

The Language of Cryptocurrencies

Tereza Michálková

Bachelor's thesis
2019



Tomas Bata University in Zlín
Faculty of Humanities

Univerzita Tomáše Bati ve Zlíně
Fakulta humanitních studií
Ústav moderních jazyků a literatur
akademický rok: 2018/2019

ZADÁNÍ BAKALÁŘSKÉ PRÁCE

(PROJEKTU, UMĚLECKÉHO DÍLA, UMĚLECKÉHO VÝKONU)

Jméno a příjmení: **Tereza Michálková**
Osobní číslo: **H15696**
Studijní program: **B7310 Filologie**
Studijní obor: **Anglický jazyk pro manažerskou praxi**
Forma studia: **prezenční**

Téma práce: **Jazyk kryptoměn**

Zásady pro vypracování:

Shromáždění odborné literatury k tématu práce
Vytvoření korpusu článků k problematice kryptoměn
Stanovení cílů práce a specifikace analýzy
Analýza článků dle definovaných kritérií
Shrnutí výsledků analýzy, formulace závěrů

Rozsah bakalářské práce:

Rozsah příloh:

Forma zpracování bakalářské práce: **tištěná/elektronická**

Seznam odborné literatury:

Allan, Keith, and Kate Burridge. 2006. *Forbidden Words: Taboo and the Censoring of Language*. New York: Cambridge University Press.

Mishkin, Frederic S. 2016. *The Economics of Money, Banking, and Financial Markets*. 11th ed. Boston: Pearson.

Plag, Ingo. 2003. *Word-Formation in English*. Cambridge: Cambridge University Press.

Steinmetz, Sol, and Barbara Ann Kipfer. 2006. *The Life of Language: The Fascinating Ways Words are Born, Live & Die*. New York: Random House Reference.

Stroukal, Dominik, and Jan Skalický. 2018. *Bitcoin a jiné kryptopeníze budoucnosti: historie, ekonomie a technologie kryptoměn*. 2nd ed. Prague: Grada.

Vedoucí bakalářské práce:

Mgr. Lenka Drábková, Ph.D.

Ústav moderních jazyků a literatur

Datum zadání bakalářské práce:

9. listopadu 2018

Termín odevzdání bakalářské práce:

3. května 2019

Ve Zlíně dne 22. ledna 2019

doc. Ing. Anežka Lengálová, Ph.D.
děkanka



Mgr. Libor Mareš, Ph.D.
ředitel ústavu

PROHLÁŠENÍ AUTORA BAKALÁŘSKÉ PRÁCE

Beru na vědomí, že

- odevzdáním bakalářské práce souhlasím se zveřejněním své práce podle zákona č. 111/1998 Sb. o vysokých školách a o změně a doplnění dalších zákonů (zákon o vysokých školách), ve znění pozdějších právních předpisů, bez ohledu na výsledek obhajoby ¹⁾;
- beru na vědomí, že bakalářská práce bude uložena v elektronické podobě v univerzitním informačním systému dostupná k nahlédnutí;
- na moji bakalářskou práci se plně vztahuje zákon č. 121/2000 Sb. o právu autorském, o právech souvisejících s právem autorským a o změně některých zákonů (autorský zákon) ve znění pozdějších právních předpisů, zejm. § 35 odst. 3 ²⁾;
- podle § 60 ³⁾ odst. 1 autorského zákona má UTB ve Zlíně právo na uzavření licenční smlouvy o užití školního díla v rozsahu § 12 odst. 4 autorského zákona;
- podle § 60 ³⁾ odst. 2 a 3 mohu užít své dílo – bakalářskou práci - nebo poskytnout licenci k jejímu využití jen s předchozím písemným souhlasem Univerzity Tomáše Bati ve Zlíně, která je oprávněna v takovém případě ode mne požadovat přiměřený příspěvek na úhradu nákladů, které byly Univerzitou Tomáše Bati ve Zlíně na vytvoření díla vynaloženy (až do jejich skutečné výše);
- pokud bylo k vypracování bakalářské práce využito softwaru poskytnutého Univerzitou Tomáše Bati ve Zlíně nebo jinými subjekty pouze ke studijním a výzkumným účelům (tj. k nekomerčnímu využití), nelze výsledky bakalářské práce využít ke komerčním účelům.

Prohlašuji, že

- elektronická a tištěná verze bakalářské práce jsou totožné;
- na bakalářské práci jsem pracoval samostatně a použitou literaturu jsem citoval. V případě publikace výsledků budu uveden jako spoluautor.

Ve Zlíně 2.5.2019

.....

1) zákon č. 111/1998 Sb. o vysokých školách a o změně a doplnění dalších zákonů (zákon o vysokých školách), ve znění pozdějších právních předpisů, § 47b Zveřejňování závěrečných prací;

(1) Vysoká škola nevýdělečně zveřejňuje disertační, diplomové, bakalářské a rigorózní práce, u kterých proběhla obhajoba, včetně posudků oponentů a výsledku obhajoby prostřednictvím databáze kvalifikačních prací, kterou spravuje. Způsob zveřejnění stanoví vnitřní předpis vysoké školy.

(2) Disertační, diplomové, bakalářské a rigorózní práce odevzdané uchazečem k obhajobě musí být též nejméně pět pracovních dnů před konáním obhajoby zveřejněny k nahlížení veřejnosti v místě určeném vnitřním předpisem vysoké školy nebo není-li tak určeno, v místě pracoviště vysoké školy, kde se má konat obhajoba práce. Každý si může ze zveřejněné práce pořizovat na své náklady výpisy, opisy nebo rozmnoženiny.

(3) Platí, že odevzdáním práce autor souhlasí se zveřejněním své práce podle tohoto zákona, bez ohledu na výsledek obhajoby.

2) zákon č. 121/2000 Sb. o právu autorském, o právech souvisejících s právem autorským a o změně některých zákonů (autorský zákon) ve znění pozdějších právních předpisů, § 35 odst. 3:

(3) Do práva autorského také nezasahuje škola nebo školské či vzdělávací zařízení, užije-li nikoli za účelem přímého nebo nepřímého hospodářského nebo obchodního prospěchu k výuce nebo k vlastní potřebě dílo vytvořené žákem nebo studentem ke splnění školních nebo studijních povinností vyplývajících z jeho právního vztahu ke škole nebo školskému či vzdělávacímu zařízení (školní dílo).

3) zákon č. 121/2000 Sb. o právu autorském, o právech souvisejících s právem autorským a o změně některých zákonů (autorský zákon) ve znění pozdějších právních předpisů, § 60 Školní dílo:

(1) Škola nebo školské či vzdělávací zařízení mají za obvyklých podmínek právo na uzavření licenční smlouvy o užití školního díla (§ 35 odst. 3). Odpírá-li autor takového díla udělit svolení bez vážného důvodu, mohou se tyto osoby domáhat nahrazení chybějícího projevu jeho vůle u soudu. Ustanovení § 35 odst. 3 zůstává nedotčeno.

(2) Není-li sjednáno jinak, může autor školního díla své dílo užít či poskytnout jinému licenci, není-li to v rozporu s oprávněnými zájmy školy nebo školského či vzdělávacího zařízení.

(3) Škola nebo školské či vzdělávací zařízení jsou oprávněny požadovat, aby jim autor školního díla z výdělku jím dosaženého v souvislosti s užitím díla či poskytnutím licence podle odstavce 2 přiměřeně přispěl na úhradu nákladů, které na vytvoření díla vynaložily, a to podle okolností až do jejich skutečné výše; přitom se přihlédne k výši výdělku dosaženého školou nebo školským či vzdělávacím zařízením z užití školního díla podle odstavce 1.

ABSTRAKT

Tato bakalářská práce zkoumá jazyk kryptoměn ve vybraných článcích tradičních zpravodajských webových stránek a specializovaných zpravodajských webových stránek zaměřených na kryptoměny. Práce je rozdělena na dvě části, teoretickou a praktickou. Teoretická část slouží jako úvod do problematiky kryptoměn, žargonu, slovtvorných procesů a online žurnalistiky. Praktická část se zaměřuje na analýzu vybraných termínů specifických pro kryptoměny za účelem zjištění jejich původu a následně schopnosti vytvářet nová slova a kolokace.

Klíčová slova: kryptoměny, žargon, slovtvorné procesy, online žurnalistika, Bitcoin, kolokace

ABSTRACT

This bachelor thesis examines the language of cryptocurrencies in selected articles from traditional news covering websites and cryptocurrency-focused news covering websites. The thesis is divided into two parts, theoretical and analytical part. The theoretical part serves as an introduction to cryptocurrencies, jargon, word-formation processes and online journalism. The analytical part focuses on the analysis of the selected cryptocurrency-specific terms with the intention of identifying their origin, productivity in creating new words and ability to collocate.

Keywords: cryptocurrency, jargon, word-formation processes, online journalism, Bitcoin, collocations

ACKNOWLEDGEMENTS

Firstly, I owe my gratitude to my supervisor Mgr. Lenka Drábková, Ph.D. for her feedback, guidance, patience and the time she devoted to me during the process of writing my bachelor's thesis. Additionally I would like to thank my friends and family for their support and understanding, especially my mother who provided me with constant encouragement.

I hereby declare that the print version of my Bachelor's thesis and the electronic version of my thesis deposited in the IS/STAG system are identical.

CONTENTS

INTRODUCTION	10
I THEORY	11
1. CRYPTOCURRENCY.....	12
1.1 BLOCKCHAIN	12
1.1.1 Changing the Data.....	13
1.2 MINING PROCESS.....	13
1.3 DEVELOPMENT OF CRYPTOCURRENCIES	14
1.4 TYPES OF CRYPTOCURRENCIES.....	15
1.4.1 Bitcoin	15
1.4.2 Altcoins	16
2 JARGON	18
3 WORD-FORMATION PROCESSES	20
3.1 AFFIXATION.....	20
3.1.1 Prefixation.....	20
3.1.2 Infixation.....	21
3.1.3 Suffixation.....	21
3.2 COMPOUNDING	22
3.3 CLIPPING	24
3.4 BLENDING.....	24
3.5 CONVERSION	25
3.6 BACKFORMATION.....	26
3.7 ABBREVIATION.....	26
4 ONLINE JOURNALISM.....	27
4.1 HISTORY OF ONLINE JOURNALISM.....	27
4.2 ETHICAL PRINCIPLES	27
4.3 FEATURES OF ONLINE JOURNALISM.....	28
II ANALYSIS	30
INTRODUCTION TO THE ANALYTICAL PART	31
5 DIFFERENCES IN SPELLING	33
6 DIFFERENCES IN USE.....	35
7 LEXICAL ANALYSIS.....	36
7.1 TERMS ORIGINATING FROM ECONOMY	36
7.2 TERMS ORIGINATING FROM IT	36
7.3 CRYPTOCURRENCY-SPECIFIC TERMS.....	36
7.3.1 Cryptocurrency.....	37
7.3.2 Blockchain.....	38
7.3.3 Mining.....	39
7.3.4 Bitcoin.....	40
7.3.5 Block	41
7.3.6 Hash.....	42
7.3.7 Proof-of-work (POW), Proof-of-stake (POS), Proof-of-research (POR)	43

7.3.8	Wallet	44
7.3.9	Fork	45
7.3.10	Hodl, lambo, to the moon.....	46
SUMMARY OF THE ANALYTICAL PART		48
CONCLUSION		50
BIBLIOGRAPHY		51
LIST OF THE ANALYSED ARTICLES.....		58
APPENDICES		60

INTRODUCTION

In 2019 modern cryptocurrencies celebrate 10 years on the market as they were introduced by minting first bitcoins in 2009. Subsequently new cryptocurrencies, as of time of writing there are 2,133, appeared on the market.

The aim of this thesis is to investigate the language of cryptocurrencies. The thesis is divided into theoretical and analytical part. To lay the groundwork, the theoretical part of this thesis focuses on cryptocurrencies, their history, how they work and major cryptocurrencies on the market, jargon, word-formation processes and online journalism. Word-formation processes are included to establish a framework upon which the origin of the terms is investigated. As trading cryptocurrencies is an occupation, jargon, as an occupational variety of language, is also included, as well as online journalism as all the articles compiled for the analysis originate from news covering websites.

The analytical part examines the terms and expressions that pertain to the jargon of cryptocurrencies as well as business jargon and IT and technology jargon. For the purpose of the analysis of the language of cryptocurrencies articles from traditional news covering websites and news covering websites that specialise in covering cryptocurrency-related news are compiled to serve as a corpus. The cryptocurrency-specific terms are selected for closer analysis based on the frequency of their use in the field and linguistic phenomena that surround them. Furthermore the analytical part also concentrates on the inconsistencies in spelling and use of the cryptocurrency-specific terms present in the analysed articles.

I. THEORY

1. CRYPTOCURRENCY

Cryptocurrency is a type of digital currency that uses cryptography to prevent tampering and to encode the rules of the cryptocurrency in the system. (Narayanan et al. 2016, 1) Modern cryptocurrencies are based on the technology called blockchain and use the process of mining to give value to the coins which the users obtain.

