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Money As a Medium/Form-Distinction: The Challenge of Blockchain-Economy to Luhmann's Concept of Money As a Symbolically Generalized Communication Medium

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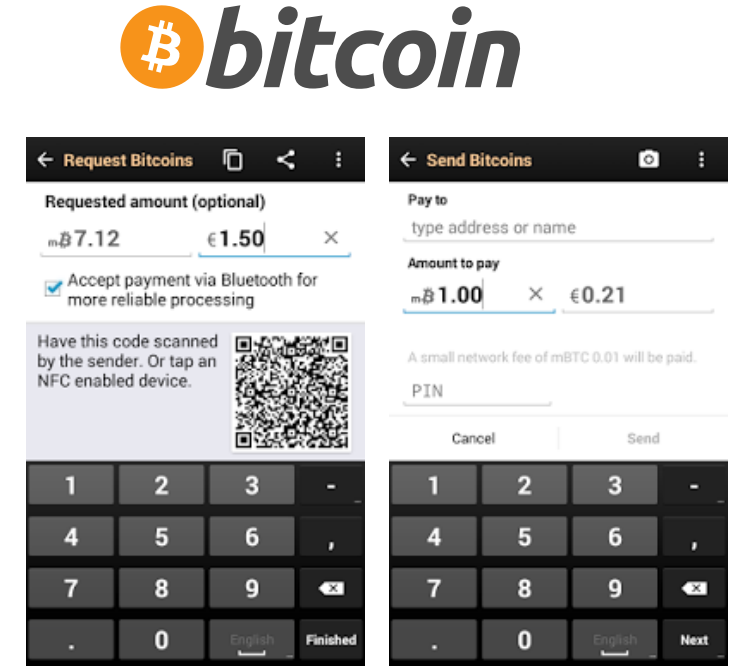
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The Provocation of Blockchain-Economy

- Blockchain-Economy challenges economics and sociology
- Questions:
 - What are the consequences for the theoretical understanding of money, its nature and function?
 - What is the contribution of Luhmann's Theorie of Social Systems?
- Issues:
 - I. The provocation of „Blockchain Economy“
 - II. 2500 years controversy between „nominalism“ and „essentialism“: looking for the „core cell“
 - III. Functional Analysis as alternative: The distinction between medium and form

1. What is „Blockchain Economy“?

- The Example of „Bitcoin“
 - „A Peer-to-peer electronic cash system“ (Satoshi Nakamoto)
 - Using cryptography (Blockchain Protocol)
 - Idea: Anonymity, faster, cheaper, more free, prevention for manipulation and misuse of authorities, overcome of bureaucratic barriers, protection against freeze of accounts by governments, and tracking of shopping behaviour)
- How does it works?
 - How is it created? It is created and administered in a decentralised computer-network
 - How is money supply regulated? Cryptographic rules govern the mining and the transactions
 - Where we can purchase it? Worldwide "currency exchanges" and „market places“
 - How we can Bitcoin store and transfer?



1.1. Expected Advantages

- Everybody can create bitcoins
- Bitcoins can be transferred directly from person to person via the net without going through a bank or clearing house (this means that fees are much lower)
- one can use it in every country,
- sending bitcoins is simple like sending an email,
- the account cannot be frozen,
- there are no prerequisites or arbitrary limits,
- no possibility to track shopping behaviour and to identify the trade partners
- the transfer is anonymous like with money in cash,
- there is no possibility to recall already transferred money.



[between Ireland and Northern Ireland]

2. The Provocation of Cryptocurrency: What is Money?

- Sociological: Money as a steering media
- Requirements:
 - to express an universal applicable value (= general equivalent)
 - to measure this value (= medium for measuring value)
 - to keep records of deferred payments (= medium for storing value)
 - to transfer value from one to another (= medium of exchange)
- Current ordinary view is strongly affected by the current form of money, which is emitted by national authorities, central banks etc.
- The world before and after „Bretton Woods“: an adventurous oscillation between „nominalism“ and „essentialism“



2.1. The everlasting Controversy: Nominalism versus Essentialism

- Money as a system of recording credits and debits
(Sumer 3000 BCE: "Clay Tablet"; Europe 10-12 century: "Tally sticks"; Europe 16 century: Scudo di Marchi)
- Money as authorised and guaranteed by political authorities
(Platon, 5th century BCE; Jixia-Academy, China, 4th century BCE)
- Money as a symbolic bundle of four economic functions
(Aristoteles, 4th century BCE)
- Money as special good with equivalent value
(Aristoteles, 4th century BCE; A. Smith 1776)
- Money as a „Monetary Agreement“
(Bank of England 1694; Peel's Bank Act 1844)
- Money as a social relation
(K. Marx 1857; G. Simmel 1900; T. Parsons 1951, Luhmann 1982))



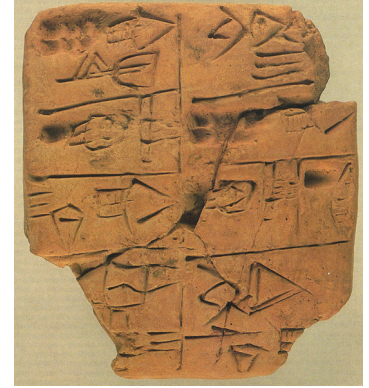
„Fei“ Stone Money at the Yap Island



Electrum Lion Coin (Ancient Lydia 600 BCE)

