

Innovation [Under the Bitcoin Standard]: Building our Future through Cognitive Science, Information Science, & Economics

Cognitive science is “the interdisciplinary, scientific study of the mind and its processes with input from linguistics, psychology, neuroscience, philosophy, computer science/artificial intelligence, and anthropology. It examines the nature, the tasks, and the functions of cognition.”

Information Science is the study of “interactions between people and technology, how technology is shaping individual lives and social groups, as well as how the ways that people use technology can shape new developments.”

Economics is the study of “human behavior in many settings...At its heart, however, economics is more than a set of questions, but rather is a mode of thought, a set of precise analytical tools that can be used to study a wide variety of social science problems.”

Economics and by extension, money “is the foundation layer that gives rise to everything else” and “abundance in money creates scarcity everywhere else, and scarcity in money creates abundance” ([Booth 1](#), [Booth 2](#)).

“Disruptive innovation is another way of saying “creative destruction.” - [Cathie Wood](#)

Bitcoin, money, and so much more, is a disruptive innovation and will change how the world works for the better. Our world is destroying itself. The US dollar will be the last currency to fail, but it will fail. When that happens, we must be prepared for a new reality, a new world. Innovation, first-principled innovations, will occur at the intersection of disciplines. Our future will occur at the intersection of disciplines.

Nobel Laureate Economist Paul Krugman in 1998 said, “By 2005 or so, it will become clear that the Internet’s impact on the economy has been no greater than the fax machine’s.” This sentiment might represent most of the world’s opinion on bitcoin now, in 2022, but in 2029, in 2049, and in 2069, I think not. There is a history of underestimating the impact of technology that must be corrected.

It is essential for students now and in the future to think differently, to think about the future, and to think transitively to build a world that will change drastically. Throughout the different disciplines Arts & Sciences offers, this task is possible.

As Hobbes argues, a Leviathan is necessary for society to exit the state of nature, for society to thrive, and for civilization to progress. Currently, I would argue that the actual “leviathan” is money, not government; money and control of money, control of what is scarce, is where power

originates. However, this Leviathan is weakening because fiat currency is no longer scarce. The gold standard failed, and the PetroDollar is failing. As such, I would argue we have not exited the state of nature because before 2009, we've never had a scarce property such as bitcoin that is also backed by the Law of Conservation of Energy and because there has not been mass adoption of bitcoin.

Bitcoin, a decentralized, immutable protocol securing value through consent, will allow our society to truly function.

- Think of the values aligned with bitcoin: truth, empathy, and inclusion.
- Think of the values aligned with our current financial institutions: fraud, greed, and exclusion.

*“When economic decision making is geared toward the future, it is natural that all manner of decisions are geared toward the future as well. People become **more peaceful and cooperative**, understanding that cooperation is a far more rewarding long-term strategy than any short-term gains from conflict. People develop a **strong sense of morality**, prioritizing the moral choices that will cause the best long-term outcomes for them and their children. A person who thinks of the long run is less likely to cheat, lie, or steal, because the reward for such activities may be positive in the short run, but can be devastatingly negative in the long run....As people start **spending more and saving less**, they become more present-oriented in all their decision making, resulting in **moral failings** and a likelihood to engage in conflict and destructive and self-destructive behavior.” - [Saifedean Ammous. The Bitcoin Standard](#)*

Bitcoin, not just money, is a disruptive innovation, creatively destroying existing systems for a better path forward into our future. The 21,000,000 bitcoin are our tools for the 21st century.

The Bitcoin network will be the world's peaceful Leviathan. Its power is entirely decentralized, valuing privacy, security, and ethics. Think of the flourishing and progress that will come when the remaining 66% of the world is banked. Only when each person has equitable access to the financial system will society exit the state of nature.

Bitcoin is money and so much more. Money is information, and bitcoin is layer 1 of our future. Bitcoin will touch all aspects of the future, but it stems from the best of our past. The bitcoin protocol is embedded with history, philosophy, psychology, cognitive science, economics, cryptography, religion, physics, engineering, and computer science.

By studying CogSci, Info Sci, and Economics, the interactions of people, of information, and of markets, students will be prepared for the world they will inherit and see change before their eyes. To do the greatest good in our drastically changing world, we have to think differently, we have to draw on the “and” to shape what's next.

