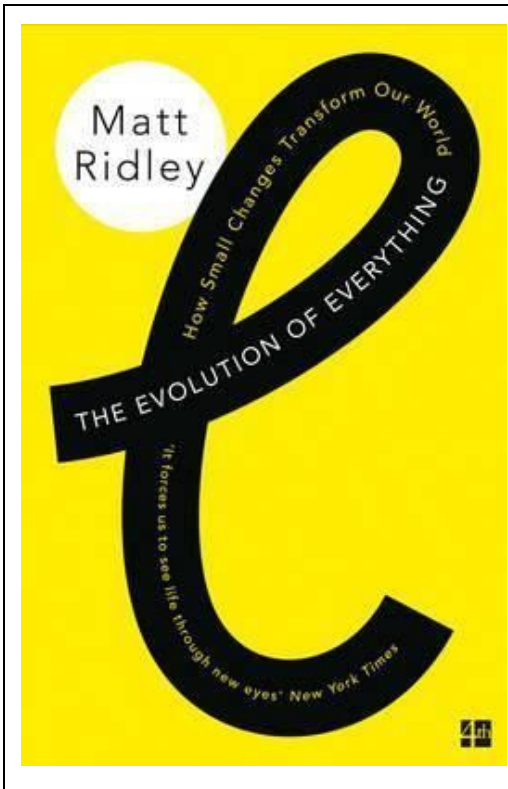


Favorite Quote:

“The core insight that Adam Smith had—that most of what we see in society is the result of human action but not of human design—remains true to this day, and under-appreciated.”

	<p>Summary: <i>The Evolution of Everything</i> starts off with enticing intellectual appetizers. By the time you're done, you've had the best meal of your life and you need to rethink every meal you've had prior.</p> <p>Expanding upon the work of Charles Darwin and Adam Smith, Matt Ridley deftly applies evolution theory to an astounding 17 domains like technology, morality, education, government, religion and money.</p> <p>The central premise? Top-down design doesn't work, and true positive change comes from bottom-up iteration that is "incremental, inexorable and inevitable." Evolution has no goal or end in mind; and it largely happens by trial and error - a version of natural selection.</p> <p>His goal for this book? To disentrall you from our obsession with human intentionality, design and planning.</p> <p><i>“I want to do for every aspect of the human world a little bit of what Charles Darwin did for biology, and get you to see past the illusion of design, to see the emergent, unplanned, inexorable and beautiful process of change that lies underneath.”</i></p> <p>Devour this 320p meal for yourself, or enjoy a few nibbles below.</p>
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“Science is the belief in the ignorance of experts. Observation and experiment trump scripture.”
—Richard Feynman

Author: [Matt Ridley](#) is one cool British cat. If you were to encounter him at a dinner party, you would address him as *The Right Honourable Viscount Ridley*. He sits in the House of Lords as a Conservative Hereditary Peer, but what he's really known for is writing: economics, science, environment, evolution—often in mind-bending fashion.

In addition to his 8 books, Mr. Ridleys' writings have been featured in *The Economist*, *The Times*, *The Wall Street Journal*, and many more. Awards abound, aplenty.

In short, Mr. Ridley is a free market guy. He believes that bottom-up evolution is the best approach for the long-term, and that serious concern should be had for top-down creationist thinking and design. His affinity for research-backed insights is both admirable and effective.



Chapter 1: The Evolution of the Universe

Overview: the ‘skyhook’ is introduced as a (very effective) metaphor for the argument that life shows evidence of an intelligent designer (full credit given to philosopher Daniel Dennett). Mr. Ridley argues that the history of Western thought is *dominated* by skyhooks: “devices for explaining the world as the outcome of design and planning.” We are also introduced to the Epicurean Roman poet Lucretius and his landmark poem *De Rerum Natura (Of the Nature of Things)* from which Ridley draws much inspiration and each chapter-opening quote.

- On Lucretius: “His poem rejects all magic, mysticism, superstition, religion and myth. It sticks to an unalloyed empiricism. . . In his ethics he thought the highest goal of human life is the enhancement of pleasure and the reduction of pain.”
- Ridley suggests reading [A.E. Stallings’ translation of Lucretius’ poem](#)
- Who advanced toward bottom-up thinking? Locke, Montesquieu, Voltaire, Diderot, Hume, Smith, Franklin, Jefferson, Darwin and Wallace, among others. Natural explanations displaced supernatural ones.

