body, which is more intuitive than a black-and-white lithographic book. It was an extremely rare learning opportunity for the lack of academic and cultural resources in some fields in China at that time. The western culture not only transmitted the new results of its exploration to China, but also broke the basic framework of traditional Chinese academics. Especially in the case that the western academic system has been roughly formed, it has exerted a great influence on the relatively weak and unformed academic field in China and promoted its continuous development.

### 3.3 After the Reform and Opening-up

After the reform and opening up, the new China began the comprehensive economic construction. In 1956, Chairman Mao Zedong put forward the policy of "letting a hundred flowers bloom and a hundred schools of thought contend", which brought a harmonious and relaxed atmosphere to the creation of literature and art.<sup>[6]</sup> Inspired by the flap books in the West, Chinese publishing houses began to imitate the production of flap books in the preschool education industry. From bookmarks and greeting cards in the streets to the Three-D *Small Picture Albums of Five Talents and Four Beaus* in the campus, flipping device has been used in all of them.

Among them, *Little Yellow Cow 3D Album* published by Education Books Publishing House in the 1950s is the most representative. This picture album is the earliest children's literature book in China, and its flipping device is relatively simple. But what is valuable is that this is a purely handmade flap book. The picture album is mainly horizontal, and the pictures are presented in a 90-degree landscape layer. The little cow on the grass is lifelike, and the interaction between it and the lamb looks at each other and smiles is particularly interesting in the form of flap book.

In the 1970s, the *pop-up book* series edited by the original author Su Gang is even more popular in the contemporary era. The book has 14 pictures, each page of which is cut into three sections: upper, middle and lower, making the characters divided into three parts: head, upper body and lower body.<sup>[7]</sup> Taking the Journey to the West, in which the Monkey King is good at fighting against demons and protecting his master Tang Priest to go to the West for Buddhist scriptures, as the theme, Su Gang combined the Four Great Classical Novels of China with Robert Searle's idea of "flip-match" and created the first flap book of Chinese novels. When flipping through any section of the book at will, a new image can be formed. The Monkey King in the book not only has 72 images, but can produce 2,744 kinds of interesting images. After *pop-up books* became popular in the market, major domestic bookstores increased their orders and printed it continuously for several years. This was quite a rare phenomenon in children's published books at the time.

In the 1990s, domestic publishing houses mostly created flipbooks based on cartoons, TV series and other film and television works, such as classic flap book *Mr. Black, The Mad Monk, little Horse Crossing the River*, etc. Although most published children's books have problems such as small length, few pages and low printing quality, the cumulative sales of low-cost children's books in China have reached up to one million copies, which enabled families at that time to afford the cost of children's literature education and alleviated the problem of insufficient attention to early childhood education.

### 3.4 The Renewed Flap Books in New Century

In the millennium, China's flap book industry started from the OEM of flap books in Europe and America. In order to reduce the production cost, European and American publishing houses adopt the production mode of multinational division of labor.<sup>[8]</sup> At the beginning, China's OEM factories only produced overseas commissioned orders. However, with China's emphasis on early childhood education, the market demand for children's books has been driven. Therefore, the foundry has used its own printing technology for many years to open the way of flap books with original designs.

In 2010, the Shanghai World Expo was held grandly, and Juveniles and Children's Publishing House took this opportunity to launch a commemorative book-- "*Magic Shanghai*".<sup>[9]</sup> Designed in collaboration with the UK-based studio Katz Pigamas, the book's content is very well designed and the volume is of extremely high quality. What's more, the content of the book are all unprecedented original design in China, such as the Oriental Pearl hidden under the flap device, the dynamic pavilion in the lake presented by the "pull bar" device, the sound of the flowing water of the Jiuqu Bridge, the lighting effect that "lighting up" Shanghai, and even the ink aroma emitted by rubbing the pages. The book records the beauty and charm of Shanghai, presenting the diversity and modernization of the city, as well as its historical and cultural characteristics.

However, the design capability and agency technology in China are not yet mature. After the upsurge of Shanghai World Expo, China has no new flap books until the "Funny Book", a children's

book brand, began to introduce a large number of foreign flap books and create them independently, which once again triggered the creation frenzy of flap books in China.

### 3.5 Since the 21st Century

"Funny Book" is the first early education book brand focusing on flap books in China, and it is also an independent organizer of important children's book categories for flap books.<sup>[10]</sup> From interesting picture books, puzzle games to basic cognition and scientific knowledge, there is no field of preschool education that does not involve.

At first, through the introduction and selling of foreign flap books, the foreign original stories, children's literary classics and Disney stories become very popular in the early education literature market in China, which helps the publishing house launch the brand of "Funny Book", and improve the popularity of flap books in the early education market in China. However, shortly after the introduction, it was discovered that the contents of foreign flap books are basically foreign historical backgrounds and scenes, which are quite different from the growth environment of Chinese children. Many parents and children cannot understand Western traditional culture and customs. Therefore, in combination with profound Chinese cultural deposits, "Funny Book" independently created many books full of unique and excellent traditional Chinese culture, such as *Disclosure of Chinese Characts*, *Disclosure of the Twenty-four Solar Terms*, *Disclosure of Ancient Poems*, *Disclosure of the Silk Road* and so on. This type of flap book has been loved by the children's book market, as well as parents and children. Many small and medium-sized publishers and producers have followed suit. At the same time, many parents choose flap books as an auxiliary tool of preschool education, which not only promotes preschool education literature, but also promotes its development.

Subsequently, more printing houses are willing to innovate the cutting and assembly process, and more creators are willing to flexibly integrate Chinese traditional culture into the flap book. This not only broke the traditional idea of lithographic printing habits, but also brought innovation in printing technology. Starting from the handicraft books thousands of years ago, we continue to learn and progress, and finally achieved a good development situation today. As the excellent traditional Chinese culture is extensive and profound, it needs the creators to continuously explore, so as to better present it in the form of flap books. Therefore, flap books in our country's development of preschool education literature has a long way.

## 4. Conclusion

After centuries of trails and hardships in China and the West, the flap book has lasted to this day. Nowadays, the readers are presented with the flap books which have better content and are more refined and varied. From the initial exploration of the small flap, it has grown into the bestseller favored by public readers. We have the honor to witness the development of flap book, the widespread popularization of preschool literature education and the enlightenment and progress of parents' awareness of early education in China. Patch Adamna, chairman of the International Andersen Prize Jury, said, "In the next ten years, China may become the most important force in the world's children's publishing."<sup>[11]</sup>

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