The cryptocurrency terminology as an object for metalanguage reflection of Russian and English speakers

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Abstract. The research aims to prove the assumption that the terminology of such an extraordinary socio-economic digital phenomenon as the cryptocurrency market is involved in the sphere of the Russian and English speakers' metalanguage consciousness, and is subject to pronounced metalanguage reflection. Observation over "naive linguists" is a way to monitor lexical changes in both languages due to the emergence of the crypto market. Metalanguage reflection is understood here as the ability of an individual to reflect on the elements and patterns of language and speech: to observe the language, to notice new phenomena in it, to make generalizations, describe and explain the results of the observations. It has been shown that at present, both Russian and English speakers feel the need for clarification of the new terms and explicitly express this need. Analysis of the discourse on the Internet reveals a huge number of metalanguage comments in both Russian- and English-speaking segments of the Internet. A high degree of metaphoricity in the cryptocurrency language is noted. Another manifestation of metalanguage reflection is amateur lexicography. It was also found that professional cryptocurrency market participants feel the need for terminology standardization and are making attempts to do so.

1 Introduction

Language as an instrument for thought and communication always responds to what is happening among its speakers. Nowadays, with the immeasurably accelerated pace of life and the dictatorship of the World Wide Web, this reaction of the language has become almost immediate. Due to resonant events and processes in society, new words emerge and the old ones acquire new meanings. The changes at the language lexical level do not go unnoticed: reflection is constantly carried out over the processes of word formation and usage. The manifestations of the reflection, for example, are the "Word of the Year" campaigns, which monitor the language vocabulary in its dynamics.

Not all social phenomena and their accompanying neologisms become recognizable by a wide mass of native speakers (this applies equally to Russian and English speakers).

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Proper understanding of many new words and combinations and fluency in them are impossible without strong interest of native speakers in the life of society as a process of communication, in which constant influx of new information implies a certain response. To fully understand the modern reality language, a native speaker must be aware of what is happening in it. The reasons for communication failure can be social apathy, age, gender, lack of education, and other factors.

Based on the above, the authors suggested that the "neological boom" in the field of cryptocurrencies should definitely trigger its participants' verbal reaction. This assumption was confirmed, and the authors turned to examine the pronounced metalanguage reflection of the Russian and English speakers on the cryptocurrency terminology.

The speaker's ability to consciously create in language is directly proportional to their "feeling" of language, taste, observation skills, a tendency to reflect on the facts of language and speech. It is known that metalanguage reflection is typically common to native speakers, to different extents. The reflection is understood as an activity of consciousness aimed at understanding the facts of language and speech; it is an interpretation of any language and speech phenomena, as well as a verbal representation of this operation. Metalanguage reflection is "a type of language behavior that involves the meaningful use of language, i.e., observation, analysis and evaluation of its various facts, correlation of one's assessments with others, with the norm and usage" [6]. The ability to focus on the facts of language and speech, to comprehend and evaluate them is an important function of consciousness. Here, we mean the ordinary metalinguistic consciousness represented by ordinary native speakers called naive linguists.

Over the past decades, a lot of linguistic studies have addressed these and similar issues. It should be noted that English-speaking authors investigate the metalinguistic awareness and reflection issues mainly in the framework of language acquisition. Russian linguists pay considerable attention to what they call "ordinary metalanguage reflection of the native Russian speakers". The theoretical basis for this research are studies by both Russian and foreign authors analyzing the ordinary speakers' metalanguage activity (I. Vepreva, V. Khlebda, T. Shmeleva, M. Shumarina, R. Jacobson, R.P. Leow, M. Swain, J.E. Gombert). This research paper is the first attempt to look at the crypto market vocabulary as the object for metalanguage reflection of Russian- and English-speaking users. Observation over "naive linguists" is a way to monitor lexical changes in both languages due to the emergence of the crypto market as a new digital economic phenomenon.

2 Approach and methodology

The intellectual activity of a linguistic personality manifests itself, among other things, in metalanguage reflection and is constantly subject to interdisciplinary scientific interest. In this case, we are talking primarily about the manifestations of the ordinary metalanguage consciousness of people who are not linguists. These are creative native speakers who are able to reflect upon written and spoken language, to understand the speech components and their relationships." [1]. Thanks to them, it becomes possible to make a "lingo-mental cross-section of the era" [2]. Modern life is full of new complex phenomena that entail the renewal of the conceptual world. Therefore, ordinary metalinguistic consciousness is seen as an increasingly active and influential force in society [3].