Chapter 2: The Evolution of Morality

Overview: what if morality was not handed down by God, but rather a spontaneous thing produced by social interaction among people seeking to find ways to get along?

- Adam Smith’s ‘invisible hand’ first appears in his lectures on astronomy, then later in *Moral Sentiments* and once more in *The Wealth of Nations*. Fascinating to know this phrase was used in both astronomy and morality prior to gaining widespread notoriety vis-a-vis free markets.
- “In Smith’s evolutionary view of morality, it is easy to see how morality is relative and will evolve to a different end point in different societies [and eras].”
- “The more prohibitions you have, the less virtuous people will be.” —Lao Tzu
- Capitalism and peace are largely correlated.
- “It is an extraordinary fact, unremembered by most, that in the Anglosphere people live by laws that did not originate with governments at all.” [common law]

Chapter 3: The Evolution of Life

Overview: we take on life itself—is God the ultimate creator, or was it something else? We are introduced to the brilliant theologian, William Paley, who wrote convincingly of biological design based on purpose, contrasted with Hume who surgically dismantles creationist logic, but then famously “swerves” by conceding that if a supreme being is not to be called “God,” then perhaps “Mind” or “Thought” may suffice. We get flybys of Russel Wallace, Jean Baptiste de Lamarck, and others.

- “My studies consist in Locke and Adam Smith.” —Charles Darwin, Cambridge

- “Evolution is a mechanism that builds organized complexity. . . out of primeval simplicity.”
—Richard Dawkins
- “It’s a massive non sequitur to find divinity in ignorance.”

Chapter 4: The Evolution of Genes

Overview: to reverse the drift toward entropy, life needs three things: information, order, energy. At a molecular level this equates to DNA (to store information), protein (for making order), and ATP (medium of energy exchange). But here we arrive at the chicken-and-egg problem. The work of Nick Lane and William Martin highlight some simple cells don’t burn carbohydrates, but power themselves by converting CO₂ into methane or acetate. This could have been how life began: microbes along hydrothermal vents.

- A human genome contains ~20,000 genes
- The true “purpose” of DNA is to survive
- References to Richard Dawkins’ *The Selfish Gene*
- The commonest gene in the human genome is [reverse transcriptase](#), an enzyme that the human body has little or no need for but is used to spread retrovirus. There are more copies and half-copies of this gene than of all other human genes combined.
- Onions and salamanders have larger genomes than humans. Grasshoppers have 3x as much DNA as humans.
- “The more we understand genomics, the more it confirms evolution.”

Chapter 5: The Evolution of Culture

Overview: Ridley argues that our habits and our institutions, from language to cities, are constantly changing, and the mechanism of change turns out to be surprisingly Darwinian: it is gradual, undirected, mutational, inexorable, combinatorial, selective and in some vague sense progressive. Language is best learned bottom-up; rarely does top-down language instruction actually work. Even monogamy and polygamy are not immune to evolution—both being popular at various times—is that the preference for either was an adaptive, evolutionary consequence of a certain set of selective conditions.

- “The key point is that there is no choreographer and no leader. Order, organisation, structure - these all emerge as by-products of rules which are obeyed locally and many times over.”
—Richard Dawkins
- “Cities, marriage, language, music, art—these manifestations of culture change in a regular and retrospectively predictable ways, but in ways that nobody did predict, let alone direct. They evolve.”

Chapter 6: The Evolution of the Economy

Overview: When Adam Smith published *The Wealth of Nations* in 1776, the economy was much different: government set strict rules and issued professional licenses—a far cry from laissez faire. In this chapter we explore the evolution of the global economy and how bottom-up specialisation and trade unleashed economic prosperity. The economy is an emergent phenomenon.

