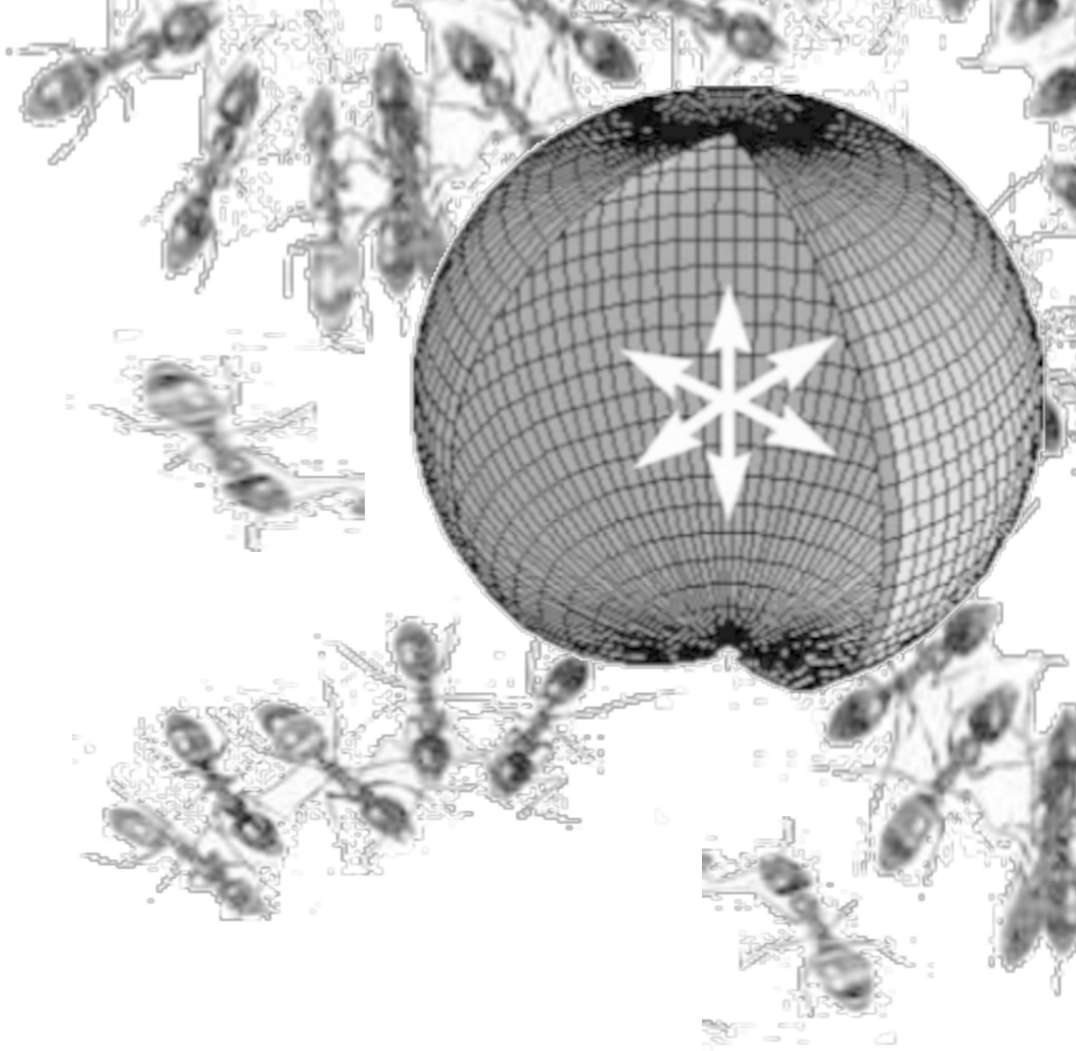


our submission to more automation

or the path to a more free and decent

This is now changing. Banks, as we know them, could become obsolete. But will it empower us?

what is the blockchain?

The blockchain is a distributed public transaction ledger, originally developed for the bitcoin cryptocurrency. It consists of an indivisible chain of timestamped 'blocks' of transactions, each of which contains a hash of the previous block.

Put simply it is a method of authenticating an individual entity over an untrusted network. This is done by keeping a ledger which is stored on many computers and continuosly accessible to all, and, in the case of bitcoin, timestamped by a verifiable 'proof of work' system. 'Proof of work' refers to being able to demonstrate that an amount of computational work has been carried out, requiring time and computer resources. Each block is a function of the previous block in the chain, so in order to change something one would have to re-compute all previous blocks. If there are differing blockchains available, meaning that one of them could have been maliciously changed, the longest blockchain is assumed to be the correct one. What this means is that the system assumes that the majority of the system is honest, and the only way to undermine it would be to have more computer resources than the cooperating majority. Rather than trusting the bank, you trust the majority of the network.

