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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии  
საქართველოს სამედიცინო სიახლენი

## GEORGIAN MEDICAL NEWS

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**GMN: Georgian Medical News** is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

**GMN: Медицинские новости Грузии** - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

**GMN: Georgian Medical News** – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებშიდან.

### WEBSITE

[www.geomednews.com](http://www.geomednews.com)

## К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html) В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

**При нарушении указанных правил статьи не рассматриваются.**

## REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html)  
[http://www.icmje.org/urm\\_full.pdf](http://www.icmje.org/urm_full.pdf)

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned  
Requirements are not Assigned to be Reviewed.**

## ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრაფიების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

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## FORENSIC AND LEGAL SIGNIFICANCE OF HYPNOSIS DURING A CRIMINAL INVESTIGATION

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### Abstract.

The purpose of the article is, based on a comparative legal study of the general and distinctive features of the norms of criminal and criminal procedural legislation of Ukraine, Georgia, Poland, the Czech Republic, Slovakia and Hungary, regarding the possible participation of a psychotherapist in conducting procedural actions aimed at collecting evidence for the crime committed, determine the feasibility and admissibility of the participation of a hypnologist to conduct hypnosis sessions with participants in criminal proceedings. The task is based on an analysis of the norms of criminal and criminal procedural legislation of a number of European countries, as well as taking into account the specifics of hypnotherapy as a branch of psychotherapy, the limitations of legal norms regarding psychotherapists (hypnologists) in the exercise of their professional duties and in attracting them for judicial - investigative actions to collect evidence, the unsettled nature of these legal positions - to outline ways to improve the norms of medical and legal legislation of European countries in this area. It has been established that the problem of realizing the right of the subject to full legal and medical protection during a forensic medical examination, as well as the implementation of the rights and obligations of an expert psychotherapist during the latter, is the lack of clear implementation in the criminal procedural norms of the states of the participation of a hypnologist during a forensic examination, investigative actions that are aimed at collecting evidence for a crime.

It has been revealed that the requirements of international legal norms and certain specifics of the situation regarding the conduct of a forensic medical examination, as well as the lack of clearly defined legal norms for the participation of a psychotherapist in collecting evidence by immersing a participant in a criminal trial - a patient in a hypnotic sleep, dictate the need to make a number of changes in criminal procedural legislation not only of Ukraine, but also of the countries of the European Union, such as Poland, Slovakia, Hungary, the Czech Republic. These medico-legal documentary "amendments" should be aimed at a clearer formulation of the definitions of the basic concepts and terms of engaging or prohibiting the participation of a hypnologist during forensic investigative actions that are aimed at obtaining evidence using hypnosis, such as a ban on engaging the latter is clearly provided for in the legislation of Georgia. Thus, these innovations in the legal sphere will act as a guarantor of the implementation of the right to human health, will serve as a "psychotherapeutic impetus" for eradicating cases of obtaining evidence in a case using hypnosis in the practical activities of law enforcement agencies, and will meet the basic international

principles and requirements in the field of healthcare and law.

**Key words.** Suggestion, doctor, hypnosis, evidence, subject, patient, criminal process, criminal code, criminal procedure code, psychotherapy, examination.

### Formulation of the problem.

The processes of democratization that are being carried out in the European Union, strengthening the protection of the rights and legitimate interests of citizens of Ukraine, Georgia, Poland, the Czech Republic, Hungary, and Slovakia affect all sectors of our life, all areas of activity of government bodies. One of these areas is ensuring the physical and mental health of the population of the European Union. Nowadays, increased attention is paid to the legal support of the activities of medical and scientific institutions in this area (for example, psychotherapy).

At the same time, since crime is the most pressing social problem of modern society, psychotherapy, in this case, like all medicine, can turn out to be a rather convenient tool for avoiding criminal liability.

But changes in medicine are not only about financing, but also about monopoly, approach to patients and their right, as well as the rights of psychotherapists.

All this requires legal scholars, medical professionals, and legislators of all countries to develop and apply new forensic and psychiatric methods for collecting evidence on the crime committed, for the further use of the information received to conduct an effective investigation, identify and bring the perpetrators to justice.

Legal and medical aspects of the participation of a psychotherapist (hypnologist) in forensic investigative actions, namely: when obtaining evidence of an informational (verbal) nature through hypnosis, it is a specific phenomenon of forensic investigative activity, in which not only the participant in the criminal process is subject to legal assessment (hypnotic), but also the qualification and legal aspects of the professional activity of the psychotherapist (hypnologist) who carries out this procedure. It is this specificity that requires judicial, law enforcement agencies and forensic experts to improve existing ones, develop and apply new medico-legal methods and methods for obtaining an evidence base, a list of legal guarantees and obligations, and forming a kind of legal "shield" for a psychotherapist (hypnologist) who conducts a hypnotic session in order to obtain the most reliable and truthful, "forgotten" and "hidden by consciousness" information without any illegal or unlawful influence on the official powers of the psychotherapist.

This places a special responsibility on law enforcement agencies for the high-quality collection of evidence, and as a result, a legitimate pre-trial and judicial investigation of



criminal offenses, which is not possible without strict adherence to the legality procedure and taking into account the medical characteristics of patients participating in criminal proceedings who are susceptible to hypnotic influence in order to obtaining the necessary information on a criminal case. This is the urgency of the problem [1-35].

#### **Analysis of recent research and publications.**

The analysis [1-35] showed that scientists, theorists, and practitioners have repeatedly studied the activities of law enforcement agencies in collecting evidence through medical examinations and investigative experiments, as well as the implementation of forensic investigative actions in this area in general and its individual aspects in particular. But, consideration of procedural, legal and medical issues regarding new opportunities for identifying and collecting evidence through hypnotic sessions, their ethical and legal admissibility, and procedural feasibility requires detailed research and analysis.

**The purpose of the article** is, on the basis of the theoretical analysis and our own practical experience, to consider procedural, legal and medical issues of new opportunities for identifying and collecting evidence through hypnosis, to clearly outline the legal status of a psychotherapist (hypnologist specialist) when conducting forensic investigative actions to collect evidence, as well as justify the need for effective cooperation between investigators, courts and the medical industry for high-quality and objective execution of tasks of criminal proceedings in Ukraine, Georgia, Poland, the Czech Republic, Hungary and Slovakia, and improve the innovation policy of these countries.