2.2. Money, Money, Money

- Money based on political authority
 - Neolithic Revolution: How to organize the surplus fund of sereals in order to ensure future sowings?
 - Coins of
 - Money exist long time before the first coin was minted. A system accounting credits and debits (Uruk 3000 BCE; „Fei“ Stone Money at the Yap-Island (Micronesia); and "tally sticks" (mediaval Europe).
- Money without political authority
 - „Scudo de Marchi“ (= Unit of account at international fairs of trade and drafts in Geneve, Lyon, Genua, 16. century)
 - Struggle of Power between monarchs and merchant bourgeoisie



Sumerian Clay Tablet (Uruk 3.500 BCE)



Exchequer Tally (Mediaval Europe)

2.3. Monetary Agreement: Privat Public Partnership and the BOE

- Foundation of the „Bank of England“ 1694 (Public Privat Partnership: Banknoten mit staatlicher Garantie)
- Debatte um den Wertstandard des Geldes (Nominalisten vs. Essentialisten)
- John Locke setzt sich durch (Essentialismus aus Misstrauen gegenüber der Macht des Königshauses)
- Tauschwertschwankungen (Wertrelation zu anderen Waren): Wenn er unter den Gebrauchswert fällt (=Materialwert) kommt es zum Entzug der Münzen aus der Zirkulation. Sie werden eingeschmolzen.
- Negative Folgen für die wirtschaftl. Aktivität, und: Deflation. Man versuchte gegenzusteuern durch schrittweise Verringerung des Silbergehalts des Pfund.

2.4. Beeing in the Fool ...

„ (...) even love has not turned more men into fools than has meditation upon the nature of money“ (William E. Gladstone on Peel's Bank act 1844, quoted by Karl Marx, Critique of Political Economy, 1859)

- First theoretical reflections on money ~500 BCE (in China and in Ancien Greek)
- the same basic controversy: Nominalism vs. Essentialism
- The provocation of BITCOIN: neither ... nor ...
- What we see is basically the FORM of the MEDIUM
- The turn from Aristoteles, Platon, Smith u.a. : functional analysis (marking a distinction between medium and form)



20 Gold-Mark (Germany 1905)



10 Million Reichsmark (during the Great Inflation, Germany 1923)

3. Formanalysis III: N. Luhmann – The Distinction between Medium and Form

- FORM is the indication of a distinction
- Distinction between loose and strict coupled elements
- Media open a space of possibilities of combinations
- Medium and Form are mutual dependend. Without medium no form, and without form no medium
- Media and Form are no entities but differences (created by an observer)

Forms are „not (beautiful or otherwise) shapes, but (..) boundaries, as markings of differences that oblige us to make clear which side we are indicating, and thus which side of the form we are on, our point of departure for further operations. The other side of the boundary (the „form“) is given simultaneously. Each side of the form is the other side to the other side. Neither side is anything on its own.“ (ToS 29).