Cryptocurrencies combine, to certain extent, the anonymity of cash with the convenience of online payments. They however do not provide the same level of anonymity. Because even though when paying, the user is not required to use his/her real identity, the transaction can be theoretically traced back to the username from public ledger by using advanced algorithms or due to insufficient security on user's side. (Narayanan et al. 2016, XIV) However the transaction can be traced to an account, not to a specific person.

Mishkin (2016, 101–102) claims that cryptocurrencies cannot replace regular money as of yet because they do not fulfil all three key functions of money, i. e. medium of exchange, unit of account, and store of value. They can function as a medium of exchange, some companies such as Subway, Microsoft and Paypal provide option to pay with cryptocurrency (Nasdaq 2018), and they could be used in the future as a unit of account, provided they will be used widely enough, but they cannot store value as their prices are too unstable. (Mishkin 2016, 101–102)

1.1 Blockchain

Blockchain (usually written with lower case b) is a distributed ledger of transactions of a cryptocurrency. It is based on the original Bitcoin technology – blockchain which was replicated or stolen by other individuals or companies and serves as a base for other cryptocurrencies. (Van Valkenburgh 2017) Lee and Deng (2018, 15) point out that blockchain based cryptocurrency can be programmed to work with anything of value for example company shares, taxes, environmental credits, vouchers, cash and votes. (Lee and Deng 2018, 15)

The technology has three constituent parts: peer-to-peer networking, consensus mechanisms, and blockchains. (Van Valkenburgh 2017) Blockchain is a collection of blocks linked in a chain. The link is established because each block contains data about the network and a hash pointer, a link, which points to the previous block and verifies that the data have not been altered. Therefore it is possible to trace predecessor of each block and know the value of it. (Narayanan et al. 2016, 11) Stroukal and Skalický (2018, 28)

claim that very rarely blocks can split from the original chain into new chains (during a process known as forking) but these sidelines are usually short. Irregardless of the sidelines, the system always works with the longest chain for verification because it is the most difficult one to calculate. (Stroukal and Skalický 2018, 28)

Lee and Deng (2018, 15) state that every transaction, grouped together with others into a block, is transparently recorded across automated peer-to-peer computer network. A transaction is approved when all the nodes reach a consensus on the state of the ledger, i. e. date, time, account number, and amount of transaction, this assures that the system is synchronised, and is almost impossible to defraud by changing the data. (Lee and Deng 2018, 15)

1.1.1 Changing the Data

The data can be hypothetically altered but Narayanan et al. (2016, 12) state that if the data were altered in the middle of the chain, for example in the block B, the follow-up block, block C, would not correspond, because it contains a link (hash) to the previous one, block B, and the link would not correspond. (Narayanan et al. 2016, 12) Stroukal and Skalický (2018, 28) add that the modification of the chain in the middle would require modification of each follow-up block, i. e. blocks D, E, F, etc. (Stroukal and Skalický 2018, 28)

According to Franco (2014, 113–114) to change the data on the blockchain without the need to alter each following block, the attacker would have to control majority of the processing power, this is known as 51% attack. 51% attack occurs when an attacker, a group or a mining pool controls 51%, or more, of the processing power of the network. In this situation the attacker or attackers would be able to prevent transactions from being verified, reverse transactions, which would allow double spending of the coins, and prevent miners from mining new blocks. (Franco 2014, 113–114)

1.2 Mining Process

Mining process is a process during which the coins are obtained from the network when a computer solves complex mathematical equations. (Tucker 2013) Narayanan et al. (2016, XIX) claim that the equations are independent of each other and increase in difficulty to ensure that the time needed to solve them does not decrease because that would mean the solutions to the equations lose their value. The value of a cryptocurrency is therefore derived from the system itself rather than being determined by other commodities such as gold or dollar. (Narayanan et al. 2016, XIX)

1.3 Development of Cryptocurrencies

According to Narayanan et al. (2016, XIV–XV) the idea of applying cryptography, a process of encryption used to achieve more security, came from David Chaum, an American computer scientist and cryptographer, in 1983. His system ensured anonymity and prevented double-spending. (Narayanan et al. 2016, XIV–XV) Double-spending was one of the major problems that needed to be solved before the technology could be regularly used; it occurs when one coin is spent twice. (Stroukal and Skalický 2018, 27) Narayanan et al. state that this was possible because the coins did not have any distinguishing features. David Chaum proposed that since the system was supposed to be anonymous, the receiver of money picked a serial number without revealing it to the person sending the money who then signed and confirmed the amount sent. Narayanan et al. point out that the system worked because if the receiver were to put a serial number already assigned to a different coin it would be impossible for him/her to spend the money. However this system still required a central entity (bank, government or company) to verify the transactions. (Narayanan et al. 2016, XIV–XV)

In 1988 Chaum joined with other cryptographers to create another system based on his earlier one, the system, however, did not allow division of coins. (Narayanan et al. 2016, XV–XVI) In 1990 he founded the first company dealing with online payments, Digicash, the name of the cash being Ecash. (Stroukal and Skalický 2018, 28–29) Digicash's system prevented double-spending by encoding the identity of the sender that could be decoded only by the sender himself/herself. When transferring money the recipient required the sender to decode a random part of the code to prove his/her identity. The recipient kept a record of this decoding. That alone was not enough to find out the identity of the sender but if the coin were double-spent, all the recipients would be able to trace it back to the sender as they would each have a piece of an unique code that could be traced to the sender's identity. (Narayanan et al. 2016, XV–XVI) Stroukal and Skalický claim that the company went bankrupt because they were not able to get government funding and Ecash only substituted traditional cash in online payments rather than had their own value. (Stroukal and Skalický 2018, 29) Nonetheless, his idea was then copied by other companies, most prominently by the company called Mondex which developed a technology that served as a base for online payments in banking industry. (Narayanan et al. 2016, XVII–XVIII)

The cryptocurrencies at this point did not have their own value as their value was determined by the commodities they were based on (dollar and gold) and therefore they were linked to the market value of these commodities. (Narayanan et al. 2016, XVIII–XIX) For example e-Gold used gold as the commodity determining value of the cryptocurrency. (Stroukal and Skalický 2018, 29) The aim of the cryptocurrencies was to create a currency which has its own value not determined by outside factors, such as market value of gold or dollar, but derived from within the system itself. Narayanan et al. (2016, XIX–XXIII) state that the proposed solution was to create their value by solving complex computational problems. This idea was employed in 1997 in Adam Black's Hashcash and is a significant characteristic of cryptocurrencies today, but unlike modern cryptocurrencies it did not account for inflation. In 1998 b-money and Bitgold were introduced, employing all the previous ideas and adding recording to ledger. B-money's ledger was not global but each node had its own ledger. It proved to be problematic because if the nodes were in disagreement the system would not know how to deal with the discrepancy unless a central identity were involved. (Narayanan et al. 2016, XIX–XXIII) Another major step in a development of cryptocurrencies was taken in 2009 when Bitcoin was introduced on the market.

1.4 Types of Cryptocurrencies

1.4.1 Bitcoin

Bitcoin is a cryptocurrency that is not controlled by a single entity, for example a central bank. (Mishkin 2016, 101) Like its predecessors, it is decentralised, anonymous and its value is determined from within the network, but unlike its predecessors it accounts for inflation.

Bitcoin was first presented in paper written by Satoshi Nakamoto published in 2008. Satoshi Nakamoto is a pseudonym for a group, or a single person. According to Stroukal and Skalický he introduced himself as a 34-year-old Japanese man. He is speculated to be someone from an English-speaking country, due to the use of perfect English and absence of Japanese words in the communication and code. Stroukal and Skalický also favour the theory of multiple individuals with extensive knowledge of economics, IT and cryptography, using the name Satoshi Nakamoto, due complexity of the technology. (Stroukal and Skalický 2018, 24) On the other hand, Narayanan et al. (2016, XXIV) disagree as all the communication over the period of two years had a similar style, voice

and there were no contradictions and according to them that could not be achieved with multiple individuals using the same name. (Narayanan et al. 2016, XXIV)

Bitcoin solves the problem of inflation by replicating the golden standard in its mining process. The miners download the full ledger of all existing Bitcoins and all coins have their owner. The mining is done by solving complicated math equations that must be solved by computer and get harder over time, mimicking the progressively more difficult historical process of mining gold. As the creator had set a limit on how many coins can be mined, 21 million by 2140, the scarcity of the cryptocurrency was ensured. (Tucker 2013) Stroukal and Skalický (2018, 37) say that the number was set arbitrarily. (Stroukal and Skalický 2018, 37) Additionally the limit prevents oversaturation of the market which would consequently lead to the value of the cryptocurrency dropping under a desirable limit. Stroukal and Skalický contend that it is still possible to mine more bitcoins but the process is more difficult and expensive. The process of mining will stop 2140, however it is assumed, given the current development, that all the bitcoins will have been mined before 2033. (Stroukal and Skalický 2018, 37)

1.4.2 Altcoins

Altcoins is a collective name for the cryptocurrencies that followed after Bitcoin. As the code for Bitcoin is open-source and publicly available, it is free for anyone to copy or contribute to the code to create new cryptocurrencies. These modifications enhance the code which leads to the general improvement of cryptocurrency technology. Altcoins also help to speed up the adoption of digital currencies and help to lower the cost of the payments. (Lee 2015, 82–84) Hileman and Rauchs (2017, 15–16) claim that the majority of altcoins based on Bitcoin make minor changes, for example different block time, currency supply, and issuance scheme. But some introduce larger innovations for example new consensus mechanisms (e.g. *proof-of-stake*) as well as decentralised computing platforms with smart contract capabilities. (Hileman and Rauchs 2017, 15–16)

Lee (2015, 83–84) divides altcoins into five categories: coins with minor changes (e. g. *Terracoin* – which is very similar to Bitcoin with the exception of some modifications), coins with technical innovation (e.g. *Peercoin* – using Proof-of-stake instead of Proof-of-work), coins coded in a different programming language (e. g. *NTX* – written in JAVA), coins with new ideas (e.g. *Etherum* – introduced smart contracts) and Appcoins (e.g. *SWARM coin* – blockchain for private equity) which can be perceived as equity or shares that are sold on crowdfunding websites, such as Kickstarter. (Lee 2015,

83–84) Hileman and Rauchs (2017, 15–16) on the other hand divide altcoins into two categories: new (public) blockchain systems that feature their own blockchain (e.g. *Ethereum*, *Peercoin*), and dApps/Other that are additional layers built on top of existing blockchain systems (e. g. *Counterparty*). (Hileman and Rauchs 2017, 15–16)

According to Hileman and Rauchs (2017, 18) Bitcoin was a dominant cryptocurrency on the market in 2017, followed by *Etherum*, *Dash* and *Litecoin*. *Etherum* was launched in 2015 and its cryptocurrency is Ether. (Hileman and Rauchs 2017, 18) It has its own Turing-complete programming language and introduced smart contracts. (Lee 2015, 84) *Dash* was launched in 2014 as a privacy-focused cryptocurrency, its distinctive feature being that the system puts 10% of revenues to fund the development, community projects and marketing. *Litecoin* was launched in 2011 and although it borrowed the main concepts from Bitcoin (Hileman and Rauchs 2017, 17) it introduced new technical innovations that made the mining process more decentralised. (Lee 2015, 83)

2 JARGON

Jargon is usually defined as a vocabulary consisting of words and expressions used by a particular group whose members often share a profession and which is difficult to be understood by non-members of the group to who might even seem like gibberish. (Stevenson and Waite 2011, 760)

Hudson (1978, 3; 5) claims there are four essential elements of jargon. It belongs to a certain profession or occupation, it is considered to be pretentious and having little to no meaning, it is used by intellectually inferior people and it is deliberately or accidentally mystifying. Hudson however draws distinction between jargon and technical language. As he sees that technical language, obtained while studying the field (theoretical knowledge), is necessary to the professionals to express ideas and communicate more effectively. (Hudson 1978, 3; 5)

Jargon used in a professional setting as well as with hobbies and is used to ease the communication. Crystal (2003, 174; 370) suggests that more specialised professions often have more technical vocabulary, which becomes more complex with time. (Crystal 2003, 370). Typical examples are medicine (e.g. *placebo*, *GSW*) and law (e. g. *plaintiff*, *defendant*). Crystal continues that jargon is not only limited to professions but it is also related to hobbies and interests, most prominently games and sports (e. g. *throw in the towel*). (Crystal 2003, 174)

Allan and Burrige (2006, 56) claim that jargons can differ from each other not only lexically but also often grammatically and sometimes phonologically and typographically. (Allan and Burrige 2006, 56) Finnegan (2012, 341) on the other hand claims that linguistic features of jargon are limited solely to vocabulary; pronunciation and grammar derive from the situation in which the vocabulary is used. (Finnegan 2012, 341)

In some cases words cannot be assigned to a specific jargon without knowing the context because one word or expression can be used as vocabulary of two, or more different professions. For example bubble can mean *purchasing the stock of weak companies which leads to inflation of the market* in business, *a break in a process stopping the flow of instructions* in computing and *a bulb used for lighting* in TV industry or *overtime in TV industry*. (Green 2013, 84) Additionally expressions and words from one jargon can become a part of another. For example military jargon often enters business jargon, primarily managerial jargon and therefore it is used in business jargon as well as

military jargon. Examples include *collateral damage*, *asset deployment* and *scorched earth-strategy*. (Folsom 2005, XII)

