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# “Artificial Intelligence”: Problems of Civil Law Qualification

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## **Abstract**

Based on the civil law research methodology, the paper provides an insight into the concept of “artificial intelligence”, its legal nature and peculiarities of transactions. The subject of research is the underlying doctrine, legal provisions on “artificial intelligence” and their enforcement practices. The research purports to lay a theoretical groundwork for the concept of “artificial intelligence” as a complex thing at law whose structure may comprise a variety of intellectual assets. The applicable civil law regime — specifics of formalization of the underlying relationships — is determined by the legal nature of “artificial intelligence” as an ideal phenomenon. In view of the complex nature of the object in question, the structural system and comparative law methods were used in the paper. In fact, the use of the structural system method allowed not only to analyze “artificial intelligence” as a complex structure but also to identify computer software as its core structural element. The comparative law method enabled to develop an idea of regulatory mechanism for “artificial intelligence” as well as to demonstrate the specifics of interpretation of the applicable provisions of intellectual property law. The paper also makes use of special methods of inquiry such as the logical and formal methods, with the latter allowing to define the concept of “artificial intelligence” and discuss its core legal features. As a methodological peculiarity, the study combines the theoretical and empirical levels of cognition. The use of the methods mentioned allowed to explore raised legal issues of “artificial intelligence” as they relate to the foundations of civil law. It is concluded that the main frequently used contractual arrangements to dispose of the exclusive right to “artificial intelligence” include the exclusive right transfer agreement and the licensing agreement. The paper provides an analysis why an exception from the general rules applicable to exclusive right transfer agreements and licensing agreements were made for “artificial intelligence”.

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**Keywords**

“artificial intelligence”; intellectual asset; complex object; legal regime; exclusive right; exclusive right transfer agreement; licensing agreement.

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**Background**

It is not accidental the problem of “artificial intelligence” has recently come under scrutiny in civil law studies. In the context of a large-scale economic digitization, “artificial intelligence” has become tradable, only to pose a number of practical questions to businessmen with answers expected primarily from civilian lawyers. What kind of agreements should apply to the creation of “artificial intelligence”? What transactions are allowed for its use? Is “artificial intelligence” pledgeable or heritable? Could it be transferred under the rules developed for physical objects? These questions cannot be answered unless the doctrine unambiguously defines the legal nature of this phenomenon, with the legislator enshrining the adopted stance in specific provisions. Unfortunately, despite a wealth of literature on the subject, there is yet no clear idea of “artificial intelligence” either in civil law or among researchers. A retrospective review at the problem allows to identify a number of methodological inaccuracies and failures behind wrong conclusions.

The first thing that calls attention is the methodological defect of most publications on “digital matters”. Many authors consider the digital environment and digital data on technical devices and their systems to be ideal ones and essentially in opposition to the material world. This is wrong and contrary to the principles of the philosophical methodology on the difference between the material and the ideal. It is a vulgarization and a mistake to believe that the materiality boils down to the physical, corporeal world represented by specific things existing in time and space. The world outside physical things — including digital data and digital environment as a whole — is thus considered to be ideal. From the perspective of philosophical methodology, matter is not only a physically perceivable world but also a world of field structures, viruses and bacteria just as that of semiotic systems (signs, words, symbols, numbers). An ideal world (subjective reality, inner world) is comprised not only of human feelings and percep-

tions but also of thoughts, images and ideas. This ideal world will never be perceivable by a third party unless it is embodied in a material form. To be perceived by others, these forms may be visual (such as text and pictures), sonic, tactile or gustative. The forms allowing to perceive an ideal world (ideas, representations, concepts, intellectual assets, information) as a flow of numbers will differ for different devices and their systems (computers, gadgets, servers etc.). The digital (electronic) form is material just as any other (corporeal, sonic, gustative). Therefore, “artificial intelligence” visualized in a digital form on a device does not assume non-materiality (ideality). As an example of erroneous judgment, K.M. Mefodieva, in discussing the attributes of digital data, underlines their “non-material, digital form — source code in a numeric form” [Mefodieva K.M., 2019: 10, 12]. V.A. Laptev and P.I. Usenkov make a similar mistake when they suggest “digital things at law represented and expressed in an electronic form... can be embodied in a physical form” [Laptev V.A., Usenkov P.I., 2020: 76]. While an electronic form is essentially physical, the authors obviously ignore a principal difference between the ideal content and physical representation of a thing ideal in its essence.

