

ISMGE 2020**II International Scientific and Practical Conference "Individual and Society in the Modern Geopolitical Environment"****SMART TECHNOLOGIES TO REGULATE SOCIETY: IS THE OFFICIAL CONCEPT OF LAW CHANGING?**

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Abstract

Smart technologies of cryptocurrency, blockchain and smart contract require reflection in the context of philosophical and legal issues. The legal literature on this subject is currently quite extensive, both abroad and in Russia. However, the main focus of the overwhelming majority of publications is a simple description and further understanding of the device of these technologies, the order of their implementation, development and operation. First, we believe that the question of the essence of these technologies and their correlation and mutual influence with traditional institutions is not quite clear. As a rule, the works simply postulate the legal nature of the studied technologies. However, all nation-states have the problem of regulating these regulatory technologies themselves, which are autonomous information and telecommunication systems that do not require a state to operate. This delicate circumstance may shake the official definition of the right, postulating a connection with the state as a binding attribute of the right and providing positive evidence of the possible existence of the right before the state and beyond its borders. In its essence, these digital technologies contain claims to the status of a normative regulator of relations between participants, similar to traditional institutions of the state and law. In this article the authors conclude that these technologies will exist in parallel with traditional state and legal institutions, freeing up a significant part of legal relations from the state. The paper provides preliminary observations on these complex issues, inviting further reflection by the scientific community.

2357-1330 © 2020 Published by European Publisher.

Keywords: Blockchain, cryptocurrencies, crisis of official law definition, K. Marx's sociological law, regulatory approaches, smart contracts.



1. Introduction

According to historical materialism, the development of productive forces causes changes in all aspects of social life. First of all, property relations are changed. New social groups, new forms of political power, worldviews and cultures emerge from them, and all superstructure phenomena change. In modern language, productive forces are technologies.

In other words, the first part of Marx's law looks like this: the whole system of social relations corresponds to the nature, level and needs of technology development. However, the establishment of this correspondence does not happen overnight or painlessly, as does any growth accompanied by kickbacks, recession, and resistance from "old" social institutions to change.

The second part of the sociological law describes this process of transition to a new state of social balance: social relations produce an active reverse effect on technology. The individuals and social groups that have spawned the new technologies and their users, like the engine, are *accelerating* their adoption and the accompanying changes in social institutions. The other part of humanity keeps to the "old" forms of social interaction, due to their conservatism and reactionary nature, and *slows* down their development. Recently, the state and law have faced completely new phenomena that have stalled not only practical legal regulation but also theorists. We are talking about digital algorithms for cryptocurrencies, blockchain, and smart contracts (Artemyev, 2018; Malushko et al., 2016; Tarakanov et al., 2019). These technologies are interconnected, so there is reason to consider their interaction with the law in the same way.

The specific feature of these technologies is that they are regulators of participants' relationships in themselves, but they are built on a fundamentally different basis than traditional legal regulation.

2. Problem Statement

Traditional legal regulation has a high degree of centralization, with a state as a privileged intermediary and the possibility of coercive measures to restore and protect the rights of participants in legal relations. So, the algorithm of the traditional structure of the legal norm consists of three links "*if-then-otherwise*", where the state plays a monopolistic role in actualization, formalization and objectification of its entire content.

On the contrary, the above-mentioned new technologies imply self-organization and autonomy of processes, as well as complete decentralization of regulation, i.e. independence from the external regulator, replacing the state and other social institutions (banks, lawyers, notaries, auditors, etc.) as intermediaries with mutually agreed actions in the framework programmed by the digital environment.

Cryptocurrencies exist in the virtual space and are independent from the banking system and any administrative and bureaucratic procedures. It is impossible to falsify them, and they are not afraid of inflation due to limited emission. They are protected by cryptographic methods, secured by market demand, mining complexity and equipment to keep the network running.

Blockchain is a distributed ledger technology, an accounting database capable of providing secure storage and exchange of almost any information (from accounting data and records of property rights to

issued insurance and counting votes), including about transactions, without any external intermediary and centralized leadership.

A smart contract is a digital algorithm containing information about obligations between parties that do not trust each other, including the execution protocol, located at a specific address in the blockchain and the execution of which results in reordering information that leads to a change in its state. It consists of “*if-then...*” conditions based on consensus.

In this sense, technological algorithms are an effective and dangerous competitor to state and legal institutions.

