

Pop art

Part toy, part storybook, pop-up books are irresistible to little readers

By Alyson Ward

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For the most part, there are books and there are toys. You read books and you play with toys, and that's the way it is.

There's a wonderful exception, though, to this rule: The pop-up book, which has always blurred the book-toy distinction and made reading a literal adventure of discovery.

Today we salute the pop-up book, with a short history and some fun facts about these complicated creations. You never know when the need to know this sort of thing will, you know, pop up. What's so great about pop-ups?

Kids and adults read, admire and collect them, sometimes with committed zeal. There's an international organization devoted to the charms of the pop-up - the Movable Book Society.

Ellen G.K. Rubin, a member of the society, has built her Web site, www.popuplady.com, around her affinity for the pop-up. Rubin curates pop-up exhibits and has her own collection of about 4,400 books.

For Rubin, pop-ups have what she calls a "smile factor."

"I used to work in oncology," she says. "Definitely, few smiles. But everybody smiles with pop-up books."

Besides that, she says, pop-up books are a superior diversion to television or movies: TV is passive, but reading a pop-up is an interactive experience.

"You move the tabs, you open and close it, you can do it fast, you can do it slow," she says. "You are part of the equation - you are part of the action."

"I like to think of paper engineers as puppeteers," Rubin says. "They're creating these puppets, and then they're handing the puppet strings to us, the readers - and we're making it come alive for us."

Pop-up designer Matthew Reinhart says he grew up with the books.

"The only thing I really remember about them is that I tore them all up, or my kid sister did," he says. "I loved them - I guess I loved them so much that they couldn't take it."

Today he creates pop-ups instead of tearing them apart. His most recent book, *Animal Popposites* (Simon & Schuster, \$13.95), is new this month; he also creates books with bestselling pop-up creator Robert Sabuda.

What is it about pop-ups that appeals to Reinhart?

"You control the magic," he says. "It is something that the only thing you have to do is open the pages."

Pop-up history

Believe it or not, readers have been controlling that magic for hundreds of years. Pop-up history goes back to the 13th century, but the first books weren't truly pop-ups - and they weren't for children, either.

The first movable books, made in the 1200s, were hand-written books that contained volvelles, which are little discs inside the page that spin around like a wheel, revealing pictures or words.

This device is still popular, by the way - you may have seen it used in greeting cards. Volvelles weren't developed just for fun, though; back then, they were used for predicting the future, exploring philosophical theories or even making secret codes.

In the 14th and 15th centuries, a new kind of movable book developed. Scholars drew medical diagrams that had flaps you could lift to see another picture. On a diagram of the human body, for instance, you could lift the flap to see an interior layer of the body - muscles or other internal organs.

No one then thought about using this concept to make a book for children. But then, there weren't many books of any sort being published for children until the late 18th century.

In 1765, London publisher Robert Sayer produced what he called "harlequinades." Also called "metamorphosis" or "turn-up" books, these books had pages with flaps you could lift to see hidden pictures accompanied by a few lines of verse. This type of book eventually became popular with children, and children's pop-ups began to take shape.

Several other types of movable books were developed soon after. In 1810, a London publisher produced Paper Doll Books, which contained a paper head and a set of paper clothes. You'd dress up the doll by fitting its head onto one of the outfits, then read the verse that went with each piece of clothing.

From 1878, Germany's Lothar Megendorfer produced some of the most memorable movable books. He often wrote humorous verse, then accompanied it with pictures with pull-tabs that created movement. And there was a lot of movement: As many as five parts of an illustration would move at the same time.

At about the same time, another man in Germany developed a completely different kind of movable book. In the 1890s, Ernest Nister made pictures that worked like Venetian blinds: When you pulled a tab, the slats of one picture would cover over the first one, presenting an entirely new illustration. Nister also developed illustrations that stood up automatically when the book was opened - just like the ones in modern pop-up books.

Encouraged by these new developments, the late 1800s were a "golden age" for movable books. But then production came almost to a standstill when World War I began in 1914.

In the 1930s, the term "pop-up book" was used for the first time. Blue Ribbon Publishing, an American publisher, made books called pop-ups that featured Disney characters and characters from traditional fairy tales.

