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# 12 engrossing nonfiction books from 2016 that will expand your brain

Awesome reads for people who love technology, science, history, and geek culture.

ANNALEE NEWITZ - 12/23/2016, 5:15 AM



Design by Heidi M. Rolf

**Enlarge** / Detail from the cover of *The End of Ownership*, by Aaron Perzanowski and Jason Schultz.

Sometimes you just want to escape into another world... of facts. That's why the best way to round out your holidays is to snuggle up with a book that is both entertaining and *true*. We're here for you with some suggestions for great new nonfiction books that came out in 2016.

***I Contain Multitudes: The Microbes Within Us and a Grand View of Life***, by Ed Yong.

Ed Yong has delighted readers for years with his blog Not Exactly Rocket Science and his stories about science for *The Atlantic*. With his dry wit and kaleidoscopic knowledge of biology, he can make anything fascinating—whether it's duck penises or parasite lifecycles. In this bestselling book, he explores the microbiome, or the massive ecosystems that live inside our bodies and keep us (mostly) healthy. Come for the poop transplant jokes and stay to have your view of nature turned upside down.

***Lab Girl*, by Hope Jahren.**

The scope and majesty of this memoir of a biogeoscientist is belied by its humble title. Jahren has devoted her life to understanding how prehistoric plants survived Earth's many climate transformations, which puts her squarely between the worlds of geology and plant biology. As she tells the story of how she fell in love with science, we follow her into muddy ditches, full of pollen fossils, and into remote arctic field study sites. Plus, we discover that plants are far more complicated organisms than we ever realized. *Lab Girl* is about scientific wonder and getting your hands dirty for knowledge.

***The Man Who Stole Himself: The Slave Odyssey of Hans Jonathan*, by Gisli Palsson.**

If you're a history buff, this incredible story of an escaped slave will enthrall you. Hans Jonathan was born in the Caribbean, the child of a slave and a young white musician who worked briefly as a bureaucrat on a local plantation. When his master took him to Denmark, young Hans discovered that slavery had just been abolished in his new country. So he sued his master for freedom. When the courts exploited a legal loophole to declare him still a slave, he fled to Iceland. There, he became a respected, if unusual, member of a tiny seaside community. He eventually married a local girl and fathered a family whose offspring are now scattered across Northern Europe and the United States. Historian Gisli Palsson's extensive research uncovers Hans' true paternity, explores his historic lawsuit, and tracks down his living relatives. *The Man Who Stole Himself* is an amazing story about how one lucky man used his wit and education to escape slavery, but it's also about how people in small Icelandic communities understood race at a time when none of them had met anyone of African ancestry before. It's simply riveting.

***Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*, by Cathy O'Neil.**

If you're sick of the "big data" buzzwords and love math (who doesn't?), this mega-bestselling book is for you. Cathy O'Neil, a [Wall Street quant](#) known online as "math babe," explains how many of the slick tools that make data mining possible are based on false assumptions and unregulated "black box" algorithms. By tracking how algorithms shape people's lives at every stage, O'Neil makes a compelling case that our bot overlords are using data to discriminate unfairly and foreclose democratic choices. If you work with data, or just produce reams of it online, this is a must-read.

***Ghostland: An American History in Haunted Places*, by Colin Dickey.**

A couple years ago, journalist Colin Dickey decided to drive across the United States and explore haunted places. The result is this smart, funny travelogue about how ghost stories reveal more about

the people who tell them than they do about the supernatural. We learn what's behind ghost stories, which ranges from desperate property owners trying to make a buck on ghost tourism to genuinely horrifying real-life events that morphed into folklore over the years. Whether you're a skeptic or spirit-curious, *Ghostland* is a great exploration of why we want to believe in ghosts.