APPENDIX

KEY SKILLS / LEARNING OUTCOMES

- **Thinking**
 - First-Principles Thinking
 - Transitive Thinking
 - Critical and Evidence-Based Thinking
 - Thinking Differently: Emerging Issues, Cross Impact, and Uncertainty Analysis
 - Creativity
 - **Game Theory**
 - Uncertainty & Risk Management
 - Judgment & Decision Making
 - Negotiations
 - Globally Stable Outcomes: Making the Dominant Strategy Peace
 - **Emerging Tech**
 - Analysis
 - Ethics of Emerging Tech Studies
-

This major will embrace the transition from HARD → SOFT SKILLS

*“In a world where intelligence is hyper-competitive and many previous technical skills have become automated, **competitive advantages tilt toward** nuanced and **soft skills**-like communication, empathy, and perhaps most of all flexibility....The ability to do those things when most others can't is one of the few things that will set you apart in a world where intelligence is no longer a sustainable advantage.” -*

[Morgan Housel, The Psychology of Money](#)

Top 15 Skills of 2025	Top 5 Skills of 2040
<ol style="list-style-type: none"> 1. Analytical thinking and innovation 2. Active learning and learning strategies 3. Complex problem-solving 4. Critical thinking and analysis 5. Creativity, originality and initiative 6. Leadership and social influence 7. Technology use, monitoring and control 8. Technology design and programming 9. Resilience, stress tolerance and flexibility 10. Reasoning, problem-solving and ideation 11. Emotional intelligence 12. Troubleshooting and user experience 13. Service orientation 14. Systems analysis and evaluation 15. Persuasion and negotiation 	<ol style="list-style-type: none"> 1. Curation 2. Data Literacy 3. Storytelling 4. Ethics 5. Global Competence

Bitcoin Teaches....

-  law
-  math
-  energy
-  physics
-  history
-  finance
-  money
-  politics
-  economics
-  engineering
-  game theory
-  human rights
-  macroeconomics
-  computer science & cryptography
-  cognitive science, philosophy & psychology
-  religion
-  community
-  hope
-  truth
-  love

.... + Critical thinking, Problem solving

Electricity & Bitcoin

- 1880: Light Bulb Patented
- 1882: With J.P. Morgan funding his efforts, Edison launched the businesses that would later be known as General Electric.
- 1907: Wisconsin and New York were the first states to extend state-level rate regulation to the electricity industry
- 1914: Forty-three other states had followed suit and created state-level commissions to oversee electric utilities.
- 1925: 50% all homes in the U.S. have electric power (other 50% of Americans still lit their homes with gas light and candles)
- 1930: 70% “”
- 1970s: 100% “”

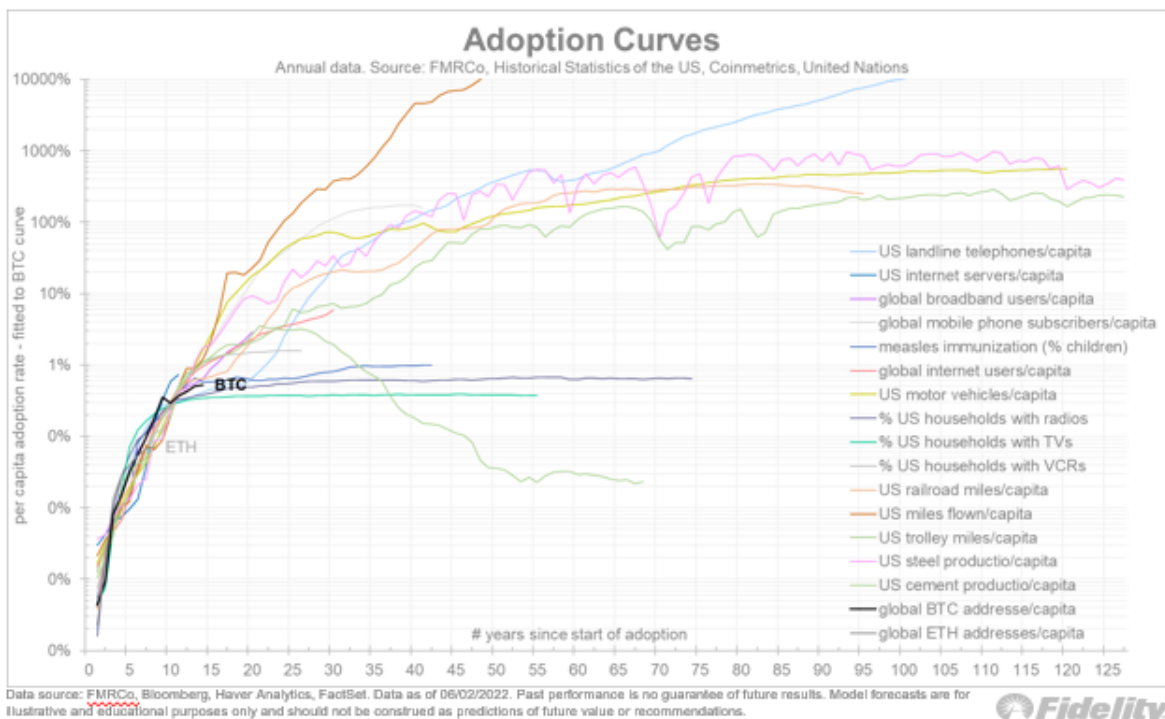
43 years passed from the time the lightbulb was invented to when 50% of all homes used electricity.