In particular, cryptocurrencies, as private digital money, create parallel money circulation that is cross-border in nature and beyond the control of not only "their" state but also other states. Virtual currencies are based on anonymous transactions and therefore allow evading taxation, moving goods without accounting, including those limited in circulation, financing various projects, initiatives and social processes that may, inter alia, be prohibited by the legal systems of specific states or politically undesirable.

Blockchain and smart contract technology technically accompanies the distribution of cryptocurrencies through the initial placement of digital tokens (ICO) from anywhere in the world with real money, without any control or involvement of authorities. Besides, in the Russian legal environment, according to optimistic (perhaps excessive) estimates of specialists (Lizunkov et al., 2020), the potential sphere of application of these technologies can replace up to a quarter of the articles of the Civil Code of the Russian Federation, i.e. to function completely independently of legal regulation in property and value relations.

On the background of these statements, it becomes quite obvious that there are actual changes in property relations caused by these technologies. Moreover, if we expand this list of information technologies by interconnected modern means of communication and general computerization, and automation of practically all spheres of society from economy and everyday life to art and education, the effect of the basic sociological law becomes even more evident and decisive.

Changes in property relations lead to the formation of a new dominant class consisting of companies and their founders producing software and Internet access, which generates a gradual but increasingly obvious weakening of the regulatory and powerful influence of traditional state and legal institutions and the increasing role of transnational companies. New forms of political power are beginning to take shape as supranational organizations that have no interest in strong nation states and seek to dismantle them consistently, as well as blurring the formed borders between countries, just as these borders have actually been erased in virtual space.

The centralization of power now takes place on a global scale in the hands of political supranational organizations with cross-border jurisdiction, whether conscious or unconscious, expressing the interests of the new dominant class of technocrats, as these processes are objective. Globalization is alien to local multiculturalism, despite the slowing outbursts of national consciousness and the lack of cultural mixing noted by many observers. Resistance and recession as a manifestation of the active backward impact of "old" social relations are foreseeable and are likely to weaken along with the gradual natural disappearance of their carriers.

The need for global integration is not obvious and many people believe in conspiracy theories that explain globalism by the desire of one country or race to be the hegemon and the main consumer of resources. The process of further unification is most likely to encounter many obstacles on its way. However, we have already been connected to the Internet, most of us "have received" cell phones, soon paper money will completely disappear from circulation, due to modern transport the world has accelerated and decreased.

The whole of history is a tireless attempt to widen frozen circles. And if earlier history was a spontaneous, uncontrollable process, today, when we have invaded the evolutionary mechanism, it becomes more and more controllable and planned, and the expansion of frozen circles occurs on the scale of an entire planet, not individual tribes, peoples and states.

Many scientists and philosophers have waited and described these processes as if pushing them. Some do not believe in the reality and justification of the ongoing forced-voluntary integration, feeling nostalgic for local culturalism. However, relying on modern communication technologies, it is possible to state with a certain degree of certainty that mankind will evolve on the way of further conquest and absorption of some peoples by others, more passive.

The leader and the vector of such a cease-and-extension will change, just as the methods will vary, from mind manipulation to bloody interventions. There is every reason to believe that all this will happen until the emergence of a social giant, a single "human ant-hill" with a single control center, no matter how it may look, in the form of unitarianism or federalism, is not the point.

Similar processes take place in the global legal sphere, legal thinking, and ideology. Barlow (1996) expressed the ideology and worldview of the new era and its bearers with particular accuracy and pathos. "We create a world in which all can enter without privilege or discrimination, regardless of color, economic or military power or place of birth. We are creating a world where anyone can express their opinions, however extravagant they may be, without fear that he or she will be forced to remain silent or agree with the majority opinion. Your legal concepts of property, expression, identity, movement and context are not applicable to us. They are based on physical matter but there is no matter here. Our personalities have no bodies, so unlike you, we cannot achieve order through physical coercion. We believe that our way of government will be based on ethics, enlightened selfishness and the common wellbeing. Our personalities can cover a lot that is under your jurisdiction. The only law that almost all of our cultures recognize is the Golden Rule. It is our hope that we will be able to find private solutions based on this general principle. But we cannot make the decisions that you are trying to impose" (Barlow, 1996).

One key problem of jurisprudence in our formulation is whether the moment when the right arises coincides with the moment when the state originates and whether the right is reduced to a national law, limited to its space, or whether the right exists as a natural essence without regard to the place and time of the state's origin, and therefore is not limited to its space.