The present contribution focuses on the explicit manifestation of metalanguage reflection upon the cryptocurrency vocabulary. Taking into account some discrepancies between the Russian-language and English-language terminology, the authors consider it necessary to clarify the terms used in the article. Metalanguage reflection is understood as the ability of an individual to reflect on the elements and patterns of language and speech. It

is the ability to observe the language, to notice new phenomena in it, to make generalizations, describe and explain the results of the observations. Word-combinations “metalinguistic ability”, “metalinguistic knowledge”, “language-analytic ability”, “metalinguistic awareness”, “(meta)language reflection”, “metalinguistic reflection”, “metadiscursive reflection”, “reflexive metadiscourse” are often used as synonyms in the specialized literature. Accordingly, in the Russian-language linguistic studies, the speakers’ reflexive comments are called “reflexives”, “reflexive utterances/statements”, “metadiscursive expressions”, “metalanguage utterances/statements” or, in A. Wierzbicka’s terms, “metatext expressions”, “metatext markers”. “Reflexive” is a metalanguage utterance containing a commentary on the word or expression used. Metalinguistic reflection and talk about language are also called ‘metatalk’ by some English-speaking authors [4, 5].

To reveal the stated topic, the following research methods were used: linguistic observation of the Internet discourse, data collection, description, cross-lingual comparison, classification, and interpretation (commenting and generalization of metalanguage statements).

Metalanguage statements of native English and Russian speakers in the Internet discourse were analyzed (websites, specialized forums and FAQ pages both in English and Russian, official documents).

3 Results

3.1 Explicit metalanguage reflection on the crypto industry lexicon

The cryptocurrency market, understood as a complex of all known cryptocurrencies and their supporting infrastructure is a remarkable layer of today’s economy and an element of economic culture. Economic culture “connects the economy with those cultural conditions and cultural environment in which the economy exists and moves, changes and reproduces” [7].

As a new economic phenomenon, the field of cryptocurrencies has entered a living language and has acquired its own terminology, giving rise to a kind of neological boom, a huge number of new words, some of which are purely professional slang, and some have slipped into common usage. Neologisms arise at the intersection of three functions of a language (communicative, cognitive, nominative) and the cognitive and creative activity of native speakers [8]. New vocabulary usually brings the task of communicative decoding with it. It often turns out that the more complex the phenomenon underlying the new vocabulary, the more difficult it is to comprehend and “cope” with the new terminology.

Over the eleven years of Bitcoin’s existence, the cryptocurrency market has changed dramatically, but a huge number of people still do not know what it is and how it all works. The possible reason for this is a lack of understanding by laymen of the sophisticated network technologies and the very concept of digital money.

As a consequence, the cryptocurrency terminology has become the object for intense metalanguage reflection. It is necessary to emphasize the importance of this fact since in this case, interest in the new vocabulary is valuable not only for the linguists who analyze the functioning of ordinary metalinguistic consciousness. Words as units of the lexical system are often at the intersection of language and law, and here, it should be noted that the cryptocurrency market legal foundations are still vaguely formulated. Russian legal system has difficulty comprehending the cryptocurrency space. There is no uniformity in terminology, which the researchers point out: “as technology develops, the number of people involved in it increases. Against this background, the development and improvement of the language used to describe it is taking place. ...The Russian law still lacks a minimum

standardized terminology and a clear mechanism for the virtual currency circulation. It seems that when developing normative legal acts, it is first necessary to decide upon the content of the basic concepts and formulate a categorical apparatus" [9].

The problems of communication language in the crypto world were also mentioned in the Eurasian Economic Commission report (2019) which emphasized the need to first develop a glossary: what do we put into understanding specific terms so that our legislation, if it will differ, at least does not differ much in concepts and terms [10].