Pop-ups were popular, but World War II disrupted production again, with both labor and paper in short supply, and few pop-ups were created in the '40s and '50s.

The 1960s brought about a second "golden age" in pop-ups, one we're still enjoying. In 1965, a Los Angeles company called Graphics International began to produce a series of pop-up books. Hallmark bought the company, more companies emerged, and pop-ups were back.

Today, artists make pop-ups that are more and more complex, colorful and difficult to make. It's estimated that 25 million are produced every year. Even when children's book sales drop, pop-ups continue to sell well - and older movable books grow more valuable among collectors.

Pop-up trivia

- Pop-up fans are quick to point out the differences between true pop-ups and other kinds of movable books. True pop-ups, they say, do just that: Pictures pop up from the book when you open it. Other movable books may have pull-tabs or revolving pictures or 3-D images, but they're not true pop-ups.
- Even today, pop-up books are all assembled by hand. Workers - often in Mexico, South America or Asia - will sit at long tables, carefully gluing pieces of pop-ups together. As many as 60 people may work on a single book.
- Pop-ups and other "movable books" are favorites among collectors - the older, the better. The University of North Texas library has a collection of movables and pop-ups that date back to the early 1800s. Take a look at the collection at www.library.unt.edu/rarebooks and click on "Collections," then "Weaver Collection," or call the library's rare books division at (940) 565-2769.

How pop-ups are made

People who design pop-ups are called "paper engineers." And that's a good description of what it takes to put a pop-up together.

"It's a lot of trial and error," Reinhart says. "The first versions of any of our pop-ups are a mess."

He starts out by thinking in three dimensions - the pop-up pictures come first.

"We know basic mechanisms that work, and we put them together in 3-D."

After the first version comes a period of refining, he said.

"We'll trace the pieces with tracing paper and rework the mechanism and rework the shape so the pop-up looks like something."

Then it's time to add art. This may mean using a computer program or other means of adding color and lines to the pop-up pages.

How-to books

If you want to try making your own pop-up, here are some instruction books to get you started:

- Pop-O-Mania (Dial Books, \$16.99) by Barbara Valenta. Filled with bright illustrations, this book teaches the basics of pop-up construction, with actual 3-D examples of each step. Designed for children ages 4-8.
- The Elements of Pop-Up: A Pop-Up Book for Aspiring Paper Engineers (Simon & Schuster, \$35) by David A. Carter, one of today's most popular pop-up creators, and James Diaz. This book lets you examine the way paper is folded and positioned to make pictures pop up; you can read about how it's done, then see it in action. Designed for ages 9 and up.
- The Pop-Up Book: Step-By-Step Instructions for Creating Over 100 Original Paper Projects (Owlet, \$22.50) by Paul Jackson, with photos by Paul Forrester. This book teaches the basics of pop-up projects, from books to greeting cards. There are step-by-step instructions and a gallery of photos you can look at to see if you're on the right track. Designed for teens or adults.

Pop-ups to read

- The Wonderful Wizard of Oz: A Commemorative Pop-Up (Simon & Schuster, \$24.95) by Robert Sabuda. This magnificent retelling of L. Frank Baum's classic story spent much of last year on the New York Times bestseller list.
- Young Naturalist Pop-up Handbook: Butterflies (Hyperion Press, \$19.99) by Robert Sabuda and Matthew Reinhart. What's more beautiful than butterflies, popping out from the page in colorful splendor? This science-minded book also teaches readers about the transformation from caterpillar to butterfly - using pull-tabs and pop-ups, of course.
- Peekaboo Bugs (Simon & Schuster, \$12.95) by David A. Carter. This is just the latest of Carter's colorful, appealing bug pop-ups. This is best for young children, with flaps that lift to reveal hidden creatures.
- Sam's Pizza (Dutton, \$12.99) by David Pelham. Pelham is another popular pop-up engineer. This book looks like a pizza box. Open the lid and read a rhyme about making a pizza. But look carefully - some not-so-tasty creatures are hiding underneath the pepperoni and olives. Great for kids who love to be grossed out.

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Nineteenth- and 20th-century movable books shown here are part of the Weaver Collection, University of North Texas library.

Modern-day books shown are available at Barnes & Noble, 401 Commerce St., Fort Worth.