There is no fundamental study on the subject. The AI publications by Russian researchers will often only echo the economic and technical literature in the English language. This negative trend results from the fact that, on the one hand, a large part of the foreign literature in the field is in English and, on the other hand, a review of foreign literature poses objective constraints: since researchers in Russia largely have the knowledge of English, they choose publications they can translate on their own without incurring significant costs of professional translation services. This means that a majority of authors become captivated by the approaches that dominate in countries of the Anglo-American legal doctrine. In particular, this is manifested in the use of economic analytical tools to study the legal aspects of digitization processes and “artificial intelligence”. Without going into details of economic analysis of law, it is noteworthy that a negative impact of its propagation affecting the legal analysis of economy was primarily visible in the fact of using the concepts of economic and technical sciences to provide a legal description of many digital assets including AI. Such a metaphysical approach inappropriate in any branch of knowledge has brought about negative implications for legal studies of “artificial intelligence”. Instead of competent civil law analysis of “artificial intelligence”, the literature is crippled with numerous publications demonstrating a departure from the academic principles of civil law. For example, many authors have come

to discuss legal personality of “artificial intelligence” [Kuteinikov D.L. et al., 2019: 85–95]; [Dremluiga R.I., Mamychev A.Yu., Dremluiga O.A., Matyuk Yu.S., 2019: 127] while ignoring the absolute truth of civil law that only persons have a legal personality and that only the legislator can grant rights and not academics.

Moreover, AI’s primitive imitation of human cognitive functions does not at all mean “artificial intelligence” can approach natural human intelligence in terms of functions, purpose and evaluation of *its* outcomes just by virtue of legal fiction allowed by the legislator. “Artificial intelligence” is a convention to be put, in our view, in quotation marks. Humankind is not anywhere close to recognizing AI a person at law<sup>1</sup>. For example, according to M. Kovalchuk, President of the National Research Center Kurchatov Institute, AI has “nothing to do with intelligence”, “this just means a higher amount of computations, a cloud”<sup>2</sup>. The discussions to endow AI with a legal personality and delictual dispositive capacity follow from various reasons (economic, social, political, academic), the main (primary) reason being economic — financial, pecuniary interest of large businesses prompting major high-tech companies to search for new mechanisms of boosting consumption of innovative products for domination and control of production and sales markets, and to identify new ways and methods of minimizing liability vis-à-vis innovative product users.

Another wrong and no less extreme stance is assumed by the authors who identify “artificial intelligence” with its physical medium and thus extend to it the regime applicable to things at law. Their “definition of artificial intelligence as an AI-enabled thing” is puzzling [Somenkov S.A., 2019: 75]. The inevitable result of this mistake is confusion of civil law regimes applicable to things and items of intellectual property. As an intellectual asset, AI is essentially ideal and needs to be represented in an objective (physical) form to be perceived by others. As was noted above, ideal products existing on different devices and their systems have a digital (electronic) form, something that allows to represent any intangible asset not in a corporeal form (that of a printed text, scheme or image) but in another physical (digital) form such as signs, numbers, source codes existing in special data media as a modern way of storing the ideal outcomes of human activities (back up systems). For “artificial intelligence”, computer is a physical medium that has

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<sup>1</sup> Available at: URL: <https://newizv.ru/comment/2/15-02-2017/252046-evgenij-kasperskij-nikakogo-iskusstvennogo-intellekta-poka-net> (accessed: 18.07.2023)