3. Research Questions

In what relation does the modern legal system of the world have to deal with these new communication technologies, pretending to become a new regulator? To understand the seriousness of the

current changes, it is reasonable to go far away and start with a brief excursion of ideas on the essence of law.

Throughout its long history, the philosophy of law cannot get along with the idea that the state is "the only creator of law" and it is impossible to exclude the sign of a coercive and sanctioning sovereign without losing the ability to distinguish between right and wrong.

The search for the location and source of the right's origin dates back to the dawn of time and since then we have seen many opposing theories. The essence of the multitude of views with a certain share of conditionality, according to our modest opinion, is reducible to the three main areas of research, which we will discuss in the main part of this article.

4. Purpose of the Study

The aim of the study is to show that those notions of law as an independent entity that existed only in the theory and philosophy of law, but today receive practical confirmation by the very fact of the emergence of intelligent regulatory technologies, which are pure legal phenomena by their nature.

5. Research Methods

The main methodological approach of the present research is K. Marx's idea about the existence of a sociological law according to which technologies (productive forces, tools, production method) determine social relations between people and the reverse effect of superstructural phenomena on the technological way of life of society, through whose dialectics society assimilates/disperses new ways of production, consumption, and distribution of material goods. Smart regulatory technologies are changing the world's property relations, leading to a significant weakening of nation-states and a strengthening of the position of transnational companies that own communications technologies resulting in the emergence and increased role of supernational institutions.

6. Findings

The most important tradition that goes back to Plato is the discovery of the nature of law in the idea of justice as a "proper measure", allowing everyone to know "what is mine and what is yours". The source of the essence of the law is the human mind capable of comprehending this universality (objective essence) and using it as a benchmark for law-making and a criterion for assessing law as right (fair) or wrong (unfair).

The next fundamental tradition, in our opinion, most underestimated, is the teaching of O. Ehrlich about Living Law. According to the Ehrlich the law comes from social relations and manifests itself in the form of autonomous internal orders of various human unions, formed spontaneously historically for the purpose of establishing peace and regulating joint cooperation within them. State law deals with rules concerning conflicts. But the law, as objective concrete order, does not come down to defining borders in case of struggle and conflicts. Much of non-state law has never been used to resolve conflicts, but has allowed for adjustment and reconciliation of members of social groups among themselves and with other groups. Consequently, we need to look for the primary legal reality preceding state law in the depths of

the rules of peaceful dormitory and coexistence. In this free quest for peace and cooperation, the true nature of the law is manifest.

Finally, the emergence of a third original tradition of fundamental searches for the essence of the law is due to the Pure Theory of H. Kelsen. He believed that the law emanates from a transcendental-logical premise in the form of a "core norm" that precedes any legal judgment as a condition of its possibility and constitutes, according to the principle of hierarchy, the subsequent order of organization of the legal material from top to bottom in legal force. Jurisprudence studies legal rules in themselves, which are logical constructions, schemes of interpretation of reality. The law science is interested in the facts of being itself to the extent that they represent the content of legal norms. The content of legal norms can be completely arbitrary, i.e., unrelated to any morality. "Her subject is a specific area of meaning, subject to its own laws." Law is the sphere of a priori due, but it relies on coercion for realization in the plane of being, which distinguishes legal norms from other social norms. The organization and implementation of this arbitrary content of legal norms requires a special apparatus in the form of political power. However, this does not mean that the state precedes the law, creates it and then submits to it. In fact, Kelsen equated the state with the normative legal order, which he considered as the primary constitutive feature of the state. The Pure Theory defines the state organization of Society as a personalized regulatory legal order.

Previous and further conceptual constructions of legal reality represent various and complicated variations of interacting and integrating the designated objects of research, which presentation is not included in the purpose of this article.

So, this excursion shows us that the ultimate sources of legal reality can be recognized as independent three abstract spheres: reason, social relations, system of coercive norms (Davydova & Zykov, 2019; Pereverzeva & Shamne, 2017).

We can see that the above possible areas of the location of the right are essentially equivalent to descriptions of the multifaceted phenomenon of the right and are completely independent in their concept from the state.

However, while at the level of philosophy there was an unquenchable search for the legal matter in itself, the legal practice has been and is still trying to do with a positive understanding of law as a state volitional (forced) normative regulator of public relations.

