International Journal of Business, Law and Political Science
Homepage : https://e-journal.antispublisher.id/index.php/IJBLPS
Email : admin@antispublisher.com

e-ISSN : 3032-1298
IJBLPS, Vol. 3, No. 8, August 2026
Page 49-66
© 2026 IJBLPS :
International Journal of Business, Law and Political Science

The Concept of the Subject of Crime in Modern Criminal Law: Problems in the Context of Digital Transformation and New Social Relations

Noraliyev Turgun
Research Institute of Criminology, Uzbekistan

Check for updates OPEN ACCESS

DOI : https://doi.org/10.61796/ijblps.v3i8.535

Sections Info

Article history:
Submitted: June 05, 2026
Final Revised: June 30, 2026
Accepted: July 20, 2026
Published: August 07, 2026

Keywords:
Subject of crime
Object of crime
Criminal law
Digital economy
Artificial intelligence
Information
Intangible goods
Cybercrime
Energy resources
Human organs and tissues
Social relations
Criminal encroachment
Corpus delicti
Criminal liability
Law enforcement practice

ABSTRACT

Objective: *This article provides a systematic analysis of the concept of the subject of crime in modern criminal law, its place, and its role in the structure of social relations. In the context of the fourth industrial revolution, digitalization, and the dynamic development of artificial intelligence, it is scientifically substantiated that the subject of crime should not be limited only to traditional material goods but should fully encompass intangible goods, including information, digital assets, energy resources, as well as human organs.* ***Method:*** *The article also provides a comparative analysis of the opinions of domestic and foreign scholars, expressing the author's personal attitude and critical view on existing scientific discussions.* ***Results:*** *The author criticizes the outdated views that the subject of crime is merely a component of the object of crime or a sign of the objective side, and puts forward his conceptual approach to recognizing it as an independent and equal element of the corpus delicti. As a result of the research, specific, comprehensive, and scientifically grounded proposals and recommendations consisting of six points have been developed to improve criminal legislation and eliminate confusion arising in law enforcement practice.* ***Novelty:*** *These recommendations will serve the correct qualification of cybercrimes and offenses involving high technologies in the future.*

INTRODUCTION

The acceleration of globalization processes and the widespread penetration of digital technologies into all aspects of social life require a scientific re-evaluation of traditional legal institutions, in particular, the norms of criminal law, and their adaptation to modern relations. Currently, at the stage of rapid technological and economic development, the integration of the virtual environment into real life is significantly accelerating [1]. This situation, in turn, gives rise to new, previously unobserved forms and methods of crime. Accordingly, in the era of developing digitalization, social relations in society are undergoing a profound transformation. Along with the traditional physical world, the entry of virtual space, artificial intelligence, digital assets, and intangible goods into our daily lives poses complex tasks for the science and practice of criminal law [2]. In particular, the structure of social relations protected by criminal legislation is becoming increasingly complex, and the mechanism of encroachments on them has also changed. Cyberattacks, cryptocurrency thefts, and fraud carried out through neural networks are testing the classic approaches of criminal law [3]. Therefore,

revising the concept of the subject of crime in modern criminal law, researching its legal nature and place in the corpus delicti based on new scientific and theoretical approaches has become an urgent issue of today [4].

In general, the literature emphasizes the role and significance of the subject of crime not only theoretically, but also in law enforcement practice. The subject of crime not only helps to clarify the essence of the object of crime, but also plays a direct central role in understanding the mechanism of committing a crime, and in determining the nature and exact amount of the damage caused. As a result, it allows ensuring the existence of grounds for bringing to criminal liability and the correct qualification of the act [5].

From this very point of view, the issue of accurately defining the subject of crime remains one of the debatable and controversial problems in the doctrine of criminal law. This legal concept is interpreted differently by scholars, has various definitions, and a number of rules cited as evidence, despite their certain truth, often contradict each other. Such scientific fragmentation poses an obstacle to solving many theoretical and practical tasks based on a single standardized approach. Therefore, the issue of accurately delimiting the concepts of the object and subject of crime is a controversial issue that has remained open in the science of criminal law for many years [6]. At the same time, the role of the subject of crime as an independent feature in the structure of the corpus delicti is important, because determining its significance in the mechanism of socially dangerous encroachment directly affects the correct qualification of the crime and the establishment of clear boundaries of criminal-legal relations [7].

However, until now, the questions of how to approach it in the structure of the corpus delicti, whether the subject must purely be considered a material component, or whether «subjectless» crimes can exist at all, remain unresolved. A number of conceptual ideas regarding the place of the subject in the structure of the corpus delicti and its essence have been formed in the doctrine of criminal law. However, it is advisable to generalize almost all of them into certain basic theoretical groups that explain the content of the subject of criminal encroachment and describe the mechanism of criminal impact on the objects of criminal-legal protection [8].

For a long time, the theory describing the subject of crime merely as a part of the object of crime has dominated national and foreign criminal law science. However, this traditional view cannot fully meet the requirements of today's information society and the digital era, because it denies the evolutionary development of criminal legislation and the taking of new types of social goods under legal protection [9]. According to this traditional approach, the subject of crime is an optional feature of the corpus delicti, and it has been considered within the concept of the object of crime. At the same time, the issue of the exact essence and scope of the concept of the subject of crime remains debatable. Most scholars and traditional researchers recognize only the items of the material world, which are directly affected to cause harm to the object of the crime, as the subject of the crime [10]. This theory stems from the material nature of the subject of crime and is based on understanding its essence solely within the framework of philosophical materialism (i.e., only real, tangible material objects: items, things, living beings are

recognized as objects of criminal impact). In this approach, the scope of the concept of the subject of crime is limited only to the circle of physical, material objects. Proponents of this theory believe that there is no legal basis to recognize actions, ideal phenomena, moral goods, and interests in general as the subject of a crime, because in their opinion, it is impossible to exert direct physical impact on things that do not exist physically [11].

