

# Blockchain Narrative Ontologies

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March 23, 2019

Sfetcu, Nicolae, "Blockchain Narrative Ontologies", SetThings (March 23, 2019), MultiMedia Publishing (ed.), URL = <https://www.telework.ro/en/blockchain-narrative-ontologies/>

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A partial translation of  
Sfetcu, Nicolae, "Filosofie tehnologiei blockchain - Ontologii", SetThings (1 februarie 2019), MultiMedia Publishing (ed.), DOI: 10.13140/RG.2.2.25492.35204, ISBN 978-606-033-154-4, URL = <https://www.telework.ro/ro/e-books/filosofia-tehnologiei-blockchain-ontologii/>

## Blockchain Narrative Ontologies

Social ontology is concerned with the nature of the social world, constituents, or building blocks of social entities in general. Some theories claim that social entities are built from people's psychological states, others are built up of actions, others from practice, and other theories deny that even a distinction can be made between social and non-social. One of the ways to clarify assertions about building social entities is to use different forms of the supervenience<sup>1</sup> relationship. An advantage of the supervenience relationship is that it allows relatively easy articulation of important distinctions in precise ways. But there may also be well-known shortcomings regarding the relationship of supervenience. (Fine 2001) Various other relationships besides supervenience,

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<sup>1</sup> Supervenience is a relationship between sets of properties or sets of facts. It is said that X supervene on Y if and only if a distinction is required in Y so that any distinction in X is possible.

including identity, parties, merger, aggregation, membership, constitution, and substantiation, can be discussed for the social blocks of the social world. (List and Pettit 2011)

For Paul Ricoeur<sup>2</sup>, there is an order and a structure of history transmitted through the narration of history, otherwise the history would be unintelligible. But the events and facts of this narrated history disrupt the dominant order and reorder it.

Ricoeur has examined a number of different forms of extended speech, starting with metaphorical discourse. Narrative discourse is one of the forms investigated by Ricoeur, (Pellauer and Dauenhauer 2002) setting up heterogeneous concepts that identify actions at a time when something happens not only after something else, but also because of another thing from a story or history that can be followed. It reforms physical events as narrative events, which make sense because they say what happens in a story or history. The narratives are always a synthesis of the heterogeneous concepts that configures storytelling episodes.

In *Time and Narrative*, Ricoeur emphasized the importance of the idea of a narrative identity. (Ricoeur 1988) Ricoeur's argument on individualization continues through a succession of stages. It starts from the philosophy of language and from the problem of identifying the reference to persons as individuals themselves, not just things. This leads to the consideration of the speaker as an agent, passing through the semantics of the action that Ricoeur had learned from analytical philosophy. Then comes the idea that the self has a narrative identity. (Pellauer and Dauenhauer 2002)

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<sup>2</sup> Paul Ricoeur was a French philosopher preoccupied with philosophical anthropology in the tradition of French reflective philosophy. Ricoeur concluded that, in order to properly study human reality, the phenomenological description should be combined with the hermeneutical interpretation, thus developing a theory of interpretation that could be grafted on phenomenology. While philosophical language always pursues univocal concepts, the language actually used is always polysemic, so all language uses necessarily require interpretation. In his later work he put an increasing emphasis on the fact that we live in time and history. (Pellauer and Dauenhauer 2002)

The narrative paradigm is a theory of communication conceptualized by Walter Fisher, (Fisher 1984) which states that all significant communication takes place by telling or reporting events. Stories are more convincing than arguments. Stories have the power to include the beginning, middle, and end of an argument. (Rowland 1988)

Narrative rationality requires consistency and fidelity. (Dainton and Zelley 2011) Narrative coherence is the extent to which a story makes sense. Narrative fidelity is the extent to which a story fits into the prior understanding of the observer. The narrative paradigm is generally considered an interpretive theory of communication. (Spector-Mersel 2010)

Wessel Reijers and Mark Coeckelbergh describe ontologically the technology with reference to the ever-growing digital chain, which contains transaction records. (Reijers and Coeckelbergh 2018) The blockchain is made up of the programming code as a sequence of symbols that can be read by the computing devices. This code has a significant human and socio-institutional dimension. John Searle offers an ontological theory of social reality that explains the similarity between the law and the programming code, indicating their linguistic origin. The origin of certain artificial phenomena, called institutional deeds, is traced back to the linguistic entities called statements of status functions. (Searle 2010, 13) The linguistic act of the agreement (speech act) results in a new reality: (Searle 2006, 69) it gives the agreed party a new set of digital rights and duties, the constitutive rules defining the ontology of the ICT environment. (Reijers and Coeckelbergh 2018)

Declarations on status functions include both internal aspects (linguistic aspects, sentences) as well as illustrating aspects (extra-linguistic aspects: intentional states such as beliefs and desires). Thus, if we declare something, we can create an ontological reality while we want it to happen. (Searle 2006, 112)

In the case of blockchain technology, the individual act of trading a quantity of cryptocurrency depends on the collective intentionality of this act, and a collective consensus is needed to make the system work. (Nakamoto 2008, 8)

Wessel Reijers and Mark Coeckelbergh consider post-phenomenological theories in the philosophy of technology about the role of technological mediation and social studies of science and technology (mapping social networking groups or human and non-human actors) to analyze blockchain technology by conceptualizing the type of relationship which he represents between the subject and his world. Thus, the development of technologies such as Bitcoin indicates a policy understood as an interaction between social discourses and social imaginations.

There are different philosophical views on how the ontological significance of narrative can contribute to our understanding of the social world and the way in which social reality is modeled. Some researchers consider that narrative is an instrumental cognitive skill or linguistic tool, while others regard it as an ontological category related to how people exist in the world (Meretoja 2014, 89) or understand human life as a narrative. (MacIntyre 2007, 114) Another theoretical division of the role of the narrative exists between an empirical tradition denouncing the narrative as a fundamental philosophical concept (Strawson 2004) and a hermeneutical tradition rejecting the idea of a narrative-free experience and claims that all representations of the human social world are mediated by the human linguistic interpretation (Taylor 1971, 4) that subjectivity is always mediated by language, signs, symbols and texts. (Meretoja 2014, 96) Thus narrative should be understood as a fundamental ontological aspect of human social reality.

Narrative ontology can be used to study the different aspects of our social world. Ricoeur characterizes narratives as cultural phenomena and explains why narratives can outline our social reality: because it configures narrative portions that recreate social events (Borisenkova 2010, 93)

and thus renews our social reality. Organizing the narrative structure helps us to understand the social world, but at the same time understanding the social world is the basis of any new narrative structure.

David Kaplan established a connection between Ricoeur's work and the philosophy of technology. He suggests that Ricoeur's hermeneutical method as well as the hermeneutic circle analysis between human experience and narrative can be fruitful in technology discussions, (Kaplan 2006, 43–44) as these elements can enrich the analysis of technological mediation by including the notion of linguistic and social mediation.

Blockchain technology and narrative-constructed monetary technologies do not organize people and interactions directly with each other, but rather quasi-characters (e.g., addresses, exchange houses) and quasi-events (e.g., transactions) in quasi-plotting (e.g., mining a block). (Ricoeur 1990, 181)

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