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The Interface of Competition Law and Blockchain Technology: A Global Perspective[5]

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Abstract

The rule of law does not govern all human interactions. There are times when the state bypasses legal constraints, as documented by the World Justice Project. Other times, jurisdictions may be mutually unfriendly and refuse to enforce foreign laws. Blockchains create trust between contracting parties at the individual level, enabling them to transact freely and increase consumer welfare. Blockchains can only supplement antitrust if the legal constraints do not impede their development. The law should thus support the decentralization of blockchains so that blockchain-based mechanisms may take over (even if imperfectly) where the law does not apply. With that in mind, we justify the attractiveness of that approach by showing that blockchain causes an increase in the number of transactions by creating trust (Part 1), and that it may overall increase the decentralization of economic transactions (Part 2). The law should take into account where it applies (Part 3). We conclude afterward (Part 4).

Keywords: law, enforcement, cross border, blockchain, competition law, technology.

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Interfejs prawa konkurencji i technologii blockchain – perspektywa globalna[6]

Streszczenie

Praworządność nie reguluje wszystkich interakcji międzyludzkich. Zdarzają się sytuacje, gdy państwo omija ograniczenia prawne, jak udokumentowała to organizacja World Justice Project. W innych przypadkach jurysdykcje mogą być sobie wzajemnie nieprzyjazne i mogą odmówić egzekwowania zagranicznych przepisów prawa. W takich sytuacjach można polegać na innych środkach zwiększania wspólnego dobra.

Na poziomie indywidualnym blockchainy budują zaufanie między stronami umowy, które mogą swobodnie dokonywać transakcji i zwiększać dobrobyt konsumentów. Równocześnie pomagają w zwiększaniu decentralizacji; do tego samego celu dążą też ustawy antymonopolowe. Blockchainy mogą jednak uzupełniać ochronę konkurencji tylko wtedy, gdy ograniczenia prawne nie utrudniają ich rozwoju. Prawo powinno więc wspierać decentralizację blockchainów, aby mechanizmy oparte na blockchainie mogły przejąć te obszary, w których prawo nie obowiązuje.

Mając to na uwadze, utrzymujemy, że o prawie i technologii należy myśleć jak o sprzymierzeńcach – a nie o wrogach – ponieważ mają one swoje mocne i słabe strony, które się uzupełniają. Takie myślenie prowadzi do nowego podejścia typu „prawo i technologia". Atrakcyjność tego podejścia uzasadniamy wykazaniem tego, że blockchain powoduje zwiększenie liczby transakcji poprzez budowanie zaufania (część 1) i że może ogólnie zwiększyć decentralizację transakcji ekonomicznych (część 2). Prawo powinno uwzględniać miejsce obowiązywania (część 3). W dalszej części artykułu dokonujemy podsumowania (część 4).

Słowa kluczowe: prawo, egzekwowanie, transgraniczność, blockchain, prawo konkurencji, technologia.

[6] Badania wykorzystane w artykule nie zostały sfinansowane przez żadną instytucję.

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Part 1 – Blockchain and Trust

The rule of law makes games cooperative by binding the players together. The same is true for blockchain when using smart contracts (**A**). This translates into an increase in the number of transactions, which has multiple consequences (**B**).

A Primer on Game Theory and Blockchain

In game theory, a Nash equilibrium is a non-cooperative game[7] outcome whereby no players can independently change their position and be better off. One may find a Nash equilibrium for every finite game. That being said, the Nash equilibrium of a game is not necessarily Pareto optimal; that is, there could be other game results that are better for one participant but would require making altruistic sacrifices.[8]

Game theory helps to understand why players may be willing to transact. When games are non-cooperative, each player ignores the strategy that other players will choose. This uncertainty can make them reluctant to enter into a transaction because they are unsure the other players will also follow the course of action that leads to Pareto optimality. Instead, they are left with a stochastic Nash equilibrium.

