

NATIONAL ACADEMY OF INTERNAL AFFAIRS

Department of Criminalistics and forensic medicine



GENERAL THEORY OF FORENSIC SCIENCE



At the beginning of the XX century, the forensic science was perceived by scientists as a science of tools and techniques for applying the achievements of natural and technical sciences in order to investigate crimes.

There are many definitions of the subject of forensic science. The scientists called the following:

Synthesis of knowledge

Specificity of forensic science technologies, techniques and methods

The focus of forensics on the study of the patterns of the emergence of evidence

Development of scientific and technical methods



Forensics

is the applications of science to crime means, accrue information of offenses and associates, and applications of collection, investigation, evaluation and implementation of evidence, and acquirement of special tools and methods of forensic expert examination and crime prevention based on the patterns (by R.S. Belkin).



Forensic science

is a system of knowledge about the legitimate generation (formation, occurrence), the identification (ascertaining), fixation, extraction, study, evaluation and use of information suitable for verification or establishment of any facts, events, phenomena, as well as development on the basis of known patterns of practice, methods, procedures, techniques, technologies, tools, materials, devices and their complexes and other means of optimizing the work with such information.

The main functions are inherent to forensic science:

Ascertaining
function

Interpretation
function

Heuristic
function

Predictive
function

Practical
applied function