Allan and Burrige (2006, 58) contend that jargon has two functions. It serves as a technical and specialist language that is precise and economical. (Allan and Burrige 2006, 58) For example saying *bear* is significantly more efficient than “*one that sells securities or commodities in expectation of a price decline*”. (Merriam-Webster, n. d.) Allan and Burrige continue that it also provides its user with a sense of belonging to a certain group by excluding those who are not the members of the group. (Allan and Burrige 2006, 58) Therefore as Hudson (1978, 6) states jargon is more condensed, saves time, raises morale and makes it seem as though the members of the group are more supportive. (Hudson 1978, 6)

On the other hand the use of jargon can be perceived as pretentious and unnecessary by non-members. Lutz (1989, 3–4) claims that due to the nature of jargon, speakers can make simple appear complex, ordinary profound and obvious insightful, therefore it can be used to get authority or even deliberately deceive. (Lutz 1989, 3–4) Its use in advertising, politics and military to obscure the reality earned jargon negative reputation and therefore it is advised to avoid it. Madhukar (2017, 160) suggests that jargon should be used sparingly in business communication and advises to use it only when the author is certain that the reader is familiar with it. (Madhukar 2017, 160) Hudson (1978, 4) adds that jargon should be used only if expressing the ideas simply cannot be done without the communication suffering from such simplification. (Hudson 1978, 4)

Jargon is only one of the terms that refer to the variety of language used by professionals in the same field or people sharing a hobby. Crystal (2003, 370) prefers to use the term occupational variety. (Crystal 2003, 370) Trudgill (2000, 81), on the other hand, opts for a hyperonym, register, and defines it as using particular words or words in particular sense, not dependent on a dialect and related to a certain profession. (Trudgill 2000, 81) As register is a variety of language associated with a particular situation of use, e. g. in a workplace, including particular communicative purposes, it shares the same linguistic features as jargon. (Biber and Conrad 2009, 6)

3 WORD-FORMATION PROCESSES

Word-formation processes create new words in a language. New words are either completely new creation, coinage, today used mainly for creation of names for commercial products (Fromkin, Rodman and Hyams 2003, 92), borrowed from other languages, or are created using elements already existing in a language. (Kvetko 2005, 27)

Plag (2003, 14) divides the word-formation processes into two groups – derivation and compounding, with derivation being further subdivided into affixation (prefixation, suffixation, infixation) and non-affixation (compounding, conversion, clipping, blending, abbreviations – acronyms, initialisms). (Plag 2003, 14) Kvetko (2005, 27), on the other hand, divides the word-formation processes by their frequency of use into principal (affixation, compounding, conversion) and minor (clipping, backformation, blending, abbreviations – acronyms and initialisms) processes. (Kvetko 2005, 27)

3.1 Affixation

Affixation is a process in which a bound morpheme is attached to a root morpheme or a stem, which results in creation of a new word. (Kvetko 2005, 32) Yule (2014, 57) adds that words can be created either by adding prefix, suffix or both (e.g. *demystifying*, *non-mineable*) and that the resulting word does not necessarily share the same word class with the original word. (Yule 2014, 57) Plag (2003, 86; 98; 101) distinguishes three types of affixation – prefixation, infixation and suffixation. (Plag 2003, 86; 98; 101)

3.1.1 Prefixation

In prefixation a new word is derived by attaching a prefix to a root or a stem. Generally speaking, prefixes change or concretise the lexical meaning of the word undergoing the derivational process but prefixation very rarely affects the word class. (Kvetko 2005, 34)

Plag (2003, 98–99) divides the prefixes in English semantically into five categories. Prefixes quantifying the root (e.g. *macroeconomics*, *overheating*), prefixes serving as locatives (e.g. *counter-strike*, *endocentric*), prefixes referring to time (e.g. *postmodern*, *pre-mined*), prefixes denoting negation (e. g. *dissatisfaction*, *devaluation*) and the fifth category are prefixes that encompass the rest of the prefixes (e. g. *malfunction*, *misunderstand*). (Plag 2003, 98–99)

Kvetko (2005, 35–36), on the other hand, divides prefixes in to six groups. Negation, opposition, reversal and counter-reaction (e. g. *unfair*, *dislike*); degree, measure or size (e. g. *superhuman*, *ultrahigh*); repetition or making something possible (e. g. *rebuild*,

enlarge); time, place, distance, order and relation (e. g. *postmodern*, *pro-democratic*); and number and numerical relation (e. g. *bilingual*, *multinational*). (Kvetko 2005, 35–36)

3.1.2 Infixation

Infixation is a process during which an affix is inserted in the middle of another word. Although it is more prominent in other languages, it occasionally appears in English as an insertion of an expletive in another word. (Yule 2014, 57) Fromkin, Rodman and Hyams (2003, 79–80), add that the most common American infix embedded is *fucking* and all its euphemisms, while in British English infix *bloody* and its euphemisms share the same level of prominence. (Fromkin, Rodman and Hyams 2003, 79–80) Plag (2003, 101) however disputes the existence of infixes in English due to the lack of bound morphemes that could possibly fulfil this function. (Plag 2003, 101)

3.1.3 Suffixation

The process of suffixation involves adding a suffix to the root or the stem to create a new word. Among the most popular suffixes in English are *-er* (e. g. *work-worker*), *-ist* (e. g. *economy-economist*), *-ism* (e. g. *collective-collectivism*), *-ize* (e. g. *normal-normalize*), *-ic* (e. g. *economy-economic*), *-y* (e. g. *wealth-wealthy*). (Kvetko 2005, 32–34)

Plag classifies suffixes into nominal, verbal, adjectival and adverbial. According to Plag (2003, 86–92) nominal suffixes usually create abstract nouns, derived from verbs, adjectives and other nouns. The nouns created this way often denote actions, results of actions, properties and qualities (e. g. *arrival*, *useful*). Other nominal suffixes derive person nouns (e. g. *applicant*, *supplier*). Examples of nominal suffixes include *-age* (e. g. *spill-spillage*), *-al* (e. g. *arrive-arrival*), *-ance* (e. g. *absorb-absorbance*), *-ant* (e. g. *defend-defendant*), *-ity* (e. g. *productive-productivity*), *-ment* (e. g. *asses-assesment*), each having limitations as to what the nominal prefixes can be attached to and the type of noun resulting from the derivation. (Plag 2003, 86–92)

Plag (2003, 92–93) continues that verbal suffixes allow the derivation of verbs from other word categories often from adjectives and nouns. The only suffixes that belong to this category are *-ate* (e. g. *regular-regulate*), Germanic suffix *-en* (e. g. *broad-broden*), *-ify* (e. g. *simple-simplify*) and *-ize* (e. g. *item-itemize*). (Plag 2003, 92–93)

Adjectival suffixes are either relational or quantitative. Suffixes *-able/-ible*, *-al*, *-ary*, *-ed*, *-esque*, *-ful*, *-ic/ical*, *-ing*, etc. are more prominent when deriving relational adjectives (e.g. *beautiful*, *forked*) as opposed to quantitative adjectives (e. g. *daily*). (Plag 2003, 94–97)

Plag (2003, 97–98) adds that adverbial suffixes are represented only by two suffixes. Suffix *-ly* can be considered inflectional, however, in cases such as *short-shortly* and *hard-hardly* there is a difference between the semantic meaning of the adjective and the adverb. The other suffix, *-wise*, derives adverbs from nouns (e. g. *streetwise*). Two types of adverbs the suffix *-wise* produces are manner/dimension adverbs (e. g. *crosswise*) and viewpoint adverbs (e. g. *lengthwise*). (Plag 2003, 97–98)

3.2 Compounding

Compounding is a word-formation process during which two words are joined together in order to create a new one. (Fromkin, Rodman and Hyams, 2003, 93) Plag (2003, 133–134) argues that due to the existence of multiword compounds (e. g. *screenwriter equity chairman*), rather than two words, two elements are put together while the individual elements can consist of multiple words. (Plag 2003, 133–134) Plag (2003, 146–147) distinguishes two types of compounds, coordinative (copulative) and subordinative. Coordinative compounds can be perceived as having two heads because neither seems more important, while subordinative have a modifier-head structure. (Plag 2003, 146–147)

The structure of compounds usually abides the right hand rule, therefore the head is on the right-hand side and on the left side the modifier occurs. The rule however does not apply to multiword compounds, such as *Jack-in-a-box*, as they do not have the usual structure of compounds, but instead have an internal structure of a syntactic phrase. (Plag 2003, 135–136) Fromkin, Rodman and Hyams (2003, 93–95) state that the head, either word or phrase, determines compound's broad meaning and grammatical category as it inherits its semantic and syntactic information from the head. They continue that the meaning of compounds is derived from their individual parts however many compounds have an idiomatic quality and therefore their meaning has to be learnt (e. g. *turncoat, highbrow*). (Fromkin, Rodman and Hyams 2003, 93–95)

There is no universality of spelling for compounds as the spelling depends on individual idiosyncrasies of the compound. Compounds can be spelled with a space between the words, open compound (e. g. *film producer, block time*), a hyphen, hyphenated compound (e. g. *easy-going, proof-of-work*), or without separation, closed compound (e. g. *bittersweet, blockchain*). (Fromkin, Rodman and Hyams, 2003, 94) According to Steinmetz and Kipfer (2006, 192–193) in some cases compounds made up of three or more words have a tendency to remain hyphenated (e. g. *happy-go-lucky*). Steinmetz and Kipfer continue that compounds usually enter the language separated by

a space, later get hyphenated and finally fuse into a single word. Multiple forms of one compound can co-exist in a language at the same time. (Steinmetz and Kipfer 2006, 192–193) Kvetko (2005, 29) adds that they can also be written with linking elements such as vowels, consonants, prepositions or conjunctions. (Kvetko 2005, 29)

Fromkin, Rodman and Hyams (2003, 95) state that compounds usually have stress on the first word (element), which helps to distinct a compound from a noun phrase in an oral speech. (Fromkin, Rodman and Hyams 2003, 95) Plag (2003, 154–155) contradicts them and claims that the rule only applies to nominal compounds, as the adjectival compounds have both left-ward and right-ward stress and verbal compounds have no definitive stress pattern. The stress however is not a determining factor when recognising adjectival compounds in oral speech. (Plag 2003, 154–155)

Plag (2003, 144–155) classifies the compounds by their head as nominal compounds, adjectival compounds and verbal compounds. Nominal compounds have a noun as a head and they represent the most common compounds in English. He further subdivides them into endocentric which are self explanatory (e. g. *book cover*), and exocentric the meaning of which is obscure and has to be learnt (e. g. *redneck*). Adjectival compounds have an adjective as a head and either a noun or another adjective as a non-head. The number of verbal compounds created by compounding is limited, as there are only verb-verb compounds. Verb-verb compounds do not have a modifier-head structure and therefore are interpreted as two actions taking place at the same time (e. g. *stir-fry*). (Plag 2003, 144–155)

Another type of compounds is neoclassical compounds. Neoclassical compounds are compounds that are created by combining elements of Greek and Latin origin with other elements in the language. (Plag 2003, 155–156) Daille (2017, 16) adds that these elements are not language independent and therefore they have to be always combined with other elements. Neoclassical compounds can also have more than one element from Greek or Latin. (Daille 2017, 16) Plag (2003, 155–156) continues that the Greek and Latin elements can be divided into two groups, initial combining forms which occur at initial position (e. g. *photograph*) and final combining forms which are at the end of the word (e. g. *bureaucracy*). There are only two elements *morph-/morph* (e. g. *morphology*, *polymorph*) and *phil-/phile* (e. g. *philothelist*, *anglophile*) which can attach at initial position as well as at final position. (Plag 2003, 155–156) In some cases a linking element can be added between the first and second element, for Greek element *o* (e. g. *cryptography*) and for Latin *i* (e. g. *toxigen*). (Daille 2017, 16)

3.3 Clipping

Yule (2006, 55) defines clipping as a process of shortening words longer than one syllable by one or more syllables and therefore reducing them to a monosyllabic or a disyllabic word. (Yule 2006, 55) Plag (2003, 121) states that usually the clipping is based on the first part of the base word but clipping from the stressed syllable, albeit less frequent, exists in English (e. g. *telephone-phone* and *telex-fax*). Plag also states that the process of clipping has a function – an expression of familiarity, meaning that clipped forms are used by speakers who share similarities such as profession or interest, despite that some clippings are used by larger groups of speakers. (Plag 2003, 121)

Kvetko (2005, 39–40) distinguishes four types of clipping. Final (back) clipping, result of which is a reduction of the latter part of the word (e. g. *photography-photo*, *cryptocurrency-crypto*), initial (front) clipping reducing the initial part of the word (e. g. *telephone-phone*, *blockchain-chain*), mixed (middle) clipping that eliminates both ends of the word (e. g. *pajamas-jams*) and medial clipping (e. g. *specifications-specs*). Medial clipping is not a popular type of clipping in English. Kvetko states that during this process syllables or sounds in the middle part of the word are dropped. (Kvetko 2005, 39–40)