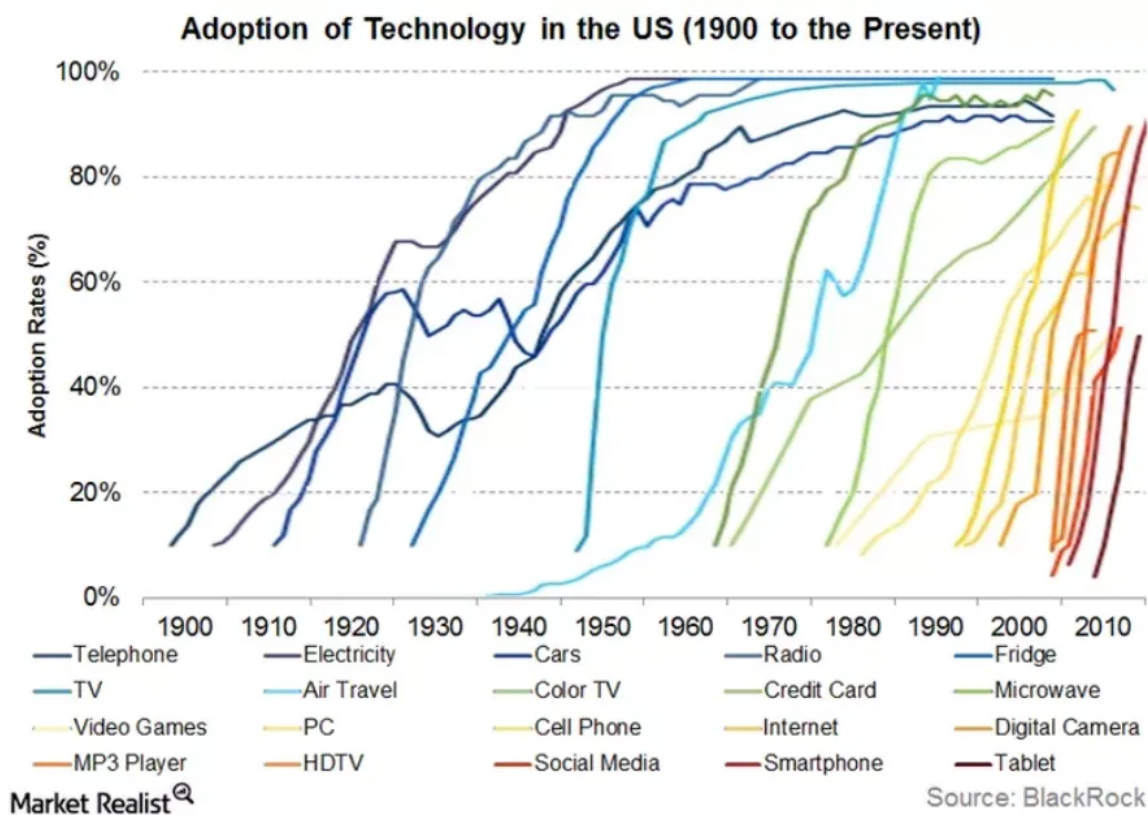
- And...didn't have the spread of information through information cascades at the speed we do now.

