The future of monetary exchange systems
(and why bitcoin is not)

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2014 November
I knew 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

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http://wellbeing.research.mcgill.ca

... *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 $\rightarrow$ deflation / appreciation $\rightarrow$ 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.
Flaw #8

Bitcoin harms the climate
Flaw #7

Works as a means of payment, but not a store of value
Flaw #6

Means of payment function not even emphasized
Flaw #5

Less secure than national currencies
Flaw #4

It’s not actually private

Flaw #3

Governments and central banks will have to kill it if it gets too big
Flaw #2

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

Sexcoin Charts

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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
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Royal Canadian Mint’s MintChip (2013)

The evolution of currency

MintChip

electronic version of paper cash
instant
private and secure
micropayments
stored and moved quickly online or by tapping devices
Royal Canadian Mint’s MintChip (2013)

- Electronic version of paper cash
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Bank of Canada looking into ‘potential merits’ of issuing e-money, senior governor says

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.
Further reading

http://www.positivemoney.org/2014/04/bitcoins-fatal-design-flaws/
http://equitablegrowth.org/2013/12/28/watching-bitcoin-dogecoin-etc/
http://pando.com/2013/12/16/bitcoin-has-a-dark-side-its-carbon-footprint/

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