Money as a social technology

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Peet van Biljon and Alexandra Reed Lajoux's Money Creation: the past and present of society's most important technology will be published in English in 2020, and its Hungarian translation was published by Pallas Athéné Könyvkiadó, also in 2020.

The cover of the Hungarian translation of the book „The Creation of Money" features a detail of Michelangelo's world-famous painting „The Creation of Adam", showing two hands extending towards each other in longing, with the slight but critical modification of a gold coin between the two hands. The cover image is symbolic in the sense that books on monetary theory usually begin with „the creation of money", and the Bible is known to begin with Genesis. Moreoever, the earliest written reference to money is also found in the Bible, in Genesis 17, verse 13, in the context of a slave „acquired with money". This indelible image lays the foundation for a compelling examination of money as a social, historical, and societal construct as the most important technological resource since the beginning of time.

Typically, financial textbooks take a technical and/or historical approach to topics such as the history of money, the functions of money, money creation, the functioning of the economy and the role of banks in it, the distribution of income and wealth in society, central banks, the structure of financial institutions, the FinTech phenomenon, cryptocurrencies and blockchain technology, to name but a few.Unlike other textbooks/specialty books, Money Creation looks at money as a broad social phenomenon,exploring its nature, how it enables our society to function on a daily basis, and how this might change in the future.

The authors sequentially describe the financial innovations that have emerged since money's inception through contemporary times with an ultimate focus on the partnership between money and technology.

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The book is divided into 4 major sections, covering the following topics:

1. money and society: the origins and role of money in society and distribution issues central banks and global finance: how banks create money and the dynamics of global financial markets
2. Money and technology: features of FinTech and cryptocurrencies
3. Future considerations: the potential for other business applications of blockchain technology and the possibilities of a cashless society.

At the beginning of the book, the authors try to dispel a misconception, namely that money did not evolve from barter. The issue of trust is crucial when discussing the theory of money. In addition, it is important to stress, and the authors emphasise several times in the book, that money is effectively an abstraction.

Creating Money offers an interesting journey through the world of money, with the four major chapters mentioned above.

In the first chapter, the authors seek to answer the question: why and how did we invent money and how does it serve us?

The verb „to serve" also plays an important role in the questioning, as it frames money as a means and suggests that there is a connection between money and its contribution to society. One of the most important lessons of the first chapter is that money is, in practice, a technology and that, because of its embeddedness in society, it is necessary to understand its functioning as much as possible. Similarly, monetary and fiscal policy which is also designed to provide „service" to society, do not have an easy task, and often have to balance competing objectives.

Why do some people have so much money while others have so little?

The next chapter of the authors' journey looks at why there is a difference in the money/monetary wealth held by each individual in society. In it, the authors offer four explanations for why wealth inequality has emerged globally.

But first of all, it is worth going back to the definition of money creation. This will be explained in detail in a later chapter, but it is important to understand the process in the early chapters. Money can be created by central banks and commercial banks, but for individuals it is most often ‚money creation' in the form of income generation. However, it is important to understand that this does not involve an increase in the amount of money, as someone's income, someone else's expenses, our own expenses, someone else's income, and taxation are all income transfers.

It is worth distinguishing between categories within different incomes. Basically, the income of the factors of production are rent, wages, interest and profit. However, in addition to the factors of production, intellectual capital has also emerged in the modern economy, but the book raises the question of whether it is worthwhile to consider this as a separate factor of production, whereas in many respects, such as extra income earned in exchange for patent rights or special knowledge, it is similar to each of the factor incomes.

A detailed understanding of factor incomes leads us to the important question of who in society gets more or less money.

And through the example of feudalism, we can see how changes in factor incomes can also change societies. Just as other technologies, such as the Internet, have also changed societies, so you can see from the examples in this book why money can be called a technology.

If we look at the definition of technology in the Hungarian Dictionary of the Interpretative Dictionary of the Hungarian Language, we find the following under the word technology: „The description of all methods and means by which raw materials are processed into useful objects."