Kvetko (2005, 39) continues that the shortened word and its longer version often coexist in the same language, traditionally the shortened variant is used in oral speech and often has a different emotive charge, while the longer option is reserved for written speech. This is not universally true, as some can occur in both written and oral speech, and in some cases the longer word variant becomes obsolete (e. g. *omnibus-bus*). (Kvetko 2005, 39) Steinmetz and Kipfer (2006, 59) also contend that in some cases clipped words may acquire new meanings and differences in spelling (e. g. *bicycle-bike*), often due easier pronunciation. (Steinmetz and Kipfer 2006, 59)

3.4 Blending

According to Kvetko (2005, 42) blending can be perceived as a combination of two word-formation processes, clipping and compounding, during which two (rarely more) words are combined to create a new one. The first word is usually shortened at the end (final clipping) while the beginning of the second word is eliminated (initial clipping), the two clipped words are then joined together (e. g. *breakfast + lunch = brunch*, *alternative + coins = altcoins*). In some cases the blended words partially overlap if they

share a letter, syllable or only one of the words is clipped (e. g. *slang* + *language* = *slanguage*). (Kvetko 2005, 42)

Plag (2003, 122–125) points out that blended words have to be semantically related and have the same syntactic category for blending to occur. For example both *breakfast* and *lunch* are nouns and are semantically related, therefore the creation of the word *brunch* is possible. The length of a blend is determined by the number of syllables in the words being merged; if they do not share the same number of syllables, the length is determined by the number of syllables in the second word. (Plag 2003, 122–125)

3.5 Conversion

Conversion is a word-formation process that unlike affixation, blending, compounding or clipping does not add or eliminate an element, such as an affix or a lexeme, to create a new word but the function of the word changes. (Yule 2014, 55) Steinmetz and Kipfer (2006, 123) claim there are no restrictions as to what forms can be converted and the process can produce almost any part of speech. (Steinmetz and Kipfer 2006, 123) Kvetko (2005, 37) identifies four major types of conversion, the formation of verbs from nouns, nouns from verbs, adjectives from nouns and derivation of nouns from phrasal verbs. The conversion of nouns to verbs is the most prevalent method of verb-derivation in English. (Kvetko 2005, 37)

According to Steinmetz and Kipfer (2006, 124–125) conversion can be subdivided into total conversion and partial conversion. During total conversion, often also described as zero derivation, the word changes its function but remains unchanged (e. g. *a bottle-to bottle*). Partial conversion is generally not considered a true word-formation pattern but rather it can be perceived as a part of speech fulfilling the function of a different part of speech (e. g. *to call-a call*). (Steinmetz and Kipfer 2006, 124–125)

It is difficult to identify which word is derived by conversion but according to Plag (2003, 108–111) the directionality can be identified by further study of history of the language, taking note of the regularity of the inflections (mainly in the case of verb-noun conversion) and frequency of the usage. Derived words are less prominent in language and tend to have narrower range and meaning. Nevertheless, in some instances the direction of conversion cannot be identified. (Plag 2003, 108–111)

3.6 Backformation

Backformation, otherwise known as back derivation, is a type of word-formation process that creates a simpler word from more complex one by deleting a suffix or supposed suffix. (Plag 2005, 37) The process is similar to clipping, as it deletes a part of the word but unlike clipping, the product does not share the same word class with the original word. (Kvetko 2005, 41) Fromkin, Rodman and Hyams (2003, 97), state that such a deletion is often caused by an incorrect morphological analysis that assumes that the words ending with, for example *-er*, were created by the process of suffixation and proceeds to eliminate the assumed suffix and therefore a new word is created (e. g. *swindler-swindle*, *editor-edit*). Similarly, words ending with *-s* are falsely identified as plural and the supposed inflection is deleted in order to create a singular (e. g. *kudos-kudo*). (Fromkin, Rodman and Hyams 2003, 97) Although backformation is based on incorrect morphological analysis, most words created by backformation fill a niche in the language. (Steinmetz and Kipfer 2006, 53)

3.7 Abbreviation

Plag (2003, 126) defines abbreviation as a process similar to clipping and blending because the word or phrase is shortened. The word changes its visual form by creating a new word from the initial letters and occasionally non-initial letters of the words in the phrase or multi-word sequence (e. g. *UNESCO*, *ICO*, *HODL*). (Plag 2003, 126)

Plag (2003, 127–128) subdivides abbreviations into two categories: initialisms and acronyms. Initialisms are pronounced by reading each individual letter, whereas acronyms are read as a regular word. (Plag 2003, 127–128) Other linguists such as Yule (2014, 56) and Fromkin, Rodman and Hyams (2003, 95–96), recognise only a single category, acronyms, that encompasses both. (Yule 2014, 56; Fromkin, Rodman and Hyams 2003, 95–96)

Some acronyms are homophones deliberately chosen for publicity and intentionally allude to a certain cause (*CARE* – *Cooperative for Assistance and Relief Everywhere*, *WAR* – *Women Against Rape*). (Plag 2003, 128)

4 ONLINE JOURNALISM

Flemming et al. (2006, 1) define online journalism as journalism that involves writing news on the Internet. Journalism had changed over time, originally it was writing for newspapers or periodicals and with development of new technologies journalism had spread to radio, TV and eventually the Internet. (Flemming et al. 2006, 1)

OECD (2010, 76–78) claims that readers of printed newspapers today tend to read more news online and fewer people rely solely on printed newspaper as a source of information. On the other hand, readers do not tend to rely exclusively on the online news with the exceptions of the countries where citizens have access to broadband Internet such as South Korea. (OECD 2010, 76–78)

4.1 History of Online Journalism

Friend and Singer (2007, 29–30) state that news online appeared first in late 70s and early 80s, in the USA newspapers began to publish articles online in 1994, by the end of 1994 there were around one hundred online newspaper services in the USA and more printed newspapers followed. In the middle of 2000s majority of the print newspapers in the USA had a website which complemented the print. (Friend and Singer 2007, 29–30) Due to printing being expensive, news outlets have rebranded themselves as multimedia businesses in recent years (Hill and Lashmar 2014, 8) and therefore most media outlets have a website alternative to printed copies. (Flemming et al. 2006, 22) Additionally some of the newspapers and magazines are online exclusive (e. g. *Huffington Post*), these usually have smaller editorial teams which contribute to the lower cost of production. (Hill and Lashmar 2014, 8)

4.2 Ethical Principles

Online journalism should uphold the same basic ethical standards as print journalism. Ethical Journalism Network (n. d.) identifies the ethical principles of online and print journalism as:

- *Truth and accuracy* – the journalists should always report the information as accurate as possible, give all the relevant facts and make sure that information in the articles are fact-checked. Additionally, in case the information cannot be fact-checked, the journalists should clearly indicate as such;

- *Independence* – the journalists should be impartial to any political affiliations, corporations or cultures. If the journalists have any affiliations, they need to declare them to the editors or the audience;
- *Fairness and impartiality* – the journalists should be objective and present the reader with multiple viewpoints; this practice ensures that the article is going to be balanced and the reader is going to be provided with context. Fairness and impartiality also create trust and confidence between the author and the reader;
- *Humanity* – the journalists should take in consideration the effect of the articles as some articles can be harmful for the parties involved;
- *Accountability* – the journalists must be accountable and therefore if there are any errors in their work they should correct themselves and sincerely apologize.

4.3 Features of Online Journalism

There are distinctive features that are specific to online journalism as oppose to print journalism, Foust (2017, 6–11) identifies them as follows:

- *Audience control* – online media allow the readers to have more power to choose what information they want consume;
- *Time and space access* – online media are able to reach the readers anywhere at any time;
- *Non-linearity* – the articles do not have to be read in a specific order because online media do not have, unlike print media, a predefined linear order;
- *Storage and retrieval* – the news websites can store information and therefore they are easily retrievable and can be read long after they were published;
- *Unlimited space* – online media are not limited by space and therefore the articles are not limited by length;
- *Immediacy* – the articles can be published immediately and they do not have to uphold a deadline;
- *Multimedia capability* – the online articles can include different formats, such as video and audio, to better tell the story;
- *Audience participation* – the articles engage the readers by allowing them to comment as well as contribute their own content, such as photographs and videos. This type of involvement of the readership can increase the interest of the readers in certain topics as well as make the readers feel that they are listened to by the news

organisation. Audience participation also provides feedback to the authors of the articles as well as the news website which can afterwards adjust the content to better suit its readership.

Bradshaw and Rohumaa (2011, 30–31) add to the characteristics of online articles:

- *Transparency* – the authors of the articles can provide hyperlinks to the audio, video, reports, related articles, source materials and other websites to give the reader more information which contributes to better understanding of the article. Craig (2011, 8) adds that the hyperlinks also help with the promotion of the news outlet on social media. (Craig 2011, 8)

II. ANALYSIS

INTRODUCTION TO THE ANALYTICAL PART

The aim of the analytical part is to inspect the language of the cryptocurrencies in articles published on the traditional news reporting websites as well as published on the cryptocurrency-oriented websites and identify the terms used and their origin. It can be assumed that the articles will contain terms and expressions used only in the field of cryptocurrency. And additionally, as cryptocurrencies combine economy and technology, it can be also presumed that the expressions used in the articles are going to be related to these fields.

The articles used to create the corpus for this analysis are equally divided between traditional news covering websites and cryptocurrency-oriented news covering websites. The articles from the traditional news covering websites originate from the BBC, marked as BBC1–BBC5, Forbes, marked as FO6–FO11, and The Guardian, marked as G12–G15. The articles from the cryptocurrency-oriented websites were taken from Cointelegraph, marked as CT1–CT6, Bitcoin Magazine, marked as BM7–BM11, and CCN, marked as CCN12–CCN15 in the analysis. The articles were written between 2014 and early 2019 and were chosen because they covered similar topics and events. The excerpts from the articles used to illustrate the linguistic phenomena are quoted without any alterations, with the exception of shortening of the direct citations indicated by square brackets, no alterations were made to better illustrate inconsistencies in the spelling of some terms.

The articles are not cited in the analytical part; as a reference to specific articles the marks assigned to the articles are used. The list of the articles, authors, years of publication and headlines can be found at the end of the thesis. The analysed articles in their full length can be found on the enclosed CD.

Only some of the terms specific to the cryptocurrency are analysed in greater detail. The terms chosen for the analysis are selected based on the frequency of their use, ability to create new forms, appearance in collocations and differences in spelling and use. The synonyms of analysed terms, if present in the articles, are analysed as well. The terms are organised based on the frequency of their use and their spelling is based on the most common practice.

The aim of the analytical part is to identify the word-formation processes used to create the new terms pertaining to the jargon of cryptocurrency, the common spelling practices and capability to produce new words and collocations.

All the terms and expressions present in the analysed articles and this thesis can be found in Appendix 1 – Glossary of the Cryptocurrency-specific Terms included at the end of the thesis. Their meanings and possible alternative forms are indicated. The definitions of the terms are, in the majority of the cases, taken from the previously cited printed sources or, for some, from cryptocurrency focused websites. However the names of cryptocurrencies, other than Bitcoin, are not included in the glossary because of their extensive numbers.

5 DIFFERENCES IN SPELLING

Due to cryptocurrencies being a relatively new field, the terms and expressions often do not have a consistent spelling. The terms such as *cryptocurrency* and *altcoins* are typical examples, although in majority of the analysed articles *cryptocurrency* and *altcoins* are written as a closed compound, in some, namely articles from the BBC and The Guardian, the authors opt to use the hyphenated *crypto-currency* and *alt-coins*. That is however an exception to the rule as out of thirty articles the hyphenated *alt-coins* (1) appears only in one article (G12) out of three that use the term and hyphenated *crypto-currency* (2) appears only in four articles by the BBC (BBC 1–4) out of twenty-five that use the term.

In the analysed articles the term *smart contracts* also has different spellings, in one article taken from cryptocurrency-focused news covering website (CT6) both forms *smart contracts* and *smart-contracts* appear. This deviation in spelling, however, most likely stems from two writers contributing to the article, the author and the interviewee. (3).

In addition *proof-of-work* has two different ways of spelling, *proof of work* (4) (F10) and hyphenated *proof-of-work* (5) (CT1, BM8, FO6, F10) the spelling of which is similar to phrases such as Jack-in-a-box and good-for-nothing. Similarly *proof-of-stake* is also written in the same article (F10) as a hyphenated and an open compound (i. e. *proof of stake*). The abbreviations of *proof-of-work*, *POW* (F10), and *proof-of-stake*, *POS* (6) (F10), are alternatively written as *PoW* (CCN13, CT1) and *PoS* (7) (CCN13) in the analysed articles as well.

Blockchain is usually consistently written with a un-capitalised *b*, however in one article originating from cryptocurrency news covering Cointelegraph (CT6) the author adopts capitalised *Blockchain* instead (8).