#### **Materials and methods.**

During the study, general scientific and special research methods were used:

- the dialectical method is aimed at bringing the integrity of the criminal procedural and medical principles of ensuring the right to health of a person - a participant in a hypnotic trial, the possibility of their constant development, as a result of the continuous filling of the existing legislation of Ukraine, Georgia, Poland, the Czech Republic, Hungary, and Slovakia with new innovative proposals.

- methods of analysis and synthesis that allow us to determine the essence and admissibility of a legal norm that would regulate the possibility of using hypnosis during forensic investigative actions, in particular collecting and obtaining evidence of an informational nature, with the participation of a psychotherapist (hypnologist) in health care and criminal systems -procedural activities of Ukraine, Georgia, Poland, Czech Republic, Hungary and Slovakia.

- a systematic method for studying the essence and admissibility of the norm for obtaining testimony from a participant in the process through hypnosis (during forensic investigative actions) and the mandatory participation of a psychotherapist, which has its own structural and logically interconnected elements.

- comparative and comparative method - to identify the general and distinctive features of the legal norm of the possibility and admissibility of obtaining testimony from a participant in the process through hypnotic sleep during judicial investigative

actions in the legislation of Ukraine, Georgia, Poland, the Czech Republic, Hungary, and Slovakia.

- functional method - to identify the place and significance of the norm on the possibility and admissibility of the use of hypnosis during the criminal investigation of crimes in Ukraine, Georgia, Poland, the Czech Republic, Hungary, and Slovakia.

#### **Results and Discussion.**

The forensic medical significance of hypnosis and suggestion has been the subject of numerous studies since the 19th century by both doctors and lawyers. Data on hypnosis related to criminal law were first published by V. Lilienthal [27]. He wrote that modern criminal law has enough points of support to refute the supposedly existing danger of using hypnosis for the purpose of violating the law.

In the past and at present, judicial and criminal practice poses the following questions to doctors and lawyers: is it possible, with the help of hypnotic suggestion, to force a subject in a state of hypnosis or after awakening to commit a crime? Is it possible, through suggestion, to force a hypnotic to give false testimony in court without subsequently exposing this criminal trick? Can investigators use hypnosis when interrogating a known criminal or suspect of committing a particular crime? Finally, can the hypnotist himself commit this or that crime against the person of the euthanized person without the risk of being exposed in the future?

To answer all these questions, first of all we must understand the concept of hypnosis and suggestibility.

Thus, Academician V.M. Bekhterev [32] put forward the doctrine of hypnosis as a special state of modified natural sleep (and not a pathological phenomenon), which can be obtained using not only mental, but also physical influences, and develops in both humans and animals. V.M. Bekhterev considers hypnosis as an artificially induced biological inhibitory reflex or an artificially induced combined reflex of an inhibitory nature with suppression of active concentration.

Suppression of concentration V.M. Bekhterev attached great importance, since for successful suggestion in reality he considered it necessary to weaken active attention. According to him, hypnosis is a biological state of an inhibitory nature, accompanied by the suppression of other reflexes, a state reminiscent of a modified dream and explained by the inhibition of active concentration under the influence of passes or inhibition associated with the verbal or symbolic designation of sleep: commanding or persuasive "sleep!"

But at the same time, the first scientific attempt to explain hypnotic phenomena belongs to the "father of hypnosis" J. Braid [2]. He defined hypnosis as "nervous sleep or that peculiar state of the nervous system that can be caused by prolonged concentration and tension of the sensory and mental gaze, especially on an object of irritating nature." According to J. Braid, a subject in a state of hypnotism can be influenced in three ways: through muscular feeling, through pressure on the skin (phrenohypnotism) and through words; J. Braid called all these influences suggestion. J. Braid explained the actions of suggestion through words as "monoidism."

The English psychophysicologist A. Carpenter [3,4] further developed the previous theory and "translated" it into psychological language.

Theory by A. Liebeault. In the theory of A. Liebeault [28], two sides are distinguished: metaphysical, dealing with issues of the relationship of the soul to the body, and special, dedicated to hypnotism. According to A. Liebeault, ordinary sleep is essentially no different from hypnotic sleep: both are a consequence of focusing attention on the idea of sleep. But a person sleeping in ordinary sleep, as soon as his consciousness becomes closed, is in communication with himself. In contrast, the hypnotic sleeper "retains in his mind the idea of him who has put him to sleep and places his concentrated attention and his senses at the service of that idea." Hence the possibility for this extraneous will to inspire dreams, ideas, actions, hence the phenomena of selective somnambulism.

Theory Ch. Richet [5] relies on Brown-Sequard's theory of inhibition. Inhibition meant that property of the nervous system, due to which irritation of one part of it leads to the cessation of the activity of others. Ch. Richet formulated five principles of the physiological theory of hypnosis:

1) weak irritations of various natures can stop the activity of nerve centers directly or reflexively.

2) weak irritations of various natures can stop the activity of mental centers and cause a state of automatism of all degrees - a state of somnambulism.

3) the ease with which inhibitory actions are performed increases with each experience.

4) the state of delay or cessation of action, caused in the nerve centers by a delaying reflex action, can in turn be delayed by weak stimulation.

5) the state of somnambulism caused by a weak inhibitory action can be terminated by another weak inhibitory action of the usual order.

Of course, in our opinion, this explanation cannot be considered satisfactory, since the word inhibition, used to express complex phenomena, only in a unique way "covers up" ignorance in a certain field of knowledge, but it, like any theory, deserves to exist.

The theory of H. Bernheim [23], which explains all the phenomena of hypnotism by suggestion, differs from the theory just given. He supplements the doctrine of inhibition with a brief reference to the same author's doctrine of dynamogeny, or the theory that delaying nervous activity in one place can increase this activity in another. According to H. Bernheim, hypnotic sleep is essentially "nothing, absolutely nothing" different from ordinary sleep; the only difference between the first and second is that the hypnotic falls asleep with the thought of who put him to sleep.

