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探寻比特币的“意外”价值

文 | 泰德·普林斯

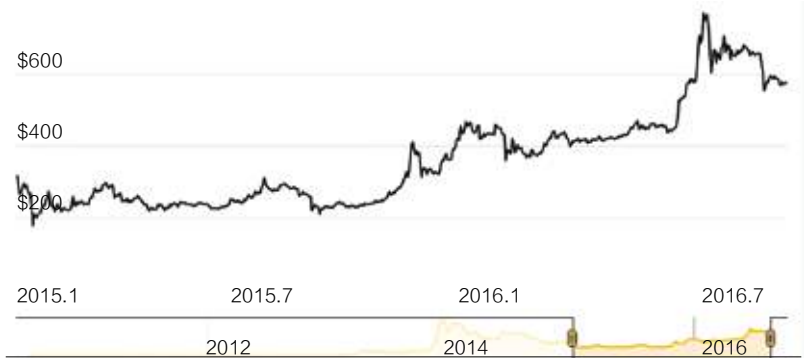
几个月前，笔者曾在这个专栏发表过一篇文章，介绍了基于比特币发展出来的区块链技术的革命性潜力，它早已不仅服务于比特币交易，而是成为了建立全球透明交易系统的一个新方法，其作用也远远超出了金融领域。

最近，比特币的兑换价格又出现大涨，人们再次开始讨论其领导金融发展和支付方式创新的可能性。借这个热度，笔者想与大家探讨一些基于比特币和区块链技术的新发展、新思路，让我们一起来看看让新技术造福社会的更多可能性。

“意外”的价值

你知道便利贴是如何诞生吗？这种粘性便条纸是3M公司发明的。他们本来是想研发一种超级胶水，结果胶水没做成功，但科研人员偶然间发现了它的一个新用途，这才有了我们现在用的便利贴。也就是说，便利贴是一个歪打正着

比特币价格走势 （2015.1.1 ~ 2016.8.18）



2013 年 2 月前，比特币价格一直维持在 20 美元以下，之后整体呈上扬趋势。2013 年 11 月 5 日，比特币价格达到 979.45 美元的历史峰值；2016 年 6 月 16 日，比特币价格达到 2015 年以来的最高点 768.24 美元。

来源：www.coindesk.com

的新产品。其实，市场上有很多产品都不是为了它们现在的用途而发明出来的，结果那个预想的用途行不通，却在一个意外的领域大受欢迎。

我身边也有这样的例子。我有个朋友开办了一家专注于金融领域的社交媒体公司，结果，社交媒体没办成功，但他从一位客户那里受到启发，转而为华尔街提供金融数据。目前业务推进得很顺利，但这个业务方向是他当初完全没想到的。

意外成就的区块链

我们再来看看比特币，迄今为止，这种数字货币的发展算是比较失败的。现在的确有很多人在使用比特币，但用它来搞歪门邪道的比例太高了，比如洗钱等等。比特币本身当然是无罪的，也有很多公司开始在正当途径使用它。但从根本上说，大多数国家的政府都不喜欢比特币，因为除了可能被用于犯罪活动之外，这种不受政府控制的货币创造来源很可能引发严重的经济问题。

笔者之前的那篇文章主要讲述了区块链技术的应用前景。这是一项为实现比特币安全流通而发明的技术，相当于在网上建立了一个分布式分类账簿，让人们可以追踪每一笔比特币金融交易的记录，谁在何处、为何种目的使用了比特币都一目了然。区块链技术是辅助比特币交易的基础技术，谁也没想到如今它的应用火热程度远远超过了比特币本身。目前，这一技术的发展已成为西方社会关注的一个焦点问题，连IBM都为其专门成立了一个研究部门。显然，区块链技术的应用前景要比比特币光明得多。

区块链最初是开发出来控制比特币交易流程的，但事实越来越清晰地表明，它能胜任大量计划外任务。每个任务都包含数百万起交互行为记录，每一笔都需要核实行为的源头、财产所有权并记录数据的交互情况，这是单一中心数据库难以胜任的。

泰德·普林斯
佩斯领导力研究院创始人暨CEO

如今此类交互行为的数量巨大，最典型的就是物联网（IoT）派生出的行为。物联网能联结起几乎世界上的每一样东西，联网的物品会被派发一个独有的追踪标签，其所有者或相关人可以通过物联网追踪物品的流向和状态。只有区块链技术才能实现规模如此庞大的数据追踪，除此之外别无选择。

