



COMPULSORY STATE GENOME REGISTRATION: RUSSIAN AND INTERNATIONAL EXPERIENCE

Mikhail Aleksandrovich Nekrasov

Candidate of Law, Associate Professor of the Department of Theory and History of State and Law,
Sevastopol State University - Russia
<https://orcid.org/0000-0003-0652-609X>

Sergey Zenin

Ph.D. of Juridical Sciences (Candidate of sciences)
Kutafin Moscow State Law University - Russia
South-Ural State University (National Research University) - Russia
<https://orcid.org/0000-0002-4520-757X>

Vladimir Nikolaevich Koval

Doctor of Law
Director of the Law Institute
Sevastopol State University - Russia
<https://orcid.org/0000-0003-1255-920X>

ABSTRACT

Background: Some of the European states, Great Britain, the United States and the Russian Federation have consolidated the compulsory genome registration of citizens who committed serious crimes and violent acts against sexual integrity and sexual freedom. This stipulates the need to develop a model for limiting human rights and civil freedoms due to the transfer of genetic information to state data banks. **Objective:** The objective of the study was to determine the problems of implementation of compulsory state genome registration in Russia from the point of view of the category of human and civil rights. **Methods:** The authors used the following methods: general philosophical, general and special scientific methods (structural-legal, comparative-legal and formal-legal). **Results:** The authors propose the general principles of limiting human rights and civil freedoms related to the transfer of genetic information to criminals, as well as citizens suspected of committing crimes. **Conclusion:** The article shows the need for the legal consolidation of an additional set of conditions that determine aggravating or mitigating circumstances for deciding on the guilt of a suspect in a crime. At the level of criminal, procedural and executive legislation, it is necessary to develop rules for the rehabilitation of those accused of committing crimes in case their guilt is not proven.

Keywords: Access and protection. Compulsory state genome registration. DNA fingerprinting. Human rights and civil freedoms. Personal data storage.



IMPLEMENTAÇÃO DO REGISTRO GENÔMICO ESTATAL OBRIGATÓRIO: EXPERIÊNCIAS NACIONAIS E INTERNACIONAIS

RESUMO

Antecedentes: Vários estados europeus, bem como a Grã-Bretanha, os Estados Unidos e a Federação Russa estabeleceram, em nível normativo, o registro genético obrigatório de cidadãos que cometeram crimes graves, bem como as ofensas na área de integridade sexual e liberdade sexual. Isto torna necessário o desenvolvimento de um modelo de restrição dos direitos humanos e civis e das liberdades em vista da transferência de informações genéticas para bancos de dados estatais. **Objetivo:** O objetivo do estudo era determinar os problemas de implementação do registro genômico estatal obrigatório na Rússia do ponto de vista da categoria dos direitos humanos e civis. **Métodos:** Métodos filosóficos gerais, científicos gerais, científicos privados, especiais (estrutural-legal, comparativo-legal, formal-legal) foram utilizados. **Resultados:** Os autores propuseram os princípios gerais de restrição dos direitos humanos e civis e liberdades relacionadas à transferência de informações genéticas de criminosos, bem como de cidadãos suspeitos de cometerem um crime. **Conclusão:** O artigo mostra a necessidade de desenvolvimento e padronização de um complexo adicional de condições que determinam a presença de circunstâncias agravantes e atenuantes ao decidir a questão da culpa de uma pessoa suspeita de cometer um crime, desenvolvimento de regras de reabilitação de pessoas acusadas de cometer um crime caso sua culpa não seja provada no nível da legislação criminal, processual e executiva.

Palavras-chave: Registro genômico estatal obrigatório. Armazenamento. Acesso e proteção de dados pessoais. Direitos e liberdades humanas e civis. Impressões digitais genéticas.

1. INTRODUCTION

The concept of natural human rights, which is fundamental for many modern constitutional provisions, has come a long way of formation. In the 18th century, J. Locke (1988) expressed his idea of freedom in the following way:

[...] for liberty is to be free from restraint and violence from others; which cannot be where there is not law. It is a liberty to dispose, and order as he lists, his person, actions, possessions, and his whole property, within the allowance of those laws under which he is, and therein not to be subject to the arbitrary will of another, but freely follow his own. (p. 293).



