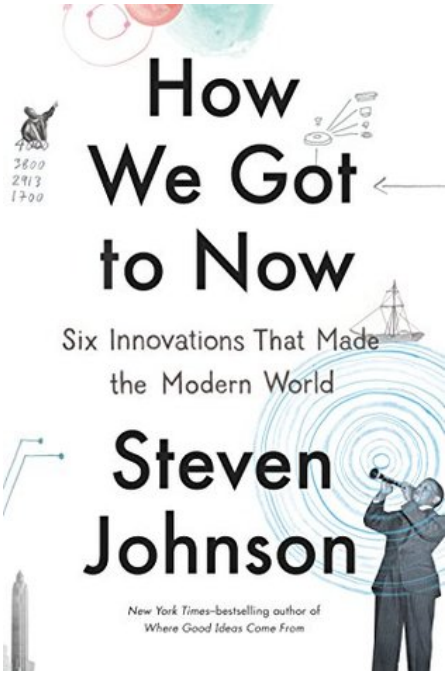

How We Got to Now: Six Innovations That Made the Modern World

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How We Got to Now: Six Innovations That Made the Modern World Steven Johnson
From the *New York Times*–bestselling author of *Where Good Ideas Come From* and *Everything Bad Is Good for You*, a new look at the power and legacy of great ideas.

In this illustrated volume, Steven Johnson explores the history of innovation over centuries, tracing facets of modern life (refrigeration, clocks, and eyeglass lenses, to name a few) from their creation by hobbyists, amateurs, and entrepreneurs to their unintended historical consequences. Filled with surprising stories of accidental genius and brilliant mistakes—from the French publisher who invented the phonograph before Edison but forgot to include playback, to the Hollywood movie star who helped invent the technology behind Wi-Fi and Bluetooth—*How We Got to Now* investigates the secret history behind the everyday objects of contemporary life.

In his trademark style, Johnson examines unexpected connections between seemingly unrelated fields: how the invention of air-conditioning enabled the largest migration of human beings in the history of the species—to cities such as Dubai or Phoenix, which would otherwise be virtually uninhabitable; how pendulum clocks helped trigger the industrial revolution; and how clean water made it possible to manufacture computer chips. Accompanied by a major six-part television series on PBS, *How We Got to Now* is the story of collaborative networks building the modern world, written in the provocative, informative, and engaging style that has earned Johnson fans around the globe.

How We Got to Now: Six Innovations That Made the Modern World Details

Date	:	Published September 30th 2014 by Riverhead Books (first published September 25th 2014)
ISBN	:	
Author	:	Steven Johnson
Format	:	Kindle Edition 289 pages
Genre	:	Nonfiction, History, Science, Technology, Business

From Reader Review How We Got to Now: Six Innovations That Made the Modern World for online ebook

Marianne Morris says

I love stuff like this - like that old British tv series Connections - that tell you how one discovery or technological improvement in the field of printing, for example, led to another discovery or great leap forward in the field of art, or rapid progress in science, etc. Anyway, that's what this book is about and it is fascinating. There's also a PBS series that brings it to life, but the book by itself is great.

Pouting Always says

I'm a sucker for books that incorporate interdisciplinary thinking and then weave them into a narrative about history. It was fun to see the way innovations in one area could set off subsequent innovations that seem totally unrelated. The unpredictable consequences of new discoveries is interesting and explaining it through history made it resonate much more, it really humanized the people being talked about. I really appreciate the author's discussion about what actually helps people make these leaps and ideas that revolutionize everything because it's one that even though I see acknowledged more often now isn't as widely believed. Which is awful because it holds people back from doing amazing things because they have a faulty view of how progress really works. I really enjoyed the book though, if you liked Freakonomics you'd probably like reading this one also, it utilizes the same out of the box thinking.

Tawney says

I received this book compliments of Riverhead Books through the Goodreads First Reads program.