Consequently, fundamental issues related to determining the essence, role, place, and legal significance of the subject of crime remain open. To date, in the theory of criminal law of our country, the issue of whether the subject of crime belongs to the object of crime, or to the objective side of the crime, or distinguishing it as an independent element of the corpus delicti is among the debatable topics. For example, B. Matmurodov writes, «One of the features of the object of crimes is the subject of the crime, which includes things: information, documents, and others that are directly affected or related to them when committing a crime» [12]. Although this opinion of B. Matmurodov is notable as it expands the scope of the subject to information and documents, it still turns the subject into a component of the object, not as an independent element. In our opinion, the socio-legal value of information and electronic documents is not sufficiently and correctly assessed in this approach of B. Matmurodov. Information and digital documents do not simply remain a means of influencing the object or a part of it, but in many cases become the object of criminal encroachment – an independent and valuable subject [13]. Leaving them in the shadow of the object of the corpus delicti is illogical. On the other hand, M. P. Bikmurzin believes that «the subject of the crime is not included in the features characterizing the object of the crime, but belongs to the optional features of the objective side of the corpus delicti» [14]. One cannot agree with this approach, because tying the subject of crime only to the objective side (the act) cuts off its integral, fundamental connection with the protected social relations and denies the social and legal value of the subject. According to V. D. Filimonov, the subject of crime is a unique connecting link that simultaneously characterizes both the object of the crime and its objective side [15]. Although this idea seems somewhat like a reconciling compromise, from the point of view of the systematicity and classification of the elements of the corpus delicti, it causes legal uncertainty and confusion in practice. V. V. Khilyuta, however, believes that the subject of crime should be considered independently as one of the elements of the corpus delicti, because, in his opinion, there are no subjectless crimes at all [16]. Although this conceptual idea of the researcher is close to the truth, it needs to be further deepened and intangible goods (for example, cryptocurrency, digital assets) should also be included in its structure based on the requirements of today's digital economy. Supporting V. V. Khilyuta's view that «there are no subjectless crimes», it can be noted that at the center and foundation of any social relation lies a specific social value or good, and the encroachment upon it is carried out exactly through this subject [17].

RESEARCH METHOD

At this point, it should be noted that the results of the survey method of scientific cognition also confirm this opinion. In particular, according to the results of a socio-legal

survey conducted among law enforcement officers investigators, prosecutors, and judges, 78 percent of the respondents emphasized that consolidating digital assets and intangible information as a subject of crime in the legislation is an essential need for the correct qualification of crimes in practice. This shows that the advanced scientific views are aimed at solving practical problems.

Also, our national scholars M. Usmonaliyev and P. Bakunov state that, «The subject of crime is things existing in objective life in a material sense, due to which or in relation to which a crime is committed. Accordingly, the subject of crime is of great importance in the corpus delicti as an optional feature of the corpus delicti. The object and subject of a crime are not the same concept; if the object of a crime is a social relation protected by law, the subject of a crime is not a social relation». In our opinion, the limitation of «things in a material sense» in this definition by the authors does not fully meet the requirements of the current technological age, and it is considered a traditional approach in science. After all, today's civil and economic turnover cannot be imagined without intangible goods such as intellectual property, cloud technologies, and electronic databases.

A number of other authors, in particular, N. Salayev and S. Niyozova, write: «Unlike the object of crime, which is a necessary element of any corpus delicti, the subject of crime is an optional feature. The subject of a crime is material things directly affected by the guilty person when encroaching upon the object of the crime». Although these scholars defined the subject of crime as the thing directly affected by the criminal, the idea of «material things» was advanced. This situation, in turn, shows that the theory of national criminal law must take into account the reality of the information society. Understanding the subject of crime in such a material sense narrows the boundaries of this legal category. It is obvious that at the current stage of development of social relations, criminal law must ensure the protection of not only physical items as subjects of the material world, but also intangible goods (cyber information, intellectual property, digital property rights). In this sense, it is expedient to consider as the subject of crime all social goods in society (regardless of whether they have a material or intangible nature), from which social relations directly arise, which exist at their core, and which the guilty person disrupts by exerting influence on them. Where appropriate, it should be noted that in the context of the rapid development of global networks and the digital economy, openly recognizing intangible goods as the subject of crime is a vital requirement of law enforcement practice.

There is also some research in this regard. For example, Kh. R. Ochilov recognizes the subject of crime as a good of the material and intangible world directed by a socially dangerous encroachment. In his opinion, the features of the subject of crime are characterized by the fact that it is a visible material and intangible good with dimensions, quality, and specific features, and a person causes harm to the object of the crime by encroaching upon the subject, and the subject of crime may not exist at all in certain corpora delicti. According to Kh. Abzalova's approach, «The subject of crime is an optional feature of the corpus delicti. By influencing the subject of the crime, the person committing the crime causes harm to social relations. However, the subject of crime exists only in cases where it served as the subject of crime in the commission of a crime and is

considered a part of social relations. The essence of isolating the subject of crime is expressed in understanding that the criminal intent is directed at a social relation – the object. Accordingly, the subject of crime is understood as a material or intangible good existing in a social relation protected by criminal law».

Although the scientific views of Kh. R. Ochilov and Kh. Abzalova are noteworthy for recognizing the intangible nature of the subject, their conclusion that «the subject may not exist in some corpora delicti» is logically questionable. On the contrary, in any crime where an object exists and is encroached upon, there is some subject (in material or intangible form) that embodies, carries, and directly receives the encroachment. Just as there is no social relation without a subject, the existence of a crime without a subject contradicts legal logic. After all, a social relation cannot arise spontaneously without some value or good, hence, without a subject.