- (1) “*In the volatile market of alternative cryptos, relatively unknown **alt-coins** such as ripple, litecoin and ethereum regularly shoot up[...]*” (G12)
- (2) “*And some observers have blamed this for creating turmoil in the **crypto-currency** markets, with many of the digital assets experiencing falls.*” (BBC3)
- (3) “*Ethereum promises a host of **smart contract** applications from gambling to ridesharing.*” (CT6)
 “***Smart-Contracts** need to communicate with the real-world to be useful.*” (CT6)
- (4) “***Proof of work (POW)** is data that is costly and time-consuming to produce but easy for others to verify.* (FO10)

- (5) *“Coinbase has made this decision based on a number of factors including the fact that ABC has a higher hashrate and a longer **proof-of-work** chain. (BM8)*
- (6) *“With **POS**, one coin is equivalent to one chance.” (FO10)*
- (7) *“Launched as an X11 PoW-based cryptocurrency, IOC transitioned to unique **PoS** I/O.” (CCN13)*
- (8) *“I also see many ethereum project open to collaboration with other **Blockchains** and enterprise users.” (CT6)*

6 DIFFERENCES IN USE

The analysis of the terms also showed inconsistencies in use in relation to *Bitcoin/bitcoin* and *hash rate*. In the case of *Bitcoin/bitcoin*, the authors usually adhere to the unwritten rule of referring to the technology, the name of the currency or the concept as *Bitcoin* and to the units in which the currency is measured in as *bitcoin* (9). The practise originates from the official *Bitcoin* website bitcoin.org. However in the analysed articles some authors write it un-capitalised, i. e. *bitcoin*, when both meanings appear in the article. This trend manifested only in the articles from traditional news covering websites in which the authors use *bitcoin* to refer to both meanings (G13 (10) and BM11). In the article BB1 there is a discrepancy within the article, as the author refers to the name of the cryptocurrency, technology and the units inconsistently. For example when explaining how *Bitcoin* works, the author chooses to write *Bitcoin* with un-capitalised *b* despite referring to the concept of *Bitcoin* rather than the units (11) but in the rest of the article the author follows the conventional rule (12). The same applies to the names and units of other cryptocurrencies.

Additionally, there is also an inconsistent use of the terms *hash power* and *hash rate* which appeared in different articles despite describing the same concept of speed at which the mining computer operates at. (Jha 2018). *Hash power* and *hash rate* also have different spellings. They can be written both as an open compound, i. e. *hash power* (BM9, CCN14, F10, G13), *hash rate* (13) (BM8, BM9), and as a closed compound, i. e. *hashpower* (CCN12), *hashrate* (14) (CCN14).

- (9) “**Bitcoin** still remains the most valuable crypto-currency. The value of the 16.8 million **bitcoins** in circulation is now worth a nominal \$231bn.” (BBC4)
- (10) “Someone controlling 51% of the **bitcoin** network could theoretically extort or otherwise gain control of a large quantity of **bitcoins**.” (G13)
- (11) “Users have a “**bitcoin** address”, to which **bitcoins** may be sent or from which they may be used.” (BBC1)
- (12) “**Bitcoin's** price fell quite sharply over the weekend, following the publication of Mr Hearn's blog.” (BBC1)
- (13) “*Bitmain Nears 51% of Network **Hash Rate**: Why This Matters and Why It Doesn't*” (BM9)
- (14) “*NiceHash accounts for the majority of the Dash cryptocurrency's **hashrate**.*” (CCN14)

7 LEXICAL ANALYSIS

The language of cryptocurrencies includes expressions, terms and abbreviations specific to the area of cryptocurrencies but the terms pertaining to economy, as well as IT were also present in the articles.

7.1 Terms Originating from Economy

Because the articles both from traditional news covering websites as well as cryptocurrency-focused news covering websites serve as a source of information for investors, majority of the articles contain terms from economy (15) or specifically associated with market capitalization (16), market behaviour (17) and national (FIAT) currencies.

- (15) “[...]’*Abra’s new European bank transfers will be available to people living in 34 countries if they have a **SEPA-supported bank account***’.” (BM7)
- (16) “*The company’s 32-year-old co-founder and CEO Jihan Wu, did recently unveil plans for a potential **initial public offering**. Should executives decide to go mainstream, their **books** would be opened to the public and make them accountable to **shareholders**, some of whom might take issue with an alleged campaign for network dominance.*” (BM9)
- (17) “*There are **pumpers** and **dumpers**. Just buying all of a token sale practically guarantees the price will go up.*” (BM11)

7.2 Terms originating from IT

The terms originating from the IT area were less prominent in the articles and appeared in relation to programming and technology used for mining the cryptocurrencies (18, 19).

- (18) “*Using **Regium SDKs**, developers can build blockchain-based **DApps** using popular programming languages such as **JavaScript, Go, C#, Java or Swift**.*” (FO7)
- (19) “*Its fully **AES 256** encrypted decentralized **name server, data storage, messaging** and a decentralized “**GPGTOOLS**” like system provides an advantage over bitcoin, according to the development team.*” (CCN13)

7.3 Cryptocurrency-specific terms

The language of cryptocurrencies contains, in addition to terms originating from economy and IT, terms that were specifically created for cryptocurrencies.

7.3.1 Cryptocurrency

Cryptocurrency is a term that refers to digital currency that uses cryptography to encode the workings of the cryptocurrency. *Cryptocurrency* is a combination of the words *cryptography* and *currency*. The term *cryptocurrency* was most likely created by blending these words together (20).

Cryptocurrency cannot be a neoclassical compound because the prefix *crypto-* would give the compound meaning of hidden or secret currency. (Dictionary.com, n. d.) Additionally it is unlikely that *cryptocurrency* is a compound created by joining *cryptography* and *currency* as words do not lose material during compounding.

The ambiguous origin of the word is likely to be the source of different spellings, i. e. *cryptocurrency* and *crypto-currency*, as blends are not hyphenated but compounds can be hyphenated before merging into a single word and both versions of the same compound can exist in the language at the same time.

In the analysed articles *cryptocurrency* collocated often with *mining*, *miners* (21), *market cap* and *exchange* (22). The collocations in articles both from traditional news covering websites and cryptocurrency-oriented news covering websites were related either to the process of creating the cryptocurrencies or to the trading the cryptocurrencies on the market.

In five of the analysed articles from the traditional news covering websites and nine from the cryptocurrency-focused news covering websites, the clipped form of cryptocurrency *crypto* was used. The terms *cryptocurrency* and *crypto* are interchangeable and therefore they have the same collocations (e. g. *crypto mining*) and use (23). However the clipped form *crypto* was used to create new noun-noun compounds (e. g. *crypto-investing*, *crypto-cash*) which were prominent in both types of news covering websites (BBC4, BM11) (24) and noun-adjective compounds that appeared only in the articles from the cryptocurrency-oriented websites (BM10) (e. g. *crypto-friendly*) (25). Even though *crypto* can refer to one cryptocurrency or multiple cryptocurrencies (26), in an article from The Guardian (G12) *cryptos* was used to refer to multiple cryptocurrencies (27).

Digital currency can also be found in the analysed articles in which it was used as a stand in for *cryptocurrency*. *Digital currency* was present in articles from both traditional news covering websites and cryptocurrency-oriented news covering websites (BBC2, BBC4, BBC5, G15, BM10, CCN15). In both types of websites it was used to refer to the world of *cryptocurrencies* (28) as well as to a specific *cryptocurrency* (29).

- (20) “Also, news recently broke that Samsung's new smartphone, the Galaxy S10, will include storage for private **cryptocurrency** keys.” (CT2)
- (21) “[...]disappointing results announced by chip-makers Nvidia and Advanced Micro Devices, both of which are leading suppliers of hardware for **cryptocurrency miners**.” (FO8)
- (22) “It took me two days to pass security checks on depository Coinbase and **crypto exchange** Binance and scour Reddit to find out how a digital 'wallet' worked.” (G12)
- (23) “This October, even ahead of the recent market slump, a report from **crypto** outlet Diar indicated that **crypto mining** is gradually becoming profitable [...]” (CT5)
- (24) “In a **crypto-investing** webinar two weeks ago, I recommended looking into buying the Brave browser's Basic Attention Token (BAT).” (BM11)
 “This valuation is higher than the other popular **crypto-cash** system - Ethereum.” (BBC4)
- (25) “At the state level, Ohio now accepts payment of business taxes in crypto via ohio-ocrypto.com, three **crypto-centric** bills are presently in committee in New York, [...]” (BM10)
- (26) “However, he acknowledges that 'Canada may be opening up to treating **crypto** as a type of non-fiat money, despite the current statutory definition of money'.” (BM10)
- (27) “In the volatile market of alternative **cryptos**, relatively unknown alt-coins such as ripple, litecoin and ethereum regularly shoot up [...]” (G12)
- (28) “After the collapse of MtGox shook the **digital currency** world, a licensing system was introduced in Japan [...].” (BBC2)
- (29) “Since its introduction in 2009, Bitcoin has been the most widely used **digital currency**, the most valuable **digital currency**, and the most secure blockchain.” (CCN15)

7.3.2 Blockchain

Blockchain is a distributed network onto which information are recorded and security of which is ensured by cryptography. In the context of cryptocurrency *blockchain* is used as a distributed ledger that holds data about the operations taking place on the network.

The word is a compound created by joining *block* and *chain*, the blocks are information shared across the network which are connected in a chain because each block

of data is connected to the one that preceded it (30). The term is most likely an alteration of *chain of blocks* which appeared in Nakamoto's paper which introduced the first modern cryptocurrency Bitcoin. (Nakamoto [2008], 7)

Blockchain in the analysed articles from the traditional news sources collocated mainly with words such as *technology* and *development* (31). *Blockchain* was also a part of four noun-adjective compounds, i. e. *blockchain-centric* (CT2), *blockchain-related* (CT2), *blockchain-specific* (FO7) and *blockchain-based* (FO7) (32).

Additionally, collocations across both traditional news covering websites and cryptocurrency-oriented news covering websites were formed using clipped form of *blockchain – chain* (33), for example *alternative chain* and *chain split* (34). *Chain* was also used to create a compound *private chain* (35).

- (30) “**Blockchain** companies are innovating in order to keep up with the new torrent of cryptocurrencies with POS variant consensus mechanisms.” (F10)
- (31) “Not only does this have significant implications for the global **blockchain community** but for investors as well.” (F7)
- (32) “The phone’s previous **blockchain-related** compatibility included support for a crypto wallet and for the CryptoKitties DApp.” (CT2)
- (33) “If both **chains** have the same amount of accumulated work (and in most cases the same block count), a decision can’t be made solely based on the longest-chain rule.” (CCN14)
- (34) “Bittrex will observe the Bitcoin Cash network for a period of 24 to 48 hours to determine if a **chain split** has occurred [...]” (BM8)
- (35) “If the attacker then adds corrupted blocks at a faster pace on the **private chain** than the public one, then successfully surpass the public chain in reconciling the two chains [...]” (FO6)

7.3.3 Mining

Mining is a process which adds cryptocurrency to the distributed ledger, blockchain. During the mining process cryptocurrency obtains value from the network itself by solving complex computational puzzles. *Mining*, when referring to *mining* cryptocurrency, alludes to the historical process of *mining* for gold or silver which were used to mint coins. Similarly the users *mine* the coins from the network.

Mining is a basic concept of cryptocurrencies and consequently the term was prevalent in the analysed articles (36). It was a part of compounds *mining pools* (37), *mining farm*

and *proof-of-work mining* (38). Additionally *mine* underwent the process of derivation, namely prefixation and suffixation (i. e. *non-mineable* (39), *pre-mined*, *miner* (40), *re-mining*), *miner* was, similarly to *mining*, frequently present in the articles.

Furthermore *mining* was a part of several collocations. *Mining* appeared in collocation with *machines*, *community* (41), *rigs*, *Bitcoin* (42), *cryptocurrency* and clipped *crypto* (43).

- (36) "51% attack [...] refers to the problem of having concentrated computing power dedicated to **mining** a blockchain turn malicious in an attempt to defraud the blockchain" (FO6)
- (37) "For a few hours on Friday, **mining pool** Ghash.io controlled 51% of all the processing power being used to perform the calculations that keep bitcoin secure." (G13)
- (38) "Resistance acknowledges that there is value in the algorithms performed during **proof-of-work (PoW) mining** [...]." (CT1)
- (39) "Most **non-mineable** cryptocurrencies use forms of the proof-of-stake (POS) mechanism. With POS, one coin is equivalent to one chance." (FO10)
- (40) "'Longest chain' is defined by various metrics including difficulty (the most **miners** were mining this version)." (CCN12)
- (41) "As a result, Resistance is seeking to address exorbitant energy consumption and the power imbalance within the **mining community** [...]." (CT1)
- (42) "'The high level of combined hash power in the Ghash pool is concerning to many participants in the system,' said one such member, BitFury, an industrial **bitcoin mining** firm." (G13)
- (43) "The post claims that a **crypto mining** manufacturer was testing out a batch of new devices and engaged in selfish mining." (CCN12)

7.3.4 Bitcoin

Bitcoin is a name of the first modern cryptocurrency created in 2008. Because it is the most popular and well-known cryptocurrency, Bitcoin was absent only in two articles from the traditional news covering websites (BBC5, FO7) and one from the cryptocurrency-oriented news covering websites (CT6) because the articles either specifically focused on *Bitcoin* or used it as an example of a cryptocurrency.