Lehman's theory. A. Lehman [26], when explaining the psychological phenomena of hypnosis, relies on supposed vasomotor changes in the brain. The author does not provide any evidence of the correctness of his theory.

Theory of A. Forel. A. Forel [1], when explaining the psychological phenomena of hypnosis, relies on hypnotic brain "dynamisms," which he interprets from the point of view of idealistic philosophy.

Theory of L. Levenfeld. L. Löwenfeld [25] considers hypnosis as a form of partial sleep, which is based on the same physiological changes in the functional state of cortical elements as in natural sleep.

In addition to a number of theories of other authors, which also deserve attention, we will devote special attention to the psychoanalytic theory of hypnosis. Proponents of psychoanalytic theory (S. Freud [16,17], S. Ferenczi, P. Schilder, Kauders, etc.) believed that hypnosis and suggestibility have an erotic root. Thus, S. Ferenczi [34] sees in hypnosis the restoration of an infantile-erotic, masochistic attitude. The hypnotizer is either an image of the father (paternal hypnosis) or a prototype of the mother. The central place in hypnosis is occupied by impulses from the area of the Oedipus complex. To substantiate their positions, psychoanalysts give examples. They say that when hypnotizing women, the hypnotist can observe before falling asleep and after waking up a wandering gaze, trembling, which are characteristic of sexual arousal. Hysterical freezing at the beginning of hypnosis is identified with motor phenomena during sexual intercourse. If a hypnotist tries to get information from a hypnotized person about his state, he will very often hear about a "blissful, pleasant feeling," "blissful fatigue," etc., and often directly about erotic arousal. Supporters of psychoanalytic theory believe that the technical means used - "fixation" (with a glance), stroking - are common to hypnosis and eroticism. Also, psychoanalysts argue that even in the nature and form of hypnosis, the sexual constitution of the individual is expressed, and people, especially those who are inclined to fall in love, who tend to have a strong focus on objects of love, usually easily fall into deep hypnosis. Psychoanalysts consider the muscular phenomena of hypnosis - complete relaxation and catalepsy - as an expression of lack of will, permission to do whatever you want with yourself.

Who is most susceptible to hypnosis and suggestibility?

Suggestibility is usually understood as a certain subordination or readiness to change behavior not on the basis of reasonable, logical arguments or motives, but based solely on a demand or proposal that comes from another person or group of people; at the same time, the subject himself is not clearly aware of such subordination, but continues to consider his course of action as the result of his own initiative and independent choice. Suggestibility is not, as was often previously understood, a mental predisposition characteristic only of certain patients (hysterical); this is one of the properties of normal higher nervous activity.

Suggestibility is considered as one of the manifestations of the qualities of the volitional process.

For a suggestible person, the opinions of others usually become the main basis determining one or another of his decisions.

According to V.M. Bekhterev, suggestibility "should be understood as the ability or inclination to perceive and assimilate suggestion to a greater or lesser extent, whether it is determined by internal or external motivations."

We interpret suggestibility as increased susceptibility to outside influence or influence.

You cannot approach suggestibility as an always negative phenomenon. Thus, in pedagogical practice, suggestibility (and suggestion) plays a positive and even significant role: the higher the authority of the teacher for the student, the greater the importance of every word he says.

The phenomena of iatrogenicity, diseases resulting from a careless word spoken by a doctor, are also associated with increased suggestibility.

We have established that the degree and type of suggestibility among individuals is extremely different. Thus, age, gender, health status, fatigue and intelligence have an undoubted influence.

For some persons, a demand coming from another person already entails submission; in others, suggestibility appears only in relation to the influence of a certain person, while a demand emanating from another person is discussed using the usual weighing of motives.

In some cases, suggestibility varies significantly depending on the nature of the suggestions and the method of inducing them. Susceptibility to extraneous suggestions (heterosuggestibility) can be very high, but the tendency to form self-suggestions (autosuggestivity), on the contrary, can be very small. There are cases when the opposite relationship is observed.

There is a category of people who are completely inaccessible to suggestion from an outsider, distrustful of everything coming from the outside, but who are easily influenced by their closest relatives and friends. So, if a person loves someone, sympathizes with someone, he is easily suggestible in the appropriate direction; another energetic subject with an independent way of thinking can sometimes be completely under the influence of his wife or friend. On the other hand, it is more difficult for a person in whom the subject does not have trust or sympathy to exert a certain suggestive influence; they often allow themselves to be inspired with something bad about people they dislike, while they immediately and unconditionally reject what is bad about their loved one.

In psychotherapy, the so-called pierced paper phenomenon is distinguished, that is, the patient's extreme, excessive compliance. The patient agrees with all the statements of the psychotherapist, but he does not accept the psychotherapist's beliefs and does not process them.

Conditions of increased suggestibility also exist in natural sleep. A person who sees a dream is, to a certain extent, accessible to direct suggestion. Direct suggestion is usually easier to implement if you touch the sleeper's hand or forehead, especially when he is talking in his sleep; in this case, natural sleep can be transformed into hypnotic sleep.

According to the teachings of I. P. Pavlov [31] on higher nervous activity, suggestibility depends on the degree to which the cerebral cortex is inhibited at the moment when a given suggestion is perceived (in other words, on the depths of hypnosis). The paradoxical and equalizing phases play a particularly important role in suggestion and suggestibility.

The paradoxical phase helps to enhance the influence of the content of the word, which is generally weaker compared to the real stimulus.

During hypnosis, due to sleep inhibition spreading throughout the cerebral cortex, the tone of the cerebral cortex decreases. When a verbal stimulus acts on a cortex with reduced tone, it concentrates the irritation much more easily at the appropriate point.

Concentrated local irritation in the cerebral cortex, according to the "law of mutual induction," enhances the opposite process - inhibition (negative induction).

Due to the fact that the tones of the cerebral cortex fluctuate all the time and are also different in different individuals, both

suggestibility and self-hypnosis are fickle, changeable, and dynamic.

Most authors who study hypnosis claim that, with a few exceptions, there is no healthy person who could not, under certain conditions, fall into a state of suggested sleep of one degree or another.

According to A. Forel, every mentally healthy person can be hypnotized to a greater or lesser extent; Only known transient mental states can be an obstacle to hypnosis.