<sup>2</sup> Available at: URL: <https://nauka/17398623> (accessed: 19.07.2023)

all stored and executable programs in a binary format (digital form). Thus, a distinction should be made between the physical (digital) form of “artificial intelligence” and its physical medium. While existing on a physical medium, AI can be introduced into any physical object (such as spacecraft, drones, robotic devices), man (cardiac pacemakers), living creature (chipped animals) etc. This distinction between the digital form and physical medium is of practical importance: property right to a thing (physical medium) should be different from exclusive right to an intellectual asset such as “artificial intelligence”. Therefore, in purchasing a thing (AI physical medium) such as AI-enabled computers or gadgets under a sale agreement, the buyer does not become the owner of the right to AI since the transfer of title to a physical medium does not assign the exclusive right to “artificial intelligence”.

Thus, any legal analysis of “artificial intelligence” should avoid the defects outlined above.

## 1. The Legal Nature of “Artificial Intelligence”

It should be noted above all that no analysis of “artificial intelligence” as a transferrable property is possible unless we recognize that “a transfer of property assumes different *economic relations* to transfer things and other property between persons. Their *formalization under civil law in the form of different agreements for inheritance and other forms of assignment* (transfer of civil rights and obligations) is covered by the *concept of civil law transaction* (italics added.– L.V.)” [Sukhanov E.A., 2019: 59–60]. Formalization of economic relations with AI under the civil law will obviously pose a number of critically important questions, one being the legal nature of “artificial intelligence” since the answer will determine the kind of agreements applicable to the creation and use of AI. Thus, the identification of the legal nature of “artificial intelligence” will give an idea of the regime applicable under civil law. Moreover, it should be borne in mind that “such regime is actually established not for items themselves but for those who deal with them in legally binding transactions. Meanwhile, different things at law will differ in this capacity by the applicable legal regime and not by their physical and economic properties while the details of such regime will be represented by this or another variety of property (civil) rights” [Sukhanov E.A, 2017: 45].

As applied to “artificial intelligence”, this principle of civil law means that before actual relations with “artificial intelligence” are formalized, it is important to determine the property in question (its nature) and the rights it gives rise to since the latter (property rights to an item) will determine the



applicable legal regime. It means that an analysis of “artificial intelligence” by a civil law specialist should be focused on the item’s legal parameters — civil law regime (technical and economic ones are none of his business!).

“Artificial intelligence” as the outcome of complex programming is still not qualified as a thing at law. Clearly, it is an intellectual product is not part of intellectual assets to be protected (Articles 128, 1225 of the Civil Code of the Russian Federation; hereinafter: Civil Code). The list of intellectual assets is known to be exhaustive: they are those that the legislator has afforded legal protection to. Obviously, AI has been put outside the regulatory scope of the civil law, something that appears to be mind-boggling and inexplicable in the context of digitization of all life spheres across the board. Therefore, the civil law study of the problem of “artificial intelligence” should be focused, among other things, at identifying its place in the system of things at law.

Let us turn to the definition of “artificial intelligence” provided in paragraph 1(2), Article 2 of the Federal Law No. 123-FZ: “artificial intelligence is a set of technological solutions allowing in the performance of specific tasks to imitate human cognitive functions (such as self-learning and search for solutions beyond preset algorithms) and obtain outcomes at least comparable with those achieved by human intellect. The set of technological solutions comprises an information and communication infrastructure (including information systems, information and telecommunication networks, other information processing technologies), software (including those incorporating machine learning methods), processes and services to process data and search for solutions”<sup>3</sup>.

In the introduction it was already stated a negative attitude to the imitation of human cognitive functions by “artificial intelligence”. It has a sense now to look at the first part of the AI definition, in particular, a set of technological solutions. From the perspective of civil law, this definition has missed the point since it deals with a technical rather than legal qualification of “artificial intelligence” while the problem of legal qualification remains unsolved.