In the 20th century, the concept of natural law with a changing content became more relevant. First formulated by R. Stammler (1902), it is based on the idea that the source of natural human rights is not the humanistic nature of a person but rather society at the certain stage of its historical development, in which particular values and specific personalities are formed.

It is necessary to consider the role of the state in the formation of such public guidelines. Rights and freedoms should not be a means of state control over citizens but rather a way to ensure the independence of individuals, their interaction with other social structures, social institutes and the state. In this regard, the optimal ratio of state participation and individual autonomy in public life should be reconsidered at a new level. If the balance of interests is violated in the form of establishing the primary interests of the state over society, it can lay the basis for the further violation of civil rights or the legislative consolidation of anarchic willfulness, which ultimately will transform the foundations of social relations and destroy statehood (Ebzeev, 2007, p. 122).

This issue is of particular relevance due to modern scientific achievements in the field of genetics (genetic engineering, the genetic correction of human characteristics, genetic identification) since they give rise to new social relations, rights and opportunities that allow managing human life at a different level, consequently they need legal regulation. Thus, there is a question of whether the new relations should be subject to legal consolidation and which need protection from government or other interferences.

DNA fingerprinting was developed by British geneticist Alec Jeffreys on September 10, 1984. This method was applied in forensic science during forensic-medical examinations as evidence connecting the suspect to a particular crime and enabled to identify any person by their biological samples (Korovski, 2016). Later it was also used to establish kinship and the compatibility of the donor and the recipient in the transplantation of human organs and tissues, treat genetic diseases, identify human remains and a genetic predisposition to certain types of diseases, etc.

On the one hand, this forensic identification method was a huge step forward to obtain new evidence and conduct prosecution. On the other hand, such information refers not only to the identified person but also to their close relatives, which brings



into question the applicability of genetic data from both legal and ethical perspectives (Perepechina, 2017).

2. METHODS

The methodological base for scientific research in the field of compulsory state genome registration in Russia and foreign countries was laid by the dialectical method of cognition. Despite its universal nature, this method opened new levels of abstraction and developed a general line of the search strategy and regulatory frameworks in forming a research program.

We also used general and special scientific methods to describe the specifics of the normative definitions used in the current Russian legislation and legal systems of foreign states. It is necessary to apply the axiological method since the data related to compulsory state genome registration directly affect human rights. The comparative method allowed to analyze similar registration procedures in other states, the protection of such data and their specifics. The information obtained is significant with due regard to the existing gaps in the mechanism of legal regulation and the main directions for its improvement.

3. RESULTS

1. The current mechanism of compulsory state genome registration in the Russian Federation needs to be improved. At the conceptual and theoretical level, it is necessary to develop a model for limiting human rights and civil freedoms associated with the transfer of genetic information belonging to criminals and citizens suspected of committing crimes into state DNA databases.

2. New scientific achievements in genetics prove the relationship between neurogenetic and socio-behavioral characteristics of a person and their criminal propensity. At the level of independent fundamental studies, it is necessary to develop a set of conditions to consider mitigating or aggravating circumstances for determining the guilt of the offender, as well as punitive and preventive measures to curtail the commission of new crimes;



3. To improve the mechanism of compulsory state genome registration in the Russian Federation, it is necessary to make the following changes at the regulatory level:

- To consolidate the possibility of compulsory state genome registration in relation to suspects and those accused of committing crimes;
- To provide the possibility of withdrawing the obtained genetic information in relation to suspects and accused of committing crimes if they have been exonerated or acquitted;
- To enshrine the legal possibility of holding a convicted person liable in case of their evasion from compulsory genome registration;
- To develop a mechanism for validating the reliability of the DNA data received from convicts during the period they serve their sentences in correctional facilities;
- To prohibit discrimination against citizens, foreign citizens and stateless persons based on their genetic uniqueness.

4. DISCUSSION

Currently, compulsory state genome registration in the Russian Federation is regulated by Clause 3 of Article 55 of the Constitution of the Russian Federation (Konstitutsiya Rossiiskoi Federatsii, 1993).

