

Can You Uninvent Bitcoin's Atomic Bomb?

Revolutions start unexpectedly for those who do not observe the development of the phenomena that trigger them

by *David Orban*

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Finance as a technology often is not considered as important as others which more clearly contributed to the progress of human civilization. But a more careful observation allows to realize that it is of equal importance to agriculture, industry, or many other areas of technology, because of its function supporting them all. Through the invention of coinage and of banks, or double entry accounting, shares and derivatives, the financial history is full of innovations that have made trade and investment more efficient. In general, they have enabled the language of human communication to codify and describe the value of assets in a manner recognizable by others. Just as earlier inventions, computers have been fundamental to the advancement of finance and subsequent developments have taken full advantage of the opportunities they offer. The mathematical foundations of finance have been improved allowing both the expansion of existing services, and the introduction of new ones. In 2009, based on the surprising combination of previously unconnected elements, a person or a group of people under the pseudonym Satoshi Nakamoto has published an academic article and a program whose code is available to everybody, to be examined and improved. He opened a new era of digital currencies based on public key cryptography and distributed verification without central authority, a step that previously was believed to be impossible. Bitcoin, the communication protocol and the corresponding distributed digital currency, began its journey to conquer the world.

Network Society

The ingenious combination of steps allows the global network to verify Bitcoin transactions between any two people, and prevents spending the same amount involved simultaneously with a third person. But it is important to understand that this distributed network formed by nodes of equal power, is not unique to Bitcoin. Indeed, it is located within a deep trend of changes that go in the same direction, moving away from centralized and hierarchical models that constitute together a phenomenal challenge to the social contract itself forming the basis of the Nation State in modern society. Solar energy in place of hydrocarbons; 3D printing in manufacturing and industrial production; containerized hydroponic production in agriculture; self-guided online

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learning; individual monitoring of health indicators, are some elements of this phase change at the end of which there is a new social structure, the Network Society, which is as different in organization and ability to bring well-being to its members from the democracies of Nation States today as these are far from what the feudal societies offered to the vassals and serfs.

Changes In Employment After 2008

The progressive mechanization of agricultural work in the early twentieth century and the efficient reorganization of industrial production have released a large work force that the second half of the century has poured into the cities and the areas of the economy that rely on the supply of services. The finance, insurance and banking world have taken advantage of this, expanding its offerings and absorbing a lot of the workforce and of the growing creative talent. The variety of financial products for both businesses and for individuals has increased significantly, with an increasing proportion of the economy dependent on a range of advanced solutions for credit, securitization and trade support, which in turn were based on increasingly sophisticated computer systems. The global financial crisis that broke out in 2008 has led to a change in the profile of employment in many companies in the industry and has freed the creative forces of very prepared people, with training in mathematics and computer science. Tens of thousands of people in New York, London, Shanghai, Tokyo and elsewhere have decided that instead of waiting for the job opportunities that would possibly surface at traditional financial companies, took the initiative and the chance to radically innovate. The network of the Internet, the availability of smartphones connected to the network, and of personal computers used by hundreds of millions, even billions of people, along with lean development tools for powerful solutions that could be made available to all at very low cost had radically changed the risk profile of these initiatives. Instead of having to raise capital for hundreds of millions of dollars, an initial product could be launched for just a few hundred thousand dollars, covering the variable costs of programmers and infrastructure. A change of six orders of magnitude, which led to an explosion of experimentation and offers unprecedented solutions. Talent, market, willingness to take the risk: an explosive combination to embrace the new digital currency!

Benefits And Risks Of Digital Currencies

The distributed digital currencies of which Bitcoin is the most famous representative have a rich set of advantages compared to the previous solutions they are challenging. The possibility of rapid global transactions at no cost or a very low cost between any two parties, the algorithmic nature of the production of coinage and of the establishment of trust relationships between the parties; accessibility to all on the sole condition of having electricity, internet and a computer or a mobile phone; the nature of the neutral network that allows you to continue to innovate with new solutions whose measure of success is only their rate of adoption. These are just some of the literally revolutionary that we already know about. Just as no one foresaw the emergence of social networks at birth of the Internet, the most interesting applications of digital currencies will be a surprise and will lead to the rapid growth of the overall value of the network. The risks of digital currencies arise from their novelty. We have had hundreds of years to learn how to deal with banknotes and wallets. We will need a few years to do the same with Bitcoin. The existing regulations that prohibit criminal activities already apply to digital currencies and their application will be properly re-interpreted according to specific needs. The real changes will come from the major reorganization of the financial industries that will be disrupted by the storm and innovation that will quickly adopt new business models to adapt to the radical increase in efficiency offered by competitors. Deposit management, international remittances, futures and

derivatives, public stock offerings: all financial areas will be affected by this change. The largest bookstore chain in the United States has an actual value of negative one billion dollars and the second largest failed: Amazon the online giant today is the largest library in the country. What will be the biggest U.S. bank in twenty years?

Emerging Challenges And Reforms For Companies

The political, social and private economic initiatives evolve to provide opportunities for active members of society. The levers that each set so as to encourage certain kinds of behavior are represented by the dynamic allocation of resources in turn mediated by finance and capital. The radical reforms of the financial technologies therefore have a direct impact on how they express themselves and the freeing up of new resources through greater economic efficiency will be an increase equal to that of the industrial revolution, supporting those who are investing in other fields that form the Network Society.