区块链技术的另一个重要应用领域是供应链。如今每天跨境贸易的货物量数以十亿计，出于贸易核算、确定财产所有权以及反欺诈等预防犯罪的目的，各国监管部门都有追踪货物去向的需求。如此繁杂的数据处理同样可以利用区块链技术来完成。总之，区块链的应用领域早已超出了当初的设想，算是一个意外之喜。

从比特币到“好币”

我们完全可以预言，区块链将凭借其独特功能成为一项伟大的技术发明。那比特币本身会往何处去呢？这个问题目前还没有定论，一时

也难以作出准确预测。数字货币这个概念本身有很大的积极意义，但它在发展道路上还面对着几大问题：

1. 各国政府普遍对数字货币持反对态度，因为数字货币的流通会影响宏观调控的效果，削弱政府对就业、债务、外汇市场等经济领域的影响力。

2. 犯罪分子会利用数字货币掩盖非法收入来源，并更方便地将资金转移到其它国家和地区。

3. 普通用户可能利用数字货币隐瞒收入来源，达到逃税的目的。

4. 法人单位可能利用数字货币逃税或是逃避外汇监管。

5. 从理论上说，比特币的价值可以受到人为控制，这种操控不易察觉，也难以识别和追踪操控者。

基于上述原因，很难说比特币能走多远。不过，除了区块链技术之外，比特币在发展过程中还有其他一些重要的意外收获，这使得各国政府对其未来也抱有希望。现在，我们一起来看看这些意外用途中的一个。

比特币的一个革命性特征在于，它不是人为制造出来的，而是通过一系列算法生成的特解。计算这个解的过程被称为“开采”，专用的运算电脑被称为“挖矿机”，操作者则被称为“矿工”。所以，形象地说，比特币是矿工们通过大量努力从数字矿山中挖出来的。

挖掘比特币的数学运算过程非常复杂，不但需要使用功能强大的计算机并耗费大量时间，而且只有成功的运算才会成比例地生成比特币，所以挖比特币是一件难度非常大的工作。运算求出的正确特解相当于一张纸币上的序号，但与之不同的是，算法决定了比特币的数量是有上限的，具体来说，比特币的理论上限是2100万枚。

挖掘比特币的大型“矿场”

我想说的是，比特币的生成过程能给我们这样一个启发：具有一定难度并包含复杂密集计算过程的活动都可以作为生成数字货币的依据，由于活动本身有难度且足够复杂密集，所以这种数字货币并不会没有节制地产生，也不会造成货币贬值。从这个原理出发，我们日常生活中的各种活动，比如登山、减肥等等，如果能与某种复杂的数学算法和密集的运算过程建立关联，就都可以成为某种数字货币的来源。这种数字货币也可以纳入比特币的体系加以管理，它们的不同之处只在于生成的方式。

还有一些不算常见的活动，我们也可以考虑将其作为数字货币的来源，比如治理污染、减少温室气体排放，再比如服刑者、缓刑者或是被判令以社区服务代替刑罚的人，如果他们所做的工作可以通过算法和计算生成数字货币，显然是有益于社会的。所有这些通过有益于个人和社会的活动产生的数字货币，我们不妨称其为“好币”（goodcoins）。

好币的来源方式决定了它有助于实现某些

社会治理目标。如果政府加以合适的引导和约束，比如允许使用好币交税或抵债，那它就不再具有破坏性，而是成为一种安全的、有益于社会的数字货币。

以上这个设想还没有人在现实中付诸实践，但我认为，好币迟早会以比特币的意外副产品的形式问世。到那时候，好币的使用范围将会扩展到方方面面，会远远超出我目前的这些设想。

新币催生新经济

前面我们说到，很多国家的政府反对比特币流通是因为它可能被用于犯罪目的或是扰乱经济秩序。如果由政府来主导比特币的开采和流通怎么样呢？能创造经济价值总不是坏事，毕竟目前各国的通货也都是政府垄断的产物。而且，政府实施的量化宽松政策本身就相当于制造数字货币，唯一的区别在于，这些量化宽松的产物可能被称为债券。

汉语中把很多国家的货币都称为“元”，我们不妨暂时把在政府主导下产生的新型数字货币称为“元币”（yuancoin）。如上所述，政府以新的方式来制造货币和管理经济是有益于社会的，并能制造新的活力。