***Venomous: How Earth's Deadliest Creatures Mastered Biochemistry*, by Christie Wilcox.**

Of course you want to learn more about the deadliest animals on Earth. But once you dive into biologist Christie Wilcox's book about her scientific adventures among poisonous animals, you'll find that evolution is even more badass than a venomous spider. Wilcox explains why some animals evolved to be so incredibly dangerous for humans, and, in the process, she illuminates how bizarre life can get under the influence of natural selection.

***Planck: Driven by Vision, Broken by War*, by Brandon Brown.**

Max Planck was one of the greatest physicists of the 20th century, and he spent the latter part his career working under the Nazi regime. He was divided between passion for quantum theory (for which he won the Nobel Prize) and his efforts to resist Fascism. At one point, he wrote personal letters to Hitler begging for leniency in the case of Planck's son, who was later executed for trying to assassinate Hitler. Brandon Brown, a physics professor, has written a moving, compassionate account of Planck's life and what it means to pursue scientific truth in a time of war and authoritarianism.

***The End of Ownership: Personal Property in the Digital Economy*, by Aaron Perzanowski and Jason Schultz.**

This is a lively must-read account of how digital formats have led to an unprecedented transformation of property law. Perzanowski and Schultz are law professors who specialize in intellectual property, and they argue that consumers need to be aware of the tradeoffs that come with the so-called freedom of cloud storage and streaming services. When your books, music, and movies are no longer "yours," at least according to copyright owners, you lose both privacy and freedom.

***The Geek Feminist Revolution*, by Kameron Hurley.**

Kameron Hurley's science fiction novels have won critical acclaim, and her online essays (collected here for the first time, along with some original writing) have sparked fascinating Internet debates. Here she tackles everything from bad science fiction, to fighting oppression online and off. If you want to understand what this whole "geek feminism" thing is, or you just want to read some angry, smart cultural criticism, look no further than this collection.

***Being a Dog: Following the Dog into a World of Smell*, Alexandra Horowitz.**

Animal behavior researcher Alexandra Horowitz has devoted her life to understanding the minds of dogs—and their *homo sapiens* owners. In this mesmerizing and often funny account of her experiments with dogs and their human companions, Horowitz introduces us to the ways dogs see

the world, and she dispels myths that humans have about what dogs are trying to communicate to them. Horowitz is the bestselling author of several books about dog minds, and in *Being a Dog* she focuses especially on how dogs' perceptions are shaped by smell. When not designing rigorous experiments, she spends a lot of time sniffing the ground on hands and knees to get into the dog mindset. The result is a book that everyone should read, whether you have a dog in your life or not.

***Hidden Figures: The American Dream and the Untold Story of the Black Women Mathematicians Who Helped Win the Space Race*, by Margot Lee Shetterly.**

Based on years of research and interviews, Shetterly's account of early space pioneers is so riveting that a movie based on it was in production before the book even hit bookstores. Luckily, you still have time to read this uplifting story of the black women mathematicians hired by NASA to chart space vessel trajectories before the movie comes out on Christmas Day. It's a story about math, going to space, and a government agency that decided to take a chance on a group of black women who lived at a time when they were forced to ride in the back of the bus.

***Welcome to the Universe*, by Neil deGrasse Tyson, Michael A. Strauss, and J. Richard Gott.**

If you've ever wished you could take an astrophysics class with space science superstar Neil deGrasse Tyson and two of his smartest friends, now's your chance. *Welcome to the Universe* is based on an introductory astrophysics course that Tyson and colleagues Strauss and Gott taught at Princeton. Learn about everything from the birth of the Universe and quasars to dark energy and exoplanets from three of the coolest guys you'll ever meet.

**Bonus: MIT "Essential Knowledge" Series.**

I'm a giant fan of MIT's Essential Knowledge series, which introduces basic concepts in science, technology, and culture in short, accessible volumes that you can read in a single airplane flight across an ocean or continent. I especially enjoyed the volumes *Machine Learning*, *Neuroplasticity*, and *Robots*, but there are plenty more. Each one is a brain booster and helps give you the vocabulary you need to get deeper into the subject once you've finished.

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