It is telling that 'bitcoin' and 'cryptocurrency' took the second and seventh places respectively, in the Russian "Word of the Year 2017" campaign. As is known, the "Word of the Year" contest is held in different countries and reveals the most important words and expressions of the particular year, thus reflecting the atmosphere of the time, the image of daily life in the linguistic consciousness. The words of the year as linguocultural markers create a verbal portrait of the year and help to identify the phenomena that excite society, through the prism of language, which, in fact, happened in 2017 with the aforementioned terms of the crypto market.

The speaker's knowledge of the words' meanings and the organization of words in their lexicon is an important area of research. The web content analysis shows that terminology issues are regularly addressed in specialized articles, numerous forums, and chats dedicated to cryptocurrencies. It can be clearly seen that the communicators can be divided into those who are fluent in the cryptocurrency language and those for whom communication in this circle is difficult due to the lack of understanding of the code, complete or fragmentary. Not being sure of the meanings of new words, communicators are unable to operate them; the communicative failure is obvious at the lexico-semantic level [11].

"Blockchain, cryptocurrencies, decentralization, HODL, whales, miners, cold wallets, tokenization, pumps and dumps. If you do not understand anything from this set of words, you are not alone" – these words from a Russian website express a common problem of misunderstanding of borrowed English words. The insiders' attempts to explain to the beginners what the world of virtual money is, take the form of metatext commentaries: "I explain in simple words", "simply about complicated things", "cryptocurrencies in a nutshell", "in other words, this is ...", "I explain in human language", "if you explain in a simplified way, then ...", "a simplified explanation may be as follows ...", "I explained to you in simple words what hodl is", "blockchain in plain language is...", etc.

The above examples represent reflexive utterances that verbalize metalanguage operations of interpretation and are the units of speech interaction between the addresser and the addressee. Verbal reflection on language and speech is explicitly expressed here, and we see the communicators act as naïve linguists. The explicitness of metalanguage reflection is important because, according to researchers, we can talk about three levels of metalinguistic awareness: noticing, followed by reporting, and finally, understanding [12, p.70]. So, the explicit use of metalinguistic terms to describe words' meanings reflects awareness at the level of understanding. Metalanguage comments of this kind are serving communication functions: they demonstrate a conscious and deliberate desire of the communicators to ensure the completeness and accuracy of communication, to prevent possible misunderstanding.

Intending to explain complex phenomena in simpler language, Russian-speaking producers of metalinguistic utterances undertake interpretive efforts and search for similes, analogies, and metaphors, trying to clarify the essence of the digital currency mechanism. These types of figurative language are a typical strategy for explaining new vocabulary because they work well to simplify things and bridge knowledge gaps:

"A bitcoin transaction can be compared to sending a letter",

"If we simplify everything as much as possible, then the phenomenon of bitcoins can be explained using the example of lemonade caps ...",

“In the simplest words, bitcoins are virtual points that are issued by a special program. Like basketball or volleyball”,

“The essence of the blockchain technology can be compared to a puzzle”,

“Any changes to the block sequence can only be made at the very end of such a chain. It looks like a train: to change the content of such a train, we do not replace the cars, but add new ones to the tail”.

There can be many definitions of the same phenomenon. Looking at the examples above, however, the question arises, how complex the phenomenon must be (bitcoin in this case), that an array of words is used to interpret it? What does sending a letter, lemonade caps, a train, and virtual glasses in a sports game have in common? Meanwhile, we see that through these concepts, which are not easily correlated, attempts are made to explain the same phenomenon. The analysis of similes and the means of expressing comparison as a manifestation of associative thinking may be of interest for further research.

In the English-speaking environment, we observe similar processes of verbalizing new knowledge, with the exception that some authors analyze more deeply the figurative means used to describe cryptocurrency technologies and take the discussion of cryptocurrency vocabulary to a higher level, which will be discussed below. This may be due to the fact that they work with the material of their native language, where the cryptocurrency vocabulary comes from, and therefore they entered the process of metalanguage reflection earlier.

At the same time, the authors believe that in the English-speaking environment, the difficulties of understanding the newly formed words are minimized for the same reason: almost all cryptocurrency neologisms are generated by the English language. Consequently, native English speakers “see” a new word better due to the knowledge of the roots and affixes used, the morphological composition of the word is much more informative for them.

