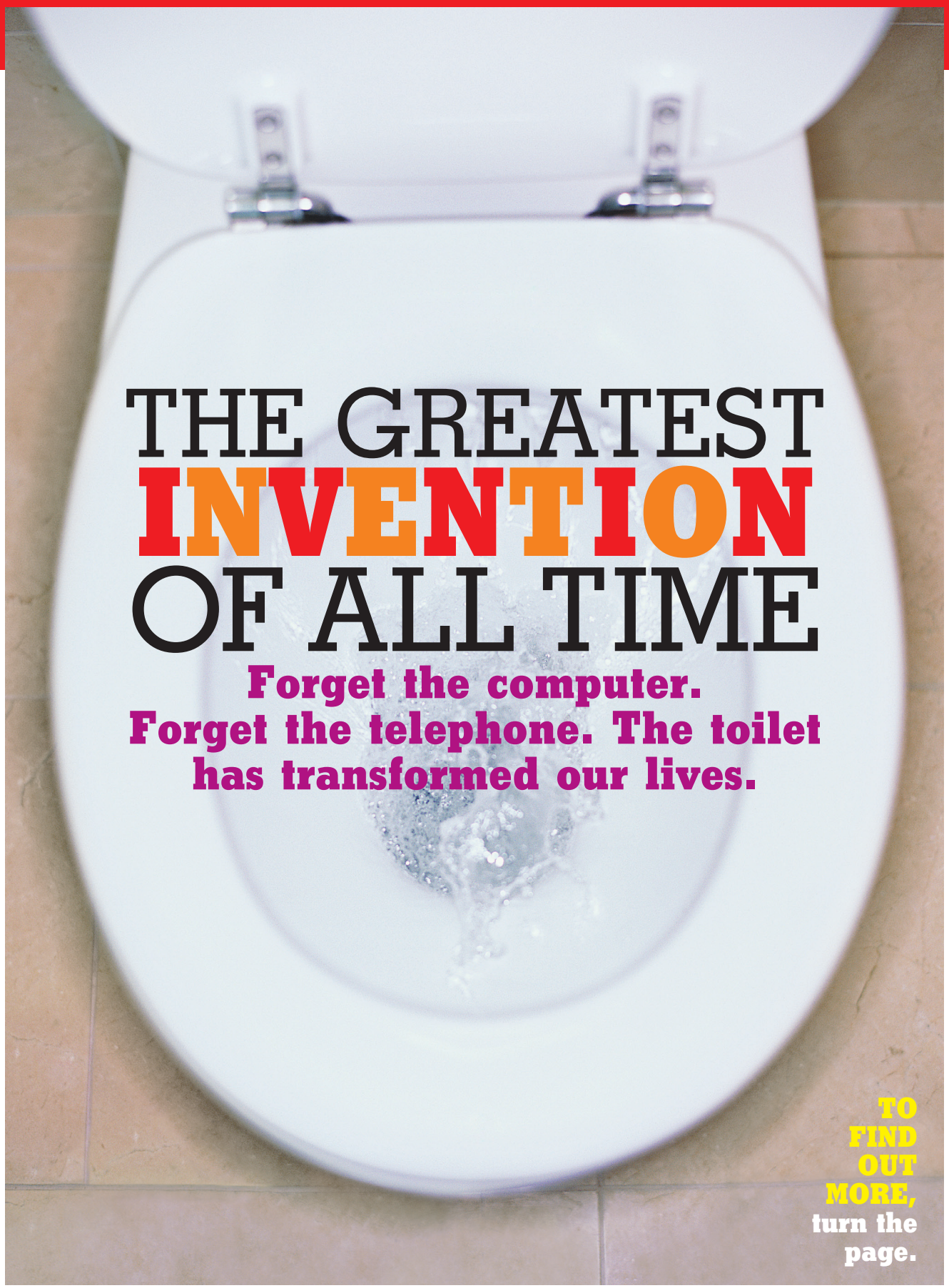


THE GREATEST INVENTION OF ALL TIME

Forget the computer. Forget the telephone. The toilet has transformed our lives.

TO FIND OUT MORE, turn the page.