- The proportion of the world population living on \$1.25 a day, corrected for inflation, has gone from 65% in 1960 to 21% today. Furthermore, the average person alive today earns 10-20 times as much money as the average person in 1800 (accounting for inflation).
- Ridley refuses to use the misleading Marxist word “capitalism” for the free market. They are fundamentally different things.
- Ridley highlights the striking similarities between Adam Smith and Charles Darwin. If life needs no intelligent designer, then why should the market need a central planner? In the economy, exchange plays the same vital role in evolution as sex plays in biological evolution.
- “You will often hear people say that free markets have been discredited, as they sip cups of coffee while sitting on chairs, wearing clothes and checking text messages -- each of which was supplied by hundreds, thousands of producers whose beautifully coordinate collaboration was unplanned but achieve by ‘market forces’.
- WHO SHAPES THE ECONOMY? The customers.
- “Is it not striking that the cost of food and clothing has gone steadily downwards over the past fifty years, while the cost of healthcare and education has gone steadily upwards?” (hinting at government meddling)

Chapter 7: The Evolution of Technology

Overview: would the lightbulb have been invented if not for Thomas Edison? Of course. In fact, there are 23 people who deserve the credit for inventing some version of the incandescent lightbulb. Yes, invention is often a story of parallel discoveries. For this reason, Ridley opposes patents and copyright laws.

- Technology proceeds, like evolution, to the ‘adjacent possible’, a phrase coined by the evolutionary biologist Stuart Kauffman. It does not leap far into the future.
- *It is the sea herself who fashions the boats.*
- “The original idea of a patent, remember, was not to reward inventors with monopoly profits, but to encourage them to share their inventions.”
- In 2003, the OECD published a paper on ‘sources of growth in OECD countries’ between 1971 and 1998, finding to its explicit surprise that whereas privately funded research and development stimulated economic growth, publicly funded research had no economic impact whatsoever. Non. This earth-shaking result has never been challenged or debunked.

Chapter 8: The Evolution of the Mind

Overview: we get a full helping of Descartes, Spinoza and Locke as we explore the role of the mind relative to the body.

- “The self is a consequence, not a cause, of thought. To think otherwise is to posit a miraculous incarnation of an immaterial spirit.”
- “The mind exists for the body, is engaged in telling the story of the body’s multifarious events, and uses that story to optimize the life of the organism.” —Anthony Damasio
- The conscious self is a construct, a story told after the fact to bring unity to what is actually a diverse experience. Consciousness is “the magic show that you stage for yourself inside your own head,” in the words of Nick Humphrey.
- “Am I free to change my mind? Of course not. It can only change me.” —Sam Harris
- Is the idea of free will itself a skyhook? Perhaps it is, and its purpose: to preserve social order.
- The belief in the will and in the immortal soul themselves emerged as evolutionary consequences of how the brain changed.

Chapter 9: The Evolution of Personality

Overview: Ridley makes a strong case that personality is mostly innate.

- By the 1960s the tendency to blame parental and early influence for everything had reached ridiculous extremes. Films and novels were routinely incorporating childhood traumas as singular causes of personality.
- The central premise of Freudian analysis—that childhood events cause adult psychological problems—has been shown to stand on no good evidence whatsoever.
- What about intelligence? Also innate? Perhaps. The debate is whether intelligence is 30% or 60% attributable to genetics. Of course, neuroplasticity is real and humans can learn.
- “Fortunately we know from the work of economist Gregory Clark that elites regress inexorably to the mean over time.”
- Men are 97x more likely than women to kill the same gender.

Chapter 10: The Evolution of the Education

Overview: one of my favorite chapters because I had no idea how our modern classroom format came to be. In short, America adopted the “Prussian Model” of 1806 that was originally devised to educate and train young men to be obedient and not run away in battle. Americans like Archibald Murphy and Horace Mann (public education founding father) brought the model to the US in the mid-1800s. Top-down education was late to the US scene: by 1880, when national compulsion was enacted, over 95% of 15-year-olds were already literate! How did this happen? Bottom-up voluntary education systems.