It cannot be denied that the scale and types of phenomena subjected to unlawful impact are increasing in the modern world. Social relations describing intangible goods (digital information, objects of intellectual property, non-cash electronic funds and uncertificated securities, cloud services, performance of work and provision of services, as well as various types of energy) are actively being included among the objects of criminal-legal protection. And they cannot be covered by the traditional concept of the subject of crime solely as an item of the material world. From this point of view, criminal law should recognize as a legal subject of crime any material or intangible goods that cause the emergence of social relations and through which the guilty person carries out a criminal encroachment by exerting influence on them.

The essence of the second theory regarding the subject of crime in science is that according to them, the subject should be included among the features of the objective side of the corpus delicti. Currently, this idea is defended by the Russian scholar M. P. Bikmurzin. In his opinion, the subject of a crime is a feature describing only the objective side of the corpus delicti, but not its object. According to his argument, if the issue of placing the subject of crime in the system of features of the corpus delicti is resolved differently, then some subjects alien to the object of criminal encroachment for example, dangerous items, false information, subjects of a bribe will be left without a specific role in the corpus delicti. In his opinion, in modern criminal legislation, these subjects are included in the scope of the concept of the subject of crime, which contradicts the rule about the place of the subject of crime in the object of the crime. M. P. Bikmurzin believes that transferring the subject of crime to the objective side of the crime allows resolving this logical contradiction. It should be kept in mind that currently, considering the subject of crime as a feature of the objective side solely on the basis of the existence of a group of certain items that are not in an objectively necessary connection with the goods protected by criminal law is scientifically insufficient. Both the theory of criminal law and judicial practice show that the law equally protects legal and illegal possession, all items that are in free circulation, as well as those withdrawn from circulation or limited in civil circulation. In fact, the problem arising here lies not in the nature of the subject of criminal encroachment, but in determining the scope of the object of criminal-legal protection.

Also, there is a view in science that completely denies the existence of a subject of crime in the structure of the corpus delicti (V. V. Khilyuta). This approach also, by its essence, merges the boundaries in the legal nature of the object and subject of the crime, turning them into one thing. Essentially, the object is a social relation, and the subject is a specific good that creates this relation, carries it, or lies at its foundation. Confusing them with each other may lead to the incorrect qualification of crimes in law enforcement practice. Proponents of this concept proceed from the idea that the subject, as a social value representing the interests of people, is capable of satisfying various human needs; therefore, when a criminal intends to deprive another person of a value belonging to them by illegally seizing or simply destroying or damaging it, the subject itself automatically becomes the object of the crime. For example, in their opinion, the object of any embezzlement, regardless of the type of subject, is the property of another belonging to a person, society, or the state; therefore, a crime directly against property (the subject) is exactly a crime against a person, society, or the state.

It is obvious that this existing diversity and scientific fragmentation in understanding the essence of the subject of crime and its legal place in the corpus delicti is primarily explained by the fact that the concept of the «object of crime» and its direct integral relation with the subject are understood differently by criminal law theorists.

In our opinion, in today's global era, it is not appropriate to ignore the processes occurring in society and the digital economy and to consider only material values as the subject of crime in criminal law, as before. At the same time, if we recognize that the subject of crime in a broad sense means material and intangible goods (values), then in this sense we should not equate the subject with the object of crime, but rather solve the problem of its independent place in the structure of the corpus delicti.

If the subject of a crime essentially means exactly upon what the social relations considered as the object of the crime are formed, then we must dwell on the object of the crime and the social relations representing social values and interests.

Usually, the structure of a specific social relation consists of a number of integrally connected elements: a) a valuable subject (specific interests) from which social relations arise; b) subjects of social relations (state, legal and natural persons); c) social connection between the subjects of social relations that is, activity. Thus, the subject of a social relation is exactly the core of why these relations arise and exist in society. And this core can be both traditional material goods, values (items, money, securities, other movable and immovable property), and digital or intangible, moral goods and values (honor, dignity, life, health, information, crypto-assets, exclusive copyrights, etc).

RESULTS AND DISCUSSION

Accordingly, looking logically, if a criminal encroachment aimed at any social relations occurs exactly by exerting a physical, mental, or virtual impact on the subject of these relations, and if there are absolutely no «subjectless» relations in life, then we assert that in such a case there can be no «subjectless» crimes either [18].

Some jurists, defending the view that the subject of crime consists only of items of the material world to which the criminal exerts a physical impact, allow for the existence of «subjectless» crimes when the encroachment is directed at relations associated with any moral or spiritual values. For example, O. E. Spiridonova proposes resolving this contradiction by «improving» the understanding of the subject of crime: «...matter should not be equated with specific types, but viewed as an objective reality [19]. From this point of view, energy, intellectual values, and various rights and goods constitute reality, that is, they are material because they exist here and now, in this world. Consequently, in a broad sense, they can be called items of the material world». Although O. E. Spiridonova's attempt to call energy, information, and intellectual values «material» is a product of a peculiar scientific search, it is an artificialization regarding these terms. Instead of forcibly «materializing» intangible goods, it is logically more correct and scientifically more justified to recognize intangible goods in the category of the subject of crime with their own independent nature [20].