Adopted within the framework of this constitutional provision Article 7 of Federal Law of December 3, 2008 No. 242-FZ "On state genomic registration in the Russian Federation" (State Duma of the Federal Assembly of the Russian Federation, 2008) provides for mandatory genomic registration for certain categories of persons: 1) the persons condemned and serving custodial sanction for making of heavy or especially serious crimes, and also all categories of crimes against sexual integrity and sexual freedom; 2) unidentified persons whose biological material is withdrawn in course of production of investigative actions. Unknown corpses are also subject to obligatory state genome registration; 3) unidentified corpses.

According to Clause 3 of Article 1 of Federal Law No. 242-FZ, genomic information is understood as personal data including the coded information on certain fragments of deoxyribonucleic acid of a physical person or unknown corpse which are not characterizing their physiological features. In other words, any person can be



almost unmistakably identified by the fragments of this macromolecule that stores and transmits a unique genetic code from generation to generation.

Criminal legislation includes the term of punishment and the form of guilt among the criteria defining grave and especially grave acts. Intentional acts, for the commission of which the maximum penalty stipulated by this Code does not exceed ten years deprivation of liberty, shall be recognized as grave crimes. Intentional acts, for the commission of which this Code provides a penalty in the form of deprivation of liberty for a term exceeding ten years, or a more severe punishment, shall be recognized as especially grave crimes (Clauses 4 and 5 of Article 15 of the Criminal Code of the Russian Federation) (State Duma of the Federal Assembly of the Russian Federation, 1996). The categories of crimes against sexual integrity and sexual freedom are enshrined in Chapter 18 of the Criminal Code of the Russian Federation (Articles 131-135).

Today, compulsory state registration is implemented by divisions of the Federal Service for the Execution of Punishments and expert divisions of the Ministry of Internal Affairs of the Russian Federation in conformity with Resolution of the Government of the Russian Federation of October 11, 2011 No. 828 "On approving the Procedure for conducting the compulsory genome registration of convicted persons and persons serving a prison sentence" (Government of the Russian Federation, 2011) at the place the above-mentioned persons serve their sentences.

According to Clause 5 and Clause 6 of the above-mentioned resolution, institutions of the Federal Service for the Execution of Punishments receive biological materials from the persons convicted and serving their sentence and then send them for research to obtain genomic information.

Based on the analysis of the existing regulatory acts, it is unclear what actions the administration of correctional institutions should take if the convict refuses to undergo mandatory genetic testing. Is it possible to bring such a convicted person to disciplinary responsibility or to use coercive measures for receiving biological samples? Does such a refusal affect the early parole of the convicted person or change the service of their sentence? Since the current Penal Code of the Russian Federation lacks the relevant amendments, there are no such restrictions, which indicates a gap in the existing legislation.



Under Clause 6 of this resolution, the head of some correctional facility ensures the receipt of biological materials and monitors the accuracy of the personal data of convicts subject to compulsory genome registration. However, it is not stated which actions comprise these provisional measures and what mechanism should be used for monitoring the reliability of such personal data and their compliance with the obtained genetic materials.

In conformity with Clause 1 of Article 7 of Federal Law No. 242-FZ, Russian citizens are subject to compulsory genome registration if they are condemned and serving custodial sanctions for committing any category of crimes against sexual integrity and sexual freedom. Courts can impose a punishment that is not related to imprisonment for this category of crimes. However, the procedure for collecting biological samples from convicts serving a sentence not related to social isolation is not regulated by the current legislation. For example, penal enforcement inspectorates of the Russian Federation do not initiate such procedures with convicts and their activities in this area are not governed by any regulatory act, while Federal Law No. 242-FZ has been in effect since 2008.

It is worth mentioning litigation practice in this sphere. On June 16, 2016, the Zavodskoy District Court of Kemerovo considered case No. 2-2761-16 on the suit of the Kemerovo Prosecutor in the interests of the Russian Federation against the federal state institution "Correctional Colony No. 22" under the GUF SIN of Russia (IK-22), in which the latter pledged to eliminate violations of the current legislation on state genome registration.

According to the case materials, the Kemerovo Prosecutor filed a statement of claim to the administration of the correctional facility, in which he stated a demand to eliminate the offense, i.e. the non-fulfillment of the obligation to collect biological materials from persons condemned and serving sentences in this facility. In particular, the prosecutor revealed that 10 out of 97 persons released from IK-22 in January 2016 after serving their sentence, convicted of grave and especially grave crimes, as well as crimes against sexual integrity, did not provide their biological materials for further research to obtain genomic information.