一旦政府开始做这些事，企业家和公司就会闻风而动，创办一种新型的专门从事数字货币业务的银行。这些银行将收储好币或元币，并基于此类数字货币开展业务创新活动，而这些活动将创造出更多基于数字货币的新型产品和服务。

实际上，这些从事数字货币业务的银行属于新型数字经济领域中的创业公司，它开辟出的新领域就像是一个数字硅谷。由于数字货币会渗透到经济的方方面面，所以这种数字硅谷会均衡地分布在全社会的各个地方。中国正在建设自己的硅谷，而这种数字硅谷的发展更有优势，因为它不受物理世界的局限，不仅能容纳少数的实体孵化园和实体初创公司。

实际上，这些从事数字货币业务的银行属于新型数字经济领域中的创业公司，它开辟出的新领域就像是一个数字硅谷。

所以我们将会看到，比特币意外产生的副产品会催生出一个新型硅谷，它有繁荣经济的作用。在任何一场经济革命中，我们都无法准确预知会出现什么样的新产品、新服务和新公司。但我们知道，经济革命很可能开创出一些我们预料不到的经济新形式。伴随这种新趋势而来的，是大量的新型企业家，我们或许可以将他们称为“意外诞生的企业家”。

让意外发生

实际上，历史上很多最具革命性的发明都来自于某次意外。除了本文开头提到的便利贴，弗莱明爵士也是由于一场意外才发现了青霉素。宇宙微波背景辐射的发现也是一样，它不仅革新了天文学，还提升了宇宙飞行、计时以及电话通讯的技术水平。

再进一步说，从这类意外中我们可以得到这样一个启示：如果想创造革新性的文化，就要提供一个允许发生意外的环境。对那些喜欢事事考虑周全的企业家和政策制定者来说，这是一个新课题。但这值得尝试，因为意外发生的时候，总会发生一些具有正面意义的意外，然后朝着人们难以预料到的方向去发展。

再回到比特币本身来看，它确实存在种种不足，并由此导致很多意外事件。其中的一些无伤大雅，但有些具有危害性，对此我们应当报以足够的警惕，让那些恶性的意外可能消弭于无形。但是那些好的意外呢，它们中的有些可能会非常好，甚至能够震惊并改变世界，我们不应该扼杀它们出现的可能。比特币催生的数字硅谷将比美国的硅谷更富有创新，更强大，更有影响力。

允许意外发生，这正是革新的意义所在，也是企业家取得突破的一个重要途径。

“The Accidental Bitcoin”

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March 2016

We published an article a couple of months ago on Bitcoins and its revolutionary potential, not just as a currency, but also as a new way to build global transparent systems. And not just for finance but for just about everything else.

I think that our readers must have noticed. Recently the price of Bitcoins has increased significantly in China and suddenly they have become a new way to conduct finance and payments. So in this article I want to discuss some more aspects of Bitcoin and an associated technology called blockchain. I think that our readers will see even more possibilities to use these technologies for social good after reading this latest article.

It Was an Accident?

Do you know the story about Post-its, the sticky notes originally invented by the company 3M? The product originally derived from an attempt to make a super glue. That effort failed but the company found a new use for it by accident. That’s why we have the Post-Its today – they were an accidental product.

What that tells us is that many products that are on the market started their life as something different. When you invent or develop a new product it’s often the case that you make it for one use, but that you are not successful but many times a new use appears which is successful.

For example, I have a friend who started a social media company for financial professionals. It wasn’t successful but he found a client who wanted to use it for the access it gave him to financial data. Now my friend has changed the purpose of his company to providing financial data in Wall Street. Now it’s progressing well. But he never knew about this use of his product until he failed with its previous usage.

The Accidental Blockchain

You have probably heard of Bitcoin. Bitcoin is a digital currency. So far it has been a failure although many people have started to use it. However often the people who use it are the wrong kind of people who use if for money laundering and criminal activities. Yet Bitcoin has many good uses and there are many companies that are starting to use it. But many

governments discourage its use because it can be used for criminal activities. Also it is a source of money creation which is not under the control of the government so it could cause economic problems.

But there is a use for Bitcoin which no-one ever predicted. That is the use of its underlying technology. That technology is called blockchain. Blockchain is really a distributed ledger which allows you to keep track of every individual financial transaction using bitcoins, no matter who uses it, no matter where or for what purpose.

We discussed blockchain in our last article on Bitcoin. Since then in the West it has become a big thing. IBM has set up a special unit just to focus on blockchain. It now looks like blockchain applications could become even bigger than Bitcoin itself.