However, if the subject of a crime in its most general form is considered to be exactly what relationships among people are formed upon, the subject of a social relation directly coincides with the subject of a crime, because the values that are the main reason for the formation of social relations are subjected to criminal impact (material or virtual) during the encroachment process, as a result of which real harm is caused to someone (or a risk of causing harm to a value taken under criminal-legal protection arises) [21]. In this respect, the Russian scholar G. P. Novoselov is right, stating: «Just as the subject of any social relation implies its object and subject, the object and subject of a relation also imply the existence of a subject in it. Thus, a crime does not exist not only without an object and a subject, but also without a subject of encroachment. Taking this into account, the matter should not be about «subject-bearing» and «subjectless» crimes, but about crimes whose subjects are various types of material values (property, money, etc.) and crimes whose subjects are intangible values (honor, dignity, intellectual property, etc.)» [22].

Thus, in modern jurisprudence, it is recognized that the subject of a crime is exactly the basis upon which social relations are formed. Here, subjects enter into mutual relations regarding specific subjects (for example, property or information) that express their vital interests; therefore, these subjects are recognized by society as social values. In this case, the subject of the crime is an integral component of the protected social relations; it acts as an independent element playing the role of the subject of social relations, that is, expressing the reason for their formation and disruption. Also, taking into account that causing harm to a social relation as an object of a crime always occurs by exerting influence on this subject and that «subjectless» crimes do not exist in life, the presence of its integral subject (material or intangible values) in every crime is confirmed.

Proceeding from this, although they are integrally connected, the subject of crime must be distinguished from the object of encroachment. As E. A. Mazurenko emphasizes, the subject of encroachment, which is a carrier and expresser of specific social relations, is an independent category, because in a number of cases, this or that relation can be disrupted exactly as a result of impact on material or intangible objects of the external

world. Therefore, in his opinion, the object and subject of a crime correlate as social and material categories (that is, the object of a crime is purely social, and the subject of a crime is its material category).

However, it is appropriate to introduce a certain clarification here too. It is necessary to mutually distinguish between the concepts of «subject of crime» and «subject of social relation» in a broad sense. The concept of social relations itself is not purely a criminal-legal, but a philosophical and sociological category; from this point of view, the subject of a social relation reflects for what reason or in connection with what a relation arises and exists, and what is beneficial for its subjects. If the subject of a crime is always equated with the subject of social relations, then indeed the subject of a crime will ultimately become the same thing as the object of the crime; as a result, separating the subject from the structure of the object of the crime will become practically inappropriate. And the subject of social relations is always an ideal, more abstract phenomenon, and it cannot always be equated with the specific form of expression of relations by subjects and objects of the material world.

It is precisely the personal or social interest that is the core of social relations, its driving subject, because the subjects of social relations carry out their activities aimed exactly at realizing these specific interests. While creating various types of goods or values that satisfy available possibilities, people enter into social connections and relations, and their practical content is the joint or opposing activity of participants aimed at realizing an interest and, on this basis, satisfying needs. From this point of view, criminal impact on the object of a crime can be expressed in exerting a harmful influence directly on the purpose (interest) of social relations, its participants, and the specific creative activity of people. Accordingly, it is logically correct to consider the subject of crime as a separate phenomenon outside the object as a cause, an integral condition, or clear evidence of the existence of a social relation. Objects of the material and intangible world are directly and closely connected with the subjects of social relations, and their creation, damage, and modification only indicate the emergence and termination of specific relations among their subjects.

As an addition to the above, it can be said that A. N. Ignatov, K. V. Vishnevetskiy, and A. A. Kashkarov conclude that the subject of crime adheres to the concept of manifesting simply as a feature of the object of crime. Also, in their view, the concepts of «subject of crime» and «object of crime» are not identified; they are not one thing, but they are in a mutual dialectical correlation as an integral part (subject of crime) and a whole (object of crime).

Furthermore, looking from this exact perspective, as I. V. Kuznetsov rightly pointed out, «the subject of a crime, being directly included in the sphere of a social relation protected by criminal law and targeted by an encroachment, materializes (or forms) it, translating the often abstract-seeming concept of the object of encroachment into a physical or tangible form». The central role of the subject in the mechanism of committing a crime and, accordingly, its importance for criminal-legal qualification is that the object

of a crime is encroached upon only by influencing the subject of the crime (destruction, appropriation, copying).

In our opinion, when broadly defining the subject of crime and determining it as a concept covering all the elements that make up the world, it is necessary to proceed from the fact that the entire reality surrounding us is a complex combination of its three components – matter, energy, and information. Modern criminal law is obliged to legally protect exactly this triad.

A thing or substance does not pose particular problems in its theoretical and practical justification. It is precisely traditional matter in its objective, tangible expression that lies at the basis of the formation of the «classical» perception of the subject of crime that has been shaped over centuries (that is, «items», «material things», «objects of the material world», «subjects and things», etc.). However, in today's reality, when determining the essence of the subject of crime, as A. F. Prostov correctly noted, it is necessary to take into account that «after the splitting of the atom and the invention of the Internet, the purely «materialistic» stage of development of human civilization has ended and in its place a new «energy-information» stage has come – a stage of searching for and exchanging new types of electronic information and energy». As for designating energy (electrical, thermal, atomic, etc.) as a subject of crime, taking into account its physical nature and economic value, this rule should no longer cause theoretical objections.

At this point, it should be noted that our country's legislation already directly recognizes goods such as electrical, thermal energy, gas, and tap water as the subject of a crime. In particular, a separate liability is provided in Clause «d» of Part 2 of Article 169 of the Criminal Code if committed by arbitrary connection to public electrical, thermal, gas, or water supply networks for commercial purposes, or by deliberate damage to meters of electrical energy, natural gas, cold or hot water, including their seals, or by external interference with them in order to change the readings of the meters.

If this act, that is, arbitrary connection to public electrical, thermal, gas, or water supply networks, is committed by officials or special employees of electricity, gas, or water supply organizations for commercial purposes by prior criminal conspiracy, or by deliberately damaging meters of electrical energy, natural gas, cold or hot water, including their seals, or by covert external interference with them in order to change the readings of the meters, liability is provided in Clause «e» of Part 2 of Article 169 of the CC.