However, remember that the majority means the majority of computer resources, not majority of people. Of course it would be much better if it was the majority of people. This means there is the possibility that a superpower such as the US government might secretly have the computing resources to break the blockchain.

- Schreckinger, Ben - Bitcoin vs. the SEC (Politico magazine article) http://www.politico.com/agenda/story/2015/04/bitcoin-money-stock-m
- Swan, Melanie, 2015 - The Blockchain
- Wood, Gavin - Ethereum: A secure decentralised generalised transactio

Compared to a moneyless utopia built on genuine community, the blockchain does not seem so great, and maybe if you have already found your way to such a community you should stop reading this. But for those of us who begrudgingly use systems which rely on a centralised trusted party, the blockchain could to some extent turn the tables on who is controlling these systems. Potentially we could create cooperative alternatives to banks, insurance companies, and many areas of government. But we are not the only ones interested. Like the internet itself, the blockchain will most likely become riddled with commercial projects.

The blockchain allows us to collaborate with a wider group of peoples as we are not limited to those we know or trust. For example we can borrow something from someone you have never met while remaining accountable, with a mechanism for resolving disputes which doesn't not rely on anything centralised.

Collaborating with a group big enough to safely pool a considerable amount of money between each, without the limit of needing to be a critically small enough group that they can all know each other well enough to give such trust. Money would not sit in storage but dynamically and effortlessly flow around to where it is currently needed.

But would this actually abstract the whole purpose of money? An abstraction of the same sort w to the financial crisis - imaginary money being pushed around? Bitcoin was developed as a resp ridiculous situation.

Bitcoin, with its transparent underlying mechanism, remains something inherently more solid th currency, where banks can limitlessly create more money, thereby devaluing our existing mone

Maybe this 'limit' of needing to know each other, of emotional contact, of human touch, is the c tool which really binds our communities. Can we really share resources if we dont really unders other?

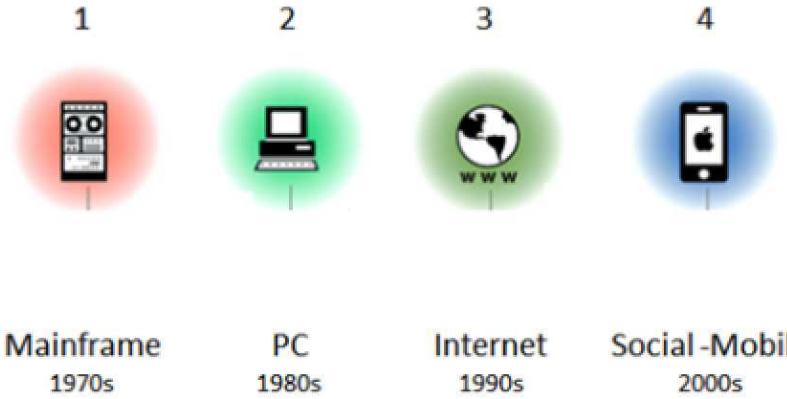
It would be nice to think that a total abstraction of money brought about by such wide scale collaboration between individuals, would form part of a path towards removing the significance and importance of money in the minds of its users. Which could be the key to transforming this competitive and individualist society.

On the other hand it might just mean more time sat at the computer while our problems of food distribution and access to land remain unsolved.

http://ameba.ehion.com

The blockchain is undoubtably an important technological breakthrough, and ha applications. Bitcoin is the original project using this technology, a distributed writing the bitcoin blockchain is the most widely used by far, although others n modifications, and it is quite possible that another will in the future prove to be notable emerging blockchain project is Ethereum, which is designed to be a dis sometimes called the universal computer. Ethereum extends the application of t not only transactions of currency, but to programmable contracts of unlimited c bitcoin currency has the potential to make a dramatic social impact, Ethereum t and is thought by many to be a technology which will disrupt all areas of societ to decentralise the web. A decentralised topology is in its very nature, and altho slow and impractical to use for certain tasks, the project is gaining a lot of inter public blockchain project has begun, the 'Open Ledger Project' backed by the L IBM and other major players in the IT industry.

As interest in blockchain-based systems grows, many companies are rushing to than seeing it as a threat they want have control it. Because of this we have to b technologies which have the potential to be liberating and useful but in practice which is competitive, individualist and environmentally destructive.