Blockchain was originally developed for controlling transactions using bitcoins. But now it is becoming clear that it can be used for a wide variety of tasks that were never predicted. These tasks are ones where there are millions of transactions and a central database is not possible for whatever propose. However the activity still needs to be able to verify the origination and ownership of transactions and transferred assets.

There are numerous activities like this. One of them is the Internet of Things (IoT). The IoT looks after physical objects such as things you own or use. It comprises literally everything in the world. They all have a tracking tag that identifies them. So now you can keep track of it no matter where it is and even when its ownership is transferred? Then you can use blockchain to monitor these activities. If you didn't do this it would be impossible to keep track of the IoT.

Another more obvious application is in supply chains. These days there are billions of items being traded across countries and companies. Governments and countries need to track these for a variety of reasons, including for trade accounting, to prevent fraud, to stop criminal activities, for legal and ownership reasons and so on. Again you can use blockchain to do this. So blockchain is now starting to be used in act ivies far from the original purposes of digital currency accounting. So blockchain is another accidental product,

The Accidental Goodcoin

So it's starting to look like, although blockchain was designed for another use, that it could become a huge product and technology in its own right. No matter what happens to bitcoin, it looks like blockchain has a bright future independent of bitcoin.

But what about bitcoin itself? The jury is still out. We don't know what will happen. The idea of a digital currency has huge appeal. But there are multiple major problems:

- Governments don't like it because it interferes with their control over the economy so they have less influence over employment, debt, foreign currency movements and other economics issues;
- Criminals use it to hide the sources of illegal income and to transfer their profits to other countries or areas;
- People can use it to avoid tax by disguising the sources of their income;

- Companies use it to reduce taxes, avoid government overview and for illegal activities such as importing or exporting currency without permission;
- Generally the prices of bitcoins can be manipulated by market players in ways that cannot be detected and by people who cannot be identified or traced.

For all of these reasons we don't know if bitcoin will survive or not. But there may yet be important accidental uses of bitcoin which any government would want to encourage. Let's look at one in particular.

One of the many innovations in bitcoin is that it requires that users who want to generate bitcoins need to "mine" them, that is spend a lot of effort to "dig" them out of the digital Earth.

In bitcoin the mining part consists of running special mathematical routines that are very difficult and time consuming on powerful computers. As this difficult and computationally-intensive activity proceeds, it generates bitcoins in proportion to the successful computations conducted. Mining bitcoins in this way means it is difficult to create bitcoins. That means you can't make too many of them so that the level of bitcoins can never get too large.

In principle, mining bitcoins can comprise any activity that is difficult and computationally intensive. So it would be conceivable for example to require that instead of mining bitcoins by "mining", instead you could generate them by some other difficult activity, for example climbing mountains. It would be possible to establish that activity as the basic activity of mining so that, for example, after climbing one particular mountain of a prescribed height and difficulty, you could generate another quantum of bitcoins.

As you can see, generating bitcoins can use any type of activity as long as it is difficult and computationally intensive so it doesn't generate so many bitcoins that it devalues the currency.

What if, instead of climbing a mountain, you could generate bitcoins by losing weight? Let's say you had a way of proving that the weight was actually lost by some check that could not be made fraudulent, and that this was then attached to a computer activity that itself was computationally intensive that resulted in the creation of bitcoins?

In this case, the mining would still be conducted, and would still create a certain number of bitcoins. The activity to generate bitcoins would just be different, albeit still as computationally intensive as mining the original types of bitcoins.

Again in principle you could make this activity anything at all that was difficult and could be tied to difficult and length computations. Losing weight could be one. Another could be doing enough work to get you out of prison if you were a prisoner who had the option to work instead of going to prison. Or it could be serving probation following a prison sentence. Or it could be doing enough work for the community to pay back debts.

So the mining activity in fact could be anything that was socially beneficial and socially profitable that was linked to the computations that would generate bitcoins. Instead of calling them bitcoins we could call them goodcoins, or greatcoins. Let's call them goodcoins for the moment.

Let's say that someone started up a company to create goodcoins. It would be possible for the government to decide to accept goodcoins instead of normal money. Maybe you could pay taxes with goodcoins. Or pay off debts. Or you could use them to meet certain targets like reducing pollution or reducing CO2 in the air. Now the goodcoins would be beneficial in meeting social and governmental goals.

And now, since the government mandated that these goodcoins could be used legally, the goodcoins wouldn't be seen as being dangerous or disruptive, they would be seen as safe, beneficial and socially advantageous instead.