In the Anglo-Saxon literature, however, a different meaning has been associated with the word. According to the Encyclopaedia Britannica, technology is „The application of (knowledge) to the practical purposes of human life, or, as it is sometimes put in words, the alteration and manipulation of the human environment." (Britannica, 2024)

In the context of definitions, it is worth reflecting on the extent to which money can be called a technology. The Anglo-Saxon formulation is closer to this (the book was originally written in this language), so the concept of social technology can be better understood through this. The definition also refers to ‚practical uses', so the word ‚technology' refers back to the important idea, which the book emphasises, that money must serve.

Going back to the example of feudalism, the feudal system, characterised by high rents and low incomes, was broken up by a change in the factors of production. Unfortunately, shock events such as plague epidemics played a part in this. Changes in the labour supply and the rise in food prices and real wages led to an improvement in the situation of workers, which eventually led to the end of feudalism. However, there is much debate about whether the digital ecosystem resembles feudalism.

In discussing the economic revolutions, the author refers repeatedly to the historian Yuval Noah Harari.[2] The agricultural revolution, the scientific revolution, the first, second, third and fourth industrial revolutions played a huge role in economic development, but these revolutions had negative consequences in many ways, and not all continents had the same impact. For example, Harari argues that the agricultural revolution has improved the quality of life, but the clear consequence is that the world's population began to grow rapidly from the 9th century BC.

In the industrial revolutions, the first revolution to be highlighted is the agricultural revolution, and this is one of the answers to why wealth inequalities have emerged. The mechanisation of agriculture did not reach all parts of the world,

2 The prominent Israeli historian, Harari's approach to money is summarised in more detail in Pesuth and Varga (2018) in Public Finance Quarterly. Harari's analysis of money takes a historical, philosophical and technological approach, and the book „Money" – a selection of his books „Sapiens" and „Homo Deus" – also takes into account temporal and cultural determinants and contexts that are specific to a specifically technically oriented literature (Pesuth – Varga, 2018).

so many people were left out of this development. The second industrial revolution was the industrialisation of production and the increase in productivity. With the advance of innovation, new differences in societies emerged, with higher wages in more innovative societies. The third explanation is the level of labour supply and skills, which in a free market leads to different wages. Finally, the fourth rationale is already socio-politically linked to the development of wealth inequalities: „Access to political power in itself provides economic rents". This in turn creates an additional capacity to earn more money and in many cases, individuals can turn relationships into economic benefits (the extreme form of which is corruption).

In the second chapter, the authors focus on Central banks and global finance: what is the role of each and connection between them?

After an examination of the emergence of money and social phenomena, the book presents the current financial system, explaining the role of the two-tier banking system and the global money and capital market. The first question is the role of central banks. There is little doubt that central banks play a significant role in shaping monetary policy in individual economies, but the social perception is more divisive globally. In advanced economies, too, central banks are under greater criticism on the grounds of central bank independence and the fact that central banks tend to focus on the private interests of their managers rather than on social problems and the monetary system. This criticism leads to one of the important questions raised in the book: can central banks, as the sole institution, manage the monetary system? This is the existential challenge the authors issue to central banks.

Financial markets, alongside central banks, likewise have a significant influence on society, even if not always readily visible or understood. The authors prompt the reader to question how financial markets can, or should, serve society, given the number of clearly-articulated examples that show that they do not fully fulfill this role. The book identifies six problems to be highlighted in this respect: (1) conspiracies, (2) fraud, (3) speculation and balloons, (4) short-termism, (5) human error, (6) automation and robotisation. These problems can lead to extreme shocks which can cause a significant financial burden and a crisis of confidence in the financial markets. Furthermore, the question of confidence in capital markets is also a key issue for which the book calls for internal market reform as a possible guideline.