The name *Bitcoin* came from the paper by Satoshi Nakamoto and was most likely created by compounding *bit*, basic unit of information in computing which has been

created by blending *Binary Digit* (Martin 2006, 17), and *coin* (44). Altogether the name alludes to *Bitcoin* being a digital currency.

Disregarding the inconsistency of spelling (i. e. *Bitcoin*, *bitcoin*), *Bitcoin* as the name of currency or the concept collocated in analysed articles with words such as *mining*, *technology* (45) and *wallet* (46) in both articles from traditional news covering websites and cryptocurrency-oriented news covering websites. *Bitcoin*, written with un-capitalised b, that is used to refer to the units in which the money is measured, did not have any significant collocations as it was usually used in relation to the price of one *bitcoin* (47).

Bitcoin has very few different forms. Its abbreviation *BTC* appeared only in the analysed articles from cryptocurrency-oriented news covering websites (CT5, BM7). The only compound of *Bitcoin*, *bitcoin-based*, appeared in CCN13 (48). However the names of cryptocurrencies that have split from *Bitcoin*, i. e. *Bitcoin Cash*, *Bitcoin Satoshi Version*, *Bitcoin Gold* (49), can also be perceived as compounds of *Bitcoin* that remained separated by space, similarly to *Bitcoin* they appeared in the articles (BB3, FO8, FO9, BM8) in their abbreviated form (50).

- (44) “When a **Bitcoin** wallet provides a 2-of-3 multi-signature setup then the user is safe because the device only holds one key.” (CT3)
- (45) “Mike Hearn is a software developer who has worked on **Bitcoin technologies** for over five years.” (BBC1)
- (46) “Right now there are 40 million **Bitcoin wallets**.”(FO11)
- (47) “The value of the 16.8 million **bitcoins** in circulation is now worth a nominal \$231bn. Each **bitcoin** has a value of about \$13,580.” (BBC4)
- (48) “The I/O Coin team previously created a full-featured HTML5 IOC wallet alternative to the **bitcoin-based QT** wallet.” (CCN13)
- (49) “As of November 15, **Bitcoin Cash** had a fork that briefly led to the creation of **Bitcoin SV** (SV stands for Satoshi Version) and **Bitcoin Cash ABC**.” (FO9)
- (50) “[...] since the fork, they have been replaced with the actual forked coins under the tickers **BAB** (for **ABC**) and **BSV** (for **SV**) on Bitfinex and **BCHABC** and **BCHSV** on HitBTC.” (BM8)

7.3.5 Block

Blocks are collections of data that are linked together in a blockchain (51). The name comes from the meaning of *block* as a quantity or number of things that had been dealt with as one unit. (Merriam-Webster, n. d.)

In the analysed articles *block* appeared both alone and in compounds with *rewards* (52), *time* and *size* (53). These compounds are terms frequently used in the articles in context with cryptocurrency and are related to the process on mining. The most prevalent compound of *block* is *blockchain* which creates its own compounds and collocations. *Block* was also a part of a collocation in both articles from cryptocurrency-oriented news covering websites and traditional news covering websites as it collocated most often with *mined* (54).

- (51) “Computers have to solve cryptographic problems in order to add **blocks** to the blockchain - a ledger that records every transaction that has ever occurred with Bitcoin.” (BBC1)
- (52) “Updated every minute, the site calculates profit yields for specific miners based on current power costs, network difficulty, **block rewards**, and cryptocurrency prices.” (CT5)
- (53) “The Bitcoin XT version developed by Mr Hearn, Mr Andresen and others offers to increase the **block size** limit to 8MB.” (BBC1)
- (54) “Once a correct combination is found, the **mined block** is added to a chain.” (BM9)

7.3.6 Hash

Hash is a shortened version of *Cryptographic Hash Function*, a mathematical function that helps to secure data in cryptography and is used by cryptocurrencies (55). (Narayanan et al. 2016, 2)

Hash occurred in the articles from both cryptocurrency-focused and traditional news covering websites. *Hash* appeared in two compounds with *rate* and *power* which are synonymous (Jha 2018). *Hash rate* could only be found on the cryptocurrency-oriented news covering websites however it had two different variations of spelling, i.e. *hashrate* (56) and *hash rate* (57). Similarly *hash power*, which was present in both types of news covering websites, was written by different authors as a closed compound (*hashpower*) (58) and as an open compound (*hash power*) (59). The inconsistency can be seen within a single article from the cryptocurrency-focused CCN12 in which both versions of spelling *hashpower* and *hash power* (60). Additionally in BM8 *hashing power* was used instead (61).

Hash did not appear in any collocations, nevertheless its other form *hashing* was a part of a collocation with *algorithms* (62).

- (55) “Miners contribute computing power (**hashes**) to the network, which essentially means one **hash** = one chance.” (FO10)
- (56) “NiceHash accounts for the majority of the Dash cryptocurrency’s **hashrate**.” (CCN14)
- (57) “This makes for a combined **hash rate** of 42 percent; an all-time high for the Chinese mining giant’s mining pools.” (BM9)
- (58) “‘The high level of combined **hash power** in the Ghash pool is concerning to many participants in the system,’ said one such member, BitFury, [...]” (G13)
- (59) “The NicheHash crypto mining marketplace contains the majority of the **hashpower** on the Dash network. A concerned Reddit user raised the alarm today.” (CCN14)
- (60) “If a miner has enough **hash power**, they can essentially rewrite a blockchain to suit their needs.” (CCN12)
- “However, Ethereum Classic does not enjoy the massive **hashpower** that Bitcoin and Ethereum have.” (CCN12)
- (61) “On November 16, 2018, what was intended to be a routine hard fork upgrade of the Bitcoin Cash blockchain became a struggle for **hashing power** [...]” (BM8)
- (62) “Proof-of-work mining is burning through energy on **hashing algorithms** that offer no benefit outside of the blockchain.” (CT1)

7.3.7 Proof-of-work (POW), Proof-of-stake (POS), Proof-of-research (POR)

Proof-of-work (POW) is a consensus distribution algorithm on which the distribution of rewards is based on. The rewards are distributed depending on how much work, electricity and computing power, the miner contributed to the network. (Antonopoulos and Wood 2019, 320) The concept of *proof of work* was first suggested by Dwork and Naor in the paper titled Pricing via processing or combating junk mail published in 1992. But the compound *proof of work*, and its abbreviation *POW*, was coined in 1999 in a paper by Markus Jakobsson and Ari Juels called Proofs of Work and Bread Pudding Protocols (63). (Jakobsson and Juels 1999)

In the articles F10 and CT1 the abbreviated form (*POW*) could be found. The abbreviation was a part of an adjective compound *POW-based* (64). *Proof-of-work* collocated with and *mining* (65) in both types of news covering websites.

Proof-of-stake (POS) is an alternative distribution mechanism based on the number of coins the user owns and was first employed by Sunny King and Scott Nadal in Peercoin.

(King and Nadal 2012) *Proof-of-stake* (66) appears only in one article from traditional news covering websites (F10), there is however inconsistency in spelling as both versions of the compound, open and hyphenated, can be found in the article as well as the abbreviated form *POS* (67). The abbreviation *POS* was also used to create an adjective compound *POS-based* (68) and *proof-of-stake* collocated with *mechanism* (69).

In one of the analysed articles (CT1) the term *proof-of-work* was discussed, *proof-of-research* (*POR*). *Proof-of-research* is a consensus mechanism which uses contribution of the computing power to the scientific research, for example research of renewable energy, cancer, HIV/AIDS and the Zika virus, to distribute rewards. (Blenkinsop 2019) As it is a new concept introduced in the article, *proof-of-research* (70) was not a part of any compounds but similarly to *POW* and *POS*, its abbreviation *POR* also appeared in the article (71).

- (63) “**Proof of work (POW)** is data that is costly and time-consuming to produce but easy for others to verify.” (FO10)
- (64) “Launched as an **X11 PoW-based** cryptocurrency, *IOC* transitioned to unique *PoS I/O*.” (CCN13)
- (65) “Resistance argues that **proof-of-work mining**’ has been hijacked by huge mining farms [...]” (CT1)
- (66) “Impetus And Challenges **For Proof Of Stake**”(FO10)
- (67) “With **POS**, one coin is equivalent to one chance.” (FO10)
- (68) “The **PoS-based** *IOC* used a volume-controlled blockchain that can execute instant transfers that receive confirmations in less than 30 seconds.” (CCN13)
- (69) “Most non-mineable cryptocurrencies use forms of the **proof-of-stake (POS) mechanism**.” (FO10)
- (70) “[...] the power imbalance within the mining community by offering a ‘radical concept’ known as **proof-of-research**.” (CT1)
- (71) “Volunteers who contribute computing power through **PoR** have the opportunity to back scientific projects such as the World Community Grid, [...]” (CT1)

7.3.8 Wallet

Wallet is a software which allows the user to access money, track balance and make transactions. (Antonopoulos 2017, 93) The term wallet has a metaphorical quality and was chosen to refer to this software because of its semantic relation (72).

In the articles from the traditional news covering websites and the articles from the cryptocurrency-oriented news covering websites alike, *wallet* compounded with words such as clipped form of cryptocurrency, *crypto* (73), *digital*, *multisignature* (74), *hot*, *cold* and *hardware* (75). In all instances the word preceding *wallet* specified a type of *wallet*.

In some articles a synonym to *cold wallet* (76), *cold storage* (77), was used instead. As both refer to a type of *wallet* that is not connected to the Internet, they are semantically interchangeable. The articles from cryptocurrency-focused news covering websites used *cold storage* instead of *cold wallet*, the articles CT2 and CT4 used both *cold storage* and *wallet* but they use *wallet* to refer to a different type of *wallet* (i. e. *crypto*, *hardware*) (78) and consistently use *cold storage*, as oppose to *cold wallet*. The BBC5 the author uses both *cold wallet* and *cold storage* but indicates that the terms are referring to the same concept (79).

(72) “*Abra wallets were initially funded using wire and bank transfers in the U.S. Customers could also purchase crypto using both credit or debit cards.*” (BM7)

(73) “*Exodus’ addition of the Opera browser, on the other hand, lets users access the browser’s integrated crypto wallet [...].*” (CT2)

(74) “*The lost \$300m follows the discovery of bug in July that led to the theft of \$32m in ether from just three multisignature wallets.*” (G14)

(75) “*A ledger is a hardware wallet, so if you are worried about someone taking your cryptocurrency you can put it there.*” (FO11)

(76) “*That contrasts with a cold wallet, where funds are stored securely offline.*” (BBC2)

(77) “*I have no intention of selling; all my coins are in cold storage.*” (BM11)

(78) “*Hardware Wallet Doesn’t Store Private Keys to Surpass Cold Storage*” (CT4)
 “*This technology is meant to overcome the risk of total loss should a hardware wallet be lost, seized or stolen.*” (CT4)

(79) “*The affidavit says the majority of the cryptocurrency was kept by Quadriga in a ‘cold wallet’ or ‘cold storage’, which is located offline [...]*” (BBC5)

7.3.9 Fork

Fork happens either when two miners create a block at the same time or when the blockchain is forcefully split in two chains. The situation is named *fork* because of the shape of the blockchain which resembles a fork (80). (Stroukal and Skalický 2018, 124)

Fork was used in the analysed articles in the sense of forcefully splitting the blockchain in order to create an offset of cryptocurrency from the original cryptocurrency. *Fork* was a component of only one compound *hard fork* (81).

Fork was used in the most of the analysed articles from both types of websites as a noun. Nonetheless the author of the article from the cryptocurrency-focused Bitcoin Magazine (BM8) used *fork* as two different adjectives created by adding adjectival suffixes *-ed* and *-ing*, i. e. *forked* (82), *forking* (83). This trend however did not manifest itself in any other articles. Additionally, *fork* underwent the process of prefixation to create *pre-fork* (84).

(80) “*In fact, it seems like this fork triggered a wave of selling across all cryptocurrencies*” (FO9)

(81) “*The **hard fork** was successful then, but the money stolen represented a much larger portion of the entire Ethereum market than the \$300m lost to Parity.*”(G14)

(82) “[...] *they have been replaced with the actual **forked** coins under the tickers BAB (for ABC) and BSV (for SV) on Bitfinex and BCHABC and BCHSV on HitBTC.*” (BM8)

(83) “*As Binance, Bitfinex and Poloniex’s actions suggest, in the comedown of the **forking** euphoria, [...].*” (BM8)

(84) “*HitBTC revealed in a blog post on November 9 that it would open **pre-fork** trading for both BCHABC and BCHSV.*” (BM8)

7.3.10 Hodl, lambo, to the moon

Hodl is originally misspelled *hold* which is a practice when the investor is not selling his/her coins despite the price plummeting. The term originated as a typo from the post titled I AM HODLING on the website bitcointalk.org. (GameKyuubi 2013) Later it became an acronym for the phrase *Hold On for Dear Life*. The term underwent suffixation to create *hodler* which describes a person who plies the practice (85). *Lambo* is a clipped form of Lamborghini, the ultimate goal of the investors (86). And *to the moon* is an expression usually used in correlation with price of an asset going extremely high (87). (Urban Dictionary, n. d.)