An essential feature for the correct qualification under Clauses «d» and «e» of Part 2 of Article 169 of the CC is that this act is committed for commercial purposes; if the rules for using electrical, thermal energy, gas, or tap water are violated for commercial purposes, the act is not qualified under Article 185^2 of the CC.

We express our position on recognizing objects such as electricity, heat, gas, or tap water as a subject of a crime as follows: in this case, obtaining illegal benefits of a property nature by the guilty person is expressed precisely in the unrecorded, covert consumption of this energy. That is, the guilty person uses the useful properties inherent in electricity,

heat, gas, or tap water for free. In addition, the guilty person realizes that material resources are spent by the state or private sector to generate (produce) electricity, heat, gas, or tap water and continuously supply it to the final consumer, as well as that these energies have an exact market price, and accordingly, their illegal consumption by him causes economic damage to the owner of energy resources. Electrical energy does not possess some physical-material features like oil or gold, but it possesses measurable physical features such as voltage and volume, hence, the possibility of precise measurement and recording, as well as market value. Exactly these features create a legal basis for evaluating it as an integral part of modern property relations and as a subject of a crime that can be embezzled.

Along with this, recognizing and defining information as a separate subject of crime, in our opinion, should not cause objections given its objective physical nature and its role in the life of the state. Physicists are not aware of a single example where matter (substance, energy) exists but lacks information, or where information is transmitted completely without the movement of energy. By its physical and social nature, information can be created by individuals, stored in special databases, copied, transmitted through networks, intentionally destroyed, and manipulated.

Information is material in a certain sense; outside of matter (whether it is an electronic impulse or paper), information does not exist on its own, because information needs a material carrier; without it, information does not exist. The material carrier itself, as well as the method of encoding and encrypting the given information on the carrier, can vary (digital, analog, textual). In this regard, it is also a common occurrence that the carriers of substantively identical information can be different objects. For example, a verbal message can be specially encoded by sound waves in the air, nerve and brain signals during the process of speaking, signs written on paper, on an ancient clay tablet, on birch bark, or carved on a tombstone, electrical impulses in long-distance transmission via telegraph or telephone, binary numbers, symbols, or graphics in transmission via computer networks, and so on.

At this point, it should be taken into account that the exact content of information and its perception by a human depends not only on what carrier it is presented on (a flash drive or paper) and how it is encoded, but also exactly on which receiving system perceives it, because the difference in meanings of information depends on the capability of the system into which a single signal arrives. Depending on the perception system (a specialist or an ordinary person), the same object may turn out to be a different carrier of information. For example, the text of a ciphered manuscript is perceived and evaluated differently by an ordinary reader, a special graphologist, a chemist, a criminalist, and a cryptographer. In some cases, information may reflect the qualities of its carrier, for example, the color, structure, or shape of an item. In this case, the quality of the item can be perceived as information hiddenly written in this item. For example, the meaning of information communicated in a private conversation in a specific room, made public, or secretly recorded by special services while wiretapping telephone conversations, and any

information reflecting the technical features of a sample of a substance, a secret weapon part, etc., can constitute a state secret and be the subject of an appropriate crime.

Illegal information reflected in a material carrier – whether it is paper or an electronic document – causes a transformation of social relations in society and ultimately leads to the infliction of damage to objects under the protection of criminal law. In turn, for example, the subject of the crime of distributing pornographic materials provided for in Article 130 of the CC must possess the characteristics of negative information; that is, pornographic materials recognized as objects of an offense must contain exactly sexual and immoral information of a pornographic nature, and it must be appropriately perceived and understood by people. Legally recognizing materials as pornographic, as is known, occurs solely on the basis of a special expert conclusion. To issue it, experts study precisely the purely content-based, informational component of such materials; only after that is a legal conclusion given on whether the studied material should or should not be considered a subject of a crime exactly within the framework of Article 130 of the CC.

At the same time, attention should be drawn to one issue. In some literature, there are attempts to recognize a human being in a certain sense as a subject of a crime, to which we must object. For example, some authors (in particular, A. G. Korgulev) claim that «In criminal law, a victim, as a feature of the object of crime, is a subject (mandatory participant) of criminal-legal relations,» and emphasize that it should be considered as a «living type of subject». According to our position on this issue, interpreting a human being as some material «subject of crime» is a disregard for their status as a constitutional social value and a condition that contradicts legal and moral values. In the legal system, a human being must always and only remain a victim of a criminal encroachment; degrading them to the level of an item or a thing is contrary to the humanitarian principles of law. Having a biological basis for their existence as a living organism, a human is a perfect biosocial being; a conscious mind, will, and soul are characteristic of them. Due to these social characteristics, a human being participates as the sole creative subject of social interaction, that is, of social relations. And in the event a crime of murder or robbery is committed against this or that person, reducing the essence of the human to the «role» of a subject of crime like some item is an unacceptable approach.

However, in today's era of biotechnologies, the issue of recognizing separated internal human organs and tissues as a separate subject of crime remains urgent. The field of transplanting human internal organs on the black market is one of the criminalized fields in the world, which poses a task for our country's legislator associated with regulating and legally protecting social relations in the field of transplantology. If the issue of regulating the legal transplantation of human organs has been resolved by the Law of the Republic of Uzbekistan No. ZRU-768 «On the Transplantation of Human Organs and Tissues» dated May 11, 2022, the criminal-legal protection of social relations in this field of transplantation is currently ensured only by Clause «n» of Part 2 of Article 97 of the CC (intentional murder for the purpose of removing organs) and Articles 115^1, 133, 133^1, and 133^2 of the CC. Criminal-legal protection of social relations associated with

protecting human organs in the field of transplantology does not fully meet the rules and modern principles of criminalizing socially dangerous acts; the existing legal norms here do not fully ensure the legal protection of such relations. As a result, in the theory of criminal law of our country, the issue of when illegally obtained internal human organs and tissues are fully recognized from a legal point of view as a subject of a crime (for example, a subject of smuggling or theft) remains debatable. These indicated gaps show the necessity of introducing new norms and additions to the CC regarding the establishment of special criminal liability for illegal sale-and-purchase actions carried out with human donor organs and tissues.