Melanie Swan thinks the Blockchain will be the game-changing technology of

Bitcoin

There are several good texts and books about cryptocurrencies and the story of psudoanonymous creator, which place it in the context of the history of moneta

Because of the initial media hype around Bitcoin, it can be difficult to know whether to take the project seriously. It is not until one gets an understanding of how genuinely decentralised such a system could be, to have a secure method of authenticating payments between psudoanonymous individuals on an insecure network with no trusted third party, that it becomes clear that there is really something innovative here. It's not just a new media buzzword but a tool that we now have which was previously unavailable. Just as the popularisation of encryption software such as PGP/GPG opened a new possibility for people fa each other to communicate in secret, the blockchain lets us do things we couldn't do before.

Dominic Frisby uses the Rai stone currency used on the island of Yap as a way to explain the id On the island, beautiful Rai stones are exchanged for things. Some of them however, are too big and stand at various places around the village. These big stones are not exchanged very often, b are, it is the talk of the town, and everybody knows who the stone now belongs to even though i moved. This could be compared to the public ledger of that is the bitcoin blockchain. Who-own stored on many different computers and is continously viewable, making the system very diffic undermine.

Environmental concerns

Environmentalists have raised concerns about bitcoin mining. The financial incentive means tha run powerful computers solely for the perpose of bitcoin mining. A considerable amount of elec 'wasted' on verifying the blockchain, and there is no way around this as the 'proof of work' syste this expenditure of computing to demonstrate it was produced by a collaborating majority. One solution to this problem would be to use this heat produced by this computing for other things. difficulties in running large Bitcoin mining computers is keeping them cool. So they could be u water for example. We could have computer kettles, heaters and boilers.

However, even if this expended heat is utilised, it is still a major disadvantage, especially if we imagine to become independent of coal, nuclear, and the commercially controlled electricity grid. It seems we must find an alternative to the proof of work system.

Advantages of micropayments

One of the major advantages of bitcoin over traditional payment systems is the possibility to transact tiny amounts which are only significant cumulatively. Transaction fees associated with credit cards and bank transfers make small payments not worthwhile. Nakamoto points out that it is the possibility to reverse the transaction which makes conventional payment systems costly and uncertain, requiring trust and mediation from a third party. Physical cash transactions are unreversable, making them practical for small, casual transactions. Bitcoin was designed to be the electronic equivalent.

did this the system simply would not work. But of course somehow it does wor

trustless interactions

Do such 'trustless' systems represent a loss of genuine trust between humans wh our communities? Trust is usually built on social activity, spending time togeth emotional attachments that mean we care about each other.

Is it the case that we need this because our 'communities' have got way too big to be possible? Is there a critical mass by which a society become to big for trus

Is there not something beautiful about genuinely trusting random people?

IPFS

Ipfs (Interplanetary Filesystem), although criticised for being inherently unreliable, seems to have some very promising properties as a universal decentralised filesystem, and potentially a replacement for the web. Information is retrieved by a content addressing system, meaning popular files are faster to find, network traffic is reduced, and censorship or anyother kind of centralised control is impossible. It also has a Git-style revision control system, meaning older versions are not lost.

Distributed crowdfunding

Also using the name 'Swarm' is a crowdfunding platform which uses blockchain technology to sell equity to individuals wanting to help a project. Co-founder and CEO Joel Dietz speaks in an interview about wanting to disrupt the financial system and to empower people. He has also appeared on an anarchist webcast program 'anarchast' and said that his influences come from studying early chinese philosophy. The crowdfunding model differs from other projects like kickstarter in that investors have a financial incentive, more like shareholders. Selling these equity 'tokens' seems to be a legal grey area. Swarm promotes an alternative model for business which it calls 'Distributed Collaborative Organisations' (DCOs). Among the projects using the model is an e-health platform, 'Pointnurse' where patients can pay to contact a nurse over the internet.

While these businesses might operate in a more decentralised way and rely less on institutions, they promote casualisation of labour which can dehumanise workers, they are used like tools which are only needed in certain economic conditions.

Some imagine this to mean that we could effectively work for computer progra
as our boss. A robot boss who always follows the rules exactly and who does n
both utopian and extremely dangerous at the same time.

Many aspects of today's 'work' rely on paying someone just to be accountable, t
can now be automated, perhaps in a cooperative way, where corruption is visibl
from under the feet of many office workers, particularly in the areas of finance

Ben Schreckinger claims there is a blockchain-based equity market emerging w
exchanges and various other financial institutions loose their importance. He sa
considerably more socially disruptive than the adoption of bitcoin as a currency
governmental and other powerful organisations stand to loose their power and s
blockchain applications, and Schreckinger thinks regulating authorities are caut
being less 'progressive' than governments in other countries, and thereby loosin

Security culture

It could be that 'smart contracts' while very secure from a technical point of vie
loop-holes in their design. Melanie Swan uses the example of a grandparent usi
inheritance gift to a grandchild either on the 18th birthday of the child or on the
grandparent. The death could be verified by checking some kind of reputable or
registry of death, which perhaps only doctors are able to modify. It is easy to se
ways of tricking the system, and so extra levels of security are required to, for e
doctor.