Thus, hypnologists noted that patients with psychasthenia can be difficult to hypnotize, many of them actually cannot be hypnotized. When asked what the cause of immunity to hypnosis in these cases is, I. P. Pavlov replied: "When you hypnotize, you tell the patient not to think about anything, but he cannot do this, because he has an obsessive point, and most importantly, your word is not fulfilled..." [31].

Increased suggestibility as a constant feature of the psyche is observed in morons, although even in this category suggestibility can be very different.

Particularly increased suggestibility, and therefore susceptibility to suggestion and hypnosis, is expressed in various drug addicts - chronic alcoholics, morphine addicts, cocaine addicts, hashish addicts, in traumatic encephalopaths (especially in a state of alcoholism), and in addition, with such a progressive disease as progressive paralysis, especially in its expansive and demented forms.

Age matters: young subjects are generally more suggestible and easier to hypnotize than mature and, especially, older people. Young children are not at all susceptible to hypnosis, at least verbally.

Vagotonic people are easily hypnotized.

Opinions differ about the meaning of gender. Some authors (L. Löwenfeld) believe that deep degrees of hypnosis are achieved more easily in women than in men; E. Trömmner [33] takes the opposite view.

The mental state of the person being hypnotized is of considerable importance, and one must keep in mind both permanent mental properties and fleeting changes in mood.

As for intelligence and education, outstanding talent and education are no more an obstacle to hypnosis than narrow-mindedness and imbecility. However, L. Löwenfeld argues that people who think little and are accustomed, due to life circumstances, to a certain passive obedience, are more easily hypnotized than educated people, since it is more difficult for the latter to resist "critical reflection" and plunge into the passive state necessary for the onset of hypnosis.

In general, intellectually developed people who know how to control the flow of thoughts and who want to achieve hypnosis very quickly drive away ideas that interfere with falling asleep.

The influence of volitional effort is as important for the onset of hypnosis as for natural sleep. In general, volitional effort cannot directly induce sleep, which is sufficiently proven by the futility of the efforts of those suffering from insomnia; will, as a conscious regulation of one's actions, can contribute to the onset of sleep only insofar as it creates the internal and external conditions necessary for falling asleep. This also applies to hypnosis.

Some subjects (a minority) experience intense fear of hypnosis. In such cases, hypnosis is usually impossible. The effect of intense fear acts in the opposite direction to that sought by the hypnotist. However, under some circumstances, fear can even favor hypnosis: what the patient fears remains in the foreground and inhibits all other thoughts, especially if it is accompanied by a feeling of powerlessness. This is confirmed by everyday experience and a number of facts from zoology (for example, hypnotizing a victim with a snake).

Susceptibility to hypnosis is influenced by the frequency of euthanasia. So, if hypnosis was not successful or was successful with difficulty and with little effect in the first sessions, then after repeated sessions, more pronounced hypnosis can be achieved. The hypnotized person learns to eliminate the moments that make it difficult to fall asleep: extraneous and critical thoughts, timidity, excessive tense anticipation, etc.

However, frequent repetitions of hypnotization may not always increase susceptibility to it; in a huge number of cases, the increase in susceptibility to hypnosis turns out to be insignificant, and initially difficult suggestibility may not only not turn into easy, but sometimes even make the subject immune.

Susceptibility to hypnosis is greatly influenced by the environment and atmosphere in which the session is conducted. Undoubtedly, a subject who sees others being hypnotized without any hesitation and falling asleep easily is easier to hypnotize. In this case, an atmosphere of suggestion operates, which not only facilitates euthanasia, but also significantly contributes to the achievement of therapeutic success.

The speed of falling asleep also has a great influence on susceptibility to hypnosis. People who fall asleep easily are generally easier to hypnotize (you just need to give them peace) than those who have difficulty falling asleep.

An obstacle to hypnotization is the extremely intense focus of attention (curiosity) on the expected mental changes. There are subjects who want to be hypnotized so much that it prevents them from falling into hypnotic sleep.

Factors such as sudden thoughts that cannot be eliminated, business or family concerns, the loss of a loved one, shock mental trauma, episodic mental turmoil, etc., interfere with euthanasia.

Painful ideas, especially obsessive thoughts about immunity to hypnosis, are also a source of difficulty.

Somatic suffering (pain, itching, cough, muscle spasms, various tics, chorea) also interfere with hypnotization.

Mental and physical fatigue usually increases susceptibility to suggested sleep, on the basis of which it is recommended to use the afternoon or evening hours to euthanize persons with low and moderate suggestibility.

In highly suggestible individuals, suggestibility can be significantly increased for a short period of time under the influence of exhaustion caused by insufficient nutrition, lack of sleep, long and intense work, and severe mental shock (fear, fright).

Sometimes persons who at first glance seem particularly immune to hypnosis turn out to be so amenable to hypnotization that they fall into a deep sleep at the mere gesture or word of the hypnotist.

The personality of the hypnotizer is of great importance. One psychotherapist easily and deeply immerses the patient in a hypnoid state, while another does not succeed. The trust that the person being put to sleep has in the hypnotist in general and in his ability to hypnotize in particular plays a great role. The attitude towards a hypnotist depends on many factors, which include, for example, his appearance, the reputation he enjoys, etc. Those who are easily hypnotized can be put to sleep by any hypnotist; this is often found at public hypnotic performances, when some subjects, having read advertising posters, go to the performances already "half hypnotized."

The fact that some people can easily be hypnotized by one psychotherapist, but not influenced by another, has led some hypnologists to recognize that the authority of the hypnotist plays too great a role. So, for example, we can say that everyone draws, but not everyone is an artist, everyone speaks, but not everyone is a speaker, everyone influences, but not everyone is a hypnotist.

In our opinion, the psychotherapist must adapt his techniques to the characteristics, habits, activities and intellectual development of the person being euthanized, and the better he does this, the better results he achieves.

Thus, we believe that the question of suggestibility and susceptibility to hypnosis in connection with the type of higher nervous activity has still been very little developed. A comprehensive study of this issue is complicated by the difficulty of determining the type of higher nervous activity of a person.

Nevertheless, based on clinical observations, Vigouroux and Juculier [20] found that "sanguine temperaments are easily suggestible," and "depressive temperaments are usually amenable to influence only in the direction corresponding to their mood."