The subsequent inspection of IK-22 showed that 557 out of 593 convicts were subject to genome registration but 535 of them had not undergone genomic testing as of June 1, 2016. At the same time, 120 convicts should have been released at the end



of their criminal sentence but 86 of them had not experienced compulsory genome registration. Furthermore, 10 convicts had already been released from IK-22 without any testing. The prosecutor's claims were satisfied and the appellate decision of the higher court of September 22, 2016 in case No. 33-12021/2016 left the initial verdict unchanged (Kemerovo Regional Court, 2016).

The reasoning of this verdict demonstrates that judicial conclusions were based on the interpretation of the current legislation without any reference points to international standards or the existing practice of regulating similar relations in foreign countries. It should be emphasized that the established practice of the European Court of Human Rights proceeds from completely different priorities, which indicates the need for a conceptual revision of this area. Having entered the legal sphere of Europe (Konventsiya o zashchite prav cheloveka, 1950) and ratified the Convention on the Protection of Human Rights, the Russian Federation recognized the case-law of the European Court of Human Rights as an additional factor for making balanced legal decisions with some exceptions (Konventsiya o zashchite prav cheloveka, 2008). Therefore, sooner or later it will be necessary to decide whether to comply with or refuse from the emerging conventional framework and law enforcement practice that developed in relation to the human genome.

In addition, it is necessary to pay special attention to several relatively recently adopted international documents aimed at the observance of human genetic rights. Among them is the Universal Declaration on the Human Genome and Human Rights, adopted on November 11, 1997. Article 6 of this document enshrines the prohibition of discrimination based on genetic characteristics (United Nations Educational, Scientific and Cultural Organization, 1997).

In addition, a rule is enshrines, according to which, every individual shall have the right, according to international and national law, to just reparation for any damage sustained as a direct and determining result of an intervention affecting his or her genome. The established jurisprudence of the European Court of Human Rights considers the implementation of comprehensive and indiscriminate retention of fingerprints, cell samples, and DNA profiles after an acquittal a violation of Article 8. If biological materials were collected but proceedings ended in an acquittal, then DNA samples and profiles are subject to mandatory destruction at the request of the parties (European Court of Human Rights, 2016).



The current edition of Federal Law No. 242-FZ does not contain such reservations. While deciding whether to collect genetic materials, the Russian executive authorities are guided by the court verdict that entered into force. If a higher court of cassation canceled the decision of a lower court and released the person in respect of whom there is a court decision from serving a sentence, then it remains unclear whether the genetic information of such a person entered in the corresponding state database is subject to mandatory destruction because there is no such a prescription at the legislative level.

Foreign practice allows genetic testing without any court decision if a person was detained as a suspect in a crime. For instance, the US Supreme Court in the case "Maryland v. King" directly indicated the legality of such actions (Supreme Court of the United States, 2013). If the detained person is not subsequently charged or acquitted, their DNA information can be deleted automatically (in some states such as Illinois, Maryland and Texas) or at the request of such a person (Personal Genetics Education Project, n.d.).

We should also consider the International Declaration on Human Genetic Data adopted by the United Nations on October 16, 2003 (United Nations Educational, Scientific and Cultural Organization, 2003). Article 4 of this document indicates that human genetic data have a special status because they can be predictive of genetic predispositions concerning individuals; they may have a significant impact on the family, including offspring, extending over generations, and in some instances on the whole group to which the person concerned belongs. They may contain information the significance of which is not necessarily known at the time of the collection of the biological samples; they may have cultural significance for persons or groups. Among other purposes, human genetic data may be used for forensic medicine and civil, criminal and other legal proceedings, except for the investigation, detection and prosecution of criminal offenses. Under Article 5, these proceedings are regulated by national laws.

In view of the above, we believe that the concept of a "crime gene" deserves scientific consideration and its existence is actively discussed in the Russian and foreign literature. In the article "Genetic background of extreme violent behavior", several Finnish scholars concluded that gene mutations in combination with social



conditions, in which a child grows up in a dysfunctional family, is neglected or affected by too authoritarian parents, results in a propensity for violence (Tiihonen et al., 2015).

