

The future of monetary exchange systems

(and why bitcoin is not)

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I ~~kn~~ew nothing about  *bitcoin*

My research at McGill is on:

- subjective well-being
(economic causes of life satisfaction — in Québec, and worldwide)
- path-dependence in urban form
- climate policy

<http://wellbeing.research.mcgill.ca>

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... not bitcoin!

Value

Why are each of these valuable?

- Gold
- Canadian dollars
- Bitcoin

Roles of money

- medium of exchange
- store of value
- unit of account
- instrument of macroeconomic policy



Top ten flaws of bitcoin

Flaw #10

Money creation and supply (I)

Fixed supply →
deflation / appreciation →
hoarding and speculation

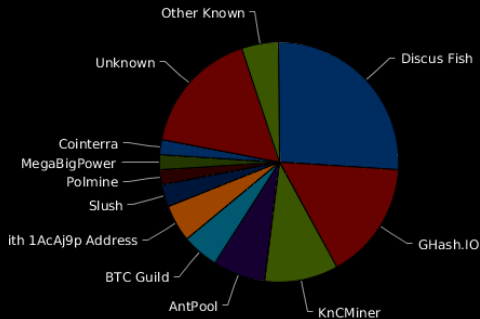
Flaw #9

Money creation and supply (II)

Mining is inefficient

Mining bitcoins is wasteful, increasingly specialized, and often involves freeriding/theft. Worse, it's an arms race.

Hashrate Distribution



Study finds dramatic decline in polar bear population

> thestar.com <

Tuesday, November 18, 2014

6:07 AM EST

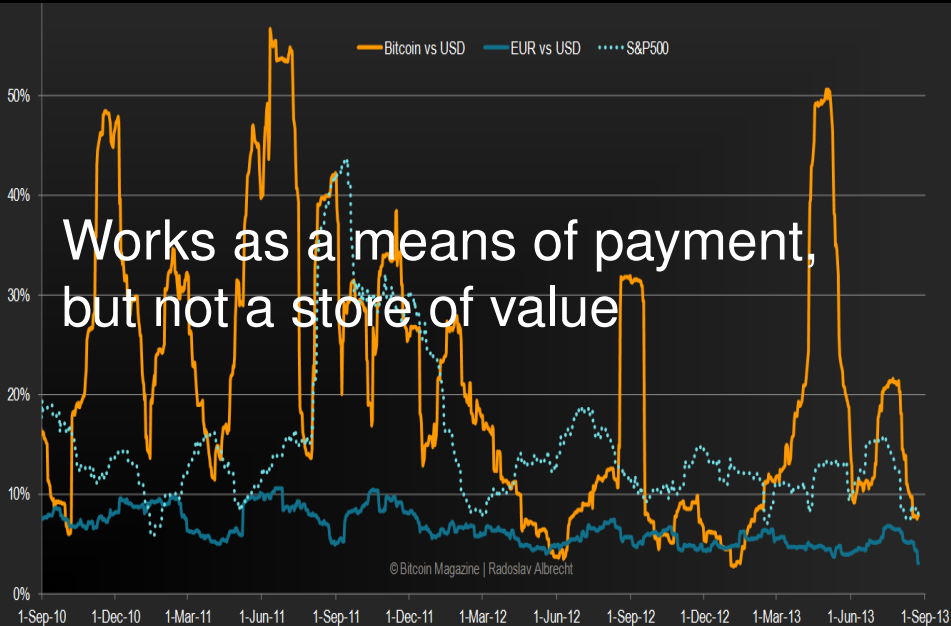
U.S.-Canada study says a key polar bear population fell nearly by half in past decade, with scientists seeing dramatic increase in young cubs dying.

Flaw #8

Bitcoin harms
the climate



Flaw #7



Flaw #6

Means of payment function not even emphasized

Flaw #5

Less secure than national
currencies

Flaw #4

It's not actually private

<http://www.economist.com/blogs/babbage/2013/08/virtual-currency>

Flaw #3

A close-up photograph of an elderly woman with short, white hair. She is looking slightly to the right of the camera with a serious expression. Her right hand is raised, with her index and middle fingers extended. The background is a plain, light-colored wall. Overlaid on the image is white text.

**Governments and central
banks will have to kill it if it
gets too big**

Flaw #2

Its newcomer competitors
("altcoins") are better

Altcoins

coinmarketcap.com

Currencies ▾

















Assets ▾

All ▾

USD ▾

Next 100 →

View All

#	Name	Market Cap	Price	Available Supply	Volume (24h)	% Change (24h)	Price Graph (7d)
1	 Bitcoin	\$ 5,191,880,527	\$ 384.22	13,512,675 BTC	\$ 39,380,500	-4.24 %	
2	 Ripple	\$ 154,932,769	\$ 0.005344	28,989,252,282 XRP *	\$ 448,927	2.45 %	
3	 Litecoin	\$ 130,857,814	\$ 3.86	33,912,937 LTC	\$ 4,174,410	-2.65 %	
4	 BitShares	\$ 33,358,857	\$ 0.016680	1,999,883,512 BTSX *	\$ 238,118	-9.66 %	
5	 Dogecoin	\$ 21,261,469	\$ 0.000222	95,667,663,777 DOGE	\$ 280,406	-3.44 %	
6	 Counterparty	\$ 20,895,347	\$ 7.89	2,647,025 XCP *	\$ 87,113	-5.13 %	
7	 Nxt	\$ 18,764,346	\$ 0.018764	999,997,096 NXT *	\$ 23,389	-6.59 %	
8	 Peercoin	\$ 16,453,499	\$ 0.752088	21,877,093 PPC	\$ 91,097	-6.69 %	