In the late 1970's James Burke hosted a television show called Connections in which he demonstrated how one innovation led to another in a seemingly unrelated way. Steven Johnson's How We Got To Now, which is the companion book to his PBS programs, quickly reminded me of that earlier series. Thankfully it is less frenetic and more focused. Johnson has chosen to explore the importance of six topics and unravel the journey of each to Now. While the current outbreak of Ebola has highlighted the importance of sanitation, most of the time we take Clean for granted. The same is true of Glass, Cold, Sound, Time and Light. We utilize the discoveries and refinements made possible by hard work, networking, accident, serendipity. Innovations don't leap from out of the blue and they lead to unintended consequences, good, bad, in between, and they lead to change.

The stories of How We Got To Now are lively and often surprising, with a cast of familiar and unfamiliar names. Johnson ties it together with some general observations on how innovations occur. The book is well illustrated, includes a bibliography and apparently will include notes, index and credits (the ARC is lacking these).

Jason Anthony says

When reading nonfiction, I have two set rules:
(1) Did I learn something new?
and
(2) Did I enjoy the writing (and/or material)?

Steven Johnson's "How We Got to Now..." led me to strong YES responses for both.

In this book (which isn't short, but feels very short because you want to race right through it), Johnson tracks how some of our most important inventions (glass, water treatment, electricity) changed the world in both predictable and unpredictable ways. The writing is quick and entertaining; the tidbits of knowledge are non-stop.

For example, did you know that the phrase "always a bridesmaid, never a bride" originated as a Listerine ad for the ladies? (I did not!)

The closest parallel I can think to this book is the work of Malcolm Gladwell. However, as Gladwell treads in my research domain, I often know when he's exaggerating, twisting, or taking credit for others' ideas. Here, there's none of the latter (he speaks of others genius and rarely hints at his own ideas) but I can't speak to the world of physics and hard science. That being said, I have no reason to doubt his historical accuracy.

I strongly recommend the book and only wish it lasted longer. (My kindle ended it at about 60% because of all of the end notes, so it felt especially quick!)

Patricia says

Fascinating! The author looks at the topics of glass, cold, sound, clean, time and light and explains how one discovery led to others, with very unpredictable results. For example, the invention of the printing press led to more books which led to more people realizing they needed spectacles which led to an improvement of the glassmaking process to make corrective lenses which led to the invention of microscopes which opened a new world to scientists studying disease. Sometimes many inventors work on similar ideas at the same time - other times an inventor may make a huge leap by getting ideas from different disciplines. I really enjoyed the book and I think I will watch the PBS series now.

Andrew says

History is most frequently told from the perspective of hero protagonist or the victorious civilization or as if everything was part of an inexorable and clear plan of progress. History writing is by definition hindsight, and we are wont to weave all details into one clear narrative. The genius of this book is to show the chaos of history and juxtapose it next to the inevitability of basic chemistry and physics. Steven Johnson succeeds exceptionally well in this enjoyable and delightful read about invention and the making of modern society.

Fred Forbes says

I find it interesting to read the history of trends and technology that have impacted our lives, enjoy it even more when it is delivered in energetic and amusing fashion. Beyond the "butterfly effect" wherein the interaction of the air of the flap of wings of a butterfly in California, say, leads to the formation of a storm in the Atlantic. While this is an interesting aspect of chaos theory, the author prefers the "hummingbird effect" where the changes in on thing can be directly linked to another like the role of pollen on hummingbird flight patterns and wing development. This effect the author puts to use to describe "strange chains of influence" where "innovation or cluster of innovations, in one field ends up triggering changes that seem to belong to a different domain altogether." An example is the development of printing by Gutenberg leads to the availability of books which leads to an awareness of a need for spectacles to see small items clearly which leads to the development of artisans working glass and the development of specialized lenses which leads to microscopes and telescopes which leads to advancements in science and health which reverberate today. Johnson analyses 6 major areas of development glass, cold, sound, clean, time and light. The book is full of interesting anecdotes - the New Englander who thought he could make a fortune delivering ice to the tropics only to find once he got there that no one wanted it. Or the Frenchman who invented a method of recording sound long before Edison's phonograph and who would be honored today but for one problem - he forgot about playback! The author posits that most inventions tend to arise in clusters based on where current practice and technology exist in the "adjacent possible". But he also notes that some "time travelers" are able to develop ideas long before they can be put to practical use a la Babbage and his analytical engine and Ada Lovelace's designs for computer programming, DaVinci and his helicopters, etc. The book is well illustrated, moves at a rapid clip and is an amusing and educational read.

