

# What We Think About When We Talk About Money:

Social Ontology and the Amalgamated Mind

Joint Ontology Workshop

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# Agenda

1. Preamble: *money talks, but do we understand what it is saying?*
2. Brief overview of the varieties of **distributed cognition theory**
3. The **Amalgamated Mind** thesis and institutional formations
4. Money as a **Conceptual Blend**
  - critique of Fauconnier & Turner's CB analysis of *Money*
5. The social ontology of sovereign money systems
6. Money as an **Institutional Blend**
  - An issuer-based perspective
7. Toward a domain ontology of money

# Money Talks

- The National Debt Clock
- Top number accurately specifies the aggregate amount of “Treasury Securities”
- Bottom number has no basis in fiscal reality
- Top number: *Our National Savings*



# Distributed Cognition

- **Definition:**

- Cognition = **distributed** when it is spread out over the brain, the non-neural body and an environment, comprising individuals, objects, tools and other artifacts, texts, and institutional structures.

(Michael Wheeler, 2011)

- The Mind

- Embedded
- Extended
- Embodied/Enactive

# Distributed Cognition

- **Embedded**
  - Intelligent behavior is causally dependent on varieties of non-neural bodily structures and/or on the bodily exploitation of environmental structures
  - All the important **machinery of mind** remains entirely internal to the individual
- environment plays a **causally** supporting role in thinking and acting.
  - Environment as “crutch”

# Distributed Cognition

- **Extended**

- The machinery of mindedness *itself* spreads out into the environment
- There are real cases of thinking and acting that involve brain+ body+ world, such that external material vehicles are rightly regarded as *constituent* elements of thinking.
- Factors external to skull-and-skin achieve **cognitive status**.
- Extended theorists regard the environment as playing a **constitutive** role in thinking and acting.

Clark and Chalmers (1998): Otto & Inga thought experiment

# Cognition: Embedded or Extended?

- Embedded thesis: the environment plays a **causally** supporting role in thinking and acting
- Extended thesis: the environment plays a **constitutive** role in thinking and acting

# Distributed Cognition

- **Embodied/Enactive**

- The nature of mind is structured by the form of the body.
  - Affordances as possibilities for action (Gibson, 2015 [1979])
  - Perceptual Symbol Systems (Barsalou, 1999)
- Sense-making structures depend on the physiognomy and sociality our bodies. (Shapiro (2011)).
  - Egocentric, Allocentric, & Absolute frames of reference (Bianchi, 2017)



# Distributed Cognition

- Summation
  - Embedded thesis: traditional philosophy of mind + scaffolds
  - Extended thesis: extend the unit of analysis to external facets of human niches
  - Embodied/enactive thesis: focus on the constitutive role of physiognomy and sociality

# Distributed Cognition

- **Amalgamated Minds**

- Minds embodied & extended

- “Some cognitive processes are composed, in part, of structures and processes that are located outside the brain of the cognizing subject. Cognitive processes are an amalgam of neural structures and processes, bodily structures and processes, and environmental structures and processes.” (Rowlands, 2010:83)

