Bitcoin Is Not Coin

Introduction
The digital revolution has brought many significant and wide-ranging changes to our lives—both positive and negative. Understanding the pros and cons of digital technologies and knowing how best to make use of them are part of Computational Thinking (CT). The widely publicized and curiously fascinating Bitcoin started in January 2009, is a case in point and our focus here.

This article is the 6th in our CT series (previous articles in aroundkent.net Vol. 13 to 17 which aims to sharpen our digital minds and give us a powerful way of thinking through a deeper understanding of modern computing technologies.

Bitcoin Is Not Money
Promoters say Bitcoin is a particular type of cryptocurrency—a digital currency using encryption techniques to generate currency units, verify fund transfers, and record transactions. Basic denominations of Bitcoin are Satoshis, verify fund transfers, and record transactions. Basic denominations of Bitcoin are

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- a pow- erful way of thinking through a
deeper understanding of modern computing technologies. A blockchain is basically a
digital currency using

encryption techniques to generate currency

units, verify fund transfers, and record transactions. Basic denominations of Bitcoin are

- satoshis.
Bitcoin Is Not An Investment

A bitcoin is not a coin which is made of a material that has at least some intrinsic value. Neither is it a currency backed by the full faith and credit of a government or tied to some substance such as gold or silver. It is some intangible thing. It is some virtual coin. By this week, it had plunged to its value peaked just before Christmas at $19,434. 

Bitcoin exchanges publicize warnings about different kinds of frauds and scams all over the world. The situation is so serious that many Bitcoin exchanges publicize warnings about scams in an attempt to show that they themselves are legitimate.

For each new block on the blockchain, there is only one winning miner: All other miners are losers and can try their luck on the next block. Globally, huge amounts of capital, equipment, and computing power are wasted in this mindless Bitcoin mining effort. It is estimated that Bitcoin mining accounts for about 0.60 percent of the world’s total energy consumption. This is hugely wasteful.

A New York Times 2018 article “Is Bitcoin a Waste of Electricity, or Something Worse?” reports: It appears that much of our evolving digital infrastructure is devoted to activities, like the proliferation of cyberecords, that are worse than frivolous,” said James McIntrigue, the former head of research at the Federal Reserve Bank of New York. It is an understatement to say that Bitcoin mining is a waste of resources and a serious act of pollution. Some countries have banned Bitcoin mining. Therefore, many countries have banned or put restrictions on cryptocurrencies such as Bitcoin. These countries include China, India, Russia, and Thailand, among others. The list is growing.

People who want to use Bitcoin just for fun or privacy should be concerned. A recent article (March 21, 2018) on the New York Post entitled “Blockchain for bitcoin is infected with child pornography” says: According to a recent bombshell report, the underlying blockchain ledger that’s used to record Bitcoin transactions is a massive online database that grows each time a Bitcoin changes hands – contains files that are tainted with hundreds of links to child pornography sites.

Bitcoin Can Be Illegal

Due to lack of government supervision, regulation, or control, Bitcoin as well as other similar cryptocurrencies, can be a destabilizing factor for many economies and financial markets. The potential for tax evasion, money laundering, ransomware, illegal drug and arms trade, and even terrorism can be a serious concern. Therefore, many countries have banned or put restrictions on cryptocurrencies such as Bitcoin.
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Bitcoin is digital and ought to be safe and convenient online but it is not. Safety and reliability is the foremost concern for online transactions. A well-trusted payment platform that provides guarantee for goods/services delivered and payments made is essential. Banks, credit cards, Paypal, and Alipay are such platforms. Do we have similar platforms for Bitcoin?

Real estate, mutual funds, stocks, bonds, precious metals, and other well-established investments have intrinsic value and/or are well regulated to protect investors. They also provide a reasonable expectation of returns. Can a cryptocurrency which can be started by almost anyone with minimal effort be a good investment? The former US Federal Reserve Chair Janet Yellen said Bitcoin was “highly speculative.”

Furthermore, something is hardly harmful if it simply glitters. But, Bitcoin is actually illegal in many parts of the world. The fact that criminals use Bitcoin for tax evasion, money laundering, illegal drugs, and ransom payments, among other things, should at least give us pause.

Applying CT, we should ask

• What purpose am I trying to achieve?
• Is using Bitcoin a means to that end?
• Is it worth the trouble or risk?
• Are there other/better alternatives?

Of course, this is generally good thinking.

Nasdaq, a well-established security exchange, recently became interested and said it might develop a cryptocurrency exchange platform sometime in the future, according to a May 25, 2018 Investopedia article. For Nasdaq, the potential for additional commissions is certainly tempting. But, even if such exchanges come to pass, they can’t be taken as endorsing investment in certain cryptocurrencies. Remember, major exchanges also dealt with securities that caused the subprime mortgage crisis and the 2007-2008 financial crisis in the USA. It is common sense that the quality of the goods has little to no connection to the market itself.

However, if a government considers digital versions of its currency or a bank looks into blockchains as a way to make its operations more secure and robust, I am all for it. For official digital currencies, there are many technical, societal, and legal problems to address along the way and we will see what the future brings. Meantime, keep your cash and don’t throw away your credit/debit cards.

I hope you find this article useful and please feel free to email your feedback to me at pwang@cs.kent.edu.

A Ph.D. and faculty member from MIT, Paul Wang became a Computer Science professor (Kent State University) in 1981, and served as a Director at the Institute for Computational Mathematics at Kent from 1986 to 2011. He retired in 2012 and is now professor emeritus at Kent State University.