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## CECHY ZASTOSOWANIA METOD SPOŁECZNO-PSYCHOLOGICZNYCH I MATEMATYCZNYCH W KRYMINOLOGICZNEJ ANALIZIE PRZESTĘPCZOŚCI

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**Adnotacja.** W artykule autor analizuje cechy wykorzystania technik społeczno-psychologicznych i matematycznych w kryminologicznej analizie przestępczości. Należy zauważyć, że kluczowymi czynnikami udanej analizy są: jasne zrozumienie celów analizy; bezstronność (maksymalna obiektywność analizy); zbieranie informacji z jak największej liczby otwartych źródeł; stosowanie „współczynników wagowych” do każdej informacji; przejrzystość prezentacji danych; kompetentna analiza otrzymanych informacji. Szczególną uwagę zwraca się na metodę socjologiczną, taką jak ankietę. Metoda ta polega na uzyskiwaniu informacji o obiektywnych faktach życia (wydarzeniach z przeszłości i teraźniejszości), a także o subiektywnym świecie respondentów (ich skłonności, zainteresowania, motywacje itp.).

**Słowa kluczowe:** przestępstwo karne, analiza kryminologiczna, analiza kryminalna, metody, taktyka, przestępstwo.

## FEATURES OF THE USE OF SOCIO-PSYCHOLOGICAL AND MATHEMATICAL METHODS IN THE CRIMINOLOGICAL ANALYSIS OF CRIME

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**Abstract.** In the article the author analyzes the peculiarities of the use of socio-psychological and mathematical methods in the criminological analysis of crime. It is noted that the key factors for successful analysis are: a clear understanding of the objectives of the analysis; impartiality (maximum objectivity of the analyst); collecting information from the maximum possible number of open sources; application of “weighting factors” to each information; clarity of data presentation; competent analysis of the received information. Particular attention is paid to such a sociological method as the survey. This method involves obtaining information about the objective facts of life (events of the past and present), as well as the subjective world of respondents (their inclinations, interests, motives, etc.).

**Key words:** criminal offense, criminological analysis, criminal analysis, methods, tactics, crime.

## ОСОБЛИВОСТІ ВИКОРИСТАННЯ СОЦІАЛЬНО-ПСИХОЛОГІЧНИХ І МАТЕМАТИЧНИХ МЕТОДІВ В КРИМІНОЛОГІЧНОМУ АНАЛІЗІ ЗЛОЧИННОСТІ

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**Анотація.** У статті автор аналізує особливості використання соціально-психологічних та математичних методів у кримінологічному аналізі злочинності. Відзначається, що ключовими факторами успішного аналізу є: чітке розуміння цілей аналізу; неупередженість (максимальна об'єктивність аналітика); збір інформації з максимально можливої кількості відкритих джерел; застосування «вагових коефіцієнтів» до кожної інформації; чіткість подання даних; компетентний аналіз отриманої інформації. Особлива увага приділяється такому соціологічному методу, як опитування. Цей метод передбачає отримання інформації про об'єктивні факти життя (події минулого та сьогодення), а також суб'єктивний світ респондентів (їх нахили, інтереси, мотиви тощо).

**Ключові слова:** кримінальний злочин, кримінологічний аналіз, кримінальний аналіз, методи, тактика, злочинність.

**Relevance of the topic.** The results of the analysis of criminological information are essential for the formation of almost all parameters of the crime prevention system. Criminological analysis of crime is the content and form of implementation of information and analytical support of anti-crime activities. The latter presupposes the availability of information on the state, dynamics, structure of criminal offenses, the impact on crime of the socio-economic, political state of the state, the activities of crime prevention entities, etc.

**Research status.** Problems of criminological analysis of crime and identification of trends in its development are a constant object of study of leading criminologists of our country and their foreign counterparts. Among domestic researchers, such scientists as O.M. Bandurka, E.M. Blazhivsky, V.V. Golina, S.F. Denisova, O.M. Dzhuzha, V.M. Dryomin, A.P. Zakalyuk, O.G. Kalman, O.M. Litvinov, V.M. Trubnikov, I.S. Yakovets and many others.

**Presentation of the main material.** Sociological observation is a way of collecting primary criminological information about the object under study, by direct perception and direct registration of its features.

Difficulties in applying this method are divided into subjective (related to the observer) and objective (independent of him). One of the subjective difficulties of observation is the ability to evaluate the actions of other people through the prism of one's own «self», one's own system of value orientations. Objective difficulties include, first of all, the limited time required to observe the event. In addition, not all social facts are directly observable.

In general, in criminology there are methods of philosophical, general scientific and special-branch level. At the philosophical level, the relevant philosophical categories and concepts (historical and logical, concrete and abstract, etc.) are substantiated in their methodological sense, as well as the system of worldview-based principles of cognition. In general science – methods used by most sciences, and in special-branch – methods that operate within one or more related sciences (for example, technical-legal, comparative-legal method).

