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Blockchain is Changing Everything

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IN BRIEF

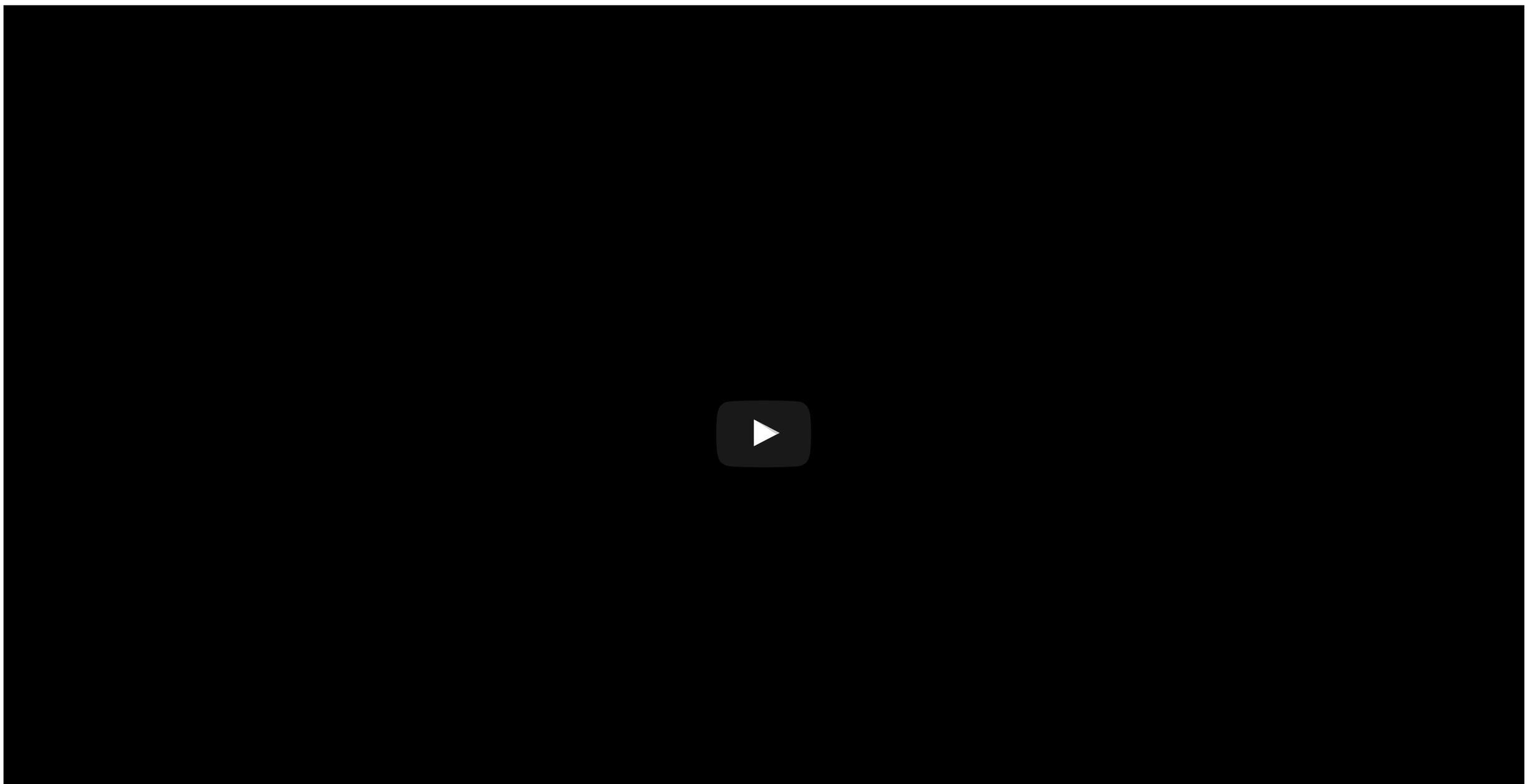
Blockchain – the innovation behind Bitcoin – seems to be completely transforming the way we think about trust (and everything else).

PLENTY OF HYPE AROUND BLOCKCHAIN, BUT WHAT IS IT?

Lately, blockchain technology has created a lot of attention and excitement (http://www.forbes.com/sites/sap/2016/06/24/believe-the-hype-blockchain-is-the-next-frontier-for-banking/#60dd62c74e59). As a novel way of organizing transactions and contracts, it has the potential to completely change the way we think about money, social organization and trust. But what is it, and how does it work?