S-Curve

Breakthrough technologies often follow an Adoption S-Curve. This Adoption S-Curve reflects the cumulative rate at which a population adopts a new technology or product. “All disruptive technologies follow a similar exponential S-curve pattern, but [...] newer network-based technologies continue to be adopted much faster than the market expects.”

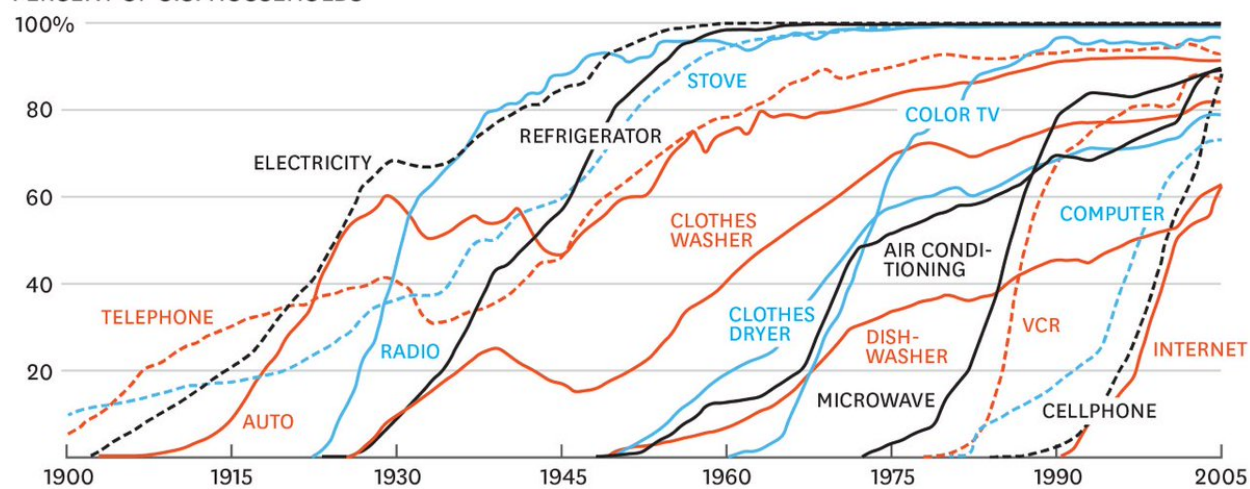
Mobile-phone adoption and the internet-adoption curve seem like viable analogs.