At the philosophical level, criminological analysis of crime is carried out on the basis of dialectical determinism with a combination of the theory of social constructivism.

It should be noted that the philosophical level of methodology through its highest level of universalization is the foundation of criminological research. Philosophical categories, integrating scientific knowledge, play the role of methodological principles of cognition, perform methodological functions in the cognition of special objects. To date, the most optimal methodological platform for the philosophical level of criminological research is rightly considered to be dialectical determinism. The latter is based on a number of philosophical categories, laws, principles, including the law of universal universal connection, the principle of historicism, the law of unity and the struggle of opposites, the category of general, special and singular, and others.

It should be noted that observation is rarely the main method of collecting criminological information. It is usually used along with other methods. As part of the study, observation is subject to its objectives and can be applied at all stages. It acquires special significance in the formulation of working hypotheses, as well as their initial testing. An equally important source of information is the study of public opinion about the criminogenic situation in the country, region, individual settlement, etc.

Sociological observation can be of two types – simple and inclusive. A simple sociological observation consists in the external analysis of criminologically significant events and phenomena, when the researcher does not take part in them, but acts exclusively as a registrar. In the included observation, the researcher simulates joining the observed group, adapts to it and analyzes events (connections, phenomena) from within, in some cases becoming an active member of the group. But in this case, the researcher must follow several rules for the application of this method: 1) it is forbidden to interfere in the course of events; 2) it is obligatory to observe ethical norms of behavior and not to harm the persons under observation by their actions, not to violate their rights; 3) adhere to the legal limits of integration (not to participate in the commission of offenses).

One of the most common sociological methods used in criminological research is a survey. This method involves obtaining information about the objective facts of life (events of the past and present), as well as the subjective world of respondents (their inclinations, interests, motives, etc.). A wide range of people can be interviewed: criminals, victims, law enforcement officers, lawyers, representatives of public associations, informal groups of people and others.

The survey can take two forms: interviews and questionnaires.

Interviewing is a direct verbal communication with the respondent and is used for in-depth study of the identity of the offender, persons prone to socially dangerous behavior; identification of characteristic negative signs of the immediate environment of these persons, other causes and conditions of deviations in their behavior; study of the process of correction of convicts, etc.

The advantages of interviewing include the fact that this method allows you to penetrate deeper into the socio-psychological aspects of criminal behavior, while establishing the approximate degree of truthfulness of the information and the speed of its receipt.

Sometimes criminology uses a method such as social experiment – a kind of experimental method, which is associated with artificial changes in the conditions and forms of social life, and hence – the study of human behavior in these conditions. Social experiments in criminology are used to test new forms and methods of crime prevention.

The complex predictability of the elements of the subject of any criminological research, given its status as a social, determines the exceptional capabilities of the experimental method. The latter is an empirical way to test a scientific hypothesis. And the use of a social experiment to predict the state, the determinant of crime makes it possible to talk about the isolation of such a variety as a criminological experiment.

However, some scientists (O. Newman, J. Cohen, M. Felton) point to the impossibility of experimenting in criminology, because to test research theories and assumptions is absolutely impossible from a moral point of view to turn a person into a criminal. M. Gottfredson and T. Hershey do not agree with them, who, opposing these scientists, point out: "This conclusion confuses the concept of crime and criminality – such experiments (scientifically based and not individually defined) do not require identification of" criminals "and specific victims. They presuppose a change in the steady, everyday course of life and therefore are ethically neutral" (Готтфредсон, Герши, 2000: 242). This statement is quite true. Criminological experiments are mostly about testing the effectiveness of certain means of combating crime, rather than creating new criminogenic factors.

In addition to those described in previous educational questions, criminological research also uses mathematical and psychological methods.

The most common mathematical methods are extrapolation and modeling.

The method of extrapolation is to transfer the dynamic and statistical series of crime indicators in the future, for which such series are formed on the basis of data over several years. The series are obtained both on the basis of absolute data and coefficients.

The method of modeling, as rightly noted by S.E. Vitsyn, is characterized by universality: you can model any object; the fundamental possibility of modeling objects of any nature is equivalent to the fundamental possibility of their cognition (Вицин, 1973; 7). The modeling method is closely related to such methods as abstraction, comparison, analogy.

Mathematical methods are also used in the processing and analysis of research data. Among them – variance (certain scattering measures – deviations from the mean), correlation analysis (study of probabilistic dependences).

At the decision of some criminological problems it is impossible to do without application of psychological methods. their use adds depth and comprehensiveness to criminological research. With the help of psychological methods used in criminological research, it is possible to obtain a detailed description of the offender, to make a qualitative and quantitative assessment of intra – and intergroup communication processes, which, in particular, is very important for classification and typification of criminals.

The most common psychological methods in criminology are testing and sociometry.