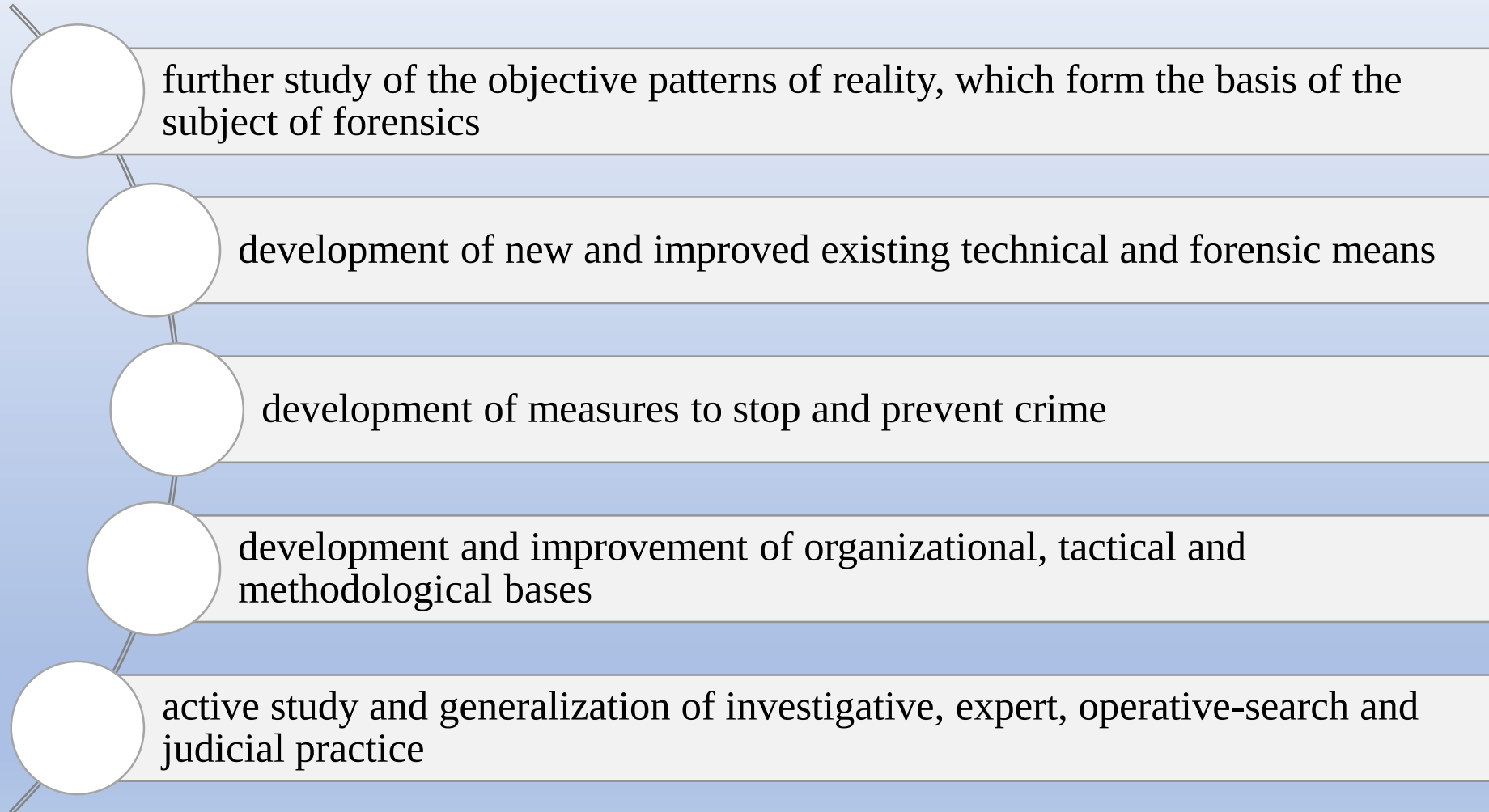
Communicative
function

Educational
function

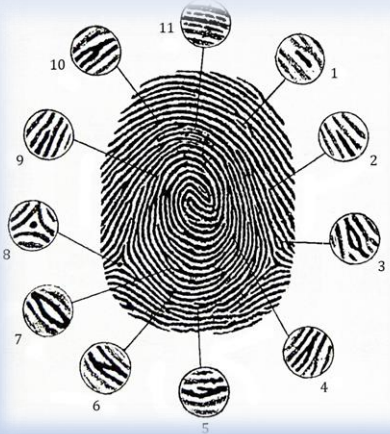
Nurture
function

Critical function

Some of the tasks of forensic science include:



The system of forensic science consists of four sections:



1. General theory of forensic science

1.2. Forensic technique.



1.3. Forensic tactics

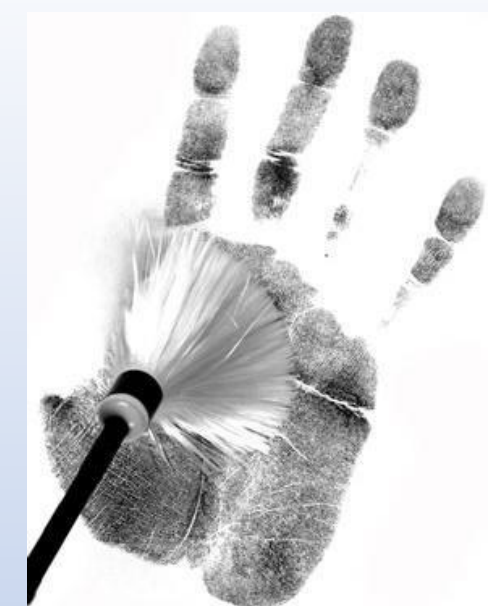
4. Forensic methodology



The general theory of forensic science

- is a system of basic principles, theoretical concepts, categories, notions, terms and methods, which is its methodological basis.





Forensic technique

- is a system of scientific regulations and technical means developed on their basis, techniques and methodology for collecting and research of evidence



Forensic tactics

- is a section of the forensic science, which includes a system of scientific regulations and practical recommendations developed on their basis on the organization and planning the pre-trial investigation and judicial proceedings, determination of the optimal line of behavior of persons conducting investigations, methods of conducting investigative (search) and secret investigative (search), procedural actions during the criminal proceedings, aimed at establishing the circumstances to be proved, the collection and evaluation of evidence.



Forensic methodology
- is the final section of the forensic science, a system of integrated scientific provisions and a set of methodological recommendations formed on their basis that provide an optimal organization of investigation and prevention of certain types of crimes.



The group of general scientific methods of forensics includes:

