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Prospects for Digitalization of Sentencing and Execution of Punishment

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Abstract

Introduction: the article is devoted to the study of issues related to the seemingly inevitable process of digital transformation of both criminal sentencing and its execution, the need for which is pushed by both consistently adopted relevant national and international legal acts and positive foreign practice. The *purpose* of the study is to substantiate the need to introduce capabilities of artificial intelligence as the most important tool for crime prevention, improve effectiveness of the execution of sentences, as well as discuss feasibility and readiness of modern reality for actual replacement of judges with artificial intelligence in sentencing. *Methods:* comparative legal, empirical methods of description, interpretation; theoretical methods of formal and dialectical logic; private scientific methods: legal-dogmatic and method of interpretation of legal norms. *Conclusions:* generalization of scientific stances and consideration of foreign practice allows us to conclude that, in our opinion, there is currently no urgent need to use artificial intelligence in sentencing. The arguments regarding expediency of such a decision in terms of limiting judicial discretion do not seem so convincing in order to abandon the human factor in sentencing. It seems advisable to further improve the legislation regarding the rules of sentencing and develop a more formalized approach. At the same time, we find positive the subsequent development of the penal policy focused on active introduction of artificial intelligence capabilities as an effective means of predicting criminal behavior, profiling (modeling) the personality of the criminal, identifying his/her distinctive features in order to further prevent crime.

Keywords: digitalization; punishment; artificial intelligence; prevention; sentencing; correctional institutions; Internet.

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Nowadays, the problem of legal space digitalization as an urgent need for its further improvement and increase in efficiency is one of the issues on the world scientific community's agenda. In this study, we will consider digitalization of the process of sentencing and execution of punishment, as well as the use of digital technologies in crime prevention. These issues are also addressed in the Decree of the President of the Russian Federation No. 490 of October 10, 2019 "On development of artificial intelligence in the Russian Federation". It should also be noted that the European Ethical Charter on the use of artificial intelligence in judicial systems and their environment, adopted at the 31st plenary session of the CEPEJ (Strasbourg, December 3–4, 2018) contains the Overview of open data policies relating to judicial decisions in the judicial systems of Council of Europe Member States.

The imposition of punishment is a complex process of applying the norms of the Criminal Code, requiring implementation of the principles of legality, justice, humanism, etc. This, in turn, is in direct correlation with such categories as judicial discretion, legal awareness, judge's experience, and impartiality. Legislative proposals for the exercise of judicial discretion are still being worked out, and this negatively affects the effectiveness of law enforcement practice and does not contribute to the formation of uniformity in it on specific issues. In relation to various institutions of criminal law, which in one way or another have broad prerequisites for judicial discretion, it is proposed to single out and consolidate certain criteria at the legislative level restricting judges' freedom in making decisions, at the same time introducing legal certainty. Abstracting from the imposition of punishment, one can also give an example of a relatively broad judicial discretion in deciding whether to release from criminal liability in connection with active repentance. Returning to punishment, the lack of uniformity in judicial practice when imposing punishment is worth mentioning. It is noted that the introduction of an electronic justice system, widely discussed recently, may contribute to limiting the discretion of judges, eliminating corruption, minimizing judicial errors, especially in cumulative sentencing. However, how justified is the exclusion of the human factor from the process of sentencing, or even if not the exclusion, but assigning it a secondary role in solving numerous issues?

Despite the validity of arguments about broad limits of judicial discretion, nevertheless, there arises a question on collision of artificial intelligence in justice with problems of implementing justice and humanism principles in sentencing. Involuntarily we recall the well-known Charles-Louis Montesquieu's work "On the Spirit of Laws" and ask ourselves, how artificial intelligence is able to cognize and perceive the spirit of law as the highest expediency found in a particular area of life, its ideological orientation.