B. N. Birman [29] developed the question of using experimental hypnosis to determine the type of higher nervous activity. He wrote that hypnosuggestibility is increased in neurotics with a weak or weakened and artistic type of higher nervous activity; neurotics with a strong excitable and thinking type are least susceptible to hypnosis; in inert types, suggestion is "implemented more slowly than in mobile ones."

Based on clinical experience, we came to the conclusion that the strongest, balanced fast type (sanguine people) is the easiest to suggest, followed by the strong unrestrained type (choleric people), the weak one (melancholic "artists") and, finally, the strong balanced slow type (phlegmatic people).

It should also be noted here that when hypnotizing, especially choleric patients, there are so-called unsuccessful sessions, depending on the influx of extraneous thoughts that the hypnotized person can only discard with difficulty, and from inadequate emotional reactions. However, the hypnotist must be able to understand the condition of his patient and persistently continue to work.

Basically, among doctors and lawyers, the question comes down to whether the hypnotized person is only an instrument in the hands of the hypnotist, or whether he can retain, to one degree or another, the ability to resist suggestion, which is unacceptable to him in a social, moral, ethical, and aesthetic sense.

A great many experiments were carried out on hypnotics, both while in hypnosis and after awakening they were induced to kill a specified person (usually with imaginary murder weapons, such as a cardboard dagger or an unloaded revolver, using drinks supposedly containing poison), to commit theft and etc.

The conclusions from such experiments in the last century were sharply contradictory. And even now, in our opinion, scientists are very far from unanimity in the interpretation of this problem.

Physiologists and lawyers (A. Beaunis, Durand de Gros, H. Bernheim, A. Forel, etc.) recognized the possibility of criminal suggestions in deep hypnosis, and hence the possibility of corresponding criminal acts. In particular, A. Beaunis pointed out that the hypnotist retains independence only insofar as this is desirable for the hypnotist; he behaves like a stick in the hand of a wanderer. Ligeois comes to the conclusion that in a state of deep somnambulism, a person is completely subordinate to the hypnotist in moral and physical terms. A. Forel adhered to the same view when he wrote: "For me there is no doubt that a very good somnambulist, under the influence of suggestion in a hypnotic sleep, can commit serious crimes and, on occasion, not know about it at all subsequently" [1]. According to A. Forel, such a person should not be weak-willed or bad at all, but his behavior is due to an exceptionally high degree of suggestibility.

A completely different point of view was held by J. Delboeuf, Gilles de la Tourette, P. Janet, M. Kaufman, and others. They believed that hypnotic suggestion cannot induce a person to actions contrary to his character, and therefore criminal suggestions do not have the meaning that attributed to them.

Experimental observations of practitioners indicate that, although some hypnotists carry out crimes suggested to them with the help of a fictitious weapon, these experiments do not bring clarity to the problem under study, since there is always the possibility of consciousness hypnotized by the crime of suggestion, he is aware of the comedy being played out and understands that his action will not have any serious consequences.

It cannot be proven that the hypnotist, when carrying out a criminal suggestion, was not sure of the fictitiousness of the suggested act. The fact is that the hypnotist could not demand that he commit an actual crime.

From a legal position (the theory of criminal law), incriminating a person for an act committed is possible only if the person is sane and guilty of his act. Sanity presupposes the presence of two criteria: intellectual and volitional. The first is the ability to be aware of the action (or inaction) committed by the subject of the crime, i.e. evaluate your behavior; the second is to manage (control) your behavior (action or inaction). Guilt is a person's mental attitude to an action or inaction and its consequences, expressed in the form of intent or negligence (Articles 19, 23 of the Criminal Code of Ukraine [6]; Articles 9-10, 34 of the Criminal Code of Georgia [7]; Article 9 § 1 -2 of the Criminal Code of the Republic of Poland [8]; § 15-16 of the Criminal Code of the Czech Republic [9]; § 15-16 of the Criminal Code of the Slovak Republic [10]; § 7-8 of the Hungarian Criminal Code [19]). In our case, the legal practice of European countries, taking into account the psychotherapeutic conclusions described

in this scientific study, cannot unequivocally state that the act of the subject of the crime, who committed the offense under the influence of suggestion or in a hypnotic sleep, contains signs of the subjective side of the crime, namely: guilt, since medicine and jurisprudence do not give a clear answer to the question of whether a person commits an illegal action of his own free will or under the evil influence of another person, in a weak-willed state. In the latter scenario, the person who committed the unlawful act is released from criminal liability, as he acquires the status of an "instrument of crime." Also, one of the main principles of the criminal process "Presumption of innocence" states that "All doubts about the proof of a person's guilt are interpreted in favor of such a person" (Article 17 of the Criminal Procedure Code of Ukraine [11]; Article 5 of the Criminal Procedure Code of Georgia [12]; Article 5 § 2 of the Code of Criminal Procedure of the Republic of Poland [13], § 2 (2) of the Criminal Procedure Code of the Czech Republic [14], § 2 (4) of the Criminal Procedure Code of the Slovak Republic [15], § 1, § 7 (4) Law on Criminal Proceedings of Hungary [24]).

We believe that the position of A. Forel and other authors that even a person of high morality under certain circumstances can be forced to implement criminal hypnotic suggestions, of course, has no proven basis, since the analysis of judicial practice on criminal offenses committed in the countries of the European Union before there is not yet a single case of a serious crime that was committed with the help of hypnotic suggestion.

It must be admitted that the hypnotic is able to resist not only criminal and sharply immoral, but even relatively harmless suggestions that contradict his principles, interests, and feelings.

In our opinion, a mentally and morally healthy person with a strong character, strong will, and conscious regulation of his actions cannot commit a criminal act in hypnosis and in a post-hypnotic state. Persons with low mental development, morally weak, limited, who have already committed crimes, can be inspired to commit criminal acts without even resorting to hypnosis.

In the literature on hypnosis, a special place is occupied by the issue of criminal actions towards the hypnotized. First of all, we are talking about coercion into sexual intercourse with a hypnotist. And here everything we said about unacceptable suggestions in general remains valid. There is no doubt that in the presence of normal inhibition such a suggestion will not be carried out, and spontaneous awakening from hypnosis or a violent attack of the hysterical type will immediately occur.