The main support of this standpoint was the statement that, regardless of the philosophers' and theorists' assertions about the independent meaning of law, the practical measurement of the legal system of any society is a way to achieve, implement concrete historical notions of justice by introducing imperative (overbearing) and dispositive (permissive) rules of behavior secured by the force of a certain authority, embodied subsequently in the form of state.

The core part of research in this field is simultaneously an ideological component of official law-making and law enforcement and flows within this understanding as well.

In this definition, the key aspect is the postulating of the dependence of the right on the state as its exclusive "creator" and guarantor, its derivative nature from the latter. The signs of normality and the regulator are not very controversial.

In its turn, the official legal understanding took account of the above concepts of the law essence all this time, not as the main characteristics of the law, but as additional, remaining actually on the periphery of the main science.

The borderline part of science, which deviates significantly from the dominant part in its legal understanding, thinks of law as an independent natural essence, not reducible to the laws of the state and to the ground of coercion.

Legal regulation is based on the intersection and combination of all three above mentioned legal reality measurements in varying proportions. However, the state has historically attributed a key role in law enforcement.

On the one hand, we have seen that the source of the law's genesis has nothing to do with the state, but on the other hand, the state inevitably accompanies, provides, sanctions the system of legal norms and it seems unthinkable without it. It's been that way up to now. However, today the situation seems to be beginning to change.

New technologies in the form of cryptocurrencies, blockchain and smart contracts offer a completely different way of regulating relations between the participants, it is built on the principles of freedom from state care and any interference from third forces (intermediaries) (Davydova & Makarov, 2020).

Views of the right as an independent entity have always been based only on theoretical arguments, now they are beginning to be confirmed by practice itself.

If technologies of blockchain and the smart contract are regulators in essence, capable to be the observable form of mutual relations of the participants, providing verifiability and the automated mechanism of compulsion of executing conditions of the transaction, and also safety of positions and the given transaction from the third parties and capable to provide achievement of mutually advantageous fair result for participants, then it is something else as institutional display of their *juridical (legal) essence* in the pure form, as an internal self-regulated order of the person. Cryptocurrencies as private means of exchange support even greater independence of regulation of property and value relations of participants from a particular state.

Philosophers' dreams of objectifying law as the mathematics of freedom seem to begin coming true. At least today there are real grounds for such expectations, not just theoretical ones. The main argument of the dogmatic theory about not distinguishing between right and wrong, if we look for and find it not only in the laws of the state, or in other sources sanctioned by the state, also seems weakening, because now there are objective correlates as smart technologies of regulation, which are able to tell us and people we don't trust, but we want to cooperate: what is mine and what is yours, what can and cannot be done.

Due to the nature of *legal* technologies of regulation, the official concept of law seems to plunge into a real crisis, losing its former positions. And the studies in the philosophy of law that seemed marginal just yesterday are taking on new significance and relevance (Novgorodov, 2010).

Of course, it is necessary to understand that these smart regulatory technologies are only the "first swallows" of the coming global changes based on the technocratic worldview, and therefore, they carry

many more unexpected risks and problems within their own development process and will inevitably face external obstacles on their way. However, we can definitely say one thing today.

Despite all the difficulties in overcoming the resistance of the traditional institutional environment, these innovations are in demand among the leading participants of exchange and distribution relations and their further integration into the civil turnover will continue. Today's perception of them as competitors to traditional regulatory institutions may tomorrow transform into a vision of independent, equivalent helpers.

Now we will consider in more detail what is the official law's relation to these smart regulatory technologies on the example of the Russian legislator, which will allow us to understand what and how the activity of "old" institutions inversely affects smart innovations.

In the domestic legal literature there are three viewpoints on such ratio: legal norms in their current embodiment are already applicable to new technologies and they should be simply regulated, i.e. they should be forced into the orbit of legal regulation, spreading the usual concepts and categories; legal norms need substantial restructuring and improvement to adapt these competitors; the law should be fundamentally updated, transforming itself to follow these technologies.

To date, the legislation of the Russian Federation (as well as the legislation of many other countries) does not define the concepts of cryptocurrency and smart-contract. The establishment of a legal regime for these technologies requires their legalization, recognition, i.e. a clear definition of their nature in the relevant legislation. However, as it turned out, it is not easy to do it without limiting or modifying the very nature of these phenomena. The first difficulty encountered in this way is the need to choose the field of law: financial or property.