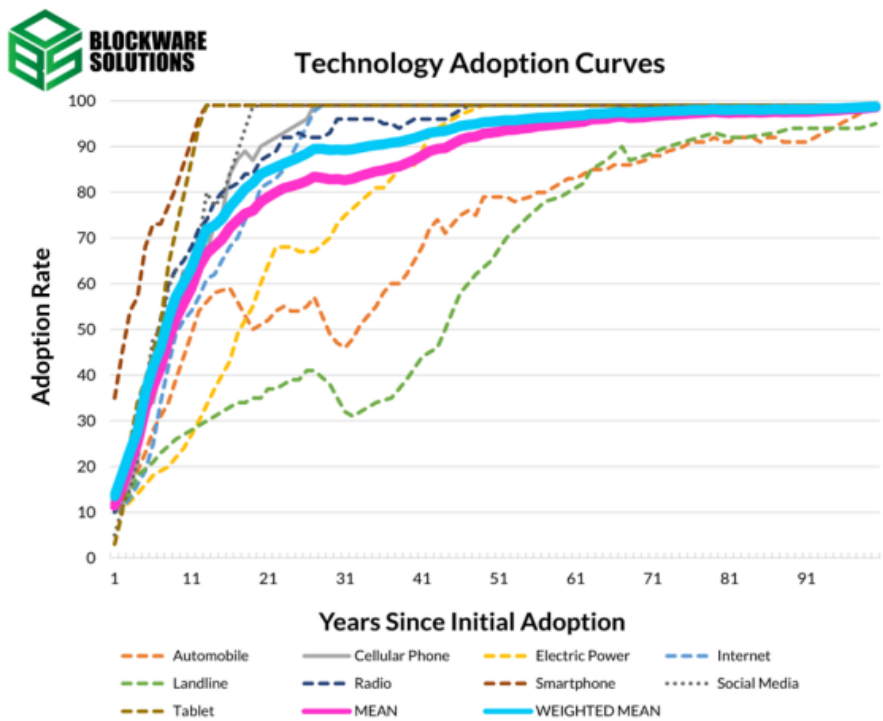
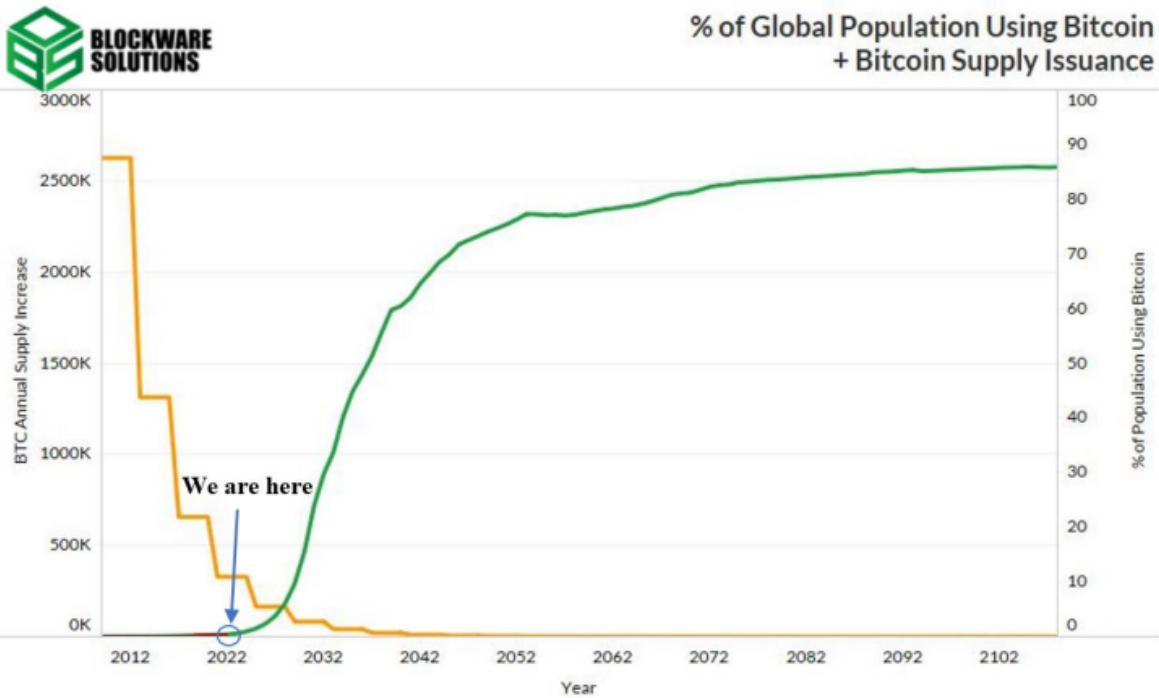
CONSUMPTION SPREADS FASTER TODAY