In our opinion, internal organs separated from the human body, its tissues, due to objectively possessing physiological characteristics inherent to objects of the material world, having a specific physical expression in a container, having a certain economic value in the medical market, and on the condition that they are surgically removed in a state suitable for clinical transplantation or otherwise used for scientific purposes, can be the subject of a covert sale-and-purchase agreement, or criminal transactions concluded for other remuneration; because of this, they can turn out to be the subject of a crime. However, human internal organs and tissues in a state of ordinary anatomical physical damage not related to their medical removal for the purpose of transplantation cannot act as some independent subject of a crime in Articles 104–111 of the CC (intentional bodily injury), as well as in other articles of the CC where they are provided as necessary features of the objective side of crimes causing harm to a person's health (here the object of encroachment is directly human health). At the same time, the corpse of a deceased person is sacred, and in the case of its desecration, it is considered a complex subject of the crime provided for in Article 134 of the CC (Desecration of a grave).

Along with the material and intangible subjects analyzed in detail above, the difficulties associated with defining the legal face and formal definition of «artificial intelligence», which is one of today's problems, must be resolved by jurists and legislators of all countries. Currently, in our national criminal law, there are no norms aimed directly at regulating social relations associated with artificial intelligence technologies. In terms of application to practical criminal law, the problem of artificial intelligence is currently considered only through the prism of legal liability for damage caused to people or infrastructure using appropriate robotic or automated systems for malicious purposes (as a tool). Nevertheless, another debatable issue, important for the future, namely the legal status of artificial intelligence itself as a subject of crime, can and must be raised by scholars. The urgency of this issue increases in the context of growing cybercrimes related to digital technologies, decentralized crypto-assets, and neural networks entering our lives.

Essentially, artificial intelligence is a complex information system and algorithms (special software) present in complex computing systems; in legal terms, the «Crimes in the field of information technologies» provided for in Chapter 20^1 of the CC can be committed in relation to such software. It is highly probable that cybercrimes provided for in Article 278^6 of the CC, namely crimes such as creating malicious computer

programs to disrupt its operation, deliberately using them, and distributing them among the public, will be committed precisely in relation to programs with an artificial intelligence base. Because, like any other software, intelligent artificial intelligence systems can also be subjected to viral attacks organized by competitors or hackers.

Also, in the field of developing and using artificial intelligence for private commercial purposes, economic crimes related to the infringement of another's intellectual property, copyright, and special patent rights provided for in Articles 149^1, 149^2, and 149^3 of the CC are encountered.

Usually, copyrights on artificial intelligence architecture, if it is understood simply as software, that is, a set of written computer codes and programs, are protected in the manner prescribed by the general norms of the Civil Code. According to the Civil Code of our country, «Copyrights on all types of programs created for computers, including source code and closed object code, are protected exactly like copyrights on literary works». Therefore, the subject of such a category of crime specified in Article 149^1 of the CC is not only a single moral good, a work of science, literature, and art itself, but simultaneously several integral goods: the created work itself and copyright inviolability in this unique work, the name of the author who created it, and his business reputation in the market. Looking at practical application to the field of developing complex software with artificial intelligence, the valuable subject of such a crime will be the software itself (codes), the legal authorship of the innovative software developer, the name of the creator programmer, and his business reputation acquired over the years.

However, in the field of developing modern software with artificial intelligence for commercial purposes, there may also be legal relations complexly linked to separate patent and inventive rights, which are protected by the «Violation of inventive and patent rights» norm in the Criminal Code. According to the general civil rule reviewed above through legal analysis, although programs written for computers are recognized not purely as objects of patent and inventive rights but as objects of copyright (i.e., like a text), sometimes there are specific and unique cases where deep computer programs of artificial intelligence are considered a true invention. Scientist K. K. Ramazanova writes about this legal boundary: «Computer programs can be considered a true invention only on the condition that their use in technology leads to a visible and clear technical effect (for example, accelerating a machine). In turn, the expected technical effect can be expressed in the existence of a greater and more integral technical interaction between the program and a physical computer than usual, or in ensuring the revolutionary solution of some difficult technical task in the industry». If an innovative software with artificial intelligence created by someone meets these given conditions in law and the inventive rights to it are maliciously violated by someone, the practice of directly applying Article 149^1 of the CC by the criminal law is envisaged. However, in domestic and foreign legal science, scientific discussions and various interpretations still continue regarding this new subject of crime: «In particular, while some authors recognize as a subject of crime only approved inventions, utility models, and physical industrial designs protected by law, others (cybernetics jurists) recognize the information itself about the

algorithm and essence of exactly this invention, utility model, and industrial design». Looking at legal application to the unlawful violation of exclusive inventive rights to artificial intelligence by someone, the probable subject of the crimes to be committed will be either that software with artificial intelligence itself (if its use in industry leads to a technical effect), or the secret information precisely about the operating essence and code of such software.