3.1. Money as a Medium

- Luhmann's functional analysis refers to the social function of money, not on any kind of essence (philosophy) or to questions of the quantity concerning money supply and prices (economics).
 - Money is a Medium. But what a medium? Here we are confronted with a second concept of MEDIUM: the concept of „symbolically generalised communication media“
 - This (second) concept is derived from another idea, which is fundamental for Luhmann's Theory of Society: The concept of Meaning. Sinn is the central medium for Luhmann's concept of communication = Unity of the difference between actuality and potentiality.
 - Both concepts (medium/form-difference & symbolically-generalised-communication-media) have a very close relationship: „Symbolically generalized media are also media insofar as they require the difference between loose and strict coupling and enable forms to be formed on the basis of a loosely coupled medial substratum.“ (ToS, 191).
 - The social function of money is not the mediation of transaction! As a factual situation of course this is naturally not disputing, but the **FUNCTION** of the corresponding generalized symbolic medium lies elsewhere, as always in overcoming an improbably threshold. (S. 209). A medium in this sense is always a medium for establishing meaning. And without meaning: no social operation. And generalisation means: the medium permits standardizations that abstract from individual preferences.
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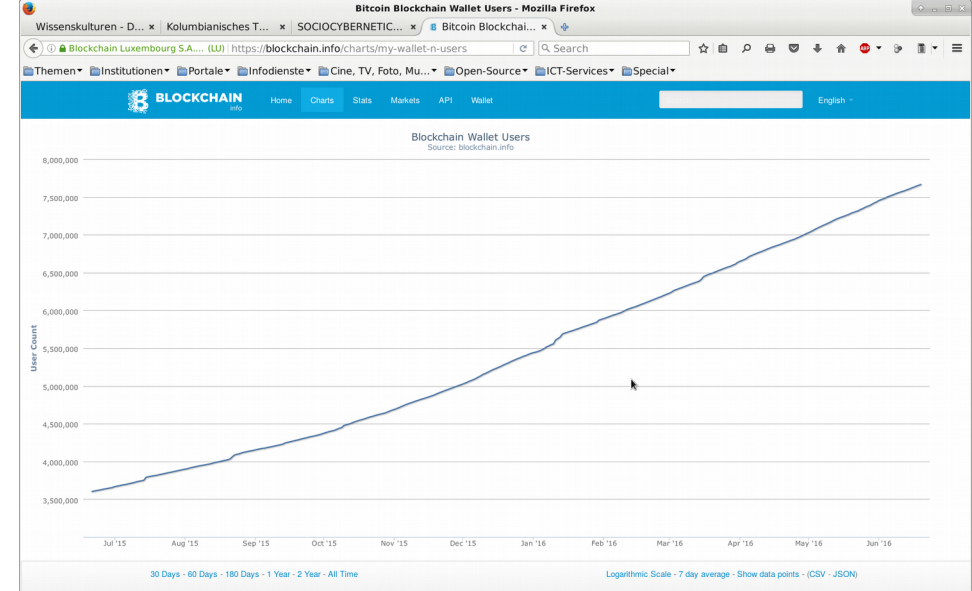
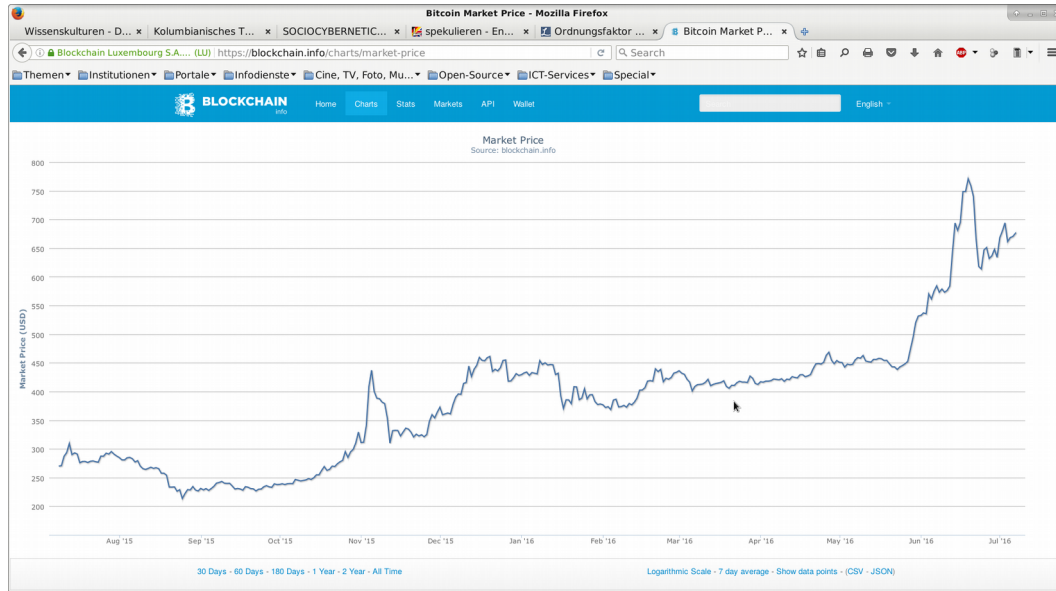
3.2. Money and Property

- „Societal evolution has created the medium property, which it later transformed into the medium of money to make it available and easier to coordinate.“ (Theory of Society, I, 208).
 - Luhmann doesn't deduce the concept of money from the exchange of commodities but from the category of property.
 - The function is not primarily the exchange of property, but „to make it available and easier to coordinate“.
 - Initially property is bounded to the substantial shape and therefore only limited and restricted to divide and to transfer. Money change this restriction. From now on there is a virtual symbol for this property which now is arbitrarily divisible and transferable.
 - "Money probably developed not for its function in mediated exchange, but as a sign for performance imbalances, to begin with, probably in household economics.“ (Luhmann: Gesellschaft der Gesellschaft, S. 348 und ToS, S. 208)
 - Money legitimates a particular position of the individuals to the property of the society or community.
 - Hereby arise the possibility to purchase property or parts of property in a legal way.
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4. Resumen

- Money as an ordering factor („At the beginning there was unjustness, violence, deception.“ (Semantik und Gesellschaft, Band 3, S. 49).
 - The function of the symbolically generalized medium money (...) became manifest only in an already functioning money economy.“ (Luhmann Gesellschaft der Gesellschaft, S. 349, ToS 208).
 - Not every money is a symbolically generalised communication media. Money existed long before, but the **steering** function of money began not before the **monetarisation of property** took place. (ToS 208).
 - Luhmann doesn't deduce the concept of money from the exchange of commodities but from the category of property.
 - if one accept this point of view - all other questions, which were asked in history of money, are **senseless** (so e.g. the search for a definitive coverage of money value“ (ToS. 201).
 - Bitcoin is money if it does fulfill the function as a symbolically generalized communication medium.
 - What are the criteria?
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Currency Rate (2015 – 2016) & Blockchain Wallet User



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