The rule of law helps in that regard by allowing each player to bind the others contractually. When a product is sold on a website, for instance, whoever completes part of the transaction first (for instance, paying before receiving the product) is put in a vulnerable position.[9] Laws can help create trust by incentivizing the co-contractors to comply with their respective obligations. In turn, this transforms

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7 L. Kaplow, *Competition Policy and Price Fixing*, Princeton 2013, p. 177 ("cooperative games allow binding agreements while non cooperative games do not").

8 In the classic prisoner's dilemma, when both players stay silent, one may observe an improvement in Pareto's sense; see: *Prisoner's Dilemma* (*Stanford Encyclopedia of Philosophy*, https://plato.stanford.edu/entries/prisoner-dilemma/ [https://perma.cc/SX3B-MTAA] (access: 24.08.2021).

9 Generally, see: B. Klein, R.G. Crawford, A.A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, "Journal of Law and Economics" 1978, 21(2), pp. 297–298 (emphasizing that "after a specific investment is made and such quasi rents are created, the possibility of opportunistic behavior is very real").

transactions into cooperative games, and thereby makes it in participants' individual interest to engage in productive transactions more frequently.[10]

The same goes for smart contracts.[11] Each player is assured that the others will collaborate as they are tied by a code, potentially, with automatic sanctions in case of breaches of contracts.[12] It gives players more certainty about the game, leading toward Nash equilibria with Pareto optimality. Generally speaking, the enforcement of cryptographic rules can be compared to the enforcement of legal rules, though distinctions come into play when it comes to drafting and enforcing them. Trust simply results from the code written in a computer language, rather than a human language.

Trust Without Antitrust

Transforming a non-cooperative game into a cooperative one creates trust, which eventually translates into more transactions being implemented.[13] That is a positive outcome that our societies have embraced. In fact, corporate and contract laws have played a significant role in fostering the modern economy by creating legal certainty. We believe the same to be true for blockchain.[14]

That being said, an increase in the number of transactions also leads to an increase in the number of illegal ones. This is, for instance, the case when firms agree to fix prices. Legal systems seek to solve this problem by striking a balance between the creation of legal certainty thanks to private law, and the enforcement of public law (such as antitrust) with the broader objective of ensuring the proper functioning of markets. However, what about situations where the rule of law does not apply, for instance, when jurisdictions are mutually unfriendly (cross-border issue), or

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10 Obviously, laws are just one of many ways to create trust. There are industries where parties prefer private ordering over legal enforcement, but laws are generally speaking a preferred way to ensure trust, as it is a public good.

11 T. Schrepel, *Collusion by Blockchain and Smart Contracts*, "Harvard Journal of Law & Technology" 2019, 33(1), pp. 117, 124, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3315182 [https://perma.cc/442Q-8RK6?type=image] (access: 24.08.2021).

12 On how blockchain is "trying to reduce social trust assumptions by creating systems where we introduce explicit economic incentives for good behavior and economic penalties for ban behavior," see: B. Vitalik in: *Governance, Part 2: Plutocracy Is Still Bad*, 18.03.2018, https://vitalik.ca/general/2018/03/28/plutocracy.html [https://perma.cc/N67W-TMW3] (access: 24.08.2021).

13 The management consulting firm Bain & Company predicts that, by 2026, distributed ledger technology and blockchain could increase the volume of global trade by $1.1 trillion from $16 trillion today. It represents a 6.9% increase in world trade, see: Bain & Company, *Press release* (22.10.2018), https://www.bain.com/about/media-center/press-releases/2018/hsbc-blockchain-report/ [https://perma.cc/J7EF-F9VH] (access: 24.08.2021).

14 See the Nobel Prize-winning economist Edmund Phelps, *Mass Flourishing*, Princeton 2015, p. 206.

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when the state is not enforcing legal limitations on the exercise of power by its agents or private entities (internal issue)? How can the same balance be achieved? In other words, does the increase in the number of transactions permitted by blockchain (where the law does not apply) benefit the common good despite the implementation of illegal transactions along the way? More specifically, should blockchains be designed in a way that leans toward the objectives pursued by antitrust laws? How? That is what we discuss in **Part 2**.

