



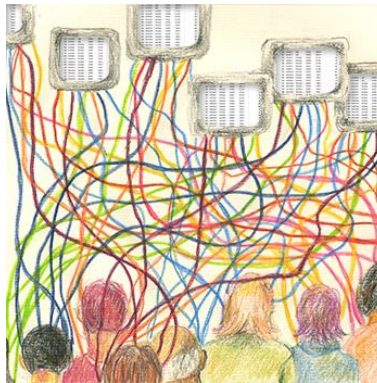
MuckrakersBulletin

A bi-weekly publication in support of informed public discourse. Our hope is that we can help make sense of what you are reading in the press by providing some otherwise missing background information. Upcoming are Bulletins will be on North Korea, Resistance and NAFTA.

Inspired by I.F. Stone's weekly, it is published by Plainspeak.ca. It is available at no charge. Readers are welcome to copy, use or resend any Muckraker Bulletin in support of informed public discourse. Back issues are on Oil, Pipelines, Truth and Reconciliation, Big Data and Brexit. See www.muckrakers.info and info@plainspeak.ca

Money Matters The Bitcoin Adventure

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As we see it:

It would not be surprising if your eyes glazed over when someone started talking about *bitcoin* and/or *blockchain*. Those who write about *bitcoin* and/or *blockchain* speak a specialized language, one that uses one technical term to explain another. Moreover, the subject is shot through with hype.

That said, there is something important going on here, and it is worth a Bulletin to sort out what it is (and isn't).

BLOCK CHAIN:

- *Block chain* refers to an innovation in the technological capacity to keep records of transactions.
 - An example will help: For now, land registries are centralized in government. In advanced industrialized countries, increasingly they are digitalized, but they are still held centrally, and can be searched more or less by anyone. In less well- endowed countries, land registries are often a mess and often not digitalized, sometimes with terrible consequences for individuals who lack resources to protect themselves against fraud.
 - Land registries are, of course, subject to being hacked just like any other large body of centrally-held (by government or corporations) data, but they have the advantage of being readily authenticated, albeit by legions of accountants and/.or lawyers.
- *Block chain* organizes, authenticates and stores large bodies of data in a new way. Here is how:
 - First, information is stripped of its personally identifying qualities once it enters the system. Thus, for example, one would be able to identify the property (including ownership) involved in a land registry but not the individual who submitted the information in the first place.
 - Second, information is organized such that all transactions are recorded in order. The records cannot be altered after the fact.
 - Third, the system is de-centralized. That is, the same whole body of data is held on multiple computers, each one independent of the others. There is no central repository and each computer/user has no knowledge about the others in the system.
 - Fourth, the authentication of data is also done in a decentralized way with many different entities (computer nerds, computer companies) involved. Each one searches for errors, and each has to prove that it has done the work itself. There are no connections among those who do the authentication.
 - The result is a body of data that can be accessed, but not easily hacked. All of the information on the sources of the information has been removed, but the information itself has been checked for its accuracy and to prevent fraud. Once the information has been verified, it cannot be altered after the fact.



Who are the users:

- This technological capacity (*blockchain*) was originally developed for the purposes of promoting *bitcoin* (see below), but it is now used for many different

purposes. Increasingly it is being adopted and adapted by large banks, governments, large corporations etc.

- It is easy to understand why. It is a data program. It doesn't require office buildings and large staff. It is relatively secure and reliable compared to other data management systems. Any government or corporate function that relies upon the authentication and storage of large bodies of data about transactions would find *blockchain* the answer to their dreams. This is true at least in theory but there are some problems – It is still a relatively new thing.
- *Blockchain* is open to being used by anyone. All users have an equal voice in its operation; there is no corporate presence. As a technological capacity is not as yet patented, although many firms are trying to patent so-called improved versions of the technical capacity associated with *blockchain*.
- *Blockchain* can thus be used for any number of applications, most put forward by corporations or would-be corporations looking not only to provide a service or product but also looking for investors. These applications can be patented and commercialized.



Why does *blockchain* matter:

- *Blockchain* introduces what are often called “efficiencies”, which we at Muckrakers Bulletin define as economic benefits without recognition of social costs.
- *Blockchain* itself creates new entities, that is, people, or more likely large companies, which task themselves (and are rewarded for) doing the authentication.
- Authentication requires computing capacity and some degree of skill but, in theory, anyone can do it anywhere. The reward system involves paying those who do the authentication in *bitcoin*, not cash.



Limitations

- One, as it stands, each new iteration of *blockchain* requires all the users to agree on changing the “rules” and threatens the existing “chain” of recorded past transactions. Thus all but very minor changes are unwieldy and unlikely to happen. However, more comprehensive new versions of *blockchain* do exist, and others will be developed. Not all of them are intended to be open to all users.