Altcoin example

Charts

Markets

Social

Sexcoin Charts

1 Day

7 Day

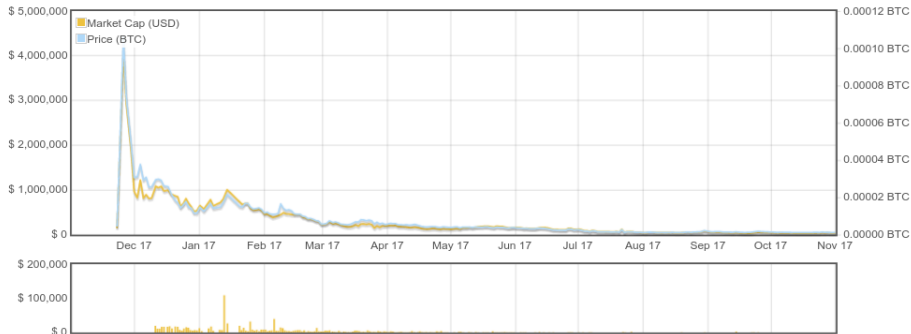
30 Day

90 Day

180 Day

365 Day

All



Flaw #1

Money is a public good

Money systems are natural monopolies

Bitcoin is “the final refutation of the efficient-market hypothesis”

— John Quiggin

So what is *bitcoin* good for?

Libertarians love it because it pushes the same buttons as their gold fetish and it doesn't look like a "Fiat currency".

BitCoin looks like it was designed as a weapon intended to damage central banking and money issuing banks, with a Libertarian political agenda in mind — to damage states ability to collect tax and monitor their citizens financial transactions.

— Charlie Stross

Here's where I agree that we need something new

- 1 our current monetary system is an accident of history
- 2 transaction fees are too high; small payments impossible
- 3 electronic mediation is in the hands of an oligopoly of private credit card companies
- 4 international finance is not easily regulated
- 5 no private alternative to archaic paper

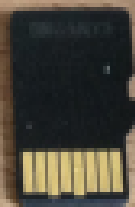
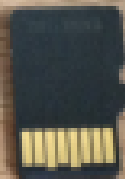
Public goods, freeriders, and anarchist fallacies



Public goods, freeriders, and anarchist fallacies

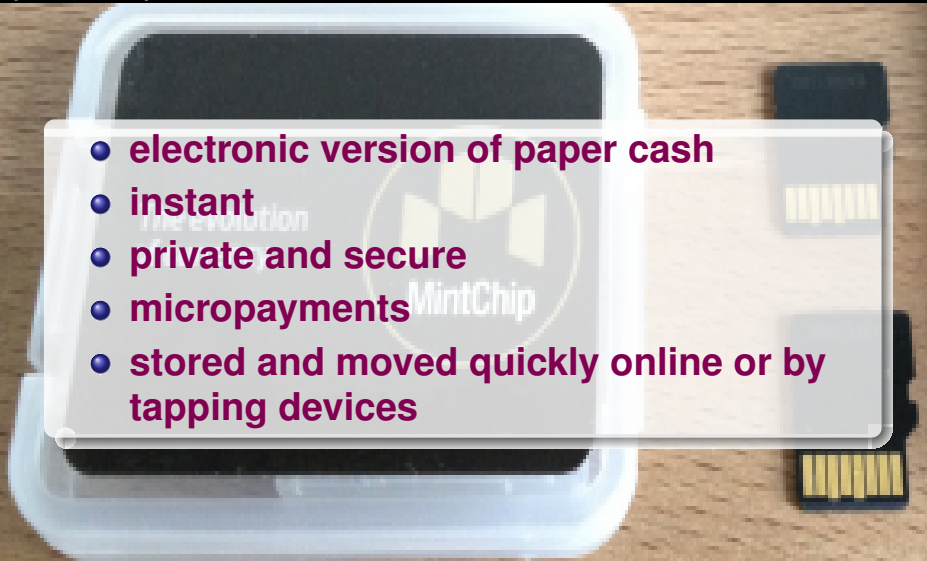


Royal Canadian Mint's MintChip (2013)



Royal Canadian Mint's MintChip (2013)

- **electronic version of paper cash**
- **instant**
- **private and secure**
- **micropayments**
- **stored and moved quickly online or by tapping devices**



Bank of Canada looking into 'potential merits' of issuing e-money, senior governor says



November 13, 2014 3:23 PM ET



Carolyn Wilkins, the Bank of Canada's senior governor. The central bank, along with the federal government, has launched a review of payment systems in this country.

Galit Rodan/Bloomberg

Further reading

<http://www.positivemoney.org/2014/04/bitcoins-fatal-design-flaws/>

<http://krugman.blogs.nytimes.com/2013/12/28/bitcoin-is-evil/>

<http://equitablegrowth.org/2013/12/28/watching-bitcoin-dogecoin-etc/>

<http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/26/dogecoins-and-litecoins-and-peercoins-oh-my-what-you/>

<http://pando.com/2013/12/16/bitcoin-has-a-dark-side-its-carbon-footprint/>

<http://www.bloomberg.com/news/2013-04-12/virtual-bitcoin-mining-is-a-real-world-environmental.html>

<http://www.extremetech.com/extreme/184427-one-bitcoin-group-now-controls-51-of-total-m>

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