How the Internet of Things will make money as we know it obsolete

Money almost rivals language as an amazing and ubiquitous invention, or maybe better put, convention. We have trusted each other with exchanges of shells, salt, coins, paper, and now ephemeral computer bits. What money you give to me for what I have or do, I may later give to another in like manner. Liquid value. It is believed that a currency arises naturally, as a durable, portable, and universally desired commodity. Gold and silver fit that bill nicely. Chairs and apples don't (at least for now). For a long time, however, nations have issued fiat money, which is backed by trust in the government to honor its value. This allows government the power to rev and throttle the economy more efficiently as need arises or, more cynically, as political machinations dictate. In the light of coming technology, maybe it is time to revisit some old ideas about money.

Money has become an abstract entity, untethered from material associations. Fortunately, our brains are fully capable of dealing with abstractions. Or are they? Abstractions are distillations that have a tendency to lack impact. For example, numerous studies reveal the limitations of email and texting, forms of communication that fail to carry visual and audible cues that are present in the face-to-face encounters that people are so well adapted for. Likewise purely factual information can fail to convey the emotional and motivational impact of a topic, which might be hazardous if the topic is wealth.

If we go back in history, wealth takes on more of a visible, tangible form. For example, it has taken on the form of crafted artifacts, livestock, or the dimensions of a dwelling. These are physical commodities. If a rich person has fifty sheep, there are fifty bleating reminders of that wealth. In societies that use commodities for money, the wealth of the society is grounded to actual resources, goods, and services; more so than an abstract currency printed by governments and doled out by banks. The manifestation of wealth and money in forms that people can see, touch, and sense, even if indirectly, fits into a conceptual framework that generally resonates more deeply with people.

Wealth satiation

At this point, you may think this is an argument for returning to the gold standard or some commodity currency like it. It is indeed along those lines, but to an even greater extent only achievable with technology that is arising to implement it. However, even if it were possible to do this, why dump the fabulously effective and fluid money that we use today? One reason is to institute a satiation mechanism for wealth that will curb an appetite which poses a serious threat to society and the environment.

People come with satiation mechanisms that tell us when enough is enough. They are crucial to keeping us healthy and safe. Food is an obvious one. Your stomach tells you when to start and stop eating in a very convincing fashion. We also know when to wake up, when to sleep, how many tasks we can manage, how long sporting events should be, etc. But what about numbers? What number is too big or too little? It doesn't make any sense unless you associate something with the number. When money is only a number, you don't say to yourself, that is enough, I'm full now. Numbers do not satiate. So what do people associate with money numbers? Things like sunny vacations, expensive food and clothes, gleaming cars, and lavish houses. If you actually had all of these commodities in front of you or in your portfolio, you might have a better notion of what is enough and when to slow down. But with pure numbers this is left to flights of imagination. Adding extra zeros on the end of a number aren't as easy to connect to reality as we might think.

"Greed has no satiation point, since its consummation does not fill the inner emptiness, boredom, loneliness, and depression it is meant to overcome."

— Erich Fromm

While the desire for wealth is the principal driver for capitalism and all of the bounty that it creates, we can see the excesses that it fosters. Although progress has been made, the environment continues to be viewed as a resource to be plundered with little forethought. Deforestation, species extinctions, and global climate change are a few major casualties. Economically, a strong and invested middle class, crucial to democracy, shrinks as wealth distribution skews ever more toward a few at the top. Plutocracy, rule by the rich, is a real danger.

Capitalism also suffers from never ending speculative bubbles that create false value, inevitably popping and deflating into recessions. And this happens despite the best efforts of governments and banks to manage the money supply. Although these bubbles may be inevitable, the degree and frequency with which they occur are often related to money that is backed by little but hope. On a darker side, government manipulation of the money supply allows it to surreptitiously tax citizens to fund pork projects and war efforts. Unfair trade imbalances have also been erected by artificially fixing the value of currency. In response to these forces, and aided by the internet, bartering networks are rising in popularity as a means of directly exchanging value.

The Internet of Things

The Internet of Things (IoT) refers to a state in which virtually everything is connected to the internet in some way. Things are tracked as uniquely identifiable and addressable entities, which in many instances can actively communicate and respond to stimuli. IoT seems to be coming fast: in the next few years, six billion objects in the world are predicted to be connected. The hypothesis presented here is that IoT can be used to overcome the obstacles and drawbacks for the use of commodity money. For example, gold is a durable, portable, and universally desired commodity and has served as currency in many societies. With IoT and the power of electronic commerce, other products and services that have few of the properties of traditional commodity money might conceivably be used as such.

As an example, consider bushels of apples harvested in a distant orchard. The apples have value relative to other products and services, and may be traded for them. The owner of the apples, wanting to purchase an item, let us say a chair, could consign them to a seller in exchange for the chair. In turn, before the apples spoil, they could be traded for another product or service of value. Since computing systems know about the apples, where they are, what it would cost to ship them, and how long they will remain unspoiled, automatic exchanges are made in the background to shift them into the most profitable position, for example a local food market. Without intervention, that which an individual owns will be constantly changing. In this sense, the arenas of commerce and finance would effectively be merged into a single massive bartering system.

The use of a just a few commodities as money can lead to unpredictable fluctuations as supply and demand waxes and wanes. Alternatively, a diversified array of products and services used as money will be less vulnerable to this type of destabilization. And unlike a representative substance that is locked up in vaults, working commodities are valued only for their inherent worth. The wealth of an individual no longer is an abstract number on a balance sheet; it is a changing portfolio of products and services. Computers can tell you what you own in terms of apples or whatever trade commodities you wish to see, but your wealth will always be grounded in real world entities.

Natural global currency

An interesting property of IoT money, to give it a name, is that it is by definition a natural global currency. The gross domestic product of a country is simply the trade value of its assets. Banks will continue to serve the role of investment houses, but much less that of money repositories. Governments will continue to raise taxes, but will have a much reduced role in managing the money supply, leaving this function to the market. Governments will no longer be able to artificially manipulate the money supply since that is simply the current value of goods and services.

If investment house assets are backed by commodities that can be precisely monitored by investors, this can serve to suppress risky investment impulses that in the past have triggered speculative bubbles. Many investors will not want their wealth loaned out in a risky fashion, or without assurances of getting a profitable return on investment.

When a commodity is used as a trade asset, there is a braking force on the overproduction of the commodity, so as not to excessively devalue it. OPEC oil quotas are an example. When many commodities are used as money, the braking will apply more extensively, conserving resources. For example, if fish were used as commodity money, overfishing will produce wealth and but also decrease the value of each fish. This is the opposite of the case with abstract money, since the overproduction of wealth increases the value of money.

For better or worse, technology is crashing upon us with waves of change. The ways we communicate, collaborate, and organize ourselves are shifting. It is worth taking a look at even the most ingrained and cherished conventions to foresee opportunities that may benefit society. Some decry the greed ethic that propels capitalism, but there is no doubt that it has raised the standard of living of those adhering to it. However, like a fire that flares and rages uncontrolled at times, unbridled greed has left many victims, social and environmental, in its wake. The speculation here is a possible way to add a moderating governor to the engine of commerce and finance.

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