If we understand the cryptocurrency as a form of private money, it creates a competition with money circulation in the country. In the conditions of unbridled economy the Central Bank of Russia directly says that "...we will not allow the use of cryptocurrencies as monetary surrogates" (The Central Bank ..., 2017).

The point is that cryptocurrencies as the underlying asset should have sources of value determined by the possibility of its alternative use. Public money also lacks the ability to use it alternatively, as the gold standard is not used today, which makes it as fiduciary or fiat money dependent on people's belief that their purchasing power can guarantee their exchange for another commodity. However, the sources of their value are liabilities of central banks, confirmed in turn by their assets in foreign currency and gold. And although the latter is no longer an objective correlation of paper money, the world's money gold actually remains. Nevertheless, the absence of an official "binding" of symbolic public money to any real underlying asset does not exclude the possibility of uncontrolled issuance of both monetary units and liabilities, far exceeding their "security" by other financial assets of central banks.

Cryptocurrencies do not even have such security and are only confirmed by market rate information, whose reliability is beyond doubt, since cryptography excludes unauthorized access to the blockchain. However, traditionalists tend to see it not as an advantage of virtual money, but as a demonstration of a speculative bubble that will burst sooner or later.

In addition, the Central Bank of Russia warns: "...cryptocurrencies are issued by an unlimited circle of anonymous subjects. Due to the anonymous nature of the activity on release of cryptocurrencies,

citizens and legal entities can be involved in illegal activities, including legalization (laundering) of income obtained by criminal means and financing of terrorism. Operations with cryptocurrencies carry high risks both in the course of exchange operations, including those resulting from sharp exchange rate fluctuations, and in the case of citizens' investments in issuing and selling new cryptocurrencies to investors. In addition, there are also technological risks in the issuance and circulation of cryptocurrencies and risks of fixing rights to "virtual currencies". This can lead to financial losses of citizens and the inability to protect the rights of consumers of financial services in case of their violation" (Chernyavskaya, 2017).

If we classify the cryptocurrency as property law and consider it of the same legal nature as a bearer bill of exchange or other property (specific goods, electronic asset), then taxation of this "thing" is inevitable. This is an absurd assumption, considering the similar symbolic nature of cryptocurrency with other fiat money, and it is equivalent to introducing a tax on the possession of rubles. Except for taxation purposes, it makes no sense to consider digital currencies as property.

There is no point in attributing a virtual asset to a thing even when profit is generated from its sale for roubles because the object of taxation is profit itself, but not the sold asset. It is already ignorant to tax the digital currency itself, which is just a fact of entering into a contract. The European Court of Justice has also confirmed this view (The exchange of traditional currencies ..., 2015).

A more consistent attitude to the concept of digital financial asset was manifested in the draft law No. 424632-7 (Draft Law No. 424632-7 "On Amendments ...), which proposed to introduce Article 141.2, recognizing and defining "digital money" as an independent object of civil rights and payment means and disclosing this concept. But it was never meant to come true and today's Russian legislation simply denies the notion of digital money as a legal means of payment.

The current draft law "On Digital Financial Assets" restricts both access of citizens to purchase cryptocurrencies and their independent production, because, on the one hand, they are not recognized digital financial assets as a legal means of payment in the Russian Federation, on the other hand, "mining is recognized as an entrepreneurial activity if the person who carries out it for three consecutive months exceeds the energy consumption limits set by the Government of the Russian Federation". In addition, this draft law regulates only so-called tokens (digital rights), but not cryptocurrencies. In other words, this regulation simply prohibits the production and use of cryptocurrency in the Russian Federation.

However, it is unlikely that prohibitions in this area will achieve their goals, because a person needs only the Internet to buy, for example, Bitcoin, and the production of cryptocurrency, with this approach, will be more difficult.

We also see half of the measures in the draft law on crowdfunding (Draft Law No. 419090-7 "On Alternative Methods...), which de jure restricts the rights of individuals to use crowdfunding platforms in principle, as it allows only qualified accredited entities in this environment. Nevertheless, it was the needs of individuals that gave rise to this alternative way of attracting investment, including for the creation of creative works, start-ups, non-commercial projects, program development, organization of cleaning and landscaping, etc.