It has a sense to describe briefly the author’s approach to the identification of legal essence of “artificial intelligence”. To decide on AI’s protect-

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<sup>3</sup> Federal Law No. 123-FZ “On the Experiment to Introduce Special Regulation for Creating Necessary Conditions for the Development and Introduction of AI Technologies in a Constituent Territory of the Russian Federation — Federal City of Moscow — and on Amending Articles 6 and 10 of the Federal Law “On Personal Data” of 24 April 2020 // Collected Laws of Russia, 2020. No. 17, Article 2701.

ability by law (Article 1225, Civil Code) we should identify the intellectual property regime extendable to AI, be it copyright law or patent law. As for the former, it should be borne in mind that if “artificial intelligence” is recognized as a copyright-protected item, it becomes protected from the time it is materialized (in digital form on a physical medium) and at the same time recognized as a copyrighted property. An item protected by patent law is regulated otherwise: once AI is recognized as such, its protection by law depends on a patent to be issued. In the first case, copyright to an item is based on the fact of its materialization in any objective form while patent right will arise from the registration of items under patent law (Articles 1259, 1353 of the Civil Code).

Based on the definition of the Federal Law No. 123-FZ, author of article present believes it is possible to conclude that AI is a complex thing at law that can comprise a variety of protected intellectual assets. Items of varying legal nature which make part of a complex object can be used only as a whole which is a distinctive feature of any complex thing including “artificial intelligence”. Let us formulate the necessary constitutional features of a complex object in line with provisions of paragraph 1 (1), Article 1240 of the Civil Code:

- combining a number of protected intellectual assets;
- representing an indivisible whole from the legal perspective;
- making part of an exhaustive list of complex things by law.

The last feature of a complex object as envisaged by the Civil Code creates a legal uncertainty for qualifying many items (such as websites) as complex things at law [Vitryansky V.V., 2018: 60–65].

In our opinion, “artificial intelligence” can comprise the following structural components:

- computer software (Article 1261 of the Civil Code);
- algorithms as knowhow (paragraph 1, Article 1465);
- technological solutions as inventions (paragraph 1, Article 1350)
- databases as complex (paragraph 1, Article 1240) or composite things (paragraph 2, Article 1260).

We deal with a thing at law that has a complex structure, with computer software undoubtedly at its core. Each of the listed elements is protected either by copyright (computer software) or patent law (inventions). As regards algorithms (knowhow), the legislator, as we know, has provided a special regime that differs from those applicable to other items of exclusive rights are part of the AI structure.

The complex structure of AI as an essentially ideal phenomenon determines its qualitative certainty as different from its constitutive intellectual assets which, in our view, allows to qualify “artificial intelligence” as a complex object under to Article 1240. This interpretation is obviously contrary to the legislator’s provisions since paragraph 1 of that Article provides, as was noted above, for an exhaustive list of complex objects, only to suggest, in our view, that the problem of the legal nature of “artificial intelligence” and of the civil law regime applicable to it as an intellectual asset needs to be addressed as a matter of priority.

AI is thus a complex object different from its constitutive intellectual assets in terms of function and representing a qualitatively new entity beyond a mechanical combination of its elements.

However, even if “artificial intelligence” is recognized by law as a stand-alone complex object under Article 1240, the question of its legal protection will be still open since the legislator has not identified complex things among those subject to copyright and patent law. Clearly, “artificial intelligence” as a complex object can be transferred via the exclusive (property) right which, unlike the thing in question, is transferrable. It is the exclusive right to “artificial intelligence” that determines the peculiarities of the applicable legal regime.

It is crucial for a legal definition of “artificial intelligence” to make it clear how a comprehensive exclusive right to a complex object will arise given that the exclusive rights to its elements are owned by different holders. Being a costly and readily tradable intellectual product, AI is created by several parties including the organizer and at least several holders of intellectual assets (structural elements of a complex object). This gives rise to the problem of multiple ownership of “artificial intelligence” as a complex thing at law. V. A. Dozortsev, a well-known researcher of civil law, has proposed the following indication of multiple ownership of a complex object: a complex object is “the outcome of a multi-layered process where the creative work of individuals results in elements used at the second stage by other individuals to make a composite thing as a whole” [Dozortsev V.A., 2005: 144].