Brendon Schrodinger says

I picked this book up on holidays on the north coast right in the middle of one of the worst cold's I have ever had. So this review comes with a drugged up warning. Lots and lots of psuedoephidrine.

The title's promise of "Six innovations that made the modern world" was probably stamped by some marketing schlep rather than the author. The book rather consists of six technological avenues that shaped how we live. These are divided by chapter and consist of concepts like 'cold', 'light', 'clean' and 'sound'. Yes, by the title, sound was an innovation that made the modern world. Ugh.

Anyway the stories inside each chapter are somewhat fascinating and full of intrigue. The author develops several ideas throughout: that some technological developments are inevitable, and some are way out of left-field. Kinda what we know anyway, but it's great to hear these examples.

So I'd say a good, light holiday read for anyone who is fascinated by the history of technology. He is a good writer and I'll check out his other stuff. But for me it could have delved a bit deeper into his premise and still been a great, light holiday read.

Radwa says

Bookclub pick by: Good Mythical Morning book club.

The most important thing with nonfiction books like this one is to learn something new, and that's what happened after reading this book.

This book takes a different approach, as Johnson calls it "The Hummingbird effect" which is different from the butterfly effect, as in he looks at inventions that had their effect on other innovations in completely different fields, in an almost not intentional or intentional way.

He also talks about some of the non-standard inventions like glass and time and clean, or approaches some well-established inventions in a new way that is new and refreshing like light and sound and cold.

Of course, the book as it says in the introduction looks solely on the way these innovations affected and came about in the US and Europe. so the "we" in the title is actually more about how Americans and Europeans innovated these ideas or made any progress with them. The only drawback is that he doesn't mention how some of the innovations came to being first in some other places like Asia or some Arabian country.

I enjoyed this book, the info and little pictures that came with it, and Johnson's style is really smooth and introduces new information and historical facts with so much ease.

Highly recommended.

Paul says

In this book Steven Johnson considers six innovation that the modern world really cannot live without. These are cold, glass, sound, light, time and clean. Slightly obscure you might think, but these six objects have given us so many things like air conditioning, microscopes, clean water, time zones, lasers and the telephone.

As he writes about each subject, he reminds you of life before these inventions, with no artificial light, drinking water that could kill you in 48 hours and food that spot quickly in the summer. He tells about the characters that put their reputations and money on the line to get these things off the ground. Others then saw the potential of the ideas and the spinoff ideas from the initial one have been phenomenal. For example before Gutenberg, it was only a handful of monks that needed glasses for near sighted work. After the first books appeared, people realised that they couldn't see the text and the market for reading glasses, using the newly developed lenses took off. The most fascinating was the way that the entire city of Chicago was jacked up to allow space underneath to install a sewerage system.

Johnson has a way of conveying ideas and concepts that make this a pleasure to read, well worth reading.

Abby says

This book is an extremely fascinating look at key innovations and the many ways they shaped our modern world. Johnson does an amazing job of explaining complex paradigm shifts in technology and culture, blending different elements into a cohesive narrative. It was especially interesting to discover how the 'adjacent possible' opened the door for change and how most inventions emerged from networks of people, incremental changes and were invented simultaneously in various different areas around the same moments in history. In particular, the sections based around 'Glass' and 'Time' I found to be very mind-blowing. Such a cool look at a lot of items in modern life that we take for granted.