Another example is the idea of a 'smart' car which is bought on credit which wi
not kept up. We can imagine other oppressive mechanisms being put in place as
aspects of our lives are computerised.

Ethereum would also have applications for machine-to-machine interactions, often called the 'Internet of Things'. For example, one driverless car could compensate another for allowing it to overtake o direct route.

More automation and more security culture does not seem to be a step in the direction of a more autonomous society.

Projects

OpenBazaar

The OpenBazaar project aims to create an online market (like ebay) which has no centralised server, it consists only of a network of individuals running the OpenBazaar software to buy and sell items from each other. The rules and regulation of how it works are determined only by the software itself, which is of course open source, making it considerably more democratic than systems like ebay. Although slightly more tricky to use than ebay, as the software must first be installed, the obvious immediate advantage over ebay is that there are no fees. This makes it possible that it will gain popularity very quickly, and its decentralised nature makes it very difficult to regulate in any way.

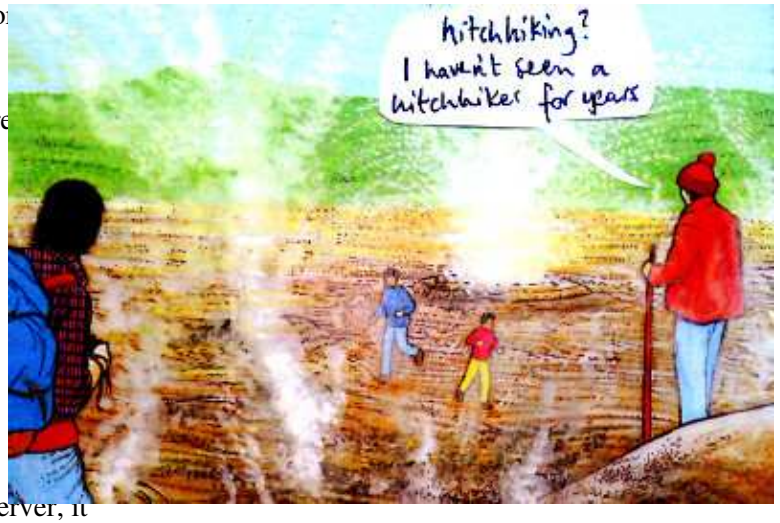
Also decentralised projects for announcements more similar to Craigslist, have been proposed.

Liftsharing

Blockchain-based peer-to peer liftshare software has been proposed. This is something much needed. There seems to be a trend in european liftshare websites that they start out by allowing the driver and passenger to directly communicate for free, and payment to be made directly by putting cash in the hand of the driver, usually at the end of the journey (covoiturage.fr, mitfahrgelegenheit.de). They become very popular and then introduce a fee and some regulation system which makes it supposedly more 'trustworthy' but also very inconvenient, requiring verified registration, credit card payment, etc. Then nearly all the users move to another website which is less regulated and at some point the same thing could happen.

be flexible about when you are going somewhere.

However, this system, although it might represent a technological breakthrough way of organising hitchhiking. Does this represent a loss of trust, a loss of com a stranger in our car if the computer tells us to? Or is it an effective way to shar decentralised public transport system?



We could extent the liftshare idea to an 'almost punk-post' system. Punk post is system where you give someone a letter or package who is travelling in the dire pass it along. It requires a lot of trust. In a blockchain-based system however, 'm to add incentive, and items could be tracked. You only need to move the thing a maybe you are making anyway, and put it in a safe place or pass it to someone where it needs to go. The blockchain makes you accountable for things while th some kind of conflict resolution system could be devised for when things go wr decentralised delivery system. It would still involve money, but there would be charge.

This could be extended to some logistics/distribution system. You could drive a your own, maybe hired, or maybe it comes as part of the collaborative distributi if it is deemed to be cost-effective to transport it. There could be some regulatio built in to the software. The software is your boss. If you don't like the rules, yo project and start a new system. But the new system will have to gain acceptanc useful. Also, infrastructure such as vehicles, storage space or staff-facilities, bel system itself, meaning the new system will take a long time, or have to be really become widely accepted and thus useful. Alternatively you could propose a cha using. How this works depend on the kind of open-source license the software l