According to V.O. Kaliatin and E.A. Pavlova, Article 1240 creates a set of rights, as it were, to a “framework” object with the organizer as the main party. The authors note that the organizer does not creatively contribute to a new thing while limiting himself to making the necessary arrangements to create it [Kaliatin V.O., Pavlova E.A., 2014: 156]. This stance is contrary to a widespread approach of many IT experts whereby the AI organizer is



directly involved in its development acting not only as a team leader and coordinator but also as a party to the creative process by making an intellectual contribution to the common business of creating new algorithms and new software and integrating the already existing intellectual assets as elements of the AI's complex structure.

One would be hard pressed to accept a view whereby the organizer's activity is essentially organizational and technical, otherwise the question would be why he should have the exclusive rights not only to specific intellectual assets (parts of AI such as computer software, inventions, knowhow etc.) but also the exclusive right to "artificial intelligence" as a whole.

## **2. Problems of Disposing of the Exclusive Right to AI**

Once "artificial intelligence" is qualified by law as a complex intellectual object, this will give rise to a number of questions on disposing of exclusive rights.

Under paragraph 1, Article 1240 of the Civil Code, the right to a complex object ("artificial intelligence") is the right to use protected intellectual assets that are part of "artificial intelligence". According to E.A. Pavlova, "a person (individual or legal entity) who has organized for a complex object to be created has a kind of special right which, albeit not always exclusive, allows to perform the necessary actions to use the complex object" [Pavlova E.A., 2016: 152–157]. While there is no explanation why the organizer's "kind of special right" is not always exclusive, the author's approach becomes clear if one follows E.A. Pavlova's logic and adopts the above stance that the organizer does not creatively contribute to the new thing but limits himself to making the necessary arrangements. Once the person who has arranged for a complex thing to be created limits himself to making the necessary arrangements without creative contribution to a new thing, an exclusive right to the thing is unlikely to emerge. But a number of questions still need to be explained in this case. Who will have an indivisible exclusive right? How an indivisible right to a complex object is possible if it was created through creative teamwork? Here are some explanations before giving answers.

As was stated previously, we believe that the organizer's creative input into "artificial intelligence" is hard to be disputed or denied. Thus, no exclusive right to AI can arise without the organizer's involvement. Moreover, the question is why a person making arrangements to create AI should own the rights both to individual intellectual assets (AI components such as

computer software, knowhow etc.) and the right to “artificial intelligence” as a whole. How does it come around?

It is not accidental that the legislator has introduced special rules for the disposal of exclusive rights to protected intellectual assets within a complex object. To reduce the risks associated with the transferability of exclusive rights, opportunities for abuse by the organizer and also a need to avoid the problem of splitting the comprehensive right to a complex object, the legislator has provided in Article 1240 for an exception from the general rules applicable to the exclusive right transfer and licensing agreements. The legislator has treated this problem in a special way: as we said before, since no complex intellectual object is listed among those subject to copyright and patent law, the issue of protecting complex objects and underlying rights is not fully settled. Obviously, the legislator had to amend the general rules of disposal of exclusive rights in this context (Article 1233).

To enable the use of intellectual assets within a complex object, the main rule provided in paragraph 3, Article 1233 was amended as follows: an agreement for disposal of exclusive right is deemed licensing agreement by default. Secondly, paragraph 1 (2) of Article 1240 provides that an agreement to purchase the right to use an intellectual asset (to be) created specifically as part of a complex object is deemed an exclusive right transfer agreement. Under this agreement, the right to use an intellectual asset (to be) created as part of a complex object will go to the person who has arranged for the creation of the complex object: the exclusive right to the corresponding intellectual asset is thus fully transferred to the organizer who acquires the right to use the asset in any way not contrary to the law and the right to dispose of the acquired exclusive right. It is admissible to believe that contractual regulation of the relations between the organizer and holders of intellectual assets within a complex object which is envisaged by law removes to a large extent not only the problem of abuse of the right but also the problem of splitting the comprehensive exclusive right to a complex object.