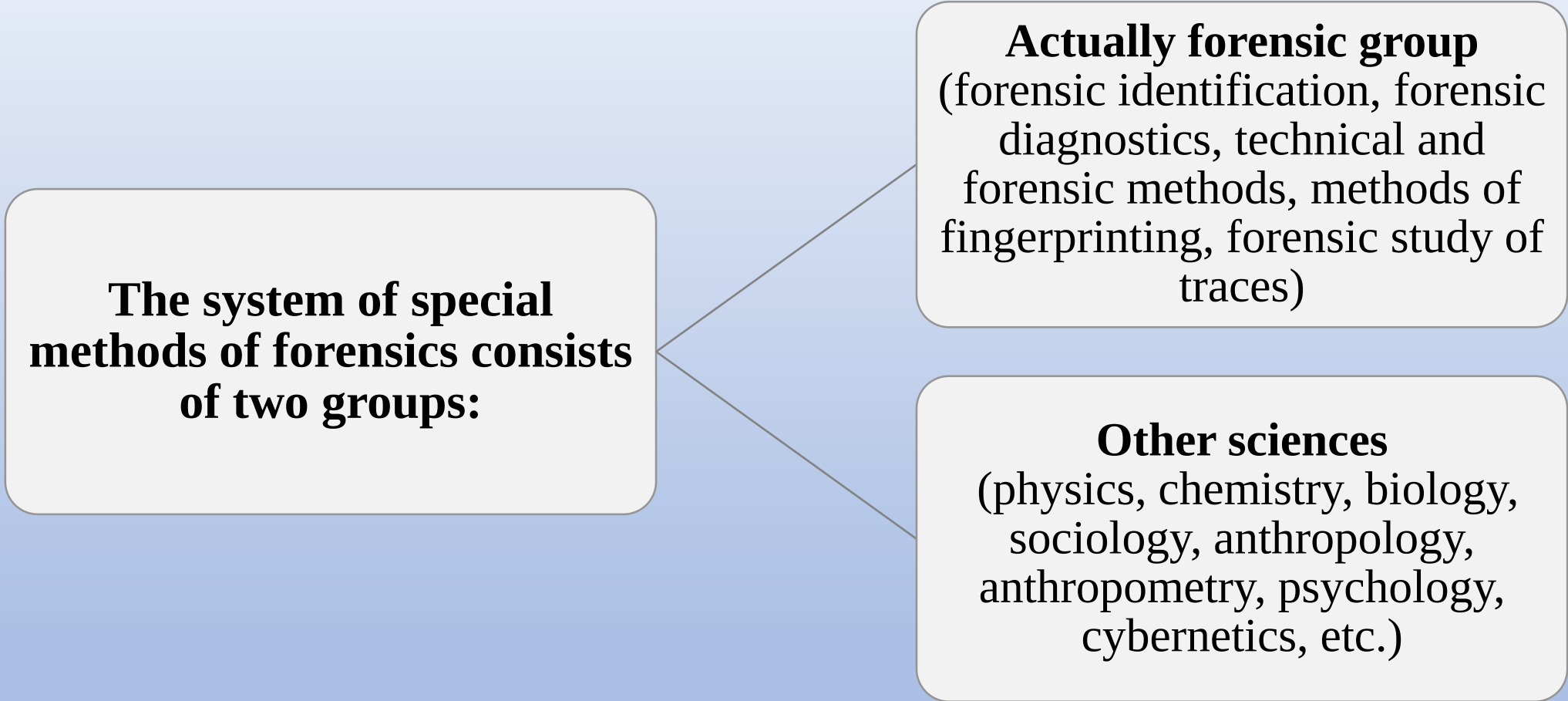
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graph TD; A["The group of general scientific methods of forensics includes:"] --> B["Sensory-rational: observation, description, comparison, experiment, modeling"]; A --> C["Logical: analysis, synthesis, induction, deduction, hypothesis, analogy, idealization, generalization"]; A --> D["Mathematical: measurement, computation, geometric construction, mathematical modeling"];
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Sensory-rational:
observation, description,
comparison, experiment,
modeling

Logical:
analysis, synthesis,
induction, deduction,
hypothesis, analogy,
idealization,
generalization

Mathematical:
measurement,
computation, geometric
construction,
mathematical modeling

**The system of special
methods of forensics consists
of two groups:**



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graph LR; A["The system of special methods of forensics consists of two groups:"] --- B["Actually forensic group (forensic identification, forensic diagnostics, technical and forensic methods, methods of fingerprinting, forensic study of traces)"]; A --- C["Other sciences (physics, chemistry, biology, sociology, anthropology, anthropometry, psychology, cybernetics, etc.)"]
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Actually forensic group
(forensic identification, forensic diagnostics, technical and forensic methods, methods of fingerprinting, forensic study of traces)

Other sciences
(physics, chemistry, biology, sociology, anthropology, anthropometry, psychology, cybernetics, etc.)

Forensic identification

is the process of establishing the identity of a particular material object by its allocation from a certain set of objects in a unique set of features that were reflected in circumstances related to the crime



By the nature of the reflection of the features of the object there are the following types of forensic identification:

the establishment of the identity of the object on the features, repelled in the memory of a person



establishing the identity on the description



establishing the identity on the photo, video



establishing the identity on the material-fixed reflection of the signs of the external structure of the object



establishing the identity of the whole in parts, or, in other words, solving the question of whether two or more parts were one whole

Forensic diagnostics

can be defined as the study of the characteristics and state of the object (situation) in order to establish the changes that have occurred therein, determining the causes of these changes and their relationship seeing the investigated criminal offense.



Techniques and forensic methods:

photographic

forensic study of
traces

odorology

ballistic

Special methods of other sciences:

Biological
methods

Anthropological
and
anthropometric
methods

Sociological
methods

Psychological
methods