# Distributed Cognition

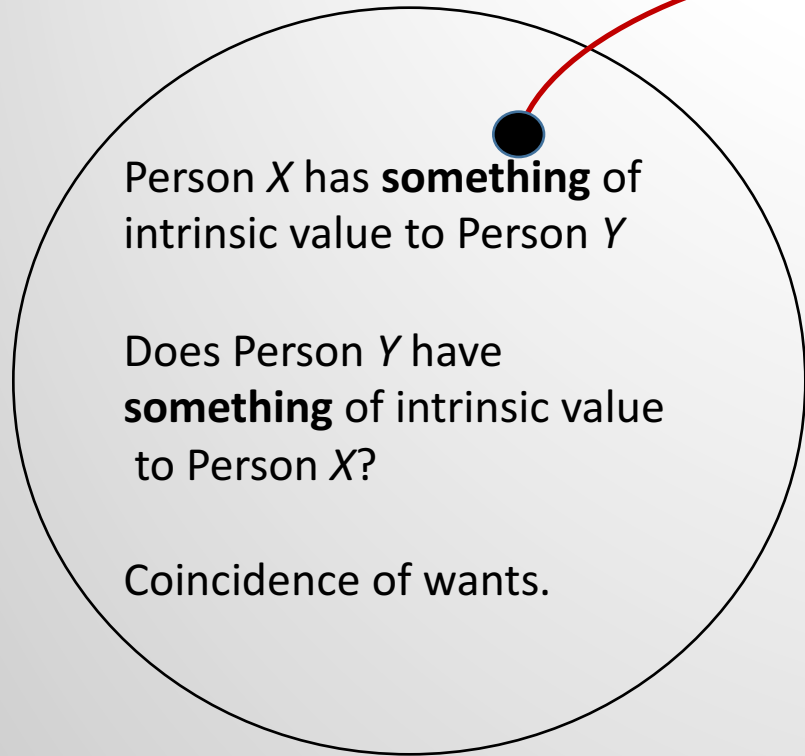
- Advantages of Amalgamated Thesis
  - Sidesteps questions of location
  - Social ontology
    - "social reality is constituted...by emergent totalities, where people and things (broadly conceived) become incorporated as components" (Lawson, 2-16: 963) [Emphasis added.]

# Conceptual Blending & Distributed Cognition

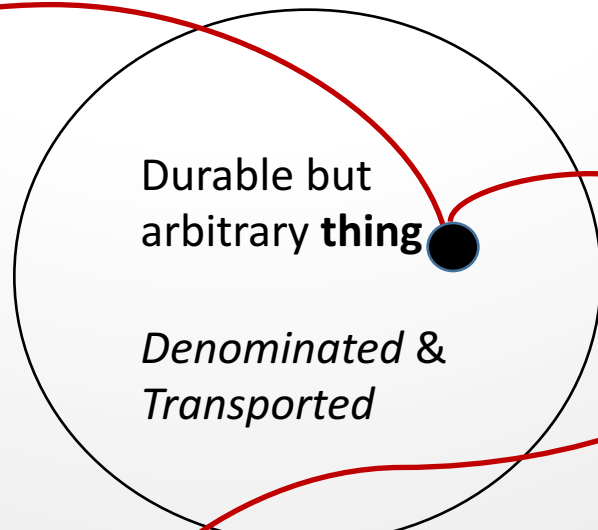
- Material Anchors
  - Role of “things” in blending
- Institutional Integrations
  - Navigation/Aviation (Hutchins 1994, 1995, 2005)
  - Socio-historical concepts, e.g., Complex Numbers (Fauconnier & Turner, 2002)
  - Concepts of Law (McCubbins & Turner 2013)
- Money
  - Material Anchor of exchange (Fauconnier & Turner, 2002)

