Future of Money

Time travel through the evolution of money from Mesopotamian accounting tokens to Web3

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Money is a social and legal construct.

Throughout history, money experiences leaps in financial and technical changes, which in turn transforms human society.

We are currently living in such an evolutionary leap of money. (Eichengreen)
Origin of Money - Traditional View: Barter System

- Goods were exchanged directly
  People traded goods and services between each other without using money

- Bartering was used to obtain necessities
  People bartered to get food, clothing, tools etc. that they needed to survive

- No standardized system of value
  Since goods were simply exchanged, there was no standard unit to measure the value of goods

The barter system was an early inefficient stage of trade before the invention of money.
Traditional Historical View: Barter System

Goods were exchanged directly
People traded goods and services between each other without using money

Bartering was used to obtain necessities
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The barter system was an early inefficient stage of trade before the invention of money.
Money is a form of **communication** and emerged from recording debts.

In turn, communication is based in **technology**.

Mesopotamian Accounting Tokens

- It is argued that the transition from three-dimensional tokens to two-dimensional signs served as the basis for the beginning of writing (Schmandt-Besserat). [https://www.maa.org/press/periodicals/convergence/mathematical-treasure-mesopotamian-accounting-tokens](https://www.maa.org/press/periodicals/convergence/mathematical-treasure-mesopotamian-accounting-tokens)
Historical examples of money in New England

Wampum = clam shell + technology
## Electronic Transfers

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online Banking</strong></td>
<td>Allows customers to perform financial transactions electronically via a bank's website.</td>
</tr>
<tr>
<td><strong>Mobile Banking</strong></td>
<td>Performing financial services through a mobile device such as a smartphone.</td>
</tr>
<tr>
<td><strong>Digital Wallets</strong></td>
<td>Allow users to make electronic transactions using a smartphone, tablet or computer.</td>
</tr>
<tr>
<td><strong>Peer-to-Peer Payments</strong></td>
<td>Transfer of funds from one person to another using mobile apps rather than cash or checks.</td>
</tr>
<tr>
<td><strong>Cryptoassets</strong></td>
<td>Digital assets that use blockchain to secure and verify transactions.</td>
</tr>
<tr>
<td><strong>Decentralized Finance</strong></td>
<td>Allow users to directly access blockchain-enabled financial services without going through traditional financial intermediaries.</td>
</tr>
</tbody>
</table>
The next iteration of the Internet: Web3 (Decentralized & Semantic Web)

Peer to peer, decentralized web architecture on blockchain that's powered by AI.
Future of Money: What is Web3?

Powered by Blockchain & AI

Money layer

Identity layer

Personal data ownership & control, community governance
## Web 2.0 vs. Web 3.0

<table>
<thead>
<tr>
<th>Web 2.0</th>
<th>Web 3.0</th>
</tr>
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<tbody>
<tr>
<td><strong>Centralized</strong></td>
<td><strong>Decentralized</strong></td>
</tr>
<tr>
<td>Application delivery, cloud services and platforms are governed and operated by centralized authorities.</td>
<td>Edge computing, peer-to-peer and distributed consensus increasingly become the norm in Web 3.0.</td>
</tr>
<tr>
<td><strong>Fiat currency</strong></td>
<td><strong>Cryptocurrency</strong></td>
</tr>
<tr>
<td>Payments and transactions occur with government-issued currency such as $USD.</td>
<td>Transactions can be funded with encrypted digital currencies such as Bitcoin and Ethereum.</td>
</tr>
<tr>
<td><strong>Cookies</strong></td>
<td><strong>NFTs</strong></td>
</tr>
<tr>
<td>Using cookies helps to track users and provide personalization.</td>
<td>Users can get unique tokens that are assigned value or provide some form of perk.</td>
</tr>
<tr>
<td><strong>CSS and Ajax</strong></td>
<td><strong>AI</strong></td>
</tr>
<tr>
<td>Web 2.0 is defined by layout technologies that provide more dynamic control than Web 1.0.</td>
<td>Smarter, autonomous technologies, including machine learning and AI, will define Web 3.0.</td>
</tr>
<tr>
<td><strong>Relational databases</strong></td>
<td><strong>Blockchain</strong></td>
</tr>
<tr>
<td>Databases underpin the content and applications of Web 2.0.</td>
<td>Web 3.0 makes use of blockchain immutable ledger technology.</td>
</tr>
<tr>
<td><strong>Social networks</strong></td>
<td><strong>Metaverse worlds</strong></td>
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<tr>
<td>Web 2.0 ushered in the era of social networking, including Facebook.</td>
<td>With Web 3.0, metaverse worlds will emerge to meld physical, virtual and augmented reality.</td>
</tr>
</tbody>
</table>

Source: [https://www.techtarget.com/whatis/definition/Web-30](https://www.techtarget.com/whatis/definition/Web-30)
Future of Money: Crypto-native and stablecoin assets

- Bitcoin market capitalization of over $710 billion USD (Nov. 14, 2023)
- Ethereum market share of over $244 billion USD
- USDT over $44 billion
- USDC almost $24 billion
Future of Money: Programmable Money

- **Fiat-backed Stablecoins**
  Stablecoins backed by fiat currency issued by a private issuer

- **Central Bank Digital Currencies (CBDCs)**
  Digital form of fiat currency issued by a central bank as legal tender

- **Retail CBDCs**
  CBDCs designed for use by individuals for retail payments and transactions

- **Wholesale CBDCs**
  CBDCs designed for use by banks and financial institutions in wholesale markets

- **CBDC benefits**
  Enhanced monetary policy control, financial stability, payments efficiency and accessibility

- **CBDC risks**
  Disintermediating banks, data privacy concerns, cybersecurity risks

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**JPMorgan Switches On Programmable Payments Using Blockchain Tech**
- System lets companies set rules to shift cash automatically
- Germany’s Siemens debuted the new feature to move funds

By Anna Irrera
November 10, 2023 at 4:00 AM EST
Key Themes of Money through History

Money is Communication (of debts)

Money is Technology (used to communicate)

Money is Data (form of communication)

Identity is Data (open banking, open data)

Identity is Money, vice versa (finance relies on identity)

Web3 adds money & identity layers (that facilitate ownership of digital assets on decentralized internet)

Intersection of Blockchain, AI & Open Data: Money becomes Programmable Money (use personal data to program money)
End of Time Travel: Interconnection between money, tech and society

Finance
- Finance supported wars, empires and the tech revolutions

Technology
- Technology in wars and tech revolutions support finance

Democracies
- Finance and tech revolutions have supported evolution of democracies (Eichengreen)

Web3 & Programmable Money
- Transferring data ownership and control to users

Where will the latest fintech revolution take us?
Thank You for time traveling with me!

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Crypto Council for Innovation

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