## **Money Technology**

Money is a form of technology that has been around for a few thousand years but has changed little in its fundamental nature and its effects, irrespective of technological and financial innovation. Current money is Money 1.0 and an upgrade is long overdue.

# Definitions for the purpose of establishing a common understanding of terms

**Create** – the act of creating value to satisfy one's own or someone else's Need. *Orthodox economists refer to production or supply.* 

**Need** – all humans have needs that must be fulfilled in order to survive and be able to satisfy their will to Create. *Orthodox economists refer to demand or consumption*.

## \* All Human Activity/Interaction that parties wish to count and/or record involves these two fundamental elements

**Exchange Value** – the "worth" of something is determined by its exchange value, the price at which a transaction takes place. Exchange value is independent of the Use Value of a particular transaction to the parties involved or the wider community.

**Proxy Resources** (Money 1.0) – dislocation of Exchange Value from Use Value gives rise to Proxy Resources, i.e. money, rather than human values, that dictate who has access to resources and how they may be applied.

**Use Value** – is the value of transactions to the parties involved and the wider community

**Token** – a symbolic representation of value which has little or no intrinsic value, e.g. a one pound coin, dollar bill or Bitcoin

**Ledger** – implicit (mental) or explicit (physical, analogue or digital) record of transactions and values

**Endogenous** - found or coming from within something, for example a system or a person's body or mind; Human Value Systems are necessarily *endogenous* 

**Human Activity/Interaction** – the process of humans creating value to satisfy their own and the needs of others

#### Money 1.0

Money 1.0 is premised on a fundamental misunderstanding of what it replaced.

Contrary to Adam Smith's arbitrary declaration that money replaced barter, for millennia, Human Interaction involved reciprocation based on Trust. Unlike Adam Smith's claim, there is ample

anthropological and archaeological evidence<sup>1</sup> of this reciprocation in action and ledgers documenting values in medieval societies. Tally Sticks<sup>2</sup>, used for hundreds of years in England, were a form of ledger.

Why is this distinction vital? Because these reciprocation systems rely on Trust both between parties and within the wider community. Furthermore, within reciprocation and mutual support systems, everyone is looked after in terms of their basic needs, irrespective of their capacity to Create.

Why did money materialise? Because once you attempt to transact beyond the Trust boundaries of the community, i.e. to deal with strangers, one needs a medium of Trust that will hold true irrespective of whether parties to a transaction are trusted. When transacting beyond the local community, one could not rely on its societal bonds to establish Trust for trade with other individuals or communities, particularly on a large Scale, e.g. when deploying armies in foreign lands.

Money's current form was adopted because it was the means to overcome these hurdles of Trust and Scale. Once established, humans haven't questioned the fundamental nature of money since, not least because of Adam Smith's unsubstantiated declaration.

"Trust" in Money 1.0 has displaced Trust between humans leading to numerous adverse consequences.

### **Perverse Consequences of Money 1.0**

The move from Use Value to Exchange Value created Competition, not just between communities but within them, as more and more transactions became "monetised". That said, within living memory and even today, villages in Bulgaria, Greece and elsewhere operate on the basis of Trust, i.e. reciprocation and mutual support.

Competition leads to Scarcity and all that arises therefrom: Greed, Poverty, Conflict and the Destruction of: our Environment; human and animal Health; and Societal Cohesion.

### **Human Value Systems**

We are indebted to the structure created by money not to individual humans, although undoubtedly some humans are beneficiaries of the Money 1.0 structure which feeds off the value created by Human Interaction locally, nationally and globally.

The invention of Money 1.0 suppressed the notion/understanding of Human Value across the world.

Human Value Systems help to Create and then Capture, Store and Transfer the value arising from interaction between humans. Political economy underpinned by such systems is driven by Use Value, thereby eradicating the perverse consequences of Money 1.0.

<sup>1</sup> https://libcom.org/files/\_\_Debt\_\_The\_First\_5\_000\_Years.pdf

<sup>2</sup> https://en.wikipedia.org/wiki/Tally\_stick

#### Why Now?

The internet is solving the problems of Scale and Trust, i.e. creating bonds of trust between humans globally.

The internet started the free exchange of information and co-creative development. Use Value became the focus of Human Interaction on the internet not least because it was free. Free, open source software underpins the internet and most of the technology we use today, in spite of the strenuous efforts of the structure to colonise it using Money 1.0.

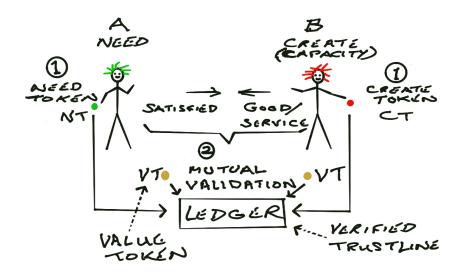
The building blocks for Money 2.0 (or rather "no money" but the Creation, Capture, Store and Transfer of Value arising from Human Interaction) have emerged from the co-creative development of alternative currencies. These began to take shape because of attempts to outlaw online gambling in the US³ in 2006. The gambling industry picked up ideas from virtual worlds (e.g. SIM City) and their currencies in the online gaming industry, leading to the creation of tokens and wallets.

Subsequently, Bitcoin, digital currencies and related technologies have evolved to provide the building blocks for new "money" systems. We now not only have the understanding of how to fix Money 1.0 but the tools to do so.

# The Mechanics of Value Creation, Capture, Storage and Transfer using Human Value Systems

This document is not a comprehensive explanation of *endogenous* tokenisation, i.e. Human Value Systems but an introduction. The Future of Money<sup>4</sup> and subsequent articles on money provide more information.

This simple diagram illustrates the concept of *endogenous* ledgers and tokens.



<sup>3</sup> https://en.wikipedia.org/wiki/Unlawful\_Internet\_Gambling\_Enforcement\_Act\_of\_2006

<sup>4</sup> https://www.outersite.org/the-future-of-money/

**A** has a Need and by some means is in contact with **B** who has the Capacity to Create. They agree that **B** can satisfy **A**'s Need and they agree a Value (which for the sake of this example is 1 unit) and each issues a Token.

Step 1: **A** issues a Need Token (NT) and **B** issues a Create Token (CT).

Step 2: at the point of "exchange" (delivery of good or service), a Value Token (VT) is issued to both **A** and **B**.

**B**'s VT validates the Value of **A**'s Need while **A**'s VT validates the Value of **B**'s Create.

When the transaction is finalised, both NT and CT cease to have a value; they may no longer feature numerically but are the audit trail of Trust and Value Creation. Both **A** and **B** are credited with one VT each. The number of tokens issued by the parties is always equal but will vary according to the agreed Value of the transaction.

The audit trail (Big Data) in terms of the specified Needs and the capacity to Create are accumulating data from which valuable insights can be derived in terms of refining or reinventing *endogenous* token systems. More importantly, the data on Need and Create will be invaluable for those participating in the distributed network to optimise resources for maximum Use Value.

Human Value is of infinite "supply". Unlike Money 1.0, *endogenous* tokens (digital) aren't recycled but once in existence, stand as an accumulating count of Use Value and Trust.

The challenge is to implement *endogenous* tokenisation in such a way that it just works, without users having to understand how. Human Value Systems must be accessible to all.

#### **Benefits of Human Value Systems**

- Financial and Economic Stability
- Optimise Resources, deter Waste and Environmental Destruction
- Financial Inclusion
- Societal Cohesion
- Eliminate Conflict
- Remove Motivation for Theft, Fraud and Financial Crime most crime starts and is supported by people being unable to satisfy their Needs