The situation is not better with the legal regulation of smart contracts and distributed registers in the world and Russia particularly. To demonstrate the Russian legislator's misunderstanding of what they

are trying to expose to norm-setting, it is sufficient to quote the Explanatory Note to draft law No. 424632-7: "In order to describe how the circulation of digital money will be carried out (in cases and within the limits provided by law), the projected Article 141.2 of the Civil Code applies a well-known legal and technical method - rules on digital rights will apply to digital money. This means that the information system must have records of the owners of digital money and that such money only passes from one person to another through a record. This method will also allow for the inclusion of digital money in the competitive mass of the debtor and in the hereditary mass, but we should understand that even with a direct indication in the law it will be possible only when it is technically possible to force an entry about the new owner of rights to the object (Lizunkov et al., 2017).

However, a blockchain is not controlled by any one person or organization; this is the very essence of it. It is its distributed architecture that ensures the security of transactions in the blockchain. The principle of operation of the blockchain is comparable to that of the Internet itself. Blockchain can be stored anywhere. Anyone can download its full version, and it will be stored with you. To control the Internet adequately and completely, you need another Internet.

Payment takes place between email addresses without intermediaries, and it is irreversible, there is no procedure to cancel the confirmed transaction, including in the error of payment. In this case, there is no information about address owners, which serves as a basis for the anonymity of participant transactions. But even if somehow such information becomes obligatory at each transaction, it will not be useful for control, because the address can be generated completely autonomously, without connecting to the network and subsequently nothing to report to the network.

Paying with cryptocurrency in virtual space is equal to cash payments in real space and time. How do we know that someone A gave cash to someone B as a bribe? Only to monitor specifically the movement of A and B, and take red-handedly at the meeting. It is also difficult to regulate cryptocurrency calculations, complicated by the fact that at the time of tracking you don't sure that A and B are really the same A and B that you suspect, because the issue is not the e-mail address of A and B, but the possession of a private key to this address.

And while in smart contracts reversible transactions are possible, to whom will the international community give the right to implement them as an arbitrator? Continuing on the regulation of smart contracts, Shaydullina (2019) raises curious issues: are the general provisions on transactions applicable to smart contracts?, if yes, how will there be a challenge and compulsion of the parties to perform them, and how will there be restitution for already performed smart contracts? how will the institution of liability of the parties look like in case of incorrectly drawn up a smart contract, which caused losses for one or both parties?

7. Conclusion

It is clear that international judicial bodies and other supranational bodies, rather than national courts and other regulators of a particular state, will regulate these issues.

We think the above is enough to draw preliminary conclusions about whether the law, as a traditional social institution, can regulate smart technologies in the form of cryptocurrencies, smart

contracts and blockchain, or should it undergo the necessary modifications, or even transform into something completely new?

The considered smart regulatory technologies are legal by their very nature, offering an alternative to traditional regulation. Every state that wants to remain in the upward trend of world development will sooner or later have to reckon with them and use them. Obviously, it will not be possible to regulate these technologies through the public legal means of a particular state so that they remain unchanged after such regulation and can be used for their intended purpose. This means that we are dealing with parallel regulation, whose scope will increase. We need to recognize that those segments of the relationship that can be regulated through these technologies will fall out of state care as more and more people take possession of them.

History and sociology teach us that the institution of the state emerged as an organization of public power to ensure the safety of the population on its own territory from external and then internal threats.

Depending on the martial or peaceful situation of the population, the state intervention swells up, invading also such areas of life that were previously rationed autonomously, then weakens, allowing self-government and delegation of authority.

Historically, the spheres of public life regulated by the state have also changed.

Once upon a time, rationing the relationship between perpetrator and victim was a private matter. Later, the state monopolized the functions of justice and punishment. The same is true for the regulation of economic processes, which were previously granted to the will of individuals and are now under the state system. On the contrary, religious beliefs have become a matter of conscience for everyone, having fallen out of the state care system.

It is time to recognize that we should gradually release those social relations that can be resolved through smart technology on the basis of "if-then ...", as long as it does not relate to security encroachments linked to money laundering or terrorist financing. Encouragingly, the processes of official reflection on the meaning of these technologies have already begun in Russia (Analytical Review ..., 2018; Review on Cryptocurrencies ..., 2017).

Another important conclusion should be the awareness that Internet relations are becoming a new legal field, which is a supernational cyberspace where the jurisdiction of each individual state ends and the actions and decisions of supernational governance and regulatory structures gain importance.