# Money as Conceptual Blend

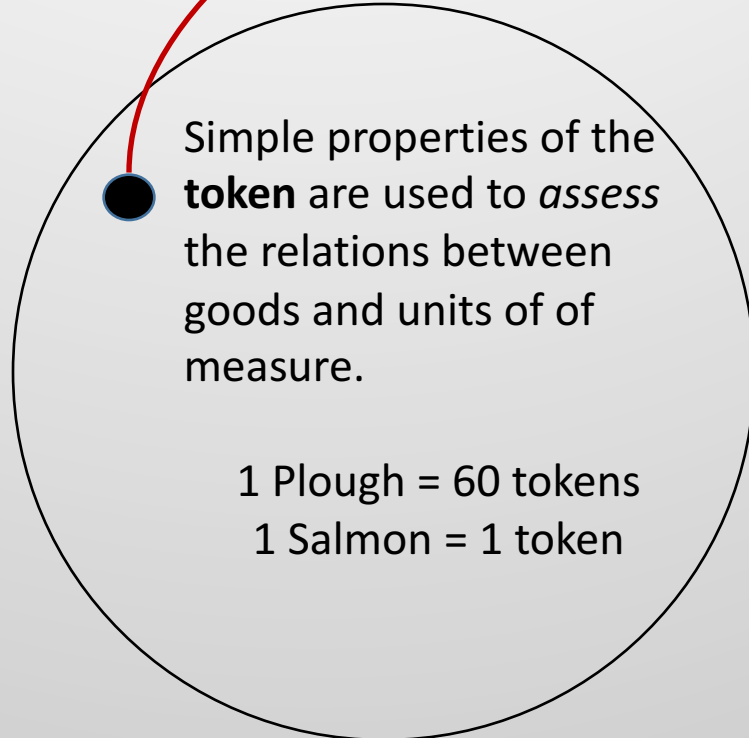
- Money as Blend
  - Fauconnier and Turner (2002:99-100) offer this analysis of money as a material anchor for conceptualizing processes of exchange
  - Ambiguous about the type of distributed cognition