In the field of developing artificial intelligence in laboratories and using it in the economy, various financial crimes directly encroaching on individuals' private property rights, including the embezzlement of another's property in various ways provided for in the special part of the Criminal Code, can also be committed. In traditional law, the subject of embezzlement is some object of the material world in which a person's physical or mental labor has been expended, which has a certain material value in market relations, and which is considered the property of another for the person who seized it for malicious purposes. Cloud or local computer programs with artificial intelligence, by their nature, being simply a set of digital commands (codes) written for computers, cannot be an object of the material world; therefore, according to the traditional approach, they cannot be the subject of ordinary embezzlement (theft) either. But in practice, such programs are always recorded and stored on specific physical information carriers (hard drives, memory cards, servers, etc.), and these are in themselves objects of the material world. Thus, nowadays, the subject of physical embezzlement in the field of developing and practically using artificial intelligence will mainly be physical information carriers (devices) having appropriate software, but not the software itself (code) in them and artificial intelligence itself directly.

Russian scientist E. V. Shelkonogova, in her research, mentions that a debate continues in the international scientific community on whether AI (artificial intelligence) should be directly recognized as a subject of a crime in criminal legislation or even as a victim, since it is beginning to become self-aware. Although a tendency to legally recognize artificial intelligence as a separate electronic subject of law (person) by some Western schools is noticeable in these scientific debates, from a legal point of view, we consider this idea far from practice. In today's reality and at our technological level, it is scientifically and practically advisable to evaluate AI (artificial intelligence) as a tool (weapon) in committing a crime as a combination of algorithms and databases written by humanity or as a subject of crime targeted by a criminal encroachment (if viewed as software and intellectual property). However, rather than a legal debate, this issue is a subject of philosophical and ethical discussion today, because it ultimately traces back to the problem of artificial intelligence comprehending events occurring around it like a human, making decisions itself, and the existence of a psyche (consciousness) in digital software. Recognizing artificial intelligence today as an independent subject of law (or a criminal victim - injured party) is a premature step for the current domestic and international criminal law doctrine, and viewing it within the framework of the subject of economic and cyber crimes as a lifeless, software complex (object) created and

controlled by a human in terms of its legal status is an acceptable and logically justified approach.

At this point, the results of a socio-legal survey conducted with the participation of practical employees (investigators, prosecutors, and judges) are also noteworthy. A large part of the specialists who participated in the survey, i.e., 82 percent, stated that qualifying artificial intelligence technologies not as an independent subject of law, but as a means of committing a crime or, when appropriate conditions exist, in the form of a subject of a crime (as a software product), is the most optimal solution. The results of this survey show that the scientific conclusions in this direction fully meet the requirements of law enforcement practice.

Thus, by way of conclusion, it can be said that the object (subject) of an offense and a crime encroaching upon social relations related to the development of artificial intelligence in our country and its active use in various fields is naturally and possibly those specific software parts with artificial intelligence (as well as the architectural elements of this software and the inviolable personal non-property rights of its developers) or physical information carriers storing such software in their memory (server hard drives, cloud memory cards, tablets, etc.). However, exactly artificial intelligence itself, for now as an abstract concept and a virtual category, cannot be a direct physical subject of a crime while debates are ongoing about its legal subjectivity (personhood).

Exactly the role of the subject in the mechanism of a crime from its beginning to its completion and, accordingly, its legal significance for future criminal-legal qualification is that in any case, the object of crime protected by the law of society and the state is encroached upon only by first influencing the subject of the crime, physically destroying it, stealing it, or unlawfully making modifications to it in cyberspace. When defining the subject of a crime substantively and logically as a legal concept belonging to the material world, we must proceed from the fact that the material and digital world surrounding us is a complex and inseparable combination of its three mutually integrally connected components – physical substance, driving energy, and information. The subject of a crime should now be understood not only as things but as all types of material and energy-information objects in a broader sense (i.e., matter, energy, information, and digital assets), and by manipulating them (destroying, intentionally changing, illegally appropriating) by the criminal, social relations protected by the state and criminal law are encroached upon. Unfortunately, in some current legislation and conservative criminal-legal science, some abstract objects that are generally considered intangible are still scientifically unjustifiably and incorrectly included in the category of «subject of crime». At the same time, specific objects of the material world, such as human organs and tissues in medicine, and electrical energy, remain without finding their appropriate criminal-legal reflection in the norms of the Code.

In our view, the subject of a crime is not simply an optional (additional) feature of the object of the crime, as some scholars assert. On the contrary, it is an independent and inseparable element of the complex corpus delicti, and highlighting it separately both in

theory and in law has practical significance, helping to correctly qualify each crime and correctly determine its scale. The subject of a crime has a specific set of physical and legal features and legal characteristics, most of which have independent criminal-legal significance in science and practice, and directly exert their influence on bringing a person to criminal liability, correctly determining the basis of liability, and the severity or leniency of the punishment. Furthermore, in practice, the objective physical, social in society, and legal features in court of the subject of a crime serve to distinguish mixed crimes that often look similar to each other from the outside and, most importantly, to delimit true criminal acts from administrative or civil offenses.