Part 2 – Decentralization of Economic Transactions

Antitrust and blockchain are made of different materials. As Lawrence Lessigputit put it, the first is the East Coast Code, while the second is the West Coast Code.[15] They share a common goal nonetheless: decentralization. After showing how each of them proceeds to reach it (**A**), we address how blockchain may help in maximizing it in the absence of antitrust (**B**).

Decentralization as a Common Language

The end goal of antitrust law is to enhance consumer welfare.[16] It achieves this objective mainly through the decentralization of monopolistic confidence, hence its designation, "anti-trust" (in the sense of trustees). Put differently, it seeks to free markets from economic coercion.

In a nutshell, the Sherman Act has two sections. Section 1 prohibits companies from combining their resources from achieving illegal centralization. Section 2 prevents a firm from abusing its centralized market power to eliminate competition. On top of the Sherman Act, the Clayton Act prevents harmful concentrations when it is expected that new entities would have too much market power.

The same point could be made for European competition law, prohibiting similar kinds of practices under TFEU Article 101 and Article 102 and scrutinizing concentrations under the EC Merger Regulation. In short, centralization is only permitted when it results from competition on the merits. For the rest, the capture of economic power must remain possible for all the market players, making sure that no market player can live "the quiet life."[17]

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15 L. Lessig, *Code: And Other Laws of Cyberspace, Version 2.0*, Basic Books 2006, p. 72.

16 H.J. Hovenkamp, *Is Antitrust's Consumer Welfare Principle Imperiled?*, "Journal of Corporation Law" 2019, 45(101), pp. 101, 109.

17 J.R. Hicks, *Annual Survey of Economic Theory: The Theory of Monopoly*, "Econometrica" 1935, 3(1).

Blockchain *raison d'être* is also decentralization. Emerging from the cypherpunk and open-source movements,[18] blockchain decentralization is the primary reason why it could eventually disrupt centralized platforms, namely by providing users with trustful features.[19] Blockchain communities nonetheless admit centralized outcomes on the merits. At the protocol level, centralization is welcome if one core design is proven to be "better" than others. At the application level, centralization is welcome when one idea turns out to be more useful. Here, again, decentralization is seen as a means.

In short, in neither case is it a question of pursuing decentralization at all costs. Decentralization is sought as a process toward efficiency, not as a moral or political stand. The idea is for all market players to retain the *ability to decide without having to follow the instructions of centralized economic power*. In other words, decentralization is thought of as a bulwark against the dangers of structural centralization. There are plenty of them, including antitrust abuses related to Section 2 of the Sherman Act in which one powerful market player is exercising coercive measures against its competitors.[20]

Although the objective is similar, antitrust and blockchain seek to achieve it in different ways. Roughly speaking, antitrust punishes anticompetitive practices and prevents harmful concentrations, while blockchain implements decentralization in its core functioning. In that regard, the decisions of courts and agencies are continuously assessed by antitrust scholars to ensure that the law is applied correctly. Similarly, one may question whether the design of blockchains enables the optimal level of decentralization. This question is crucial in situations where antitrust laws cannot be applied.

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18 See, for instance, blockchain reliance in: D. Chaum, *Security Without Identification: Transaction Systems to Make Big Brother Obsolete*, "Communications of the ACM" 1985, 28(10), p. 1030.

19 For instance, the absence of vertical control within public permission less blockchains creates trust. Trust is a major feature explaining why users would use a technology or not. In that regard, see: C. Newton, *Twitter Officially Kills Off Key Features in Third-Party A*pps, "The Verge", 16.08.2018, https://www.theverge.com/2018/8/16/17699626/twitter-third-party-apps-streaming-api-deprecation [https://perma.cc/JGH5-UW7P] (access: 24.08.2021).