It seems that it is possible to use artificial intelligence in the administration of justice only as an auxiliary tool for the judge. L.V. Inogamova-Khegai notes that the "increasing role of information technologies and potential possibility of their use in the process of monitoring execution of punishment and, moreover, making a decision on violation of the conditions of serving sentence, have formed a lively debate in legal science, whether artificial intelligence can correctly qualify actions of the guilty person and impose a punishment corresponding to the degree of the deed whose goals will be achieved" [6].

How reliable and objective are "decisions" made by artificial intelligence, what is the basis for their adoption? It is interesting to consider experience of the USA, resorting to the help of electronic justice when, for example, resolving issues about the possibility of parole from punishment, thereby trying to exclude excessive subjectivism and trusting artificial intelligence. In particular, artificial intelligence helps determine the probability of whether a particular person will commit a crime again in the future. However, it is noted that since this issue is not regulated at the legislative level and algorithms for decision-making are developed by private companies, the state, in particular, the judicial system has no idea about the mechanism of artificial intelligence.

A wide resonance was caused by the use of artificial intelligence in the United States when identifying risks of committing a repeat crime by the accused based on the study of data about him. So, in the case "Wisconsin v. Loomis", the Department of Corrections used the COMPAS risk assessment program during sentencing, which, after studying the history of the defendant's relationship with the law, assessed the

risks of recidivism as high, so the judge imposed the maximum penalty. The defense tried to challenge the decision, since the principle of operation of COMPAS is not disclosed. However, the court considered this argument insignificant and refused to appeal against the verdict, based on the fact that knowledge of the final solution of the algorithm already implies a sufficient level of transparency [14].

In the theory of criminal law, the question has repeatedly been raised regarding maximum formalization of the sentencing process in order to exclude subjectivism. Thus, engineer N.D. Oranzhireev noted that "due to the lack of a uniform way of taking into account circumstances of the case, the process of sentencing strongly resembles coffee cup reading. It is necessary to establish strict mathematical quantitative equivalents for all crimes, expressing them in appropriate sanctions, and for various circumstances significant in terms of determining the guilt of the convicted person, provide special coefficients, for example, with complicity, the coefficient of the perpetrator will be 1.0, of the instigator – 0.9, of the accomplice – 0.75, etc. The final punishment must be determined by algebraic operations with the equivalent of the crime and individual coefficients" [9]. N. Christie suggests not only applying a strictly formalized system of sentencing, but also eliminating a person from this process by transferring all the functions of sentencing to a computer [8]. The mentioned provisions, however, completely negate the possibility of the principle of individualization of punishment as the most important means of achieving justice.

Thus, several approaches to resolving this issue when sentencing emerged in the science of criminal law: 1) a subjective approach, in fact, defends the need for the court's broad realization of its opportunities to administer justice on the basis of its own legal awareness, inner conviction and experience; 2) an objective approach, whose supporters, in particular, N. Christie, N. Oranzhireev, D. Dyad'kin, A. Aryamov, argue for the need for full formalization the process of sentencing. Besides, there is an objective-subjective approach.

A clear formalized system of sentencing is used in US practice. In the United States, a system of indefinite punishments provided for in the "Federal Sentencing Guidelines Manual" (1987) has been used for many years. The Manual contains tables on sentencing for specific types of crimes; punishment for repeat offenders is determined separately. The judge calculates the level of the crime (there are 43 levels of danger of the crime in total) and the category of the criminal past of the convicted person and can assign minimum and maximum sentences in months. When imposing a punishment, the court is obliged to reduce or increase the punishment by the number of months indicated in the points table. So, if the defendant was the organizer or leader of the criminal activity that attracted five or more participants, then the penalty is increased by four levels (points). If the defendant was a "minimal" participant in any criminal activity, then the punishment is reduced by four levels (points). The circumstances aggravating and mitigating the punishment also correspond to the points.[13]

Nevertheless, we believe that the introduction of an electronic justice system will undermine all the fundamental principles on which the modern legal system is based.