The Nuffield Council on Bioethics (Great Britain) developed recommendations to study the genetic structure of defendants in judicial activities and decide on their guilt based on this information. If such a person has a genetic predisposition for crimes, its evidential effect should be equated to a psychiatric examination and this data can be referred to in the course of legal proceedings (Tarantul, 2003).

In 2018, another joint study considered how genetic and criminal factors affect human antisocial behavior. A group of scholars from the United States and Great Britain concluded that the probability of committing a crime due to a genetic disorder is approximately 40%. In addition to genetics, criminal behavior is significantly influenced by one's social environment and educational level. If a child was brought up in a socially disadvantaged environment and parents showed antisocial behavior combined with a low educational level, then the risk for criminal conviction before graduating from high school is extremely high (Wertz et al., 2018).

The scientific data obtained present the issue of crime prevention from a different perspective. Since some foreign countries develop rules governing the use of behavioral genetic data, the question arises whether such information influences the decision of judges when bringing criminals to justice. Would unfavorable factors common to criminal cause leniency on part of the jury during sentencing since the crime was committed in a heat of passion or impulsiveness? Or would it result in a more severe punishment due to fear?

Foreign studies in the field of psychology concerned with the influence of such information on people who hypothetically might become jurors in the future do not give an unambiguous answer. They state that a genetic or social deviation in the offender can both reduce the term of an alleged sentence (Aspinwall et al., 2012) and do not have any impact on the final judicial decision (Appelbaum & Scurich, 2014).

However, genetic determinism (ideas that genes are the main cause of human behavior) has received recognition in the scientific community (Dar-Nimrod & Heine, 2011) and widespread coverage in mass media (Callahan, 2013; Hagerty, 2010).

It is also worth mentioning the study of J. Bradley Segal. While answering the question of whether and when a court should recognize neurogenetic information as a mitigating circumstance in making a decision, he indicated that modern criminal justice



uses an approach according to which individual actions of people are the result of their free will. The presence of neurogenetic vulnerability implies considering several factors:

1) the presence of information from the accused about the risks of violent harm to others (for example, previous violent incidents or patterns of violent behavior, actions that were taken specifically to stop violent behavior or its impact on others, and/or a warning that the individual is particularly prone to violence);

2) the defendant takes meaningful steps to protect others from possible harm due to violence – whether or not the defendant knew that his proclivity for violence had a scientifically valid neurogenetic association ("meaningful" steps might include efforts to seek behavioral health evaluation and treatment, demonstrated efforts to avoid or manage situations likely to elicit violent responses, abstaining from alcohol and other substances broadly associated with a higher risk of violence or \with violence for that individual, and/or engagement with social groups (e.g. self-help groups, peers, faith communities) whose values and expectations shield one against violent conduct).

We believe that if the defendant demonstrably pursued meaningful safeguards against a proclivity toward violence that they did or should have recognized, then such actions should be considered mitigating circumstances.

On the contrary, given what they knew or should have known, defendants who fail to manage a proclivity for criminal violence in a meaningful way should be precluded from introducing such evidence, regardless of its relevance or scientific validity (Segal, 2016).

This viewpoint needs to be further explained. It is debatable whether it is necessary to develop a set of preventive measures aimed at persons prosecuted for committing criminal or administrative offenses, as well as those convicted to criminal penalties. Should courts deciding on the guilt of such persons consider the neurogenetic data obtained in the study of their personalities? Is it advisable to provide a set of medical and educational measures in addition to the main punishment? Will neurogenetic characteristics of convicts influence their negative or positive behavior while they serve their sentence and change their detention regime?

This analysis causes a logical concern whether states need to adjust the human genome in cases where such a mutation is detected in both parents because new



technologies in this area (for example, CRISPR/Cas to make changes into the human genome) are being tested.

The study of compulsory state genome registration reveals another group of problems related to discrimination against a person based on genetic characteristics. If the child's father committed a crime, will it affect his family or close relatives in the ascending/descending lines or collateral relationships? Will it prevent such persons from entering into marriage or receiving social services?

Today, the Russian Federation does not have a single legal act that protects citizens, foreign citizens or stateless persons in the territory of the Russian Federation from discrimination in any area of public relations based on their genetic uniqueness.