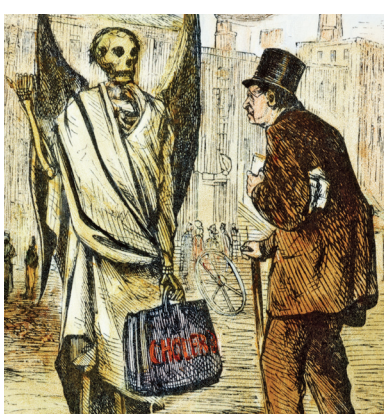
Darren Robb/Getty Images

Left: Just 100 years ago, flush toilets were mainly for the rich. **Below:** In an 1866 etching, a skeleton totes a bag of illness through the streets. What did the artist want to show?

The Miracle Flush

The humble toilet has saved millions of lives

In 1851, millions of Europeans flocked to London to see a showcase of the world's greatest inventions and treasures. Visitors to "The Great Exhibition of 1851" got to see stuffed zebras and the largest diamond on Earth. But it was a plain-looking device that stole the show: the flush toilet. For the first time in history, human waste could be simply flushed away.



It's easy to understand why people were so excited. Of all the challenges humans have faced throughout history, the problem of human-waste disposal has been one of the most difficult. In fact, if you ever have a chance to travel back in time to 19th-century London, be sure to pack your gas mask. Better yet, plan on not breathing at all. Life before the flush toilet was extremely stinky.

It was dangerous too.

Human feces (aka poop) is foul stuff. It is filled with **pathogens,** tiny organisms that can make you seriously sick. About 50 diseases are spread through contact with human waste. Three of them—cholera, dysentery, and typhoid—have killed millions of people over the centuries. In the old days, nobody understood the connection between feces and disease. People dumped waste wherever they could—into streets, rivers, and "cesspits," ditches filled with sewage that overflowed when it rained. Wells of drinking water were often **contaminated.**

The flush toilet only made things worse—at least at first. After the exhibition, some 200,000 people installed flush toilets in their homes. All that flushed water overwhelmed cesspits and soon flooded the streets. In 1854, cholera swept through England, killing tens of thousands.

It took more than a decade for city leaders to finally tackle the problem of waste disposal. They built sewers—huge networks of pipes that carried wastewater away from drinking-water supplies. As **sanitation** improved, outbreaks of disease declined.

And life in London and other European cities got much less stinky. ■

The Granger Collection

LOOK FOR WORD NERD'S 6 WORDS IN BOLD

For this Indian girl and millions of others with no access to toilets, the Peepoo could be a life-changing invention.

A New Kind of Toilet

Will the Peepoo change the world?

The Peepoo might look like a simple plastic bag. But it is, in fact, a disposable toilet that turns human waste into fertilizer for crops. Before you say "yuck," think about this: 2.6 billion people—almost 40 percent of the world's population—have no access to a toilet. Most are in poor countries, living in crowded cities like Nairobi, Kenya, or in remote villages like those that dot the Indian countryside.

Not having a toilet is more than inconvenient. It can be deadly. Many diseases are spread through contact with human waste. These diseases kill 1.5 million children each year. The Peepoo could help change that.

Here's how it works: A Peepoo bag is placed inside a bowl. The person uses the bowl as they would a toilet. Afterward, the bag is removed from the bowl and knotted. The whole thing is **biodegradable,** which means it can be buried in the ground, where it **dissolves.** Then *poof*! Harmful waste is out of human contact. Or the used bag can be sold back to the company that makes it. Crystals in the bag turn the waste into fertilizer that can be used to help crops grow.

The Peepoo's creator is Anders Wilhelmson, a Swedish architect and professor. He has always been **passionate** about finding solutions to help the world's poorest people. While traveling in cities throughout Asia and Africa, Wilhelmson came to believe that having a toilet is even more important than having a house. He worked for several years on the Peepoo. Today, people in Nairobi and India are using it. Wilhelmson hopes that over the next few years, it will catch on around the world and that his simple plastic bag will save lives. ■

COMPARE/CONTRAST

What does the invention of the flush toilet have in common with that of the Peepoo? What is different? Find three similarities and three differences. Then write about them in a well-organized paragraph.

GET THIS ACTIVITY ONLINE

Courtesy of PEEPOOPLE.COM