Money and technology

In the third part of the book, the authors discuss the technological development of the modern financial system. Money as a technology is undergoing a technological evolution, with the emergence of FinTech bringing about a rapid and pronounced change via the latest IT technologies. Virtually every banking activity now involves some technological innovation, and separate FinTech companies have been created to provide these services, often either jointly with banks or as separate service providers. There are many examples, ranging from Apple Pay or Google Pay, through the emergence of social lending, to investment management and investment advice. Innovation often involves non-bank players entering a market that was previously only served by banks, creating a growing competition that can be beneficial for consumers., Conversely, the book also highlights the risks of said advancements. Power may be unevenly concentrated in large IT players, knowledge of new technologies is essential for safe use, and for FinTech firms, as for banks, the issue of trust is important.

A separate area within FinTech that the book highlights is blockchain technology and the cryptocurrencies that build on it. as it describes the impact of blockchain technology in separate chapters within FinTech. Cryptocurrencies can be considered FIAT money in the same way, but private individuals

The origins of cryptocurrencies date back to before the 2008 financial crisis, yet this shock accelerated their spread. At the same time, cryptocurrencies, and Bitcoin in particular, have created a new bubble in the markets. The same problems that exist in the money and capital markets are also evident in Bitcoin and other cryptocurrencies, and it may even be somewhat counterintuitive that its creators created it to change the ‚old world', but what we now seem to be seeing is its integration into the existing world.

This can be seen not only in cryptocurrencies, but also in the business application of blockchain technology. It can be used not only in payment transactions, but also in clearing, in accelerating contractual agreements, in supply chains. The distributed ledger system has advantages in the control of records, but there are also a number of regulatory hurdles, and blockchain technology is in breach of the EU GDPR regulation in that data cannot be deleted from the system. In addition to many of the benefits, there are also regulatory challenges and, after the initial rise of the technology in recent years, blockchain technology has become more of a disillusionment and, according to Gartner's latest Hype Cycle analysis, is now in its so-called „enlightenment phase". The question is where this period will end in the future and how productivity will evolve.

In the final chapter of the book, we come to a new stage in the technological evolution of moneywhich paints a picture of a cashless world. Technological advances now make it almost possible to live without cash altogether, but it may be worth considering some of the benefits of cash that society may tend to forget. Cashlessness is often associated with the fact that it is expensive to issue banknotes and that it is used by the black economyBy contrast, small transactions are often carried out legally in cash, fundraising often relies upon cash-based donations, and some social groups also prefer to use cash. Cash users can remain anonymous, the holder has full control over the banknote, and it remains usable in the event of a failure of the digital infrastructure or cyber-attacks. Perhaps many people, given the technological developments, may have an Orwellian scenario of the possibility of major corporations having a say in how we spend our money, but it is also important to answer the questions the authors pose whether society is ready to phase out cash, how to include the poorest, how to ensure basic human rights in this system, and how to protect society from the vulnerabilities of electronic money.

Money Creation takes a detailed look at the forms of money that have accompanied humanity throughout history. There are many similarities between the different forms of money and, essentially, the forms of money have changed with technological development, but each stage of development brings with it opportunities and challenges that we must respond to, and see money as a technology that shapes society, not just as a passive tool.

In conclusion, money is a social innovation that must always serve society. An important idea is that citizens have a responsibility in how we use money, money is not something created by nature, it is something „created" by us. This also means that people have to control it and we have a responsibility to put money at the service of society.

Referring back to the cover of the book, the biblical reference becomes even more clear. The idea that money should serve society and not the other way round aligns well with the Christian ethical approach to money, in which money is not seen as an end but as a means. If money serves, then it is by definition only a means, as society has experienced in its many manifestations throughout history, but if money serves society, then it can be seen as an end, with many negative effects. For this reason, it is also important to understand how money works as an important technological innovation.The above ideas are also reflected in Baritz's (2016) book, The Three-Dimensional Economy. Based on these ideas, money in its various manifestations cannot but evolve along with technological advances to serve the needs of society.

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