This issue was studied by Kh.D. Alikperov in detail. In particular, he notes that the "formalized rules (there are more than five thousand of them in the motherboard of the proposed concept) are fixed on the scores of more than 400 algorithms for individualization of punishment, which together cover a huge number (about a billion) of all possible combinations of criminal manifestations in its real existence. Each of them regulates in detail the procedure for determining the optimal measure of punishment, taking into account both objective and subjective properties of the crime of small and medium gravity, grave or especially grave, committed by adults and minors, by negligence and intentionally, alone and in complicity, as a repeated offense, and the multiplicity of crimes, etc. Originality of the proposed technology lies in the fact that for the first time in the theory of criminal law, the process of sentencing is formalized as much as possible, and the procedure for determining punishment is carried out automatically, based on the initial data about the criminal case and the guilty person entered by the judge into the dialog box (interface) of the "Electronic scales of justice" [1].

Further, it is also noted that its independence from periodic changes in criminal legislation, including criminalization and decriminalization, changes in the sanctions of its Special part of

the Criminal Code of the Russian Federation, its terms or sizes is another characteristic feature of the electronic system for determining punishment. For these purposes, in all algorithms to individualize punishment, instead of the names of specific types of crimes, their categories are used, and the calculation of the terms (sizes) of punishment is carried out in the fractional calculation based on special formulas, the universality of which allows to adapt the "Electronic scales of justice" to any additions and changes in the Criminal Code of the Russian Federation to the maximum extent. Such issues as the nature and degree of public danger of a particular offense, its features, determined by the object of encroachment, remain outside the scope, or, more precisely, are significantly limited and formalized. Besides, there are proposals to change the current approach to categorization of crimes in the Criminal Code of the Russian Federation by taking the standard sanction as a basis for dividing crimes and including all types of punishments in it.

It is indicated that "this will allow assessing public danger of a specific corpus delicti only by pointing to a particular category of crime, simplify the solution of a number of problems when applying the retroactive force of the criminal law" [5]. In this regard, the point of view of A.V. Korneeva seems to be correct that the categories of crimes cannot affect the character, since, on the contrary, the category depends on the nature and degree of public danger [11].

We fully agree with A.P. Kozlov's statement that the nature of public danger of the type of crime reflects typical properties of this particular type of crime (theft has its own signs, murder has its own, hooliganism has its own, etc.) [7]. Thus, we cannot achieve a proper differentiation of punishment based only on categories of crimes.

For instance, F.S. Brazhnik notes that the nature of public danger of a particular type of crime is determined by the features specified in this article, reflecting:

– value of the goods encroached upon by this act;

– danger of the method that is used to cause harm;

– size of damage caused;

– conditions under which harm is caused;

– form of guilt or its type;

– sometimes personal qualities of the perpetrator of the crime" [10].

Since the indication of specific types of crimes is absent in the electronic justice system proposed by Kh.D. Alikperov, in our opinion, the degree of public danger of specific crimes will be ignored when sentencing, and, as a consequence, the principle of differentiation of criminal responsibility will be violated.

In accordance with Part 2 of Article 61 of the Criminal Code of the Russian Federation, when imposing punishment, circumstances not provided for in Part 1 of this Article may also be taken into account as mitigating. How is it possible to program these circumstances, recognized as mitigating in each case, in advance?

We believe that substantiation of extreme necessity and expediency of digitalization of sentencing is a rash decision, while at the same time we suggest paying significant attention to improving the current criminal legislation, creating a formalized system of sentencing rules that introduces clarity and uniformity in law enforcement practice. So, for example, it seems reasonable at the legislative level to resolve issues related to broad judicial discretion in matters of exemption from criminal liability due to active repentance and fixing cases, in which it is the duty of the court. Besides, it is required to consolidate cases in which the court is obliged to impose punishment according to the rules of Article 64 of the Criminal Code of the Russian Federation (appointment of a milder punishment than is provided for this crime).

This is also indicated by positive foreign experience of legal regulation, in particular, the criminal legislation of Spain, Italy, France, the USA is characterized by a fairly high degree of sentencing rules formalization.