Hodl, *lambo* and *to the moon* are expressions that are a part of the cryptocurrency culture. Nevertheless they were not present in any of the articles from the cryptocurrency-oriented news covering websites, they, however, appeared in the articles from traditional news covering websites. *Hodler*, *lambo* and *to the moon* have

appeared in BBC3 and G12. Additionally *lambo* was used in an article from Forbes (FO6), *holder* could also be found in two more articles (FO9, G11). In all of the articles the expressions were used superficially and often in a mocking tone (88).

- (85) “As a **'hodler'** myself, I believe it’s important to sacrifice in the short term for a long-term gain.” (FO11)
- (86) “[...] (like say, for example, sending a merchant cryptocurrency in exchange any number of goods: your famous cryptocurrency **Lambo**, Michelin-star meals, or maybe a year's supply of Lao Gan Ma) [...] “ (FO6)
- (87) “If that wallet suddenly emptied when verge went **to the moon** on the release of *Wrath*, one commenter suggested, it would be 'the heist of the century'.” (G12)
- (88) “Its bullish community of supporters filled Twitter with entreaties to **HODL** – **hold on for dear life** – until it goes '**to the moon**' and everyone can buy '**lambos**'.” (G12)

SUMMARY OF THE ANALYTICAL PART

The analysis of the thirty articles that formed the corpus showed that as anticipated the articles included terms and expressions pertaining to the jargon of cryptocurrencies as well as the business jargon and the jargon of IT and technology.

The terms specific to the language of cryptocurrencies were created by compounding, i. e. *blockchain* and *proof-of-work*, *proof-of-stake*, *proof-of-research* and *Bitcoin*, blending, i. e. *cryptocurrency*, abbreviating, i. e. *hodl*, and clipping, i. e. *lambo*. The terms *mining* and *fork* allude to the historical process of mining precious metals (i. e. *mining*) and to the shape of the blockchain after the split (i. e. *fork*). *Wallet* is used to refer to the storage of coins because of the semantic relation and similarly “*to the moon*” has a metaphorical quality. Additionally, *hash* is a shortened version of cryptographic hash function.

With the exception of *hodl*, *lambo* and *to the moon* all the analysed terms were used to create other forms. The terms *blockchain*, *mining*, *Bitcoin*, *block*, *hash*, *proof-of-work*, *proof-of-stake*, *proof-of-research*, *fork* and *wallet* created their own compounds. *Cryptocurrency* was not a part of any compounds, however, its clipped form *crypto* created several compounds, such as *crypto-investing*. Furthermore the clipped form of *blockchain*, *chain*, was also present in the articles and created compounds. *Mining* and *fork* underwent the process of pre-fixation and affixation (e. g. *pre-mined*, *forked*) and *Bitcoin* and other Bitcoin-based cryptocurrencies, *proof-of-work*, *proof-of-stake* and *proof-of-research* were abbreviated to *BTC*, *BCHABC*, *POW*, *POS* and *POR*. Only *cryptocurrency*, *blockchain*, *mining*, *Bitcoin*, *proof-of-work*, *proof-of-stake*, *block* and *hash* were a part of collocations.

Additionally, the terms *cryptocurrency* and *cold wallet*, had synonyms that were used in the analysed articles. *Digital currency* was used as a stand in for *cryptocurrency* and *cold storage* was used instead of *cold wallet*. While *digital currency* can also be subdivided into *cryptocurrencies* and virtual currencies, *cold storage* and *cold wallet* are semantically interchangeable.

The lexical analysis also revealed, that some terms specific to the language of cryptocurrencies do not have a conclusive spelling. In the analysed articles *cryptocurrency* was also spelled *crypto-currency* and *altcoins* as *alt-coins*, these alternative spellings were present only in the articles from the traditional news covering websites. *Proof-of-work* and *proof-of-stake* were written both as open compounds (i. e. *proof of work*, *proof of stake*) and hyphenated compounds. Both versions of spelling, i. e. as an open compound and as a hyphenated compound, can be found in the same article (FO10), moreover *smart contracts*

were also written as an open compound as well as a hyphenated compound (i. e. *smart-contracts*) in a single article (CT6). The abbreviated forms of *proof-of-work* and *proof-of-stake* were also written inconsistently, i. e. *POW* and *PoW*, *POS* and *PoS*, *PoW* and *PoS*, however, appeared only in one article (CCN13). Furthermore *Bitcoin* was also written inconsistently in the articles. *Bitcoin*, with capitalised b, is used to refer to the concept, technology and the name of the cryptocurrency while *bitcoin*, written with un-capitalised b, is used to refer to the units of cryptocurrency. To this practice, originating from the website bitcoin.org, was not adhered to in some of the articles in which either capitalised *Bitcoin* or un-capitalised *bitcoin* was used to refer to both. The other cryptocurrencies, for example *Etherum*, were similarly written both capitalised and un-capitalised.

As to the use of the terms, in all the cases, disregarding the different spellings of *Bitcoin*, the terms were used consistently with exception to one. *Hash rate*, *hash power* and *hashing power* were all used in the articles, from both traditional news covering websites and cryptocurrency-oriented websites, to refer to the speed at which the mining computer operates at. Additionally, *hash rate* and *hash power* were also typographically inconsistent as they were written as a closed compounds (i. e. *hashrate*, *hashpower*) and as an open compounds (i. e. *hash rate*, *hash power*). The closed compounds *hashrate* and *hashpower* appeared only in the articles from CCN, the open compounds were present in both types of the news covering websites.

CONCLUSION

The main focus of this bachelor thesis was to examine the language of cryptocurrencies. As the topic is wide in range, the attention was placed mainly on the origin of the terms, the productivity in creating new words and expressions by the means of word-formation processes, and their ability to collocate. Additionally, the inconsistencies in spelling and use were also subjects of the analysis.

The analytical part showed that the terms and expressions used in the analysed articles were created mainly by compounding, blending, clipping, and abbreviation, in addition some terms had metaphorical qualities. The terms were also used to create new words and appeared in collocations with other words. Furthermore, the analysis also showed that in some cases the spelling, mainly of compounds, is inconsistent. Similar inconsistency also appears in relation to the term Bitcoin. Bitcoin has two different meanings and based on the meaning, Bitcoin is conventionally written with capitalised or un-capitalised b. It was not complied with this convention in all of the analysed texts.

Based on my analysis, it can be concluded that the terms and expressions specific to the language of cryptocurrencies are used in their basic form and additionally, in some instances, create new words, which have their own meanings and use, by employing a variety of word-formation processes. Moreover, the terms and expressions also form larger language units such as collocations.

BIBLIOGRAPHY

Printed sources

- Allan, Keith, and Kate Burridge. 2006. *Forbidden Words: Taboo and the Censoring of Language*. Cambridge: Cambridge University Press.
- Antonopoulos, Andreas M. 2015. *Mastering Bitcoin: Unlocking Digital Cryptocurrencies*. Sebastopol: O'Reilly.
- Antonopoulos, Andreas M., and Gavin Wood. 2019. *Mastering Ethereum: Building Smart Contracts and DApps*. Sebastopol: O'Reilly.
- Biber, Douglas, and Susan Conrad. 2009. *Register, Genre, and Style*. Cambridge: Cambridge University Press.
- Bradshaw, Paul, and Liisa Rohumaa. 2013. *The Online Journalism Handbook: Skills to Survive and Thrive in the Digital Age*. London: Routledge.
- Craig, David A. 2011. *Excellence in Online Journalism: Exploring Current Practices in an Evolving Environment*. Thousand Oaks: SAGE.
- Crystal, David. 2003. *The Cambridge Encyclopedia of the English language*. 2nd ed. Cambridge: Cambridge University Press.
- Daille, Béatrice. 2017. *Term Variation in Specialised Corpora: Characterisation, Automatic Discovery and Applications*. Amsterdam: John Benjamins.
- Finnegan, Edward. 2012. *Language: Its Structure and Use*. 6th ed. Boston: Wadsworth.
- Fleming, Carole, Emma Hemmingway, Gillian Moore, and Dave Welford. 2006. *An Introduction to Journalism*. London: SAGE.
- Folsom, W. Davis. 2005. *Understanding American Business Jargon: a Dictionary*. 2nd ed. Westport: Greenwood Press.
- Foust, James C. 2017. *Online Journalism: Principles and Practices of News for the Web*. 3rd ed. London: Routledge.
- Franco, Pedro. 2015. *Understanding Bitcoin: Cryptography, Engineering, and Economics*. Chichester: Wiley.
- Friend, Cecilia, and Jane B. Singer. 2007. *Online Journalism Ethics: Traditions and Transitions*. Armonk: M.E. Sharpe.
- Fromkin, Victoria, Robert Rodman, and Nina Hyams. 2003. *An Introduction to Language*. 7th ed. Boston: Thomson.
- Green, Jonathon. 2014. *Dictionary of Jargon*. Abingdon: Routledge.

- Hill, Steve, and Paul Lashmar. 2014. *Online Journalism: The Essential Guide*. Los Angeles: SAGE.
- Hudson, Kenneth. 1978. *The Jargon of the Professions*. London: Macmillan.
- Kvetko, Pavol. 2005. *English Lexicology: In theory and Practice*. Trnava: Univerzita Sv. Cyrila a Metoda v Trnave.
- Lee, David Kuo Chuen, ed. 2015. *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data*. Amsterdam: Elsevier.
- Lee, David Kuo Chuen, and Robert H. Deng, ed. 2018. *Handbook of Blockchain, Digital Finance, and Inclusion, Volume 1: Cryptocurrency, FinTech, InsurTech, and Regulation*. London: Academic Press.
- Lutz, William. 1989. *Doublespeak: From "Revenue Enhancement" to "Terminal Living": How Government, Business, Advertisers, and Others Use Language to Deceive You*. New York: Harper & Row.
- Madhukar, R. K. 2017. *Business Communication*. 3rd ed. New Delhi: Vikas.
- Martin, Eddie. 2006. *Computer Jargon: Dictionary and Thesaurus*. 2nd ed. Matfield: Specialist Computing.
- Mishkin, Frederic S. 2016. *The Economics of Money, Banking, and Financial Markets*. 11th ed. Boston: Pearson.
- Narayanan, Arvind, Joseph Bonneau, Edward Felten, Andrew Miller, and Steven Goldfeder. 2016. *Bitcoin and Cryptocurrency Technologies: a Comprehensive Introduction*. Princeton: Princeton University Press.
- OECD (Organisation for Economic Co-operation and Development). 2010. *News in the Internet Age: New Trends in News Publishing*. Paris: OECD.
- Plag, Ingo. 2003. *Word-formation in English*. Cambridge: Cambridge University Press.
- Steinmetz, Sol, and Barbara Ann Kipfer. 2006. *The Life of Language: The Fascinating Ways Words are Born, Live & Die*. New York: Random House Reference.
- Stevenson, Angus, and Maurice Waite, ed. 2011. *Concise Oxford English dictionary*. 12th ed. Oxford: Oxford University Press.
- Stroukal, Dominik, and Jan Skalický. 2018. *Bitcoin a jiné kryptopeníze budoucnosti: Historie, ekonomie a technologie kryptoměn, stručná příručka pro úplně začátečníky*. Prague: Grada.
- Trudgill, Peter. 2000. *Sociolinguistics: An Introduction to Language and Society*. 4th ed. London: Penguin.

Yule, George. 2006. *The Study of Language*. 3rd ed. Cambridge: Cambridge University Press.

Yule, George. 2014. *The study of Language*. 5th ed. Cambridge: Cambridge University Press.

Online sources

Baraniuk, Chris. 2016. "Bitcoin: Is the crypto-currency doomed?." *BBC*, January 19, 2016. <https://www.bbc.com/news/technology-35343561>.

BBC. 2018. "Bitcoin falls below \$5,000." *BBC*, November 19, 2018. <https://www.bbc.com/news/technology-46263998>.

BBC. 2018. "Coincheck: World's biggest ever digital currency 'theft'." *BBC*, January 27, 2018. <https://www.bbc.com/news/world-asia-42845505>.

BBC. 2018. "Quadriga: Cryptocurrency exchange founder's death locks \$140m." *BBC*, February 04, 2018. <https://www.bbc.com/news/world-us-canada-47123371>.

BBC. 2018. "Ripple becomes second most valuable crypto-coin." *BBC*, January 02, 2018. <https://www.bbc.com/news/technology-42541390>.

Beaumont, Mark. 2018. "How I fell for the blockchain gold rush." *The Guardian*, January 07, 2018. <https://www.theguardian.com/technology/2018/jan/07/bitcoin-cryptocurrencies-mcafee>.

Blenkinsop, Connor. 2019. "Hardware Wallet Doesn't Store Private Keys to Surpass Cold Storage." *Cointelegraph*, February 20, 2019. <https://cointelegraph.com/news/hardware-wallet-doesnt-store-private-keys-to-surpass-cold-storage>.

Blenkinsop, Connor. 2019. "Public Gets Chance to Earn Block Rewards by Donating Computing Power to Scientific Research." *Cointelegraph*, January 15, 2019. <https://cointelegraph.com/news/public-gets-chance-to-earn-block-rewards-by-donating-computing-power-to-scientific-research>.