We have already indicated in our study that some sexually excitable subjects are affected by the setting of a hypnotic session - a lying position, a darkened room, passes, touches. The cause of false impressions may also be a slight weakening of personal activity and a sense of responsibility for one's actions, especially when the hypnotist is firmly convinced of the impossibility of resisting the "hypnotic force."

In connection with erotic fantasies in the history of jurisprudence, false accusations of criminal acts have been repeatedly brought against the hypnotist. In view of this possibility, we recommend that certain types of persons (especially hysterical ones) be hypnotized only in the presence of witnesses or in the courtroom during an open trial.

Is hypnosis used in forensic practice to obtain forgotten evidence or to solve crimes?

We believe that a hypnotic state cannot be used in forensic investigative work. This is incompatible with legal ethics and ideas about the honesty and integrity of participants in the legal process. In addition, hypnotics can tell lies in hypnosis; they only rarely express in a dream what they hide in reality; many in the waking state are so susceptible to suggestions that when questioned it becomes difficult to distinguish the truth from the suggested lie. Finally, hypnotics can, under the influence of suggestion, "remember" something that actually did not happen. The testimony of a hypnotic person is less trustworthy because his confessions cannot be verified by careful psychological analysis.

Based on the above, the question: "Is hypnosis applicable in judicial practice?" - we come to the following conclusions:

1) immersion of the offender into a hypnotic state, with rare exceptions, is impossible.

2) in order to obtain information during hypnotic sleep that the patient hides from the doctor while awake, deep sleep is necessary, and such deep hypnotic sleep is relatively rare.

3) due to the possibility of an act of synthesis (according to I.P. Pavlov) in a hypnotic state, and also due to the fact that the hypnotized person is in very close contact with the hypnotizing person and infinitely better than normal "guesses" what is required of him, the information obtained in hypnotic state, cannot be regarded as reliable, they can sharply contradict the truth.

4) attempts at hypnosis in judicial practice, creating an exceptional situation with a predominance of elements of fear (especially in the presence of a target moment), can serve as a reason for the development of reactive psychosis.

Thus, we come to the main conclusion about the need to identify a separate norm of criminal procedural law (article) in the legislation of all countries of Europe and America, which will prohibit the use of hypnosis for the purpose of solving offenses (such a norm has already been implemented in the legislation of Georgia and a number of other European countries).

We believe that hypnosis is not applicable in judicial practice for solving crimes, since in hypnosis the previous personality never completely disappears, does not change, or gives way to a seemingly new personality. In addition, hypnosis may have undesirable consequences and contraindications to it.

Thus, most psychotherapists believe that an undesirable phenomenon when receiving testimony ("forgotten memories") or treatment with hypnosis can be, first of all, the patient's well-known mental subordination to his doctor, which occurs mainly during long-term treatment. Such a patient does not dare to take independent actions, cannot leave the doctor's office, believing that he needs advice and help about every little thing.

It is believed that people with a more or less strong nervous system, who can overcome their neurotic (psychogenic) disorders on their own, should not be hypnotized.

A more unpleasant phenomenon during hypnosis, which develops in some patients, more often in women, is an excessive feeling of attachment and sympathy for the attending physician. In general, we recommend that women with increased

sensitivity, sometimes deceitful, and very susceptible to self-hypnosis, should be hypnotized by a doctor in the presence of a third party or, as we have already indicated, in the presence of witnesses or in the courtroom during an open trial (if testimony is received), since slander on the part of the hypnotized person is possible.

Some difficulties may arise during hypnotherapy of hysterical individuals with debility. In an attempt to hypnotize them, patients often see only an opportunity to show "strong will." Therefore, when hysteria and debility are combined with a certain negative attitude, hypnosis should be resorted to only in cases of extreme necessity.

Sometimes hypnosis entails transient feelings of fatigue, anxiety, fear, fainting or a seizure. However, these phenomena, fortunately, always pass quickly. The doctor must prepare such a patient accordingly.

An undesirable complication is also possible - an unexpected transition of hypnosis into a hysterical twilight state with a strong manifestation of affects ("subcortical riot"). In this case, with the help of a sharp, authoritative, and commanding tone or a fairly strong painful irritation, it is easy to stop the hysterical twilight state. If this fails, the patient should be moved to a separate room, if possible, without any furniture, and left to his own devices until the twilight state ceases.

A prolonged twilight state is an undesirable complication, and patients prone to such states, especially those with hysteria and debility, should not be hypnotized.

Also, most hypnologists and forensic investigative practice do not recommend hypnotizing witnesses (victims) who, without testimony, very stubbornly insist on using this method of obtaining the information necessary to solve a crime; this also applies to persons who have heard or read a lot about hypnosis and have the wrong idea about it.

Sometimes in practice it is necessary to listen to the fear of a witness (patient) that he may "not wake up from hypnosis." This, of course, is a prejudice of ignorant people. No one, anywhere, has ever recorded a single case like this.

As for direct contraindications to hypnosis, it is necessary, first of all, to include the presence of severe intoxication and high temperature, a state of blackout (fainting, stupor, coma), twilight, delirious, hallucinatory-paranoid and especially amental syndromes of various origins.

Undoubtedly, hypnosis is also contraindicated in cases where the session provokes hysterical fits or an epileptic attack (however, we believe that this usually happens when the doctor is insufficiently qualified).

It is contraindicated to hypnotize people who are afraid of hypnosis. Since in such cases hypnosis is often ineffective. However, in our opinion, skillful mental preparation can relieve the patient from feelings of fear.

Of course, it is not recommended to use hypnosis in cases of a sharply negative attitude towards hypnosis.

The issue of contraindications to hypnosis in severe psychoses and, in particular, in schizophrenia, especially paranoid, is still controversial.

Another reason for the inappropriateness of using hypnosis in judicial practice for the purpose of obtaining testimony and

solving crimes is the ambiguous influence of hypnosis on the memory, thinking and speech of a hypnotic witness.

Thus, in the 19th-20th centuries, miraculous powers were attributed to the influence exerted by hypnosis on memory processes. Currently, scientific research makes it possible to establish the boundaries and mode of action of hypnotic suggestion on mnemonic functions, eliminating the element of exaggeration.