- Second, introducing *blockchain* is not cost-free, despite its so-called efficiencies. Any changeover to new ways of doing complicated tasks requires time and resources. To discard what exists now (buildings, records) is not easily accomplished for many reasons, the least of which is that the original costs of buildings and equipment have to be written off. And as for rendering workers unnecessary - well, we all know the problems this creates.
- Third, for *very* large bodies of data, *blockchain* is said to be too slow to respond because authentication takes time and involves many players. Much work is being done to eliminate this problem with improved *blockchain*-like technological capabilities, but it seems to be a trade off – security of the system versus its capacity to handle huge numbers of transactions.
- Fourth, *blockchain* is a *huge* energy sucker; also uses large quantities of computing and storage capacity.
- Fifth, as it stands, all users must “vote” on additions or changes to the rules. One user, one vote. There are companies that want to privatize this or similar technological capacity. In other words, they want to create their own versions of *blockchain*, which would be open to only their designated participants. So far none of these has worked quite as well as its corporate sponsor would like.
- And, finally, as we will discuss below, *blockchain*'s capacity to hide the sources of information has many purposes that are not so attractive!



Bitcoin:

- *Bitcoin* is simply one of the many uses to which the technological capacity of *blockchain* can be put. However, *bitcoin* was apparently the reason why *blockchain* was created originally. In the public mind, mistakenly, *blockchain* and *bitcoin* are twinned.
- The goal of *bitcoin* was create a new form of currency, something akin to money/coins that could be used to buy and sell things or services.
- As with all other **currencies**, *bitcoins* fluctuate in value, that is, the value of a *bitcoin* today (what it will purchase or the returns to the seller) can be more or less than yesterday or tomorrow.
- And because, like all other currencies, *bitcoin* fluctuates in value, it acts as an **investment vehicle** (so do conventional currencies), As an investment vehicle, its value fluctuates, often wildly because it is so new and untested. Speculators and even ordinary investors climb aboard hoping to reap short and/or long term gains. Moreover, as an investment vehicle, *bitcoin* and similar ventures are subject to the usual market potential for derivatives and hedging.

- Its anonymity (which can be penetrated, but only with significant resources) is valuable for those whose goal is to hide the names of the buyers and sellers. It was and is, in short, ideal for the **dark activities** of money laundering, prostitution, criminal transactions, drugs etc..



Why replace conventional currency?

- Much is made of the origins of *bitcoin*, that is, its obvious use for money laundering etc as well as its fit with anti-government ideology. Those involved on the technical side are, if conventional wisdom is to be believed, firm advocates of a libertarian approach at least as far as anything connected to the Internet is concerned.
- It is important to note that these are “first world” (including now possibly China) preoccupations primarily.
- Where national currencies are unstable or subject to huge inflationary pressures, *bitcoin* is important for four reasons:
 - One: The people/businesses who authenticate *bitcoin* (in theory, almost anyone can) get *bitcoins* as payment and use them as a source of livelihood in the increasingly widespread *bitcoin* commercial environment in their country.
 - Two: In countries that seek surveillance over their citizens and all business activities, the *bitcoin* economy grows. It provides a shield for its users from government oversight.
 - Three: All currency transactions generate big data; big data is used for influence but can be retargeted to identify individuals (see Muckraker Bulletin on Big Data).
 - Four: It is not just individuals and corporations that engage in money laundering, but also governments themselves. Having *bitcoin* as a more or less anonymous alternative currency facilitates moving money out of state enterprises into private pockets.



The future of *Bitcoin*:

- There are now more than 800 *bitcoin*-like applications vying for a perch in the market, each providing a slightly different constellation of services and

opportunities for potential investors. Each one overcomes some of the limitations of *bitcoin*, but introduces other problems.

- *Bitcoin* is no longer the biggest player in the game. That said, *bitcoin* has the advantage of being already well established in some locations.



The public interest in all this:

- Keep in mind that what is on offer is a currency system and an investment vehicle. Currently, *bitcoin* and its cousin applications fall outside the scope of government oversight, regulation and control, unlike with currencies and the investment vehicles offered to the public.
- Anyone who believes that this “wild west” regime will continue indefinitely doesn’t know much about the history of the “wild west”.
- Today courts, agencies and the governments everywhere in the first world are puzzling over how best to characterize and thus regulate *bitcoin* and its technological cousins and how deal with taxation issues *bitcoin* raises (that is, should *bitcoin* be treated as a security/investment vehicle or as a currency). They are exploring how to control the nefarious activities *bitcoin* and its cousin applications facilitate.
- As in the case of the Internet itself, the drive to institute and protect property rights and generate revenue (including for tax purposes) is unstoppable. It provides a major impetus for *bitcoin* (and its cousins) control.

Sources: various including: *The End of Money* (Adam Rotstein) New Scientist, 2017, *Forbes* August 2017 <https://www.forbes.com/sites/kenrapoza/2017/08/30/moscow-stock-exchange-opens-to-crypto-currency-trade/#6c72672326d1>, several articles from *The Economist*: including, <http://www.economist.com/news/world-if/21724906-trust-business-little-noticed-huge-startups-deploying-blockchain-technology-threaten?frsc=dg%7Cc> and *Fortune*, Mar 4, 2016: *The Crisis in Bitcoin and the Rise of Blockchain* (Jeff John Roberts)