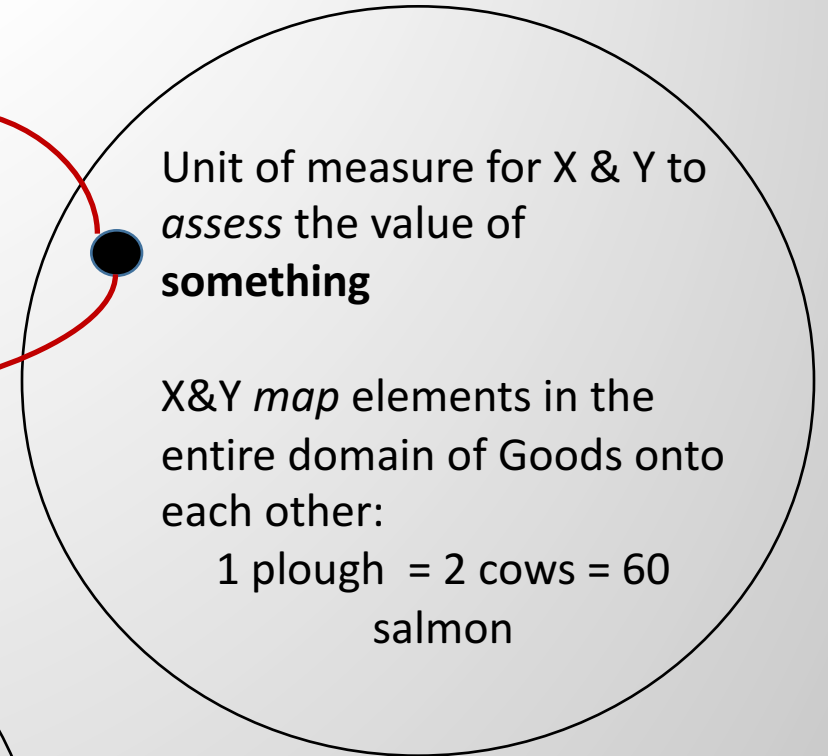
1 Bartering Goods



2 Units of Measure



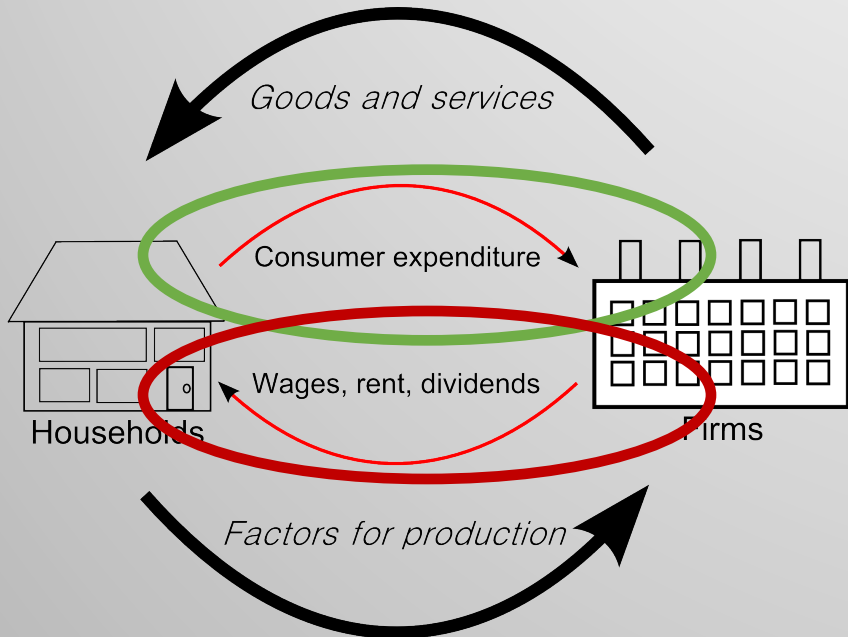
Money



3 Tokens

# “Living in the Blend”

- Money **helps** us proceed from the *abstract* to *concrete*



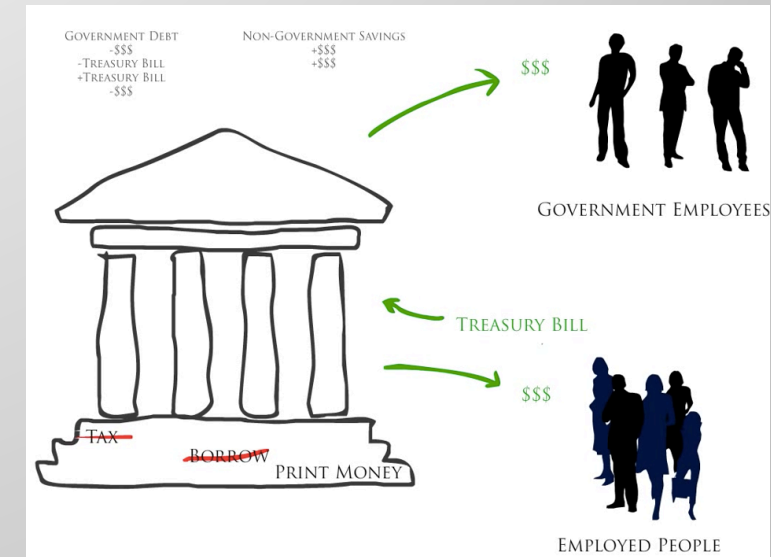
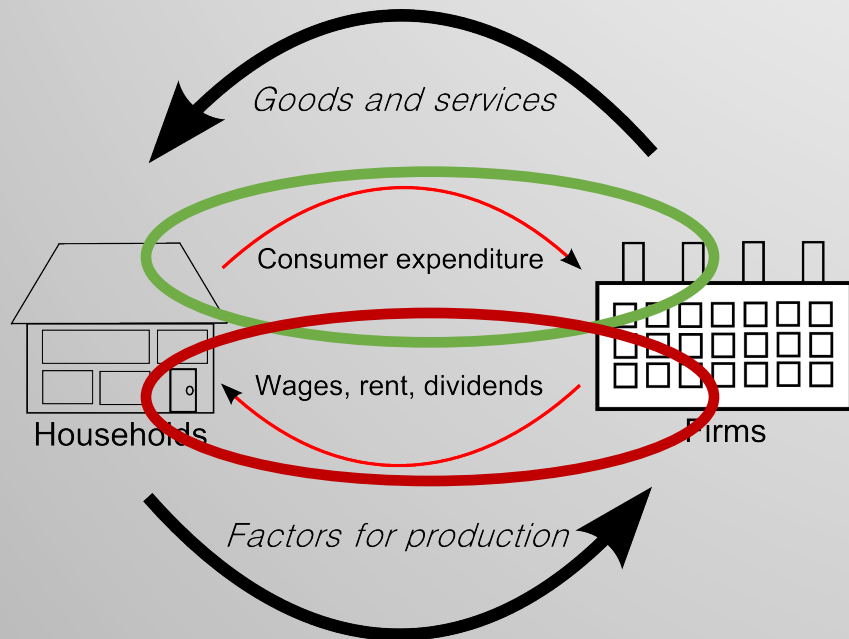
# Problems with F&T's Account