20 On the subject of Section 2 of the Sherman Act in relation to blockchain, see: T. Schrepel, *Is Blockchain the Death of Antitrust Law? The Blockchain Antitrust Paradox*, "Georgetown Law Technology Review" 2019, 3, pp. 281, 308, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3193576[https://perma.cc/4GRH-9NV8?type=image] (access: 24.08.2021) (showing that unilateral practices are more likely to be implemented into private blockchains because there is "a pilot in the cockpit"). This is all the more true for centralized firms, see for instance: R. Frank, *Antitrust Law and the Protection of Open Standards, Interoperability, and Competition*, "Public Knowledge", 10.06.2016, https://www.publicknowledge.org/blog/antitrust-law-and-the-protection-of-open-standards-interoperability-and-competition/ [https://perma.cc/86E7-8M9Z] (access: 24.08.2021), and more recently: T. Schrepel, *The Subject of "Predatory Innovation" in the Google Hearing*, "Concurrentialiste", 14.02.2020, https://leconcurrentialiste.com/predatory-innovation-google-hearing/ [https://perma.cc/PUC2-UWYC] (access: 24.08.2021).

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Blockchains Optimum Decentralization

The general way in which blockchains can facilitate more decentralized industry structures is simple: they allow for markets to be split into two layers – one competitive layer with many providers and the other layer that is the commonly shared network connecting them.

Network effects accrue to the common network layer, and *when* no direct form of control can be exercised on it, one blockchain participant cannot possibly abuse any natural monopoly that may arise. It makes other participants more willing to join because they know the network will not suddenly change its rules to turn against them.[21] Therefore, one may want to analyze that layer further.

The common network layer can be constructed either by using private/permissioned (or "consortium") blockchains or by using public blockchains. Permissioned networks have historically been considered easier to adopt because of their more familiar security model, though more recently, we have seen more adoption of public blockchains in enterprise contexts as well.[22] The ongoing stable operation of public blockchains over time is likely to alleviate concerns that their security model is unproven.

Additionally, arguments that public chains are unsuitable for enterprise use because they are seen as "anarchic" are increasingly being recognized as incorrect. Base layers with no central points of control are fully compatible with higher-layer applications that add such points of control as needed; a historical precedent of this being corporations using (decentralized) networks, such as BitTorrent, to distribute files that they (centrally) upload. Hence, all in all, we expect to see the adoption of public blockchains to continue increasing, and for that reason, we shall compare private and public blockchains when it comes to our subject.

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21 In public blockchains, the network layer cannot be changed unilaterally to fit one participant's own interests; on that, see: B. Vitalik, *Engineering Security Through Coordination* Problems, 8.05.2017, https://vitalik.ca/general/2017/05/08/coordination_problems.html; [https://perma.cc/25NK-2VZW] (access: 24.08.2021). Things are different for centralized products and services, see, for instance, the situation of API changes breaking third-party applications dependent on some underlying centrally controlled network, C. Newton, op. cit. Describing "the alteration of one or more technical elements of a product to limit or eliminate competition" as predatory innovation, see: T. Schrepel, *Predatory Innovation: The Definite Need for Legal Recognition*, "SMU Science and Technology Law Review" 2018, 21, pp. 19, 22, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2997586; [https://perma.cc/LDP3-7MES?type=image] (access: 24.08.2021).

22 See EY's public blockchain initiatives as one example of this trend, EY, *Press release* (4.03.2020) https://www.ey.com/en_gl/news/2020/03/ey-launches-baseline-protocol-an-open-source-initiative-for-the-public-etherum-blockchain [https://perma.cc/MH38-64PK] (access: 24.08.2021).

When evaluating the gains that a blockchain-based structure provides in terms of maximizing decentralization, we can look at several key parameters:

- Is the underlying blockchain (common network layer) private or public?
- To the extent that *private*/consortium components exist:
  - Are there legal barriers preventing incumbents from blocking legitimate new participants attempting to join?
  - Is their governance structure providing them equal or similar control to that of centralized firms?
- If the blockchain is *public*:
  - Is joining the network technologically and legally barrier-free? For instance, is public open-source software for performing all necessary functions available?
  - What is the type of consensus algorithm? How resilient is it against commonly known attacks? What are the risks that the system will somehow be captured by one or a small group of participants? How quickly could such a thing happen?

When the blockchain is public, resistant to the most well-known attacks, and free to use, it maximizes decentralization. In fact, this type of blockchain is optimal to supplement antitrust law in ensuring decentralization of coercive economic power, at the very least, in these situations we have described where the law does not apply.

