

# What History's Greatest Inventions Can Teach Today's Innovators

Catherine Buday (EIX and FamilyBusiness.org)

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'Epic Disruptions' author Scott Anthony, a Dartmouth Professor and acolyte of the late Clay Christensen, shares surprising facts about 11 world-changing breakthroughs.

A Chinese philosophy book from the year 142 references combining three powders together to create sparks that "fly and dance violently." It was history's first known mention of something that might be gunpowder. Over more than a millennium, philosophers, magicians, and healers would write about combining powders for mysterious or violent effect, and references of explosives being used in battle began cropping up in historic manuscripts.

The true disruptive, world-changing power of gunpowder wouldn't become clear until 1453, when a metallurgist named Orban offered his skills in explosives to the Byzantine empire. The Byzantine rulers offered Orban only a pittance in return. But their enemy, the Ottoman empire, quickly saw the potential of Orban's innovation and offered to reward him more handsomely. His invention -- recognized as the world's first explosive-powered gun capable of hurling huge projectiles -- brought down the walls of the Byzantine empire and changed the course of history.

Gunpowder is one of 11 history-altering breakthroughs examined in Scott Anthony's book, "Epic Disruptions." Among the others are the printing press, disposable diapers, McDonald's, mini steel mills, the iPhone, and even Julia Child, credited for raising the cooking aspirations of home cooks everywhere. Anthony uses the stories behind these disruptions to show how innovations really happen.

Anthony, who studied under "disruptive innovation"

thought leader Clayton Christensen, said he was inspired by his professor's advice to take old phenomena and put them under a new lens to gain important insights. And in examining these 11 breakthroughs, Anthony found some interesting patterns that challenged conventional wisdom.

He shared those insights in "Everything Thought Leadership," a video + podcast series from Buday Thought Leadership Partners. You can watch the relevant excerpt of the interview below.

[Link to video](#)

## Takeaways

Here are some of Anthony's insights gleaned from examining these 11 epic disruptions:

**History is a lens that can teach us things.** Examining how breakthroughs really happen can provide context for our own processes as innovators. It shows us things we would otherwise miss.

**Disruption causes societal crisis as well as benefits.** More than 100 years ago, the invention of the automobile caused havoc and even rioting in city streets designed for horses, yet ultimately it transformed economies, societies, and industries around the world. Today people are grappling with AI and its potential and peril in a similar way. "We have to understand that when a disruption happens -- like artificial intelligence or robotics or some of the new things emerging in healthcare -- as they play out the world will look materially different," Anthony says.

**Breakthroughs came from ordinary, flawed people -- not superheroes.** Julia Child is considered an innovator because she introduced millions of home cooks to the fine art of French cuisine, but she once was a terrible cook who flunked her first class at the



prestigious Cordon Bleu cooking school in Paris.

**Breakthroughs rarely happen in corporate settings.** While this is beginning to change, most innovators of the past have had to leave their corporate jobs to develop their products, including Paychex Founder Tom Golisano; EDS Founder Ross Perot; and McDonald's Founder Ray Kroc.

**Older innovators have propelled some of history's greatest inventions.** Both Kroc and Victor Mills, the inventor of Pampers disposable diapers, were in their 50s; Johannes Gutenberg was 54 years old, considered elderly in the 1400s, when he created a printing technique that would allow ideas to be shared more widely and change civilizations around the world. Anthony points out that "fluid intelligence" comes and goes, but the more lasting "crystal intelligence," built from accumulated wisdom, takes decades to develop.

**True breakthroughs require patience.** Many people might guess that the iPhone had its genesis in the late 1990s or early 2000s, but Anthony traces it back even further: to a failed Corning Glass experiment in the 1950s, which was re-examined decades later and inspired the "gorilla glass" that gives Apple phones their resilience.

**Foresight can lead to fortune.** The Byzantine empire fell because its rulers nicked and dined an innovator who could have given them the weaponry they needed to stay in power; the Ottomans saw the potential and invested handsomely. Similarly, Kodak bought a photo sharing tool called Ofoto in 2001, years before Facebook revolutionized social media, but never fully saw its full potential for digital photo sharing. With vision Ofoto could have been the basis for a Facebook-like product, but Kodak saw it as a threat to their printed photo business.

**Maintain your vision despite the naysayers.** As Jeff Bezos has said, "Entrepreneurs must be willing to be misunderstood for long periods of time."

Watch the full interview with Scott Anthony [here](https://budaytlp.com/2025/11/25/etl-50-scott-anthony-on-the-disruptions-shaping-the-thought-leadership-profession/).  
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