- Model of exchange that obviates barter
  - Historically and anthropologically inaccurate (Desan, 2015; Graeber, 2011; Innes, 1914)
- Fails to capture the institutional significance of money, except as the consequence of mass fraud:
  - “In retrospect, when we start to think about the culturally mature network for money, we may be amazed that anyone ever swallowed it.” (2002: 100) [Emphasis added]
- “Dupe-some-Dope” theory of money (Wray, 2013)
  - I use currency X because I believe that Joe Shmoe, a slightly more gullible person than me, will accept it.



# Social Ontology

- Money **helps** us proceed from the *abstract*<sup>1</sup> to *concrete*<sup>1</sup>
- Money **hinders** us from going from the *concrete*<sup>1</sup> to the *abstract*<sup>2</sup>



# Problems with F&T's Account

- Sovereign Money is primarily a store of value and unit of account for debts/credits
  - Creditor and Debtor are primordial social categories
- Amalgamated thesis is sensitive to the historical contingencies of elaborate social institutions

# Social Ontology

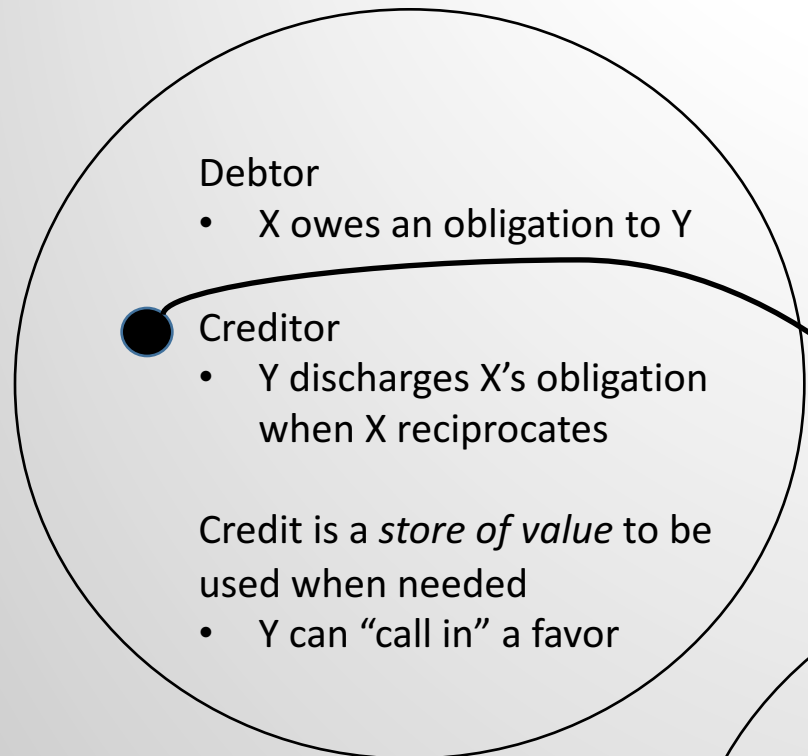
- Money as store-of value & unit of account
- Social positioning (Lawson, 2016.)
  - Creditor/Debtor
  - Ex. Medieval Exchequer Tally Sticks