Campbell, Rebecca. 2016. "Counterparty Brings Ethereum Smart Contracts to the Bitcoin Blockchain." *CCN*, June 09, 2016. <https://www.ccn.com/counterparty-brings-ethereum-smart-contracts-to-the-bitcoin-blockchain>.

Clarke, Gina. 2018. "Latest Crypto Crash Caused By Bitcoin Civil War Say Experts." *Forbes*, November 27, 2018. <https://www.forbes.com/sites/ginaclarke/2018/11/27/latest-crypto-crash-caused-by-bitcoin-civil-war-say-experts/#1d46dec13c6c>.

- Coleman, Lester. 2016. "I/O Coin Readies Blockchain Upgrade With 'Best Of Both PoW And PoS'." *CCN*, December 15, 2016. <https://www.ccn.com/io-coin-readies-blockchain-upgrade-with-best-of-both-pow-and-pos>.
- Ethical Journalism Network. n. d. "The 5 Principles of Ethical Journalism." Ethical Journalism Network. Accessed March 15, 2019. <https://ethicaljournalismnetwork.org/who-we-are/5-principles-of-journalism>.
- Fitzpatrick, Luke. 2018. "Australia Is Trying To Pass A Law That Could Kill DApps." *Forbes*, October 07, 2018. <https://www.forbes.com/sites/lukefitzpatrick/2018/10/07/australia-is-trying-to-pass-a-law-that-could-kill-dapps/#62f51b5c7c66>.
- GameKyuubi (screen name). 2013. "I AM HODLING." *Bitcoin Forum*. Bitcoin Talk (forum), Last modified December 18, 2013. <https://bitcointalk.org/index.php?topic=375643.0>.
- Harper, Colin. 2018. "After the Fork: Here's How Exchanges Are Dealing With Bitcoin Cash." *Bitcoin Magazine*, November 16, 2018. <https://bitcoinmagazine.com/articles/after-fork-heres-how-exchanges-are-dealing-bitcoin-cash/>.
- Hern, Alex. 2014. "Bitcoin currency could have been destroyed by '51%' attack." *The Guardian*, June 16, 2014. <https://www.theguardian.com/technology/2014/jun/16/bitcoin-currency-destroyed-51-attack-ghash-io>.
- Hern, Alex. 2017. "'\$300m in cryptocurrency' accidentally lost forever due to bug." *The Guardian*, November 08, 2017. <https://www.theguardian.com/technology/2017/nov/08/cryptocurrency-300m-dollars-stolen-bug-ether>.
- Hileman, Garrick, and Michel Rauchs. 2017. "Global Cryptocurrency Benchmarking Study." University Cambridge Judge Business School. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2017-global-cryptocurrency-benchmarking-study.pdf.
- Huang, Roger. 2018. "New Open-Sourced Innovation Aims To Reduce The Risk Of 51% Attacks." *Forbes*, October 11, 2018. <https://www.forbes.com/sites/rogerhuang/2018/10/11/new-open-sourced-innovation-aims-to-reduce-the-risk-of-51-attacks/#4982ff895208>.

- Huillet, Marie. 2018. "Just Two ASIC Bitcoin Mining Rigs Remain Profitable in Current Markets." *Cointelegraph*, December 11, 2018. <https://cointelegraph.com/news/just-two-asic-bitcoin-mining-rigs-remain-profitable-in-current-markets>.
- Jakobsson, Markus, and Ari Juels. 1999. "Proofs of Work and Bread Pudding Protocols (Extended Abstract)." *Publications/Patents*. Ari Juels. <https://www.arijuels.com/wp-content/uploads/2013/09/PoW.pdf>.
- Jha, Prashant. 2018. "Hash Rate or Hash Power." *BTC Wires*, December 30, 2018. <https://www.btcwires.com/glossary/hash-rate-or-hash-power/>.
- King, Sunny, and Scott Nadal. 2012. "PPCoin: Peer-to-Peer Crypto-Currency with Proof-of-Stake." *Resources*. Peercoin. <https://peercoin.net/whitepapers/peercoin-paper.pdf>.
- Lee, Sherman. 2018. "Bitcoin's Energy Consumption Can Power An Entire Country -- But EOS Is Trying To Fix That." *Forbes*, April 19, 2018. <https://www.forbes.com/sites/shermanlee/2018/04/19/bitcoins-energy-consumption-can-power-an-entire-country-but-eos-is-trying-to-fix-that/#6e4a93011bc8>.
- Madore, P. H. 2019. "Dash Cryptocurrency: Single Wallet Owner Possesses 51% of Hashrate." *CCN*, January 09, 2019. <https://www.ccn.com/dash-cryptocurrency-single-wallet-owner-possesses-51-of-hashrate>.
- Madore, P. H. 2019. "Ethereum Classic Might Have Been Hit by a 51% Attack." *CCN*, January 07, 2019. <https://www.ccn.com/ethereum-classic-might-have-been-hit-by-a-51-attack>.
- Marinoff, Nick. 2018. "Abra Supports SEPA Bank Transfers, Enabling Crypto Purchases With Fiat." *Bitcoin Magazine*, September 06, 2018. <https://bitcoinmagazine.com/articles/abra-supports-sepa-bank-transfers-enabling-crypto-purchases-fiat/>.
- Marinoff, Nick. 2018. "Bitmain Nears 51% of Network Hash Rate: Why This Matters and Why It Doesn't." *Bitcoin Magazine*, June 28, 2018. <https://bitcoinmagazine.com/articles/bitmain-nears-51-network-hash-rate-why-matters-and-why-it-doesnt/>.
- Merriam-Webster. n.d. "Block." Merriam-Webster. Accessed March 15, 2019. <https://www.merriam-webster.com/dictionary/block>.
- Merriam-Webster. n.d. "bear." Merriam-Webster. Accessed December 15, 2018. <https://www.merriam-webster.com/dictionary/bear>.

- Nakamoto, Satoshi. [2008]. "A Peer-to-Peer Electronic Cash System." *A Peer-to-Peer Electronic Cash System: The paper that first introduced Bitcoin*. Bitcoin.
<https://bitcoin.org/bitcoin.pdf>.
- Nasdaq. 2018. "7 Major Companies That Accept Cryptocurrency." Nasdaq. Last modified January 31, 2018. <https://www.nasdaq.com/article/7-major-companies-that-accept-cryptocurrency-cm913745>.
- Ogundeji, Olusegun. 2016. "Multisig Best for Bitcoin Wallet Security But Only 11 Percent Use It." *Cointelegraph*, November 28, 2016. <https://cointelegraph.com/news/multisig-best-for-bitcoin-wallet-security-but-only-11-percent-use-it>.
- Rogoff, Kenneth. 2018. "Cryptocurrencies are like lottery tickets that might pay off in future." *The Guardian*, December 10, 2018.
<https://www.theguardian.com/business/2018/dec/10/cryptocurrencies-bitcoin-kenneth-rogoff>.
- Siegel, David. 2017. "Op Ed: Crypto-Investing in the Age of Whales." *Bitcoin Magazine*, June 03, 2017. <https://bitcoinmagazine.com/articles/crypto-investing-age-whales/>.
- Tchir, Peter. 2018. "Bitcoin - Stick A Fork In It - It's Done." *Forbes*, November 24, 2018.
<https://www.forbes.com/sites/petertchir/2018/11/24/bitcoin-stick-a-fork-in-it-its-done/#cc8b203e40ba>.
- Tucker, Jeffrey A. 2013. "Bitcoin for Beginners." FEE. Last modified April 01, 2013.
<https://fee.org/articles/bitcoin-for-beginners/>.
- Urban Dictionary. n. d. "to the moon." Urban Dictionary. Accessed March 15, 2019.
<https://www.urbandictionary.com/define.php?term=to%20the%20moon>.
- Valenzuela, Joël. 2016. "Ethereum's Missing Link: Oracles Provide Off-Blockchain Data for Smart Contracts." *Cointelegraph*, October 06, 2016.
<https://cointelegraph.com/news/ethereums-missing-link-oracles-provide-off-blockchain-data-for-smart-contracts>.
- Van Valkenburgh, Peter. 2017. "What Is 'Blockchain' Anyway?." FEE. Last modified December 08, 2017. <https://fee.org/articles/what-is-blockchain-anyway/>.
- Willms, Jessie. 2019. "Elections Canada Consults With Political Parties on Crypto Donations." *Bitcoin Magazine*, January 23, 2019.
<https://bitcoinmagazine.com/articles/elections-canada-consults-political-parties-crypto-donations/>.

Wolfson, Rachel. 2018. "Tim Draper On The Future Of Cryptocurrency, His New Book And Why Bitcoin Will Hit \$250,000 by 2022." *Forbes*, May 02, 2018.

<https://www.forbes.com/sites/rachelwolfson/2018/05/02/tim-draper-on-the-future-of-cryptocurrency-his-new-book-and-why-bitcoin-will-hit-250000-by-2022/#7cac48aa2d71>.

Zmudzinski, Adrian. 2019. "HTC's Blockchain Phone Exodus Partners With Opera Browser, Adds Multiple DApps." *Cointelegraph*, February 26, 2019.

<https://cointelegraph.com/news/htcs-blockchain-phone-exodus-partners-with-opera-browser-adds-multiple-dapps>.

LIST OF THE ANALYSED ARTICLES

Traditional Online News Covering Websites

- BBC1 – Chris Baranuik: Bitcoin: Is the crypto-currency doomed? (2016)
- BBC2 – BBC: Coincheck: World's biggest ever digital currency 'theft' (2018)
- BBC3 – BBC: Bitcoin falls below \$5,000 (2018)
- BBC4 – BBC: Ripple becomes second most valuable crypto-coin (2018)
- BBC5 – BBC: Quadriga: Cryptocurrency exchange founder's death locks \$140m (2019)
- BBC6 – Roger Huang: New Open-Sourced Innovation Aims To Reduce The Risk Of 51% Attacks (2018)
- FO7 – Luke Fitzpatrick: Australia Is Trying To Pass A Law That Could Kill Dapps (2018)
- FO8 – Gina Clarke: Latest Crypto Crash Caused By Bitcoin Civil War Say Experts (2018)
- FO9 – Peter Tchir: Bitcoin - Stick A Fork In It - It's Done (2018)
- FO10 – Sherman Lee: Bitcoin's Energy Consumption Can Power An Entire Country -- But EOS Is Trying To Fix That (2018)
- FO11 – Rachel Wolfson: Tim Draper On The Future Of Cryptocurrency, His New Book And Why Bitcoin Will Hit \$250,000 by 2022 (2018)
- G12 – Mark Beaumont: How I fell for the blockchain gold rush (2018)
- G13 – Alex Hern: Bitcoin currency could have been destroyed by '51%' attack (2014)
- G14 – Alex Hern: \$300m in cryptocurrency' accidentally lost forever due to bug (2017)
- G15 – Kenneth Rogoff: Cryptocurrencies are like lottery tickets that might pay off in future (2018)

Cryptocurrency-oriented News Covering Websites

- CT1 – Connor Blenkinsop: Public Gets Chance to Earn Block Rewards by Donating Computing Power to Scientific Research (2019)
- CT2 – Adrian Zmudzinski: HTC's Blockchain Phone Exodus Partners With Opera Browser, Adds Multiple DApps (2019)
- CT3 – Olusegun Ogundeji: Multisig Best for Bitcoin Wallet Security But Only 11 Percent Use It (2016)
- CT4 – Connor Blenkinsop: Hardware Wallet Doesn't Store Private Keys to Surpass Cold Storage (2019)
- CT5 – Marie Huillet: Just Two ASIC Bitcoin Mining Rigs Remain Profitable in Current Markets (2018)

- CT6 – Jöel Valenzuela: Ethereum's Missing Link: Oracles Provide Off-Blockchain Data for Smart Contracts (2016)
- BM7 – Nick Marinoff: Abra Supports SEPA Bank Transfers, Enabling Crypto Purchases With Fiat (2018)
- BM8 – Colin Harper: After the Fork: Here's How Exchanges Are Dealing With Bitcoin Cash (2018)
- BM9 – Nick Marinoff: Bitmain Nears 51% of Network Hash Rate: Why This Matters and Why It Doesn't (2018)
- BM10 – Jessie Willms: Elections Canada Consults With Political Parties on Crypto Donations (2019)
- BM11 – David Siegel: Op Ed: Crypto-Investing in the Age of Whales (2017)
- CCN12 – P. H. Madore: Ethereum Classic Might Have Been Hit by a 51% Attack (2019)
- CCN13 – Lester Coleman: I/O Coin Readies Blockchain Upgrade With 'Best Of Both PoW And PoS' (2016)
- CCN14 – P. H. Madore: Dash Cryptocurrency: Single Wallet Owner Possesses 51% of Hashrate (2019)
- CCN15 – Rebecca Campbell: Counterparty Brings Ethereum Smart Contracts to the Bitcoin Blockchain (2016)

APPENDICES

Appendix 1 – Glossary of Cryptocurrency-specific Terms

Appendix 2 – Articles (to be found on the enclosed CD)