Memory is a reflection of what happened in past experience, based on the formation and reproduction of temporary connections.

It has now been established that through suggestion it is possible to restore in the hypnotic's memory such memories that are completely impossible to extract from it in the waking state. This heightened ability to recall traces of memories is known as hypermnnesia.

By using the heightened ability of memories under the influence of hypnotic suggestions, it is possible in some cases to fill memory gaps caused by previous diseases, disturbances in the sphere of consciousness, especially of hysterical origin (the so-called catathymic amnesia).

However, it is possible to improve memory through suggestion only in cases where we are talking about a small area of actual experiences, the restoration of which is facilitated by hypnotic suggestion.

Of much greater value is the ability to actively perceive impressions, store them, and then reproduce them. And it is possible to have an enhancing or inhibiting effect on this extremely important feature of memory through appropriate suggestions. So, you can tell a hypnotic witness slowly and persistently about five to six dozen different words, and he will freely repeat them in the same order, and the words can be retained in his memory for many days after the hypnosis session. In a waking state this would undoubtedly cause difficulty. We explain the improvement in memorization not so much by the strengthening and improvement of innate mental ability, but by the liberation from various inhibitory influences. For example, a particular mood can have a depressing, inhibitory effect on the ability to focus attention.

If poor memorization with good memory is due to instability of attention, inability to concentrate, persistence of extraneous thoughts or mood, suggestion can be of great benefit.

The physiological mechanism of these influences is as follows. I.P. Pavlov suggested that those traces that were weaker due to inhibition, here in hypnosis become stronger due to the equalizing phase. Thus, it becomes possible to connect with the patient's present behavior those events that occurred without reaching consciousness, coloring the patient's reaction in one tone or another, and when we then wake him up, we bring him into the wakefulness phase and give the task to repeat what he told us. Thus, we give him a suggestion so that he remembers this while awake, repeat, and reinforce this experience. Having received this information from him, we communicate it to him, and it revives traces that were previously obscured and delayed. We strengthen these traces, we communicate them to the face, and it begins to remember them. But do they correspond to events that actually took place in reality?

But by means of suggestion, it is also possible to exclude individual moments from consciousness, so that while the effect of suggestion lasts, there is no way to remember them. This is the so-called post-hypnotic amnesia. A hypnotic person can be made to forget his own name. He will be aware of everything but will not be able to remember his name.

Sometimes those being hypnotized try to remember their name for so long and painfully that it has an adverse effect on the psyche. That is why this kind of experiment is far from safe. The hypnotic person can also be inspired to forget the names or surnames of acquaintances, relatives, witnesses and eyewitnesses, dates, addresses and places of incidents, etc.

The thought process in a state of hypnosis also changes significantly. First of all, the pace of thinking itself changes hypnotized people answer questions slowly, deliberately. The phonetic expressiveness of speech also changes - distinctness, clarity of pronunciation. However, the content and logical division of speech is usually not changed. In this regard, the problem of speech, as well as inner speech as a complex, diverse phenomenon associated with language, thinking, cognitive, sensory, and practical human activity, requires multidimensional research in the field of psychotherapy, psychology, psycholinguistics, philosophy of language, linguistic stylistics, textual criticism, literary studies, etc. The study of this phenomenon requires an interdisciplinary approach, which is due to the ambiguity and multifunctionality of the methods of transmitting inner speech as models of verbalized thinking [35].

### **Conclusion.**

As conclusions to the article, we point out that in our point of view, the legal and medical aspects of the participation of a psychotherapist (hypnologist) in forensic investigative actions, namely: when obtaining evidence of an informational (verbal) nature through hypnosis, there is a rather specific phenomenon psychotherapeutic and criminal procedural activities, which require deep and careful study.

It is this feature, as well as the steady increase in crime in the world, in connection with this, the increasing desire of the countries of the European Union to improve the legal system of their states by reforming legislation, that require legal scholars, medical professionals and legislators of all countries to develop and apply new forensic and medical methods of collecting evidence bases for committing a crime for their further use in conducting an effective investigation, identifying and bringing the perpetrators to justice.

Also, the need for research in this area is indicated by the significantly increased flow of forced migration from Ukraine to Europe after the full-scale invasion of the Russian Federation into Ukraine [21], which involuntarily affects the crime growth index.

Taking into account the presence of shortcomings in this area of procedural and legal activity in the countries of the European Union, we consider further research in the relevant direction to be relevant, since the latter will create prospects for theoretical and practical developments and will contribute to solving problematic issues in this area.