## Medieval Tally Sticks

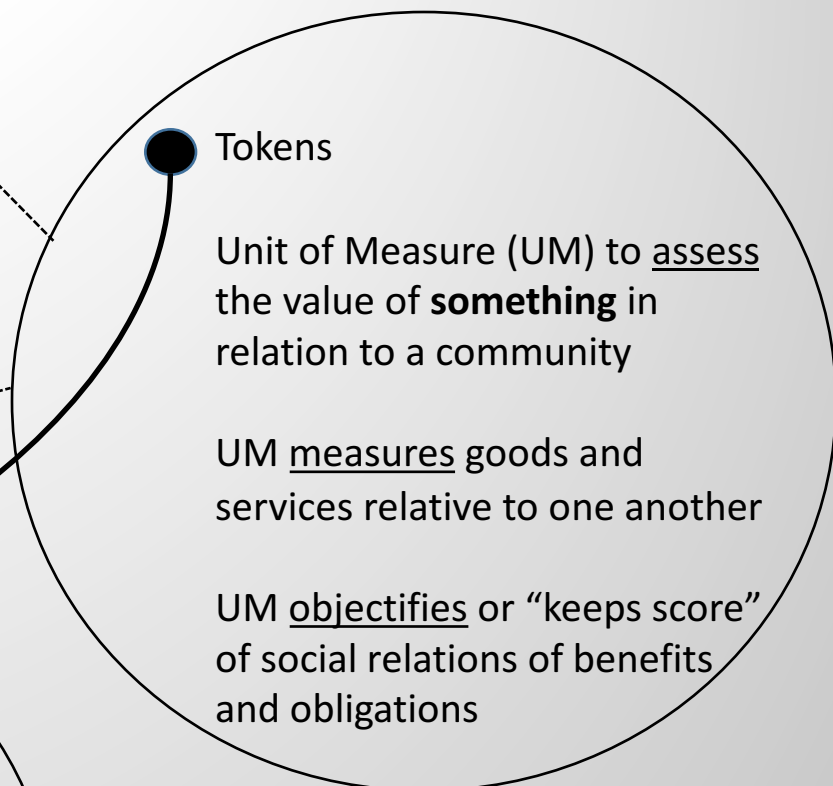
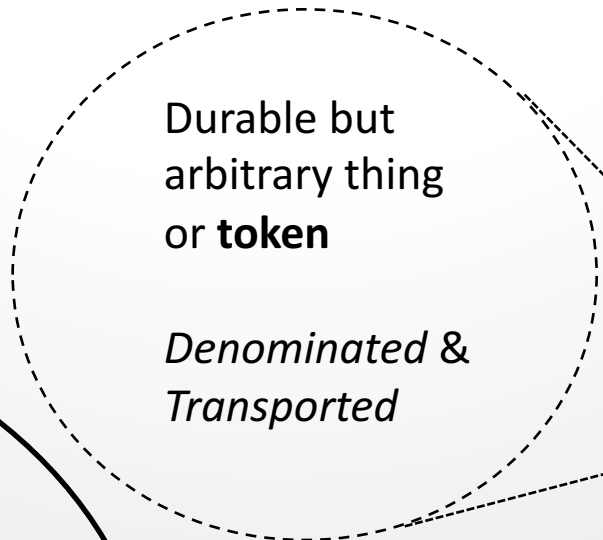