In the English-speaking environment, the desire to simplify the complex essence of cryptocurrencies is also explicitly expressed:

“a quick definition of blockchain for anyone who doesn’t know (I will try and make this as simple as possible)”,

“I’ll try to explain blockchain with a little story”,

“if you still can’t figure out what a bitcoin is, this simple explanation for a five-year-old may help you”.

English speakers also produce vivid similes and metaphors in an effort to explain new technologies through memorable images:

“blockchain is like a beaded necklace”,

“bitcoin is a new gold”,

“gold is bitcoin’s closest real-world analogy”.

Let’s take a closer look at some of the attempts to interpret the concepts of the cryptocurrency market. For example, the authors of the following explanation believe that there is a simple yet true analogy that illustrates something as complex as cryptocurrencies and blockchain. It is “the glass deposit box analogy”: “Imagine a huge vault from a bank. The vault is filled with rows of unlabeled deposit boxes. However, each deposit box has a glass facade, allowing everyone to visualize the contents of the deposit box, but does not access it. When a person opens a new deposit box, they receive a key that is unique to that box. Making a copy of the key does not duplicate the contents of the box. And in the same way, even though you have the key, the box is not technically yours. You only have the ability to access what’s inside of it” [13, 14].

We have given this lengthy piece of text to show that the analogy can hardly be called simple. The analogies like this require creative thinking, the ability to think in images, intense mental work. The given example of figurative language also shows that figurative

comparability semantics encompasses similitude relationships that do not assume that the combined language expressions are of the same type in their referential meaning.

R. R. Chauhan and A. Kulkarni offer two artefact metaphors for understanding how the crypto industry works. Both authors accompany their explanations with metatext commentaries. Kulkarni focuses on the desire to help people who are not fluent in the cryptocurrency language: «marketing efforts often play fast and loose with the terms, creating even more confusion for people who aren't fluent in the industry's language» [15]. Kulkarni offers the casino metaphor, where “the casino chips are cryptocurrency coins, and the casino is the blockchain network”. Ranjit proposes the metaphor based on correlation between blockchain and DNA. The author begins his article with an introduction, in which he explains his commitment to metaphors: “I always enjoyed a good metaphor, even more than a good joke. The best ones help you see something in a new light, and can be stretched farther that you might at first expect” [16].

3.2 The main metaphor: need for the paradigm shift

It is known that most of the cryptocurrency market terminology is of English origin. Exotic for a Russian-speaking user, the word "mining" is originally “the industry of removing substances such as coal or metal from the ground by digging” [17]. As a result of reconsidering the meaning, mining also means the technology of getting cryptocurrencies, bringing them into existence. Therefore, we can observe how English-speaking authors, in their turn, clarify the meanings of the words for their readers and warn against the literal understanding of the terms: “production of cryptocurrency units like Bitcoins is often referred to as ‘mining’. This is a metaphor: the coins are actually secured via computers solving algorithms” [18], “digital currencies, like BitCoin, must be mined – the metaphor typically used to describe the minting of new coins” [19].

Of particular interest is David Orban's point of view: he considers bitcoin to be a phenomenon of mass culture, and also insists on the need for clear and relevant terminology. The author thinks that the metaphors and the corresponding terms used to describe how Bitcoin works can be updated, or even radically changed [20].

D. Orban analyzes the origins, advantages, and disadvantages of the MINING as the cryptocurrency conceptual metaphor. He considers the analogy with gold mining to be incorrect, and even calls it a false analogy. In his opinion, the mental imagery linked to gold mining is “actually harmful to understanding Bitcoin” [20]. So, Orban believes that mining, derived from gold mining, brings negative connotations with it. Therefore, he insists on the need for the paradigm shift in relation to the main metaphor and replacing it with a new one. He offers the weaving and weavers' metaphor, and gives a detailed explanation of his very original, unique vision of the virtual money extracting process. In his deeply thought-out article, D. Orban makes important metalanguage remarks: no metaphor should go too far, no analogy can be perfect, and emphasizes that the most important thing is “to be able to talk to a larger audience, with friendly, familiar expressions that can be easily understood” [20].

It should be noted that D. Orban not only demonstrates his attitude to the words and meanings, but also appeals to the addressee's opinion, calling his audience for linguistic creativity, suggesting not to lazily accept ready-made images, but to try to come up with “new smart ways” to talk about bitcoins. If the weavers' metaphor fixes in the language, this, according to D. Orban, will mean a step in the right direction for the global acceptance of bitcoin.

