**Samantha Radocchia: Decentralized Industry 4.0**

Sam shares the operating system of the future: a decentralized society.

Ay 16, Sam did her first study abroad. No phones – she used a map. Ten years later at 26, she started a company in San Francisco. She opened Uber and put in her destination.

But before that were wayfinding technologies like MapQuest. Google built on this premise by applying Data. They let users build on top of it… and a new location-based app was born.

So in a short period we went from maps to apps… how?

It was an evolution in thinking to share the data, and let people build on top of it. It was a trillion dollar innovation.

Today we’re in another revolution – of both tech and thinking.

Sam takes us on a review of the “operating systems” of society.

Operating systems – they can be found in computers, but nature too. And society is no exception – especially when it comes social norms. Schools, institutions… all are operating systems.

There’s a rock you can find that looks like a zebra. Sam used to hoard them as a kid. And they became a currency among the kids. The whole neighborhood joined in. Even the ice cream truck accepted them as currency (probably with some background payments from parents). The economy evolved to the point that it needed a bank. And Sam’s kid brother was the banker.

This is a microcosm of trust-based communities in society. The supply chain and resources were localized. There were problems though… and society has mirrored this situation.

The social operating system is now globalized. We put trust in institutions. And these are centralized. But this system is opaque. We trust social networks to use our data responsibly. We trust the supply chain for our food and medications. Companies are now siloed and fragmented… so it takes days or weeks to figure out problems. And regulations and compliance are prohibitive.

There are safeguards… but trust is eroding.

In 2008 there was a crisis of trust, especially in finance. This was also the emergence of a new way of thinking. In 2009 the original Bitcoin white paper was published.

This was the start of a move away from institutions for trust.

What does this new Operating System look like going forward?

Here’s what underpins it: blockchain. It’s a “badass” digital ledger.

The dawn of communication was accounting… that’s what promoted unity of civilizations. Back then, it was stored on tablets… but today accounting can be performed instantly on blockchain.

It’s not just bitcoin, NFTs, or web3… it’s all of these technologies together.

This decentralization is unfolding alongside the discussion of a Metaverse. This is a persistent virtual world that affects nearly every part of human existence.

We are already converging with data through our phones. The process is underway. But other technologies are converging together too… and every aspect of our lives are becoming digitized.

This has massive implications.

Take money. Which can look like zeros and ones, bitcoin, or digital assets. These are new operating systems for value.

You could have a cryptocurrency or a digitized currency from a central bank. Many countries are piloting this already… U.S. treasury is piloting a digital dollar, and wall street is accepting these payments too.

The new operating system touches Identity, too… we are our physical person, but we are also our NFT presences.

What is identity in the future? Some companies have teams that are completely anonymous. Twitter has hired such an anonymous entity, who identifies as just a string of characters.

This also extends to private property. It’s a pillar of modern society. But that’s shifting…

Sam studied a virtual world called Second Life in 2010 as an anthropologist. She bought clothes as her avatar. And she needed more virtual currency for clothes. She had to earn *in* the metaverse. So she made digital t-shirts within the metaverse. But you could just put money into the system, not take it out…

Soon exchanges appeared on sites like eBay… and then second life became an exchange in itself. You could take money out… and so the digital asset had real world value.

Who owns this shirt? It’s hard to define… and that’s part of the new operating system. Users own the asset even though it’s not physical.

A shift is already happening with work. We’re in a hybrid remote work setting. This is a rethink of the nature of business. For gen z, folks want to be YouTube stars, influencers and Minecraft players. This is beyond the gig economy… it’s a multi-earner model. People are participating as freelancers under many identities.

Ultimately, every aspect of society is changing. And the shift is toward digitization and decentralization.

It may be a fully digital metaverse… or it may be an augmented reality. We may soon have data like nametags and pricing visible through a device at all times.

How do we structure and govern this metaverse? That’s why decentralization matters. If one central company controls the metaverse, “they will be more powerful than any government and be a god on earth” according to Tim Sweeney of Epic games.

Imagine if Sam had built her whole life on Second Life. And one day, the company shut her down. She’d have no recourse.

Many companies are building in the metaverse for commerce, data collection, advertising, and virtual product sales. But this is a dystopic vision. Decentralization will have to prevent this outcome.

NFT is more than art – it’s a standard for digital ownership. It’s unfolding in gaming, collecting, etc. But these are the early experiments. It could represent anything – like a physical car, or your title to it.

Another important concept is DAO, decentralized anonymous organization. This could be the corporate structure of the future.

The first DAO was formed in 2016 as an investment collective, as an experiment in decentralized funding. It was hacked… but the model has come a long way since then. Now we have i.e. Links DAO, a DAO that raised $10 million to buy a golf club and give membership to all its members.

Another famous DAO, ConstitutionDAO, put in a big bid on a copy of the constitution.

And Patagonia has moved from an ownership model into a trust.

This is all part of the decentralized concept of society.

There are still booms and busts in metaverse technologies.

Bitcoin has “busted” hundred of times since 2010.

But each time a decentralized item “resets”, the benefits are passed on to the world. This is the benefit of learning from open-source mistakes.

These technologies are just over a decade old. We’re at the beginning of what is possible. But it’s upon us. We’re living in the metaverse every time we turn on Zoom. The paradigm shifts are converging all at once. Experiments in social governance and incentive structure are converging… and it’s important to approach that responsibly, and support the companies that are doing this in a responsible way.