The use of DNA fingerprinting qualitatively changes an accident picture if there is no evidence other than the genetic material found at the crime scene. However, the protection and reliability of the received genetic information are still questionable. What if the genetic data were falsified and the information obtained through DNA examination is the only proof of the person's guilt in the case?

The plain truth is that cases of poorly conducted DNA tests are not rare, as a result, an innocent person may be brought to justice or other adverse consequences may arise.

Currently, the largest genetic database in the United States is based on voluntary registration databases compiled by citizens and compulsory state registration systems. The increase in DNA crime detection is exponential because DNA databases grow at an unprecedented rate. Voluntary genetic registration plays an essential role in this process. With the help of home DNA kits, people try to find their relatives and parents, reveal family secrets, concealed pregnancies and infidelity. Thus, it becomes more difficult to keep secrets in modern society (Okashin, 2018).

The ban on discrimination against citizens based on their genetic uniqueness is implemented not only at the conventional but also at the national legislative level in many foreign countries.

In 2008, the United States adopted the Genetic Information Nondiscrimination Act (GINA) (The United States Congress, 2008) that prohibits discrimination by employers and health insurance companies. The law protects Americans from discrimination based on their genetic information in both health insurance (Title I) and employment (Title II). Title I amends the Employee Retirement Income Security Act of



1974 (ERISA) (The United States Department of Justice, 1974), the Public Health Service Act (PHSA) (Legal Information Institute, n.d.-b) and the Internal Revenue Code (IRC) (Legal Information Institute, n.d.-a) through the Health Insurance Portability and Accountability Act of 1996 (HIPAA) (United States Department of Health and Human Services, n.d.) and the Social Security Act (1995) that prohibits insurance companies from engaging in genetic discrimination.

The UK Genetic Testing and Insurance Code stipulates that the UK Insurers Association, which sells one-off or annual insurance policies, does not use predictive genetic test results under all circumstances (Department of Health and Social Care of the UK, 2018).

The German Genetic Diagnostics Act of April 24, 2009 defines the requirements for genetic research and genetic analysis carried out as part of genetic testing. It aims at preventing any discrimination based on the genetic characteristics of a person. The state assumes responsibility for the protection of human dignity and ensures the right of an individual to self-determination. The law does not apply to genetic research and genetic analysis or the processing of genetic samples or genetic data: 1) for research purposes; 2) based on the applicable rules concerning: a) criminal procedural relations, international legal assistance in criminal matters, the activities of federal police bodies and police units of federal states investigating criminal offenses; b) the law on protection against infections (Bundesrat. Gesetzesbeschluss des Deutschen Bundestages, 2009).

In 2015, Kuwait adopted a law on the compulsory genetic registration of all residents of the state, including tourists, on pain of a one-year prison sentence and a fine of \$33,000. If the provision of false genetic information is revealed, it is possible to extend a term of imprisonment up to seven years. This decision was made after a terrorist attack prepared by the Islamic State (an organization banned in Russia) and resulted in many civilian casualties (Coghlan, 2017).

The above-mentioned examples demonstrate that states resolve the issues of compulsory state registration from various positions: from the compulsory DNA sampling of all citizens (the Kuwaiti model) to the compulsory state genome registration of persons who committed grave or especially grave crimes, sexual crimes, as well as the identification of unknown corpses (the Russian model).



5. CONCLUSION

Summing up the study conducted, we need to note that it is impossible to completely avoid genetic discrimination in the context of new genetic achievements. Genetic discrimination has much potential. This applies not only to commercial transactions where one party has an economic interest in the health of the other party (for example, the provision of mortgages or commercial loans) but also to non-economic relations wherever there is an interest in explaining or predicting the current or future health status (adoption, child custody, injury rate) or wherever one's future behavior is important, for example, in the sphere of education or criminal law. However, we believe that compulsory genome registration is a measure of state coercion that acts as an important marker of how some state treats the balance of personal and public interests at a particular stage of its development.

ACKNOWLEDGMENTS

The scientific research was carried out within the framework of state assignment No. 075-00998-21-00 dated December 22, 2020. Topic number: FSMW-2020-0030 "Transformation of Russian law in the face of great challenges: theoretical and applied foundations".

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