At the moment no-one has used the bitcoin mechanism to create goodcoins and to do socially good deeds. But I predict that it is one of the accidental byproducts of bitcoin that will emerge sooner or later. There's no reason why a Chinese company should not be the first to achieve this. If it does we could envisage that the use of goodcoins would spread to areas I have not even thought of here, and to areas in which it might have been unimaginable that you could use any kind of digital currency to operate in.

The Accidental Currency

As I have mentioned, there are many governments which disapprove of bitcoins because of their potential to be used for criminal purposes, as well as their potential to reduce the ability to manage the economy and public as well as private finances.

But what if a government decided that it would allow bitcoins as long as they were mined only by the government itself? The government would do the mining itself just as it can own companies that own the means of economic production, even if they are a monopoly. After all, almost all governments everywhere have a monopoly over the creation of money.

Moreover when government conducts such activities as quantitative easing, they are also creating digital currencies. The only difference is that they don't call the results – for example selling bonds that they create themselves – a digital currency. Instead they merely add their value to the stock of money and assets held by the central bank and are called money by that government, using the same units as for their normal currency, such as yuan or dollars. We could call this new type of money "new yuan" or maybe yuancoins for short.

If a government did that it would have new ways to create money and to manage the economy. It would have new powers that could be socially beneficial.

For example, if the government allowed a new digital yuan it could use the yuancoins to give only to consumers so that they could buy things using them. This would help shift the economy from investment to consumption, an important goal of the Chinese government. If, in addition, it allowed goodcoins to be used by consumers for purchasing goods and services, this would also shift the economy towards more consumption, something that the government wants to do as a matter of policy.

The Accidental Bank

Once you start to do all of these things entrepreneurs and companies are going to start up a new type of bank using digital currencies; these would use goodcoins and yuancoins. These new banks would start up new types of banking services based on yuancoins and goodcoins. In turn this would create demand for yet even more new types of goods and services based on these digital currencies.

In effect these accidental banks would be startups in a new digital economy. It would be like a new kind of digital Silicon Valley distributed over the whole of China instead of just being confined to a few startups physically located in incubators in a few physical locations.

Accidental banks would spawn an accidental Chinese Silicon Valley that would result in an expansion of both economic and social activity in China. As with any social innovations you can't predict the new kinds of goods, services and companies that would come into existence. But you would have created a new yet accidental economy. This would have come into being with the emergence of numerous new types of entrepreneurs; we can maybe call them accidental entrepreneurs.

Making Accidents Happen

Some of the most innovative and powerful inventions have come from accidents. I mentioned Post-its above. Also the example of my friend. The discovery of penicillin by Sir Alexander Fleming was an accident. So was the discovery of the cosmic microwave background which revolutionized not only astronomy, but also space-flight, time-keeping and then telephony.

Thoughtful entrepreneurs and policy-makers now understand that if you want to create a culture of innovation, you need to create an environment where accidents can happen. That's because invariably when accidents happen, some of them will be good ones that create progress in ways that no-one could possibly have predicted.

At first, bitcoin looks like it could be a problem. But, used in the right way, bitcoin is also an accident waiting to happen. Not just one but numerous accidents. Many of these will go nowhere. Some of them might even be dangerous and have to be prevented or forestalled.

But some of these accidents would also be good, even great, and even world-shattering. They could well include yuancoins, goodcoins and other types of products and services. I haven't even thought of the other huge number of possibilities, and nor has anyone else right now. It may be that bitcoin is the way for China to get its own digital Silicon Valley that is incomparably more innovative, powerful and influential than the one in the US.

When you lead a society and do social engineering, you want things to happen which you didn't think of. That's what innovation is all about.

Making bitcoin accidental would be another great way that Chinese entrepreneurs could do that.

Dr. E. Ted Prince, the Founder and CEO of the Perth Leadership Institute, located in Florida in the US has also been CEO of several other companies, both public and private. He is the author of two books: "The Three Financial Styles of Very Successful Leaders" (McGraw-Hill, 2005) and "Business Personality and Leadership Success", Amazon Kindle 2011 as well as numerous other

publications in this area. He is a frequent speaker at industry conferences. He works with large corporations globally on leadership development programs and coaches senior executives and teams in the area of financial leadership. He has held the position of Visiting Professor at the University of Florida in the US in its Graduate Business School and is currently a Visiting Professor at the Shanghai University of Finance and Economics in China.