For example, Spanish criminal legislation has the norm (Article 66 of the Criminal Code od Spain), which regulates in detail the actions of a judge (court) when choosing a specific punishment for a person found guilty of committing a specific crime. So: 1) if there are no aggravating or mitigating circumstances, or when there are both, the court individualizes punishment, assigning it in accordance with personal qualities of the offender and severity of the act, which is reflected in the verdict; 2) if there are one or more mitigating circumstances, the court appoints punishment according to the lower limit of the sanctions established by law; 3) if there are one or more aggravat-

ing circumstances, the court appoints punishment according to the upper limit of the sanctions established by law; 4) if there are two or more mitigating circumstances, the court can impose punishment for one or more two degrees below what is provided for in the law. [12]

One of the promising areas of development of the state's penal policy is the use of artificial intelligence in crime prevention, in particular in the systematic analysis of convicts' behavior, monitoring and identification of potential victims of crimes in places of deprivation of liberty (with regard to the level of penitentiary crime, conflicts between convicts, the vulnerable status of many of them) in order to conduct further victimological measures with them.

The problem of penitentiary institutions that exists both in the Republic of Armenia (as evidenced in the 2021 Annual report on activities of the Republic of Armenia) and the Russian Federation is provision of appropriate psychological assistance to convicts, manifested in frequent cases of suicide of convicts, insufficient and ineffective activities in this sphere. Thus, we propose to introduce an artificial intelligence system into the analyzed area, assigning it also the task of identifying persons prone to committing suicide in correctional institutions.

Foreign experience also testifies to broad prospects and significant positive results of the use of artificial intelligence in crime prevention and forecasting. For example, the analytical software package CEG (USA, 2016) helps analyze risks of committing a crime in a certain area, based on data obtained from social networks, video cameras, weather forecasts, etc. [2]. Introduction of artificial intelligence into the process of execution of sentences as one of the means of preventing recidivism also deserves attention.

The Ministry of Justice of the Russian Federation has proposed to create an independent structural unit in the Federal Penitentiary Service, responsible for digital transformation of the department. The use of artificial intelligence in correctional institutions will lower the workload of employees and create additional opportunities for effective prevention of offences. A significant role will be played in prevention of convicts' suicidal tendencies and conduct of the most focused individual work with such persons. With the help of systematic video surveillance of convicts' behavior, analysis of their connections (frequency and other factors) both with convicts and the administration of penal institutions, the program will be able to come to a conclusion about their suspicious behavior.

In places of detention, criminal subcultures, criminal infection of convicts, and their adoption of criminal traditions and ideology are widespread. The study of foreign experience is interesting in the analyzed context. For example, in May 2021, the first smart prison Tai Tam Gap was open in Hong Kong. Artificial intelligence plays a role of the warden: it remembers each prisoner in person, always knows where he/she is and what he/she is doing, is able to raise the alarm in case of fights, inappropriate behavior or suicide attempts, monitors the regular electronic journal and the self-management system of the cell inhabitants.

Meanwhile, the problem of penitentiary policy is its focus on preventing criminal behavior not only of convicts, but also of the administration, in particular, commission of corruption crimes. It is also possible to use capabilities of artificial intelligence to prevent escape from prison.

It should be noted that in the Republic of Armenia, in 2022, the video surveillance system consisting of more than 400 video cameras was installed in the penal executive facility "Armavir" to ensure transparency of activities of the penitentiary institution. With the help of this video surveillance system, the goal is to eliminate lawlessness and consequently protect human rights. The installation of this system will be important in the fight against drug trafficking, gambling, pressure and attacks on prisoners [4].

A very important direction is precisely ensuring convicts' safety in correctional institutions, identifying questionable frequent contacts of convicts with each other in order to prevent criminal infection.

It is worth mentioning that the Russian Federation plans to introduce the "Digital platform for the environment of labor adaptation of the Federal Penitentiary Service of Russia", focused on monitoring and analyzing convicts' labor activities [3].

The use of artificial intelligence in prisons to analyze types of prisoners' behavior will beneficial for both detainees and prison staff, as it will be possible to identify situations of potential harm. For instance, it will be easier for those on duty to notice signs of disposition to self-harm in prisoners.