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Phil Simon says

Johnson again paints a rich tapestry of innovation, much of it unexpected and not linear. His stories often

begin in odd places before they coalesce. I've enjoyed just about all of his books and this one is no exception. I was familiar with a few of the stories (Babbage, Edison) but certainly not all of them. This book is informative and very enjoyable to read.

Jim says

Johnson's long view of how innovations in 6 different fields shaped our civilization takes traces them from their original uses & discoveries through their current uses. It's an often amazing journey as he points out huge changes made possible by them & the odd consequences in other portions of our lives that we normally wouldn't associate with them.

The Wall Street Journal did a good review here:
http://www.wsj.com/articles/book-revi...

1. GLASS - from King Tut's jewelry to dishes to lenses, glass has certainly been one of our oldest & most important arts. Lenses meshing with the printing press for glasses eventually led to the microscope & telescope, expanding our views immeasurably. Its use as building & communication materials is even more astonishing.

2. COLD - is even more interesting in the way it blossomed in just the past couple of centuries & has caused huge shifts in economics & populations through food storage & habitability. Birdseye & Carrier transformed our food & living spaces.

3. SOUND - told me that the cave paintings might have been more for marking spots for the best sound than for art. Turns out even dabs of color in the Lascaux caves in France were mapped to the best echo spots, so it has a much older heritage than I'd previously thought. Even so, things really got hopping in the last century or two as we turned it into electric.

A recurring theme is that inventions & innovations are generally not light bulb moments of geniuses, but built on the thoughts & tech of the times with a lot of hard work, odd consequences, & failure. Sound illustrates this very well. Martinville's phonoautograph in 1857 set the stage for Edison's phonograph 2o years later & wasn't used the way he imagined at all. Sonar was developed prior to WWI, spurred by the loss of the Titanic, but Langevin couldn't get anyone interested & it wasn't used even though it could have saved thousands from U boats far more cheaply than any other method. Certainly he never thought it would be used for sonograms.

Unintended consequences: *...By the end of the decade, the sex ratio at birth in hospitals throughout China was almost 110 boys to every 100 girls, with some provinces reporting ratios as high as 118:100. This may be one of the most astonishing, and tragic, hummingbird effects in all of twentieth-century technology...*
The normal ratio is 105:100 in the US which makes the statistic a little less tragic. Scientists don't really know what drives the difference in the sex ratio in most cases, although China's is a fact.
http://www.pewresearch.org/fact-tank/...

4. CLEAN - the past was filthy & now we've gotten to the point where we can make things too clean. The clean up of cities was amazing. I read The Ghost Map: The Story of London's Most Terrifying Epidemic - and How It Changed Science, Cities, and the Modern World, also by Johnson, so knew some of this section. I hadn't realized the entire city of Chicago was jacked up, though. That 3 billion people still live in squalor is

ridiculous.

5. TIME - was interesting, although I've read about it before, especially the difficulties in navigation before the first clocks let us figure out longitude & now we use a similar method with GPS (time difference between 3 satellites). More interesting was the need for time accuracy in our daily lives as we industrialized & communicated faster. His examples of train schedules was excellent as were the explanations of how it got more accurate as technology progressed.

He also made a great example of how Edison was not a genius inventor on his own. He was one of the pioneers of having a team in various disciplines. Many others had the idea of the light bulb for decades, but his team came up with the best filament first & he was excellent at marketing.

6. LIGHT - was very expensive before the electric light. I was shocked by how expensive & what a difference it has made in our lives especially when coupled with other inventions. It was a byproduct of fire, our first great discovery, & yet didn't change much for 100,000 years. Not much more than a century ago, we were hunting sperm whales to mine their heads for oil. Now we're using lasers in an attempt to create a sun.

I highly recommend this. It was very well read & would be an excellent read for any SF author. Johnson even engages in some what-if scenarios. There are a lot ideas here that show just how amazing & odd our history is, especially in the past couple of centuries. Indeed, we've come a long way, baby!