The logic of D. Orban's metalinguistic reasoning shows that he belongs to those native speakers for whom it is important what words we use and what meanings they have. Metalexic, metasemantic, metapragmatic awareness are, among others, subdomains of

metalinguistic awareness [21]. Not everyone is able to feel the subtleties of language and speech. As V. Chlebeda wrote, some people just speak, and some people know what they are saying; metalanguage is used by those who need to consciously shape their speaking, who feel the need to inform the interlocutor that they are aware of the linguistic status of their utterance. This noble need is given only to the privileged, to those who can split into a speaker and an observer [22].

3.3 Amateur lexicography as manifestation of metalanguage reflection on the cryptocurrency lexicon

The metalanguage reflexive activity of the Russian and English native speakers is also expressed in attempts of the lexicographic description of the new lexicon. A search on the Internet leads to a variety of dictionaries designed to assist in understanding the cryptocurrencies terminology: "Crypto A to Z: cryptocurrency glossary", "Trader's Dictionary. Basic terms of cryptocurrencies", "Cryptocurrency. Glossary of terms and definitions", "Glossary of TOP-25 terms of cryptocurrencies", "Mini-dictionary for crypto-dummies", etc. Most of these dictionaries are products of the so-called spontaneous or amateur lexicography, and are created by crypto market enthusiasts., i.e. amateur lexicographers. They sometimes are even a kind of crowdsourced dictionaries. The dictionaries give an interpretation of the cryptocurrency concepts, and those composed by Russian speakers reveal the meanings of the vast majority of untranslatable terms of the English origin through descriptive translation. Untranslatables, or words with no equivalents in Russian are the biggest challenge for Russian speakers. As one of the users said, people who join this space "are bombarded with numerous terminologies and crypto jargons that make most of them feel out of the sink" [23]. So, in the users' comments to the online dictionaries one can see requests: "do not stop, continue updating and explaining the new terminology", "please explain what does "listing" mean in "exchanges are listing crypto", "one more question: what is "secondary tokens trading?" Obviously, the above examples indicate that there is a need to improve terminological literacy among the Internet community, at least to equally participate in the communication process.

Professional participants in the cryptocurrency market also deal with terminology issues. In particular, the Russian Association for Electronic Communications prepared in 2017 a "Dictionary of terms and definitions necessary for the development of legal regulation in the field of cryptocurrencies." The authors point out that the terms and definitions are the basic structures of the corresponding legal regime, in their absence, there is uncertainty about its scope [24]. It is worth noting that when created, the dictionary underwent various assessments, from approval to criticism and reproaches for the lack of elaboration and inconsistency of terms. Currently, various developers continue working on compiling comprehensive crypto market glossaries.

4 Conclusion

This paper has examined the explicit manifestations of metalanguage reflection upon the cryptocurrency vocabulary among the Russian- and English speakers. We can conclude that the cryptocurrency market has become an interdisciplinary phenomenon, considered both an element of the modern information economy and an element of economic culture. The conceptual and terminological complexity of this phenomenon has led to a response in the form of metalanguage reflection of the Russian and English speakers.

As has been shown in this paper, understanding many of high-frequency crypto industry words is a challenge for both languages native speakers. Metalanguage reflection upon the cryptocurrency market lexicon has been noted both among its ordinary participants and the

official structures representatives since for the purposes of legal regulation, the terminological apparatus of this area needs to be improved. Ordinary Russian speakers as representatives of the borrowing linguistic environment have a particularly acute need for the interpretation of the lexicon due to a great number of untranslatables. English-speaking users are also involved in metalanguage activity, producing reflexive utterances commenting on the words and expressions used. The main reason for this is the desire to avoid communication failures, to achieve mutual understanding between the addresser and the addressee, and to provide feedback. This is especially important because of the cryptocurrency market's global nature.

We've found that metalanguage reflection is strong in both cultures, but English-speaking authors seem to analyze more deeply the figurative means used to describe cryptocurrencies.

One more manifestation of metalanguage reflection on the cryptocurrency lexicon is also amateur lexicography, which can be called a tool for mastering the new vocabulary.

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