Acknowledgments

The chapter was prepared with financial support of the Russian Fund for Fundamental Research. Grant of the RFFR 20-011-00583 A.

References

- Artemyev, K. I. (2018). Blokchan: occurrence, peculiarities of use and regulation. *Domestic Jurisprudence*, 60-64.
- Analytical Review of the Central Bank of Russia for October 2018 on Smart Contracts.*
https://cbr.ru/Content/Document/File/47862/SmartKontrakt_18-10.pdf
- Barlow, D. P. (February 8, 1996). Declaration of Independence of Cyberspace. *Electronic Frontier Foundation ("EFF")*. <https://www.eff.org/cyberspace-independence> Davos, Switzerland

- Chernyavskaya, E. (5 September 2017). The Bank of Russia again warned of high risks when investing in cryptocurrencies. *NPP "GARANT-SERVICE"*. <http://www.garant.ru/news/1133412/>
- Davydova, M., & Zыkov, D. (2019). Limits to the applicability of types of rationality in legal activities. In *Advances in social science, education and humanities research. (1st International Scientific Practical Conference) "The Individual and Society in the Modern Geopolitical Environment" (ISMGE 2019)* (pp. 156-161). <https://doi.org/10.2991/ismge-19.2019.31>
- Davydova, M. L., & Makarov, V. O. (2020). Experimental Legal Regimes (Regulatory Sandboxes): Theoretical Problems and Implementation Prospects in Modern Russia. *Competitive Russia: Foresight Model of Economic and Legal Development in the Digital Age. CRFMELD 2019. Lecture Notes in Networks and Systems, 110*. https://doi.org/10.1007/978-3-030-45913-0_68
- Draft Law No. 419090-7 "On Alternative Methods of Attracting Investment (crowdfunding)".
- Draft Law No. 424632-7 "On Amendments to Parts One, Two and Four of the Civil Code of the Russian Federation".
- Lizunkov, V., Politsinskaya, E., Malushko, E., & Pavlov, A. (2020). Modelling as the Basis for Building a Competency Model of a Specialist Demanded by Industrial Enterprises in Priority Social and Economic Development Area (PSEDA). *International journal of emerging technologies in learning, 15*(13), 321-326.
- Lizunkov, V. G., Marchuk, V. I., & Malushko, E. Yu. (2017). Economical and Managerial Competencies of Bachelors in Mechanical Engineering. *European Proceedings of Social and Behavioural Sciences, 19*, 456-463
- Malushko, E., Maletina, O., Lizunkov, V., & Tsybaneva, V. (2016). Use of virtual learning system for educating students with disabilities and special needs. *International Multidisciplinary Scientific Conferences on Social Sciences and Arts*, 481-487.
- Novgorodov, D. A. (2010). The Concept and General Characteristics of Internet Relations. *Bulletin of Moscow University of the Ministry of Internal Affairs of Russia, 10*, 120-121.
- Pereverzeva, Y. V., & Shamne, A. N. (2017). Financing higher education: experience of Russia and Germany. *Advances in Social Science Education and Humanities Research (Proceedings of the 7th international scientific and practical conference) "Current issues of linguistics and didactics: the interdisciplinary approach in humanities" (CILDAH 2017)*, 97, 221-225.
- Review on Cryptocurrencies, ICOs and Approaches to their Regulation*. Central Bank of Russia. https://cbr.ru/Content/Document/File/36009/rev_ICO.pdf. 2017
- Shaydullina, V. K. (2019). Problems of legal regulation of the use of smart contracts. *Baltic Humanitarian Journal, 13*(1), 365-366.
- Tarakanov, V. V., Inshakova, A. O., & Dolinskaya, V. V. (2019). Information society, digital economy and law. *Ubiquitous Computing and the Internet of Things: Prerequisites for the Development of ICT, Studies in Computational Intelligence, Cham: Springer Science + Business Media*, 826, 3-15.
- The Central Bank will not allow cryptocurrencies on the Russian market as money surrogates (2017). TASS. <https://tass.ru/ekonomika/4546253>
- The exchange of traditional currencies for units of the 'bitcoin' virtual currency is exempt from VAT. (2015). *Press release of the European Court of Justice No. 128/15 of October 22, 2015*. <https://curia.europa.eu/jcms/upload/docs/application/pdf/2015-10/cp150128en.pdf>