## REFERENCES

1. Август Форель. Гипнотизм или внушение и психотерапия. Перевод с 12-го немецкого издания. Образование. Ленинград, 1928 год.
2. Basics of hypnotherapy “Hypnosis is easy.” [https://teletype.in/@psycho\\_blog/ryb36L\\_yQ](https://teletype.in/@psycho_blog/ryb36L_yQ)
3. Carpenter effect: what do we not know about ideomotor acts? “PsychoSearch”. <https://psychosearch.com/>
4. Carpenter WB. Mesmerism, Spiritualism, Etc. - New York, NY: D. Appleton. 1874:158.
5. Charles Robert Richet: Pioneer of Peace Psychology. <https://www.researchgate.net/>
6. Criminal Code of Ukraine. 2001. <http://www.zakon.rada.gov.ua/>
7. Criminal Code of Georgia. 1999. <http://www.matsne.gov.ge/>
8. Criminal Code of the Republic of Poland. 1997. <http://www.isap.sejm.gov.pl/>
9. Criminal Code of the Czech Republic. 2009. <https://www.torvenytar.cz/>
10. Criminal Code of the Slovak Republic. 2005. <https://www.zakonypreludi.sk/>
11. Criminal Procedure Code of Ukraine. 2012. <http://www.zakon.rada.gov.ua/>
12. Criminal Procedure Code of Georgia. 2009. <http://www.matsne.gov.ge/>
13. Criminal Procedure Code of the Republic of Poland. 1997. <http://www.isap.sejm.gov.pl/>
14. Criminal Procedure Code of the Czech Republic. 1961. <https://www.zakonyprolidi.cz/>
15. Criminal Procedure Code of the Slovak Republic. 2005. <https://www.zakonypreludi.sk/>
16. Freud, S. Hypnose. Bum, Anton, Therapeutisches Lexikon, Wien: 1891:724-732 . <https://freudproject.com/>
17. Фрейд Зигмунд. Основні категорії психоаналізу (переклад з нім. А. Березінська). Всесвіт. 1991:5:164-170.
18. Hubanova T, Shchokin R, Hubanov O, et al. Information technologies in improving crime prevention mechanisms in the border regions of southern Ukraine. Journal of Information Technology Management. 2021;13:75-90.
19. Hungarian Criminal Code. 2012. <https://net.jogtar.hu/>
20. “Клінічний урок у Сальпетрієрі”. Вікіпедія “Вільна енциклопедія”. <https://uk.wikipedia.org/wiki/>
21. Kortukova T, Kolosovskyi Y, Korolchuk O. L, et al. Peculiarities of the legal regulation of temporary protection in the european union in the context of the aggressive war of the Russian federation against Ukraine. International Journal for the Semiotics of Law. 2023;36:667-678.
22. Kravchuk O.V, Nalutsishin V.V, Osmolian V.A, et al. The legal status of a psychiatric expert during a forensic psychiatric expertise. Georgian Medical News No. 2021;319:152-160.
23. Кримінально-правові небезпеки гіпнозу. <http://ni.biz.ua/>
24. Law on criminal proceedings in Hungary. 2017. <https://net.jogtar.hu>
25. Левенфельд, Леопольд. Гипноз и его техника: Очерк учения о гипнозе и внушении с обращением особого внимания на его практическое применение. / Д-р Л. Левенфельд; предисл. проф. К.И. Платонова; пер. с нем. изд. “D-r L. Loewenfeld Hypnotismus und Medizin”... д-ра П.Я. Гальперина. [Харьков]: “Космос”; [Житомир]: [Волин. окр. гос. типо-лит.]. 1928:192.
26. Lehman A. “Історія чаклунства та забобонів”. <https://bookinistplus.com.ua/>
27. Lilienthal V. “Der Hypnotismus and das Strafrecht”. 1887. <https://www.booksite.com/>
28. Медико-правові питання гіпнозу. <http://ni.biz.ua/>
29. “Методика психотерапії Бірмана”. Психологічна енциклопедія. <https://vocabulary.com/>
30. Modina O. Medical reform in psychiatry: everything you didn't know about. Radio Liberty. <http://www.radiosvoboda.org/>
31. Pavlov I.P. Pavlovsk clinical environments [Text]: transcripts of meetings in nervous and psychiatric clinics. Electronic library of Bukovinian State Medical University. <http://irbis.bsmu.edu.ua/>
32. Textbook of hypnosis “How to be able to suggest and resist hypnosis.” <http://shkola.ucoz.ua/>
33. Trömner E. Hypnotismus und Suggestion (Leipzig. 1919). <http://um.co.ua/>
34. Шандор Ференці. Вікіпедія “Вільна енциклопедія” <https://uk.wikipedia.org/wiki/>
35. Shytyk L, Akimova A. Ways of transferring the internal speech of characters: Psycholinguistic projections. Psycholinguistics. 2020;27:361-384.

## РЕЗЮМЕ

### СУДЕБНО-МЕДИЦИНСКОЕ И ПРАВОВОЕ ЗНАЧЕНИЕ ГИПНОЗА ВО ВРЕМЯ ПРОВЕДЕНИЯ УГОЛОВНОГО РАССЛЕДОВАНИЯ

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Целью статьи является на основе компаративно-правового исследования общих и отличительных черт норм уголовного и уголовно-процессуального законодательства Украины, Грузии, Польши, Чехии, Словакии и Венгрии относительно возможного участия врача-психотерапевта при проведении процессуальных действий, направленных на сбор доказательственной базы по совершенному преступлению, определить целесообразность и допустимость участия врача-гипнолога для проведения сеансов гипноза с участниками уголовного процесса. Задача – на основании анализа норм уголовных и уголовно-процессуальных законодательств ряда стран Европы, а также с учетом специфики гипнотерапии, как раздела психотерапии, ограниченности правовых норм относительно врачей-психотерапевтов (гипнологов) при осуществлении ими своих профессиональных обязанностей и по привлечению их для проведения судебно-следственных действий по сбору доказательственной базы, неурегулированность этих правовых позиций



документально - наметить пути усовершенствования норм медико-правового законодательства европейских стран в этой сфере. Установлено, что проблемой реализации права исследуемого на полную правовую и медицинскую защиту при проведении судебно-медицинской экспертизы, а также реализация прав и обязанностей эксперта-психотерапевта при проведении последней является отсутствие четкой имплементации в уголовно-процессуальных нормах государств участия врача-гипнолога при проведении судебно-следственных действий, которые направлены на сбор доказательственной базы по преступлению.

Выявлено, что требования международно-правовых норм и определенная специфика ситуации по проведению судебно-медицинской экспертизы, а также отсутствия четко прописанных правовых норм участия врача-психотерапевта при сборе доказательственной базы путем погружения участника уголовного процесса – пациента в гипнотический сон диктует необходимость внесения ряда изменений в уголовно-процессуальное законодательство не только Украины, но и стран Европейского Союза, таких как: Польша, Словакия, Венгрия, Чехия. Эти медико-правовые

документальные «поправки» следует направить на более четкую формулировку дефиниций основных понятий и терминов привлечения или запрета участия врача-гипнолога при проведении судебно-следственных действий, которые направлены на получение доказательственной базы с использованием гипноза, как, например, запрет на привлечение последнего четко предусмотрено в законодательстве Грузии. Таким образом, эти новеллы в правовой сфере будут выступать гарантом реализации права на здоровье человека, послужат «психотерапевтическим толчком» для искоренения в практической деятельности правоохранительных органов случаев получения доказательств по делу с использованием гипноза, будут отвечать основным международным принципам и требованиям в сфере здравоохранения и права.

**Ключевые слова:** внушение, врач, гипноз, доказательства, исследуемый, пациент, уголовный процесс, уголовный кодекс, уголовно-процессуальный кодекс, психотерапия, экспертиза.