- “The nationalisation of education provision, in short, has freed up poorer people to spend their private income (as opposed to their taxes) on other things; but it has plainly not increased their chances of social mobility—perhaps the reverse.”
- “It is nothing short of a miracle the modern methods of instruction have not yet entirely strangled the holy curiosity of inquiry; for this delicate little plant, aside from stimulation, stands mainly in need of freedom.” —Albert Einstein

- Education and technology: when Sebastian Thrun, an AI expert, send an email he'd be [teaching a course](#), tens of thousands took the course. Over 400 of them got better grades than the top student in Thrun's Stanford class.
- Ridley gives a huge endorsement for the Montessori School philosophy of eschewing the existing order of things, questioning reality, and emphasizing self-motivation.
- Education is dominated by creationist thinking. The curriculum is too prescriptive and slow to change, teachers are encouraged to teach to the exam vs. student strengths, and textbooks are infused with instructions about what to think instead of how to think.

Chapter 11: The Evolution of the Population

Overview: we explore the uncomfortable domain of eugenics which, for a time, was wildly popular. This wasn't covered in your high school history class: in 1932, thirty states passed laws allowing for the compulsory sterilisation of the feeble-minded, insane, criminalistic, epileptic, inebriate, diseased, blind, deaf, deformed and dependent. Over the next 40 years, over 63,000 citizens were forcibly sterilised, and many more persuaded to voluntarily sterilized. CRAZY.

- The First International Congress of Eugenics assembled in London in 1912 under the presidency of Leonard Darwin, son of Charles Darwin. It was attended by three ambassadors, as well as the Lord Chief Justice and the First Lord of the Admiralty - one Winston Churchill.
- This damning chapter is hard to read. It covers the holocaust, China's one-child policy, and many more examples of humans f\$%^&'ing with natural order. Many of the ideas were drawn from the writings of Thomas Malthus, then distorted.

Chapter 12: The Evolution of Leadership

- Ridley dismantles Thomas Carlyle's '[Great Man Theory](#)' and argues standout biographies are not the cause of the times they live in, but rather an evolutionary outcome/effect of their times. Herbert Spencer and Leo Tolstoy also help counteract this obsession with big names.
- **Case study:** [Morning Star Tomatoes](#) (with 40% market share in California) is ran by "self-management"—no managers, no bosses, no chief executives. It is entirely self-managed. They have 400 FTEs and 3,000 PTEs. Low-to-high salary multiple is only 6x, i.e. \$50k-300k.
- Story of Japan's Financial Secretary, Sir John Cowperthwaite, in 1960 who deregulated merchants and rewarded bureaucrats for coming in under budget (!) while allowing three stock exchanges to encourage competition. **Today Hong Kong has higher per capita income than Britain.**

Chapter 13: The Evolution of Government

- "What [Adrian Wooldridge](#) and [John Micklethwait](#), in their book *The Fourth Revolution*, call the liberal state may have begun with [John Locke](#), been championed by [Thomas Jefferson](#), found its

clearest exponent in [John Stuart Mill](#), and reached its most radical extreme with [Richard Cobden](#), but with the benefit of hindsight we can see that it was not invented by anybody. It emerged; it evolved.”

- “From the perspective of today, or from that of a Cobden-Mill-Smith-liberal, there is not a great deal of difference between the various -isms of the 20th century. Communism, fascism, nationalism, corporatism, protectionism, Taylorism, *dirigisme*—they are all centralising systems with planning at the heart.”
- Reference to the landmark *The Road to Serfdom* in 1944 by Friedrich Hayek who argued that socialism and fascism were quite similar and that economic planning and state control were at the top of an illiberal slope that led to tyranny, oppression and serfdom, and that the individualism of free markets was the true road to liberation.
- **On government spending as a percentage of GDP:**
 - 1913: 7.5%
 - 1960: 27%
 - 2000: 30%
 - 2011: 41%
- “Public policy failures stem from planners’ excessive faith in deliberate design.”