Obviously, this type of blockchain design will not preclude all anti-competitive practices from being implemented. The balance is nonetheless positive when it comes to weighing in the increase in the number of transactions leaning toward decentralization versus anticompetitive strategies. The first has a positive worldwide macroeconomic effect, while the second is generally quite limited (in scope, in time, or in effect).

After all, even where antitrust law applies, not all illegal practices are being prevented. Due to the low detectability of such practices,[23] antitrust laws are designed to effectively deter most practices. The same applies to technology. It has great implications that we discuss in **Part 3**.

[23] J.M. Connor, *Cartel Detection and Duration Worldwide*, "Competition Policy International Antitrust Chronicle" 2011, 9 (emphasizing the fact that the percentage of detected cartels is only between 10% and 33% in the post-World War II era).

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Part 3 – The Regulatory Path toward Decentralization

Ensuring decentralization *via* blockchain requires an adaptation of antitrust and regulatory policies (**A**). It also has long-term implications, namely in shifting the way that we approach the matter of law and technology (**B**).

Short-Term Implications

We have shown that blockchain can be used to enable new transactions that decentralize the economy. For that reason, antitrust agencies should welcome blockchain as a great ally and use the law to ensure that no anti-competitive form of coercive power is being exercised in the blockchain ecosystem.[24] If, on the contrary, antitrust agencies were to use their *enforcement* power toward other goals than ensuring blockchain optimum decentralization, they could put the entire ecosystem at risk.

In addition to adequate enforcement, we contend that antitrust agencies should set up various mechanisms to *promote* blockchain optimum decentralization. This would require the creation of regulatory sandboxes and safe harbors to protect blockchain developers and users from antitrust concerns (as long as blockchain is designed in such a way that maximizes decentralization).

Sandboxes and safe harbors create comfort zones where the technology can be tested in ways that would otherwise be illegal or require overly burdensome regulatory approval.[25] Sandboxes are testing grounds for businesses supervised by regulatory institutions. They could push blockchain developments toward more decentralization, precisely by incentivizing decentralized designs. Safe harbors, which are similar to sandboxes but with no limit in time or scale, could be adopted if sandboxes' results are positive (i.e., they improved centralization).

Long-Term Implications

In the *long term*, antitrust and blockchain both have concessions to make. For antitrust, a re-conceptualization is needed, as it must become an ally to technological developments instead of just a threat. It implies directing antitrust enforcement toward technological issues in exchange for not going after other anticompetitive

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24 On how antitrust could achieve that objective, see T. Schrepel, *The Theory of Granularity: A Path for Antitrust in Blockchain* Ecosystems, 14.01.2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3519032 (access: 24.08.2021).

25 Generally speaking, on why legal certainty foster innovation, see: R.S. Pindyck, *Irreversibility, Uncertainty, and Investment*, "Journal of Economic Literature" 1991, 29(9), p. 1110.

practices. The short-term regulatory instruments which we have just exposed must also be institutionalized. Only if a legal environment that permits blockchain flourishing is created will it prove to be particularly helpful where the law does not apply. As for blockchain developers, they must be willing to keep on ensuring the process of decentralization, although it might create temporary barriers to greater adoption or scalability, for instance.

There is a long way to go. Policymakers might be tempted to point out the existence of a consistent dominant strategy for the law by systematically punishing all illegal practices, while blockchain developers might be tempted to ignore legal constraints consistently. But neither of these would be a dominant strategy. That is because the law cannot be applied to all illegal practices (whether because of detectability issues, or mutually unfriendly jurisdictions), and the technology cannot systematically trump the law. Here, depending on whether the technology collaborates or not, the law must adapt its strategy. When the technology chooses confrontation, the law must also choose confrontation. When the technology chooses collaboration, the law must choose collaboration despite the absence of certain sanctions that it may entail.

Part 4 – Conclusions

As we have shown in **Part 1**, trust in blockchain cryptographic rules spurs new transactions in areas where the law does not apply. It does so by making games more cooperative. We have contended that, although new anti-competitive practices will be created along the way, their negative impact will be outweighed when blockchain is designed to ensure optimum decentralization. We have detailed what such a design entails in **Part 2**.