The IT solution called "Facial recognition system, behavioral analysis and post-analysis of the collected data within the digital profile of the convict to adjust the resocialization program based on artificial intelligence" is to be established in 380 prisons and colonies.

Besides, artificial intelligence can be introduced into practice of executing other types of punishments, such as compulsory labor, correctional labor, forced labor, boosting effectiveness of timely detection of violations committed while serving these punishments by convicts.

In the context of the cybercrime spread, which often acquires a transnational character, it seems especially relevant to remove offenders from digital reality. This issue has been widely discussed and applied in foreign countries. The Russian Federation has certain experience in its application as well. For example, according to verdict No. 1-173/2017 of November 22, 2017, M.M. Magomedov was sentenced to imprisonment with deprivation of the right to use the information and telecommunication network "Internet" for a period of 2 years for committing a crime under Article 280 of the Criminal Code of the Russian Federation. Such withdrawal from the digital environment can have a certain criminological preventive effect on the convict. However, it is rather problematic to restrict access to the Internet completely to the convict and control actual execution of this prohibition by convicts.

The difficulties of law enforcement are related to the fact that the orders on restriction of use will be effective only to the extent that this order can be enforced. This may require probation officers to be trained in computer forensics to conduct thorough checks of the offender's computer, which is hardly possible for most probation services.

Commission of crimes against the sexual integrity of minors on the Internet, in our opinion, is of a particular danger.

There is no similar qualifying circumstance in Article 135 of the Criminal Code of the Russian Federation, however, the Order of the Plenum of the Supreme Court of the Russian Federation No. 16 of December 4, 2014 "On judicial practice in cases of crimes against sexual integrity and sexual freedom of the individual" stipulates that such actions in which there was no direct physical contact with the body of the injured person, including actions committed using the Internet, other information and telecommunication networks, can also be recognized as depraved. We believe that given the rapid development of crime through the use of digital technologies, their cross-border nature, possibility of involving an unlimited number of minor victims, the Russian legislator should borrow experience of Armenia, France, and Iceland and consolidate commission of the noted criminal act using the Internet as a qualifying feature.

Summing up results of the study, it is necessary to note rapid development of public relations, entailing digitalization of various areas, which in turn requires an adequate response at the legislative and law enforcement levels. It is necessary to state once again our disagreement with introduction of artificial intelligence directly into the sentencing process, which, in our opinion, levels such categories as legal awareness, internal judicial conviction, manifestation of an individual approach when considering each specific case, taking into account all the circumstances of the deed. We believe that in an effort to avoid numerous issues arising in connection with the wide scope of judicial discretion, it is not necessary to look for alternative ways in the form of the use of artificial intelligence. The solution to the problem is seen in improvement of the current legislation on the basis of key directions of the state criminal policy, based on the proclaimed principles of legality, justice, and humanism. The limitation of judicial discretion is necessary when solving various issues, in particular, when releasing from criminal liability (in connection with active repentance, for example), in which, unfortunately, the norm is of a discretionary nature, while the absence of a person's guarantee to be released from criminal liability negatively affects his/her corresponding positive post-criminal behavior. It is also necessary to refer to Article 64 of the Criminal Code of the Russian Federation, which is also of a discretionary nature and provides judges with ample opportunities for discretion. It is important to focus attention on the solution of these issues; therefore, we believe, without exhausting available opportunities and capacities, it seems hasty to transfer the function of the justice administration to artificial intelligence (in the context of the desire to reduce judicial discretion).

At the same time, we have outlined quite broad opportunities for digitalization of the process of execution of punishment, in par-

ticular, as noted above, it is necessary to use capacities of artificial intelligence as an auxiliary tool (not imperatively) in the prevention of penitentiary crime among convicts; monitoring their personality throughout the process of serving a sentence in order to address issues related to application, for example, of incentive measures, resolution of issues of parole from serving a sentence. Artificial intelligence can also assist in identifying and preventing the widespread spread of criminal infection among convicts.

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