Chapter 14: The Evolution of Religion

- “St. Paul was acute enough to realise that the Jesus cult could be aimed at the poor and dispossessed. Its strictures against wealth, power and polygamy were will designed to appeal to those who had little to lose.”
- “Priests discovered that demanding ascetic self-sacrifice induced greater loyalty.”
- The first detailed biography of Mohammed did not occur until 200 years after his death (author is implying ample time for heavy editing that is not unique to Islam)
- **On Mormonism vis-a-vis other religions:** “Yet to me there is nothing, except the grandeur granted by the passage of many centuries, to distinguish the implausibility of Mormonism from that of Christianity, Islam or Judaism. After all, Moses too went up on a hill and came down with written instructions from God [similar to Joseph Smith of Mormonism]. All religions look man-made to me.”
- The literary critic George Steiner, in his book *Nostalgia for the Absolute*, argued that people are attracted by higher truths that simplify the world and can explain everything. They are nostalgic for the doctrinal simplicities of medieval religion.
- “The reluctance to accept coincidence lies at the heart of telepathy, spiritualism, ghosts and other manifestations of the supernatural.”
- Ridley (quite controversially) argues that a lot of Freud’s work was pseudoscience because most of the claims are not refutable.
- Ridley summarizes his bullshit radar as detecting the following features:
 - No refutable
 - Appeals to authority
 - Relies heavily on anecdote
 - Makes a virtue of consensus
 - Takes the moral high ground

- *Spoiler alert: this applies to most religions.*
- **On global warming:** “There is a tendency to over-prioritise carbon dioxide as a cause of global temperature, rather than just another influence among many.” Also: “Bio-energy, a policy intended to forestall global warming, is already killing hundreds of thousands of people each year by putting up the price of food.”

Chapter 15: The Evolution of Money

- *“The 1772 financial crisis led indirectly to the American Revolution, both because it drew large amounts of gold out of America to repay debts to London and because it caused the East India Company to default on a Bank of England loan; to recover its position, the company sought to sell its warehoused tea, which it dumped in the colonies, with help from the government’s Tea Act of 1773 to enforce to company’s monopoly on tea sales. This led to the Boston Tea Party. America liberty, and the great thinking that led to the Constitution, got its opportunity bottom-up from a financial and commercial crisis, in other words.”*
- “By the time the system imploded in 2008, the Chinese central bank owned an astonishing \$1 trillion of American residential mortgages.”
- **On the housing bubble:** ACORN lobbied hard to decrease lending standards. It worked. In 1992 the Bush administration imposed goals on Fannie Mae and Freddie Mac to accept loans with 5% down (or less) and to accept customers with poor credit histories less than a year. The Clinton administration throttled this program into a quota system: 30% of all loans bought by Fannie and Freddie must be low- and moderate-income borrowers. The government induced the housing crisis. . . it wasn’t “Wall Street Greed”.
 - *“In short, the explosion in subprime lending was a thoroughly top-down, political project, mandated by Congress, implemented by government-sponsored enterprises, enforced by the law, encouraged by the president and monitored by pressure groups. Remember this when you hear people blame the free market for the excesses of the subprime bubble.*
- “On any objective measure, the first century of the US Federal Reserve’s existence has been a failure. Not only has there been incontinent inflation since 1913, the year the Fed came into existence (8% in the preceding 120 years, 2300% in the succeeding 100 years), but there has been devastating deflation too, and more banking panics, more financial volatility, longer and deeper recessions.” - George Selgin, monetary economist

Chapter 16: The Evolution of Internet

- “If you really want to see the Arpanet as the origin of the internet, please explain why the government sat on it for 30 years and did almost nothing with it until it was effectively privatised in the 1990s, with explosive results.”
 - Actually, the government *prohibited* the use of Arpanet for private or commercial purposes. The Arpanet handbook at MIT in the 1980s read ‘sending electronic messages over the ARPAnet for commercial profit or political purposes is both antisocial and illegal.’
- **On Bitcoin:** Satoshi Nakamoto is likely Nick Szabo and Hal Finney (giving each deniability). There are 13 million BTC in circulation and the number can never exceed 21 million.

- “To date the impact of digital technologies on the practice and productivity of government has been almost non-existent. If anything, productivity in public services has gone down, not up.”

Chapter 17: The Evolution of the Future

- “In a world that delivers an endless supply of bad news, people’s lives get better and better.”
- “Things that go well are largely unintended; the things that go badly are largely intended.”
- “The flywheel of history is incremental change through trial and error, with innovation driven by recombination, and that this pertains in far more kinds of things than merely those that have genes.”
- *“For far too long we have underestimated the power of spontaneous, organic, constructive change driven from below, in our obsession with designing change from above. Embrace the general theory of evolution. Admit that everything evolves.”*