It is noteworthy that the provision of paragraph 1 (2) of Article 1240 is dispositive: if so agreed, a licensing agreement may be entered between the organizer and holders of intellectual assets (to be) created as part of a complex object (parties to the agreement). It means that where the concluded agreement is not explicit as to its licensing nature (or else where the licensing nature does not explicitly follow from the contractually established limits for the use of respective assets), the agreement shall be deemed the one for transfer of the exclusive right. This is the first point.

The second point is that licensing agreements which provide for the use of intellectual assets integrated into a complex object cannot be restricted by any term (within the effective term of exclusive rights), unless otherwise provided for by the agreement (paragraph 1 (3), Article 1240), and cannot contain any provisions restricting the license holder's right to use the object of the agreement; such provisions are deemed void (paragraph 2 of that Article). In fact, the said rule serves to provide the organizer with all possible powers to use a complex object. Thus, the proprietor contracted by the organizer under such licensing agreement cannot refuse to assign the right to certain ways of using the intellectual asset as part of the complex object as a whole. While the parties may envisage other terms, it is the already mentioned rule established by paragraph 1 (3), Article 1240, that will apply by default and not the provisions of paragraphs 3 and 4 (2), Article 1235.

It is worth noting that neither paragraph 1 (3) nor paragraph 2, Article 1240, contain any provision for mandatory issuance of exclusive licenses under licensing agreements. Likewise, the legislator does not prohibit any sub-licenses to be issued under the said agreements. These questions are obviously something to be agreed between the parties.

It is important to distinguish between exclusive rights to intellectual assets integrated into a complex object and comprehensive exclusive right to a complex object as a whole, that is, one should not identify the exclusive right (the right to use an intellectual asset integrated into a complex object) acquired by the organizer of the team effort with the comprehensive right he has in respect of the complex object as a whole (the right to a complex object).

So, one should identify the right to "artificial intelligence" as a whole since, according to V. A. Dozortsev, "a complex creative product cannot be used as a whole if we protect only those elements which make up the complex product". In the opinion of this renowned researcher, the point is about the fiction of authorship which serves to provide a person who has arranged to create a complex object with the right to use it as a whole. The civilian lawyer believes that "conventional constructs not reflecting the reality" but serving to achieve the final outcome (creating a complex product) are possible in this case [Dozortsev V.A., 2005: 153, 154].

As applied to the creation of "artificial intelligence", Dozortsev's statement means, as may understand, the following. The organizer needs to obtain from each holder the right to use the intellectual asset integrated into a complex whole on the legal basis discussed above (agreement for full transfer of the exclusive right, licensing agreement). Thus, the person who has

arranged to create “artificial intelligence” should enter into corresponding agreements with authors of computer software, proprietors of knowhow (creators of algorithms), authors of inventions and other intellectual asset holders. In Professor Dozortsev’s logic, the organizer should purchase the right to use the complex product as a whole (comprehensive right to a complex object).

As lawyers know, the Civil Code provides no regulation of the relationships of purchase in respect of the comprehensive right to a complex object. In our view, such purchase may involve an agreement between the organizer and each asset holder — either in the form of a specific agreement or a specific contractual term envisaged in the agreement for full transfer of exclusive right or in the licensing agreement entered with each holder for the use of specific intellectual asset within the complex whole. On the above legal grounds, the AI organizer will purchase not only the rights to specific protected intellectual assets within AI but also the right to “artificial intelligence” as a whole.