Since 2008, blockchain has served as the backbone of a new digital currency, the Bitcoin. The reason for why it is so crucial for Bitcoin and other digital currencies is that it allows for transactions to be made reliably, but without third parties – which is also why it could transform not just money, but other forms of social organization, such as voting, property, or work.

Simply put, the blockchain is a distributed database, where every unit of transaction contains its own transaction history. It consists of *blocks* of timestamped transactions where each block contains the hash function – basically, a key – of the next block in the chain. Thus the name *blockchain.* For a great 2-minute introduction, take a look at this video on the blockchain from the World Economic Forum.



THE PROMISE OF BLOCKCHAIN:

There are countless applications running on blockchain technology, from banking to transportation to employment. Our guests pointed out a few things where blockchain technology can also be transformative: social organization and the smarter use of resources.

Jamer Hunt (http://www.newschool.edu/facultyexperts/faculty.aspx?id=23730), who is an Associate Professor of Transdisciplinary Design at The New School (http://www.newschool.edu/) in New York City, raised two important questions: can the blockchain be a machine for social capital, and can it be qualitative? On the whole, our breakfast panelists were quite optimistic about the social potential of blockchain applications, and saw blockchain technology as a way to decentralize and formalize trust – yielding great potential for new and larger forms of social organization.

We can also look at the link between blockchain and the internet of things, or IoT. One of the most interesting developments in this field has to do with the quantitative measurement of what has traditionally been considered to be qualitative phenomena. In addition to being able to track and verify device history, a blockchain-powered IoT (http://postscapes.com/blockchains-and-the-internet-of-things#applications) could grant a degree of autonomy for devices – letting them make different kinds of transactions independently. As we (and AI) learn to interpret subjectivity and qualitative objects, the transformative potential of the blockchain will only increase.

Furthermore, Sari Stenfors (http://augmentedleadership.com/sari-stenfors/), Executive Director at the Augmented Leadership Institute, discussed the significant potential of blockchain technology to transform the way we use resources, and is confident that a lot of progress will be made in this area. A number of applications have already demonstrated the ability of blockchain technology to increase resource efficiency.

This is particularly true in the context of the circular and sharing economies, where the issue of trust has been a persistent hindrance. With blockchain technology, it is possible to distribute trust, automate verification and thus make reliable peer-to-peer transactions, rendering many of the problems faced by shared economy applications obsolete.

COULD BLOCKCHAIN BE THE NEXT LIFE-ALTERING TECHNOLOGY?

While many have pointed out the great potential of blockchain technology, there are also occasions where it has ended up in a negative light. For example, an application running on a blockchain – The DAO (https://daohub.org/) – was hacked and digital currency worth more than $50 million was stolen (http://www.coindesk.com/understanding-dao-hack-journalists/). Bitcoin has also been associated with other kinds of criminal activity (http://www.coindesk.com/bitcoin-crime/). However, this does not necessarily prove that there is something fundamentally wrong with the blockchain itself. Yes, it is the technical infrastructure behind the applications, but arguably the problems have been more about the applications themselves, rather than the basic architecture of the blockchain.

It is therefore important to understand that the blockchain as a technology encompasses much more than just Bitcoin or the DAO. And that is the reason why it is more like a society-shifting technology than an application. The blockchain could indeed be seen as a general purpose technology (https://en.wikipedia.org/wiki/General_purpose_technology), one that might fundamentally alter society, economy and culture – like the steam engine, electricity and the internet have done before.

One must remember, of course, that none of the general-purpose technologies which previously transformed societies have proved their viability immediately. The point here is not necessarily that that the blockchain will become the new internet or the steam engine – it is simply too early to tell. What is certain, though, is that safe and viable applications of blockchain technology will only come about through repeated iteration. The takeaway here is that the emergence of technologies – even life-altering ones – takes time.

BLOCKCHAIN TO THE FUTURE

Will the blockchain then redeem its promises and become a technology which fundamentally transforms societies, the economy and social organization? This is the question nobody can answer – yet – but we can end with three important factors that will greatly affect the future potential of the blockchain:

First and foremost: what are the incentives for individuals to switch from current institutions to blockchain-based ones? In other words, are the promises of lower transactions costs, data ownership and the elimination of corruption significant and credible enough to convince the majority of the people to make the switch?

Secondly, who has the incentive to develop and facilitate the blockchain? Will banks, for example, find business models for blockchain applications or will blockchain technology become a competitor for change-resistant institutions?

Finally, will blockchain technology give rise to applications that will become so important for societies that people simply cannot use alternatives? Only time (and luck) will tell, but one thing is certain: it is an exciting time to be alive in a digital world.

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