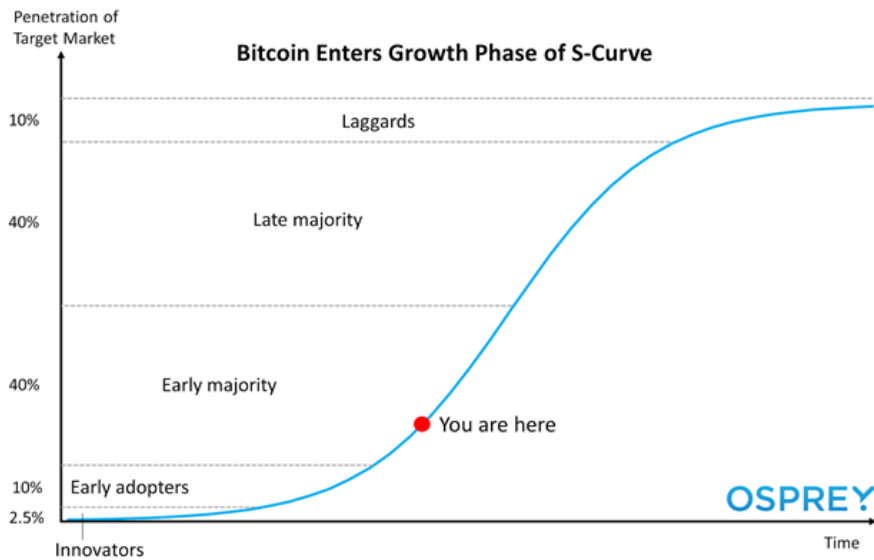
PERCENT OF U.S. HOUSEHOLDS



SOURCE NICHOLAS FELTON, THE NEW YORK TIMES

HBR.ORG





Fidelity Bitcoin Price Prediction

- \$100MM/ coin by 2035

 **Michael Saylor** ⚡️ ✓
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Over the past year currencies have collapsed against the dollar:

CAD -8%, CNY -9%, AUD -11%, ZAR -17%, KRW -18%, EUR -18%, PLN -21%, GBP -22%, JPY -23%, TRY -52%

Over the past four years the dollar has collapsed -67% against [#bitcoin](#).

4:20 PM · Sep 26, 2022

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Thoughts

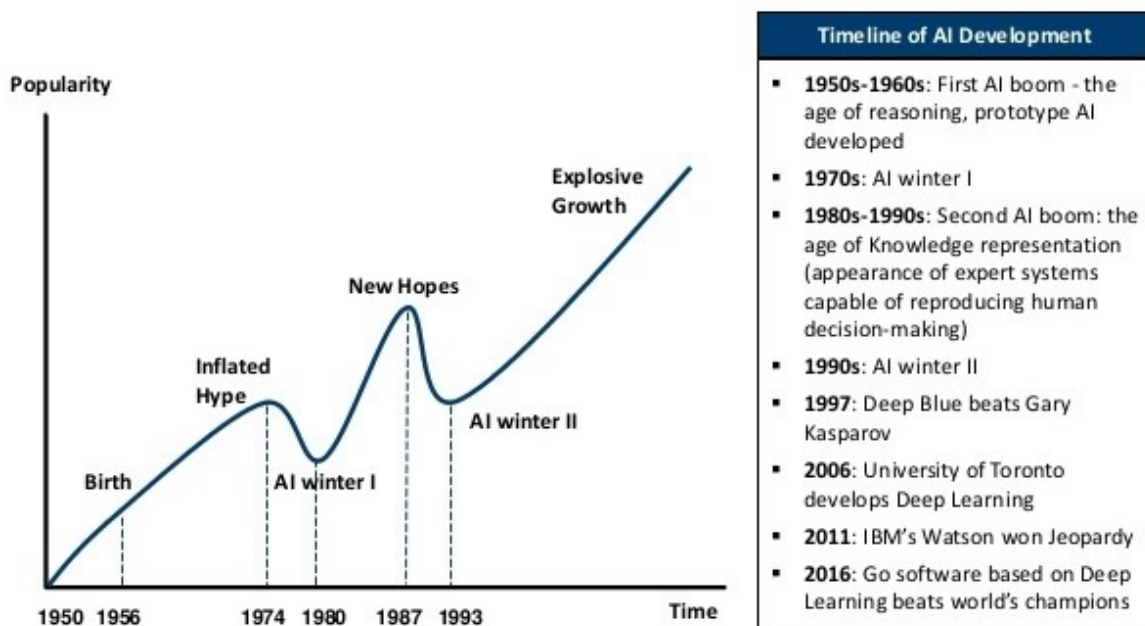
When Thomas Edison patented the light bulb, he had no idea it would revolutionize so much, leading to flourishing and great technological innovations.

When Satoshi Nakamoto created bitcoin, he knew it would revolutionize everything in a way that was much needed. Bitcoin is modern day electricity, electrifying, and bringing light to our future.

Right now, we are essentially still exploring electricity while we still use candles. Cornell does everything right, and I want them to be on the right side of change. History will look back kindly on those who accept bitcoin.

66 years ago, in 1956 AI was coined at Dartmouth. AI had two “winters” from 1974-1980 and 1987-1993.

AI HAS A LONG HISTORY OF BEING “THE NEXT BIG THING”...



We are just at the tip of the spear, and I would love for it to be attributed to Cornell for offering the first major that looked at bitcoin.

Money is how we coordinate economic activity; not how we store energy for generations. Bitcoin is how we do both. Bitcoin will lead to an abundance of wealth (financial, information, hope, etc) never before seen.