All blockchains that feature the characteristics should benefit from various legal protections, whether in law enforcement or regulatory benefits. If such protections were not present, antitrust agencies would most certainly create a disincentive to invest in such blockchains. The overall objective of decentralization would not be optimized (**Part 3**).

We acknowledge that the most challenging part lies ahead of us in convincing governments and antitrust authorities that, despite the creation of anticompetitive practices (easily observable), the increase in the number of transactions (not easily noticeable) should nonetheless be encouraged when it results from a technology designed in a way that achieves the same objective as antitrust law. We believe that it is the optimum way of playing the game of decentralization.

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Bibliography

Chaum D., *Security Without Identification: Transaction Systems to Make Big Brother Obsolete*, "Communications of the ACM" 1985, 28(10).

Connor J.M., *Cartel Detection and Duration Worldwide*, "Competition Policy International Antitrust Chronicle" 2011, 9.

Hicks J.R., *Annual Survey of Economic Theory: The Theory of Monopoly*, "Econometrica" 1935, 3(1).

Hovenkamp H.J., *Is Antitrust's Consumer Welfare Principle Imperiled?*, "Journal of Corporation Law" 2019, 45(101).

Kaplow L., *Competition Policy and Price Fixing*, Princeton 2013.

Klein B., Crawford R.G., Alchian A.A., *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, "Journal of Law and Economics" 1978, 21(2), pp. 297–326.

Klein B., Frank R., *Antitrust Law and the Protection of Open Standards, Interoperability, and Competition*, "Public Knowledge" 10.06.2016, https://www.publicknowledge.org/blog/antitrust-law-and-the-protection-of-open-standards-interoperability-and-competition/ [https://perma.cc/86E7-8M9Z] (access: 24.08.2021).

Lessig L., *Code: And Other Laws of Cyberspace, Version 2.0*, Basic Books 2006.

Newton C., *Twitter Officially Kills Off Key Features in Third-Party A*pps, "The Verge" 16.08.2018, https://www.theverge.com/2018/8/16/17699626/twitter-third-party-apps-streaming-api-deprecation [https://perma.cc/JGH5-UW7P] (access: 24.08.2021).

Phelps E., *Mass Flourishing*, Princeton 2015.

Pindyck S., *Irreversibility, Uncertainty, and Investment*, "Journal of Economic Literature" 1991, 29(9).

Schrepel T., *The Subject of "Predatory Innovation" in the Google Hearing*, "Concurrentialiste" 14.02.2020, https://leconcurrentialiste.com/predatory-innovation-google-hearing/ [https://perma.cc/PUC2-UWYC] (access: 24.08.2021).

Schrepel T., *The Theory of Granularity: A Path for Antitrust in Blockchain Ecosystems*, 14.01.2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3519032 (access: 24.08.2021).

Schrepel T, *Collusion by Blockchain and Smart Contracts*, "Harvard Journal of Law & Technology" 2019, 33(1), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3315182 [https://perma.cc/442Q-8RK6?type=image] (access: 24.08.2021).

Schrepel T., *Is Blockchain the Death of Antitrust Law? The Blockchain Antitrust Paradox*, "Georgetown Law Technology Review" 2019, 3, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3193576 [https://perma.cc/4GRH-9NV8?type=image] (access: 24.08.2021).

Schrepel T., *Predatory Innovation: The Definite Need for Legal Recognition*, "SMU Science and Technology Law Review" 2018, 21, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2997586; [https://perma.cc/LDP3-7MES?type=image] (access: 24.08.2021).

Vitalik B., *Governance, Part 2: Plutocracy Is Still Bad*, 18.03.2018, https://vitalik.ca/general/2018/03/28/plutocracy.html [https://perma.cc/N67W-TMW3] (access: 24.08.2021).
Vitalik B., *Engineering Security Through Coordination Problems*, 8.05.2017, https://vitalik.ca/general/2017/05/08/coordination_problems.html; [https://perma.cc/25NK-2VZW] (access: 24.08.2021).

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