# Sovereign Money Blends

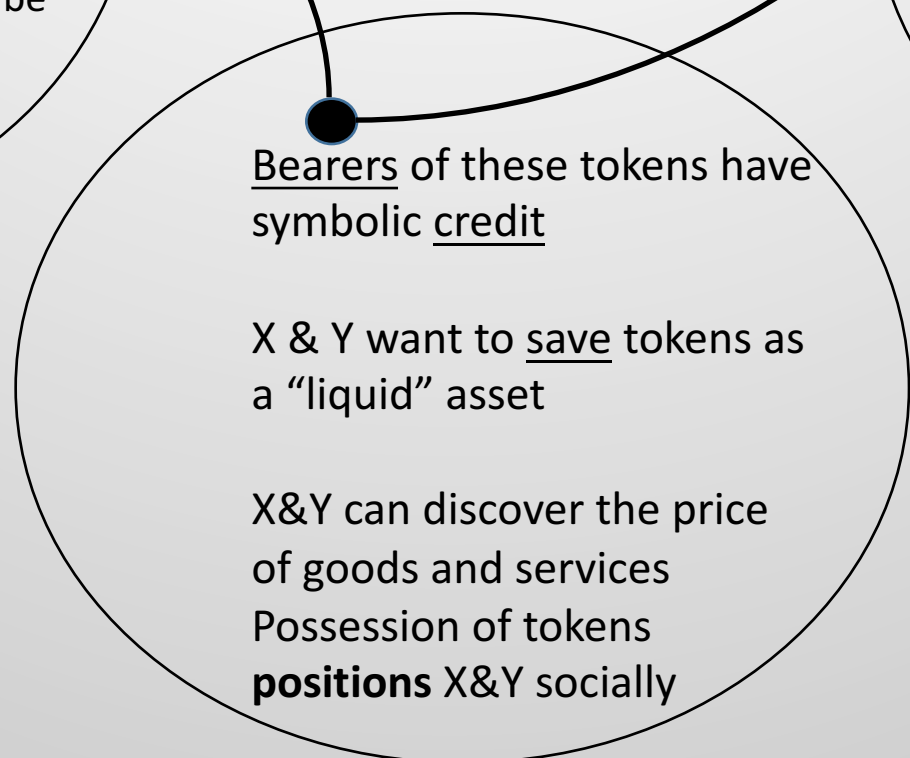
1. Money as *store-of-value*
2. Money as *unit-of-account*