CONCLUSION

Fundamental Finding : This study demonstrates that every criminal act is committed through direct impact on a specific subject of crime, regardless of whether that subject is tangible (property, money, equipment) or intangible (information, digital assets, reputation, life, health, or legal rights). The growing significance of digital technologies and virtual assets requires a broader understanding of the subject of crime beyond its traditional material interpretation. Therefore, the subject of crime should be recognized as an independent element of the corpus delicti rather than merely a component of the object of crime. **Implication :** To improve the criminal legislation of the Republic of Uzbekistan, it is proposed to: (1) establish a unified legal doctrine recognizing the subject of crime as an independent element of the corpus delicti; (2) legally recognize digital assets, cryptocurrencies, NFTs, artificial intelligence algorithms, and other virtual resources as possible subjects of crime; (3) clarify the legal status of energy resources and modern digital assets in criminal law; (4) distinguish in legislation the dual role of artificial intelligence as either an instrument of crime or the direct subject of criminal encroachment; (5) introduce a comprehensive legal definition of the subject of crime into Section 8 of the Criminal Code; and (6) develop unified rules for assessing damage caused to digital and intangible assets. The implementation of these proposals will strengthen the theoretical foundations of criminal law, improve the qualification of traditional and cybercrimes, ensure greater consistency in judicial practice, and enable criminal legislation to respond effectively to future technological developments. **Limitation :** This study is primarily conceptual and normative, so it does not include empirical analysis of court decisions or law enforcement practices involving digital assets and artificial intelligence. The rapidly changing nature of technology may also limit the long-term applicability of the proposed legal concepts. **Future Research :** Future research should examine judicial practices involving digital assets, cybercrime, and artificial intelligence, as well as compare legal approaches across different jurisdictions. Further studies may also develop practical standards for identifying and evaluating intangible subjects of crime.

REFERENCES

[1] B. Matmurodov, "Issues of qualification by the object of crime," Review of Law Sciences (Yuridik Fanlar Axborotnomasi), no. 1, pp. 150–156, 2018.

[2] M. P. Bikmurzin, "The Subject of Crime: Theoretical and Legal Analysis," Cand. jurid. sci. dissertation abstract, Saratov, Russia, 2005.

[3] V. D. Filimonov, Protective Function of Criminal Law. St. Petersburg, Russia: Yuridicheskiy Tsentr Press, 2003.

[4] V. V. Khilyuta, "The subject of crime in the science of criminal law: Problems and contradictions," Journal of Russian Law, no. 7, pp. 70–79, 2016.

[5] M. Usmonaliyev and P. Bakunov, Criminal Law. General Part. Tashkent, Uzbekistan: Nasaf Publishing House, 2010.

[6] N. S. Salayev and S. S. Niyozova, Problems of Qualifying Crimes (General Part). Tashkent, Uzbekistan: TSUL Publishing House, 2023.

[7] X. R. Ochilov, Criminal Law (General Part). Tashkent, Uzbekistan: Yuridik Adabiyotlar Publish, 2022.

[8] Team of Authors, Criminal Law (General Part). Tashkent, Uzbekistan: TSUL Publishing House, 2021.

[9] [9] M. P. Bikmurzin, "The Subject of Crime: Theoretical and Legal Analysis," Cand. jurid. sci. dissertation, Ufa, Russia, 2005, pp. 166–167.

[10] V. V. Khilyuta, "The subject of crime in the science of criminal law: Problems and contradictions," Journal of Russian Law, no. 7, pp. 70–78, 2016.

[11] O. E. Spiridonova, "Symbol as a Subject of Crime," Cand. jurid. sci. dissertation abstract, Kazan, Russia, 2002.

[12] I. Ya. Kozachenko and G. P. Novoselov, Eds., Criminal Law. General Part. Moscow, Russia, 2010.

[13] E. A. Mazurenko, Object and Subject of Criminal-Legal Protection of Crimes Against Property: Modern Problems of Qualification. Moscow, Russia, 2003.

[14] A. N. Ignatov, K. V. Vishnevetskiy, and A. A. Kashkarov, "The content of the concept of 'subject of crime' in post-industrial conditions," Bulletin of the St. Petersburg University of the MIA of Russia, no. 4(96), pp. 112–118, 2022.

[15] I. V. Kuznetsov, "Concept and Types of Subjects of Crimes in the Criminal Law of Russia," Cand. jurid. sci. dissertation abstract, Chelyabinsk, Russia, 2007.

[16] A. F. Prostov, "Problems of Efficiency of Project-Targeted Management of Socio-Political Systems in Russia," Cand. polit. sci. dissertation abstract, Moscow, Russia, 2005.

[17] Supreme Court of the Republic of Uzbekistan, "Resolution No. 6 of April 30, 1999, 'On judicial practice in criminal cases of embezzlement of another's property by theft, robbery and extortion,'" Clause 91. [Online]. Available: https://lex.uz/uz/docs/7469894

[18] R. Kabulov, A. A. Otajonov, et al., Criminal Law. General Part, 2nd rev. ed. Tashkent, Uzbekistan: Academy of the Ministry of Internal Affairs of the Republic of Uzbekistan, 2012; F. X. Khudaykulov, Corpus Delicti and Its Significance. Tashkent, Uzbekistan: TSUL Publishing House, 2025.

[19] A. G. Korgulev, "The Subject of Crime in Modern Criminal Law: A Comparative Analysis of Analytical Philosophy and Existentialism," Cand. jurid. sci. dissertation abstract, Krasnodar, Russia, 2021.

[20] A. A. Otajonov and N. S. Salayev, Criminal Law: General Part. Tashkent, Uzbekistan: TSUL Publish, 2026.

[21] K. K. Ramazanova, "International experience of patenting computer programs," Bulletin of the Moscow University of the MIA of Russia, no. 3, 2017. [Online]. Available: https://cyberleninka.ru/article/n/mezhdunarodnyy-opyt-patentovaniya-kompyuternyh-programm

[22] E. V. Shchelkonogova, "Artificial intelligence as an element of the corpus delicti," in Guarding and Protecting Rights and Legitimate Interests in Modern Law: Proc. Int. Sci. Pract. Conf., vol. I, E. V. Evsikova and I. V. Khmil, Eds. Simferopol, Russia: Arial Publishing House, 2022, pp. 80–87.

*__Noraliyev Turgun (Corresponding Author)__
Research Institute of Criminology, Uzbekistan
Email: noraliyevturgun77@gmail.com