With regard to the rights available to the organizer of complex object, there is an approach described in literature that one would be hard pressed to accept. In particular, O. Yu. Shilokhvost has proposed the following: “Apart from the said rights — *the exclusive right and the right of use* (italics added. — L.V.) — the right to a complex object will comprise other powers not related to the use of the relevant assets as exclusive things at law” [Shilokhvost O.Yu., 2011: 167–168]. Obviously, the author opposes the exclusive right to that of use. It would be useful to remind that pursuant to paragraph 1 (1), Article 1229 of the Civil Code the holder of an exclusive right (individual or legal entity) to an intellectual asset has a discretion to use it in any way not contrary to the law.

In fact, an exclusive right is both the right to use an intellectual asset and the right to dispose of it — that is, two powers are traditionally identified. According to M.A. Rozhkova, three powers that constitute an exclusive right should be identified: 1) the right of possession of an exclusive right; 2) the right of use of an exclusive property, and 3) the right of disposal of an exclusive right [Rozhkova M.A., 2014: 28]. According to V.A. Dozortsev, the right of use essentially means “the holder’s opportunity of sole action to operate a thing for a material benefit” [Dozortsev V.A., 2005: 48].

Therefore, an exclusive right to “artificial intelligence” essentially means the holder’s opportunity to change the legal history of the right itself either by way of transfer to a third party or by limitation — giving the right of use

to another person, putting the exclusive right to pledge, trust, collective management. It is noteworthy how the legislator treats the disposal of an exclusive right in paragraph 1, Article 1233 of the Civil Code that provides that the holder may dispose of an exclusive right to intellectual assets by any way not contrary to the law and the essence of such exclusive right including by way of contractual transfer to another person (under an exclusive right transfer agreement) or by giving another person the right to use the intellectual asset within contractually established limits (under licensing agreement).

Thus, an analysis of powers to use intellectual property should distinguish: power to use a thing — physical medium of the intellectual asset to be exercised by the holder not only through a legal procedure (donation, purchase agreements etc.) but also practical action with such physical media; power to use the right (exclusive right) to an intellectual asset exercisable through a mechanism for the disposal of exclusive right by giving someone the right to use the intellectual asset.

Purchasing of a physical medium by way of entering into an agreement for donation or purchase (exercising the power to use a thing) should equally assume, according to A. Makovsky, *the use of intangible assets*. This well-known civilian lawyer wrote: "The *use* can apply not only to things but also to intangibles such as reading a book, enjoying music, contemplating a picture, *searching for information in a database* (italics added. — L.V.), etc. The use means consumption, familiarization, perception of the essence and properties of an intangible product, something which is sought by the user in the first place" [Makovsky A.L., 2010: 617].

While in the first case the power to use the physical medium of intellectual asset is exercised through a legal regime established by the legislator for things, it is done otherwise in the second case — by disposing of an exclusive right (not of a thing) through licensing agreements. While in the first case we deal with a physical medium of intellectual asset — a thing at law, the second case presents a different situation: the thing at law is the exclusive right to an intellectual asset. Obviously, the powers of use and disposal as the constitutive elements of the exclusive right show complex relationships of interdependence.

Thus, the main contractual constructs to dispose of the exclusive right to AI are:

- right transfer agreement;
- licensing agreement;



sublicensing agreement;  
exclusive right pledge agreement;  
exclusive right pledge management agreement;  
exclusive right trust management agreement;  
exclusive right collective management agreement;  
etc.

The aforementioned agreements are not exhaustive of the ways to dispose of the exclusive right to “artificial intelligence”.

The exclusive right to AI can be acquired by other persons also by general succession (inheritance, reorganization).

Both individuals and legal entities can act as the organizer. Under paragraph 4, Article 1240 of the Civil Code, the person who has arranged for the creation of a complex object has a non-property right to specify his name (designation) and also to require the same from users. This right is non-transferrable and inalienable but can hardly be qualified as a personal non-property right since it accrues only to individuals. Meanwhile, legal entities can also be organizers of complex objects. If the organizer is an individual, he will creatively contribute to the creation of AI as a team member in spite of the performance of his organizational and technical functions. Therefore, it is wrong from a legal standpoint to assert a personal non-property right afforded to the organizer.