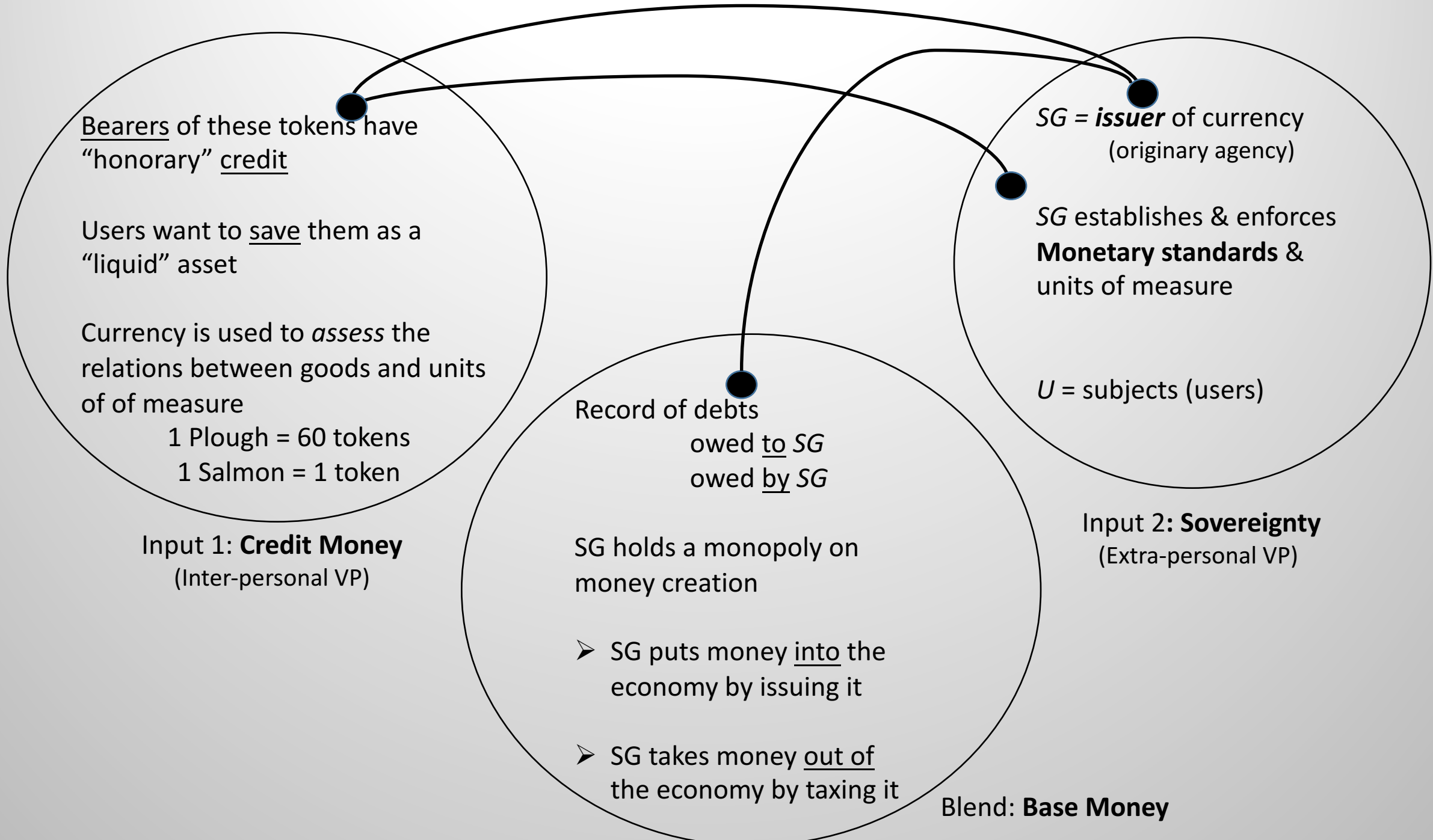
Input 1: **Credit Worthiness**



Input 2: **Unit of Measure**



Blend: **Money**



# Sovereign Money Blend

- Emergent property of base money
- Sovereign governments (**SG**) are not households (**U**)
  - SG **spends** money into existence
    - U: “I must earn it before I can **spend** it”
    - SG: “It must spend it before it can **receive** it back”

# Sovereign Money Systems

- The Logic of (fully) Sovereign Money Systems
  - SG can create money without limit
  - SG can buy anything for sale in its own currency
  - SG with a nonconvertible currency can never go bankrupt (involuntarily)
  - SG often allows private banks to create their own credit-money
  - SG places users in debt through the levying of taxes, fees, fines, etc.
  - U accepts SG's money because SG accepts only its own unit of account



# Sovereign Money Blend

- Characteristics of an **issuer-based** viewpoint on Money
  - Hard for people to maintain for long periods of time
  - Issuers of money stand in an inverse relation to users of money
    - Government officials habitually adopt a user-based viewpoint
      - Conceptually entrenched
      - Politically useful
        - Debt & Deficit is a powerful partisan weapon
  - The out of thin air quality of money scares the hell out of people

# Ontology of Sovereign Money

- Many formal models of money and monetary systems operates from a faulty ontology
  - Money as *medium-of-exchange* and *method of payment* are attributable to a **user-function**
    - Tracks quotidian experiences with consuming
  - Money as a *store-of-value* is likewise attributable to a **user-function**
    - Tracks quotidian experiences with savings
  - Money as *unit-of-account* is attributable to an **issuer-function**
    - Tracks monetary operations in the aggregate
      - Experience as Users is a poor guide

# Ontology of Sovereign Money

- A better domain ontology
  - the *store-of-value* and *unit-of-account* functions are primary
  - *medium-of-exchange* and *method-of-payment* functions are crucial but derivative
- The Amalgamated Mind
  - History of money is of material engagements within a specific environmental niche where tokens and ledgers are *necessary* and a sovereign is *sufficient* for maintaining the system
  - Brains and bodies are *necessary* but *not sufficient* for developing such systems

*Grazie per il tuo tempo e la tua attenzione.*

*Vielen Dank für Ihre Zeit und Aufmerksamkeit.*

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