Testing is a kind of survey method. A test is a task, question, and situation that a researcher develops and sets for the subject. The use of the test is determined by the need to compare (compare, differentiate, arrange) individuals according to their level of development or the degree of expression of various psychological qualities (intelligence, abilities, temperament, emotions, personality traits, etc.). The purpose of testing is to establish the psychological characteristics of the offender: his intellectual abilities as an individual, creativity, risk appetite, self-control, cruelty, speed of response in an emergency, and so on.

The testing uses standardized questions and tasks (tests) that have a certain scale of values.

The theory and practice of psychological science have developed many tests: general personality to study the entire system of mental characteristics of the person; personal to study any one characteristic of the individual; group, through which the structure of small informal and formal social groups is studied (their cohesion, features of the psychological climate and interpersonal relations that prevail in them), etc. Test research, built on a scientific basis, provides an opportunity to more fully and comprehensively study the identity of the offender and certain categories of offenders as well. Despite the complexity of some psychological tests (which sometimes consist of a large list of questions), they can be used to quickly investigate a large number of people (Иванов, 2006).

Sociometry (sociometric survey) domestic science borrowed from the psychology and sociology of foreign countries. Sociometric research is the metric study of emotional and psychological relationships between people. According to the founder of this method, the American scientist J. Moreno, the sociometric method is a system of technical means and procedures used for metric and qualitative analysis of social and emotional connections of an individual with members of the group in which he works and lives. With this method you can reflect the dynamics of internal relations between group members, to make a quantitative and qualitative assessment of intra – and intergroup communication processes, to determine the likes and dislikes of people within the group, the presence of leaders, groups, conflicts (Александров, Гель, Семаков, 2002: 37).

The main advantages of sociometry include the simplicity and speed of research procedures, such as interviewing group members to identify their willingness or unwillingness to study together, work, rest, perform community service.

In criminology, sociometry as a method of cognition is rarely used, mostly in studies of criminological problems of family relations. At the same time, this method can be successfully used in the study of some problems of criminology, in particular, in studying the effectiveness of criminal punishment (imprisonment, correctional labor, etc.), the institution of complicity. Applying this method, it is possible to change the composition of groups of convicts serving sentences in correctional institutions, to resolve conflict situations, to improve the psychological atmosphere.

The following methods have also been widely used in criminological studies of the connections between psychological personality traits and criminal behavior: the projective technique of G. Rorschach's «ink stains» (RT), the thematic apperceptive test of H. Morgan and G. Murray (TAT), and the portrait test of L. Zondi (ST), S. Rosenzweig's image frustration techniques (RPFS), F. Luscher's color choice test (LFWT), etc.

The system of criminological analysis of crime can be considered in two aspects: substantive and organizational.

In a meaningful context, the system of criminological analysis of crime can be represented in two parts - methodological and substantive. The main parameters of the methodological part of the system of criminological

analysis are covered in the previous question. The subject part is based on a statistical bank and a model bank.

A statistical bank is a set of generalized criminological information that allows to most fully reveal the interdependence of data and establish the degree of their statistical reliability, verifiability. The statistical bank, as a somewhat abstract, generalized concept, is concretized through the functioning of the systems of state statistical reporting of various departments and in other forms.

The model bank is a set of information models that are formed on the basis of criminological information, processed on the basis of general and private criminological theories and that contribute to better management decisions in the process of combating crime.

Thus, in the organizational context, the system of criminological analysis of crime is a set of interrelated procedures, the gradual implementation of which ensures the completeness, comprehensiveness and objectivity of the results of the analysis. They consist of a number of structural and functional blocks, each of which, being logically connected with all the others, has a clearly defined purpose and is a predetermined and conceptually sound set of necessary organizational and methodological operations. Basically, criminologists agree on the construction of criminological analysis. It usually includes: a) justification of the need for criminological analysis of crime, identification and clarification of the relevant problem of criminological nature; b) taking into account the existing problem – setting a research task; c) making substantiated hypotheses; d) programming the analysis procedure, drawing up its plan, implementation of preliminary calculation procedures; e) direct collection, processing, generalization, evaluation of criminological information; f) formation of conclusions and recommendations.

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## ROLA I ZNACZENIE REALIZACJI CYFROWEJ TRANSFORMACJI REGIONU

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**Adnotacja.** Znaczenie artykułu polega na tym, że dominacja technologii cyfrowych w życiu współczesnego społeczeństwa ułatwia wiele procesów, w tym w kontekście zarządzania państwem. Aby jednak osiągnąć jakościowe wyniki we wdrażaniu i budowaniu czegoś nowego w całym kraju, ważne jest, aby mieć wsparcie ze strony każdego regionu. Z tego powodu transformacja cyfrowa jest przede wszystkim prerogatywą rozwoju dolnego, regionalnego poziomu, w którym odgrywa szczególną rolę i znaczenie. W artykule na podstawie analizy poglądów naukowców podsumowano cechy i główne właściwości kategorii „region” i wskazano na jego priorytetowe znaczenie w układzie terytorialnym Ukrainy, jako obiektu transformacji cyfrowej. Rozważono przepisy prawne w zakresie państwowej polityki