According to A.L. Makovsky, Article 1240 contains a set of provisions on a “quasi right” to authorship of legal entities as creators of complex products [Makovsky A.L., 2008: 280]. From V.S. Tolstoy’s standpoint, it would be wrong to assert that the authorship of legal entities has an impact on the discussed structure of complex products. The author believes that the emergence of a new intellectual asset at law has forced the legislator to address the issue of normative regulation of a special “exclusive” right of those arranging to create a complex object [Tolstoy V.S., 2009: 116]. M.A. Rozhkova has a different view: she believes “the solution to the qualification problem of the “quasi right” to authorship of legal entities is simple: ...authorship is an inalienable right rather than a personal non-property right, and, therefore, it would be wrong to regard the right to authorship of either individuals or legal entities in relation to a specific variety of intellectual rights” [Rozhkova M.A., 2018: 98].

The problem of qualification of the non-property right of the AI organizer is obviously still a matter of discussion. It is not resolved in the doctrine and requires further theoretical elaboration.

## **Conclusion**

At the current stage, the doctrine and Russian intellectual property law need to be undoubtedly improved with regard to such innovative product as “artificial intelligence”. This need is prompted not only and not so much by the faster pace of digitization of all life spheres across the board and the transformation of the IT environment, as by conceptual defects of many provisions found in Part IV of the Civil Code. A considerable number of questions relating to AI’s essence, legal nature and regime normally deal with legal gaps. The paper presents the author’s civilian view on the problem of “artificial intelligence” and possible solutions to overcome drawbacks in civil law regulation of relationships in the field.

“Artificial intelligence” is an innovative intellectual product to be regarded as a thing at law. The views proposed by different authors on legal personality of “artificial intelligence” should be discarded as wrong: only individuals can assume legal capacity and delict dispositive capacity by law. In case of AI, we deal with a convention that the author believes appropriate to put in quotation marks.

AI is a complex object under intellectual property law, a complex entity that can incorporate a variety of protected intellectual assets such as computer software, inventions, knowhow etc. A combination of various structural elements in a new product determines its unique qualitative certainty beyond a mechanical sum of the protected intellectual assets.

Qualifying AI as a complex object under intellectual property law allows to conclude that provisions of Article 1240 of the Civil Code on an exhaustive list of complex things need to be refined since the said provisions fail to ensure proper rulemaking and regulation of the relevant relationships in the context of digital change and emergence of innovative intellectual products.

As an essentially non-material (ideal) phenomenon, AI exists in society only in objective digital form on various physical media (computers and other devices). The existence of “artificial intelligence” on a physical medium allows to build AI into any physical piece of technology (robotic device, spacecraft, drone etc.), man (cardiac pacemaker), living creatures (chipped animals) etc.

A distinction between AI’s digital form and physical medium is important in practical terms: there should be a difference between the property

right to a thing (physical medium) and the exclusive right to AI as an intellectual asset. AI as an intellectual asset can be transferred only via the exclusive right that, unlike AI itself, is transferrable.

A distinction should be made between the legal regime applicable to AI's physical media and the one applicable to the exclusive rights to AI. With regard to contractual regulation of relationships, we deal with a thing at law in the first case and with exclusive rights in the second case. Agreements will differ accordingly: transfers of physical media will involve purchase and donation agreements in the first place while the disposal of the exclusive right — an exclusive rights transfer agreement, licensing agreement, pledge agreement, trust management agreement, etc.

A distinction should be made between the exclusive right to an intellectual asset within a complex object and the comprehensive exclusive law to a complex whole (“artificial intelligence”). It is not accidental that the legislator has provided for special rules for the disposal of exclusive rights to protected intellectual assets within a complex object. To reduce the risks associated with the transferability of exclusive rights, opportunities for abuse by the organizer and a need to avoid the problem of splitting the comprehensive right to a complex object, the legislator has provided in Article 1240 for an exception from the general rules applicable to the exclusive right transfer and licensing agreements to be taken into account when creating AI.

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