

A Study on the Application of Expert Opinions in Criminal Proceeding

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Abstract

As a statutory form of evidence combining scientific and professional characteristics in criminal litigation, expert opinions play a key role in revealing case facts and assisting judicial adjudication. This paper takes the judicial application of expert opinions as the research object. By analyzing their conceptual characteristics and litigation value, and combining with practical issues such as arbitrary initiation procedures, vague admissibility standards, and low attendance rates of experts in judicial practice, it proposes optimization paths from three dimensions: system improvement, procedure standardization, and judicial concept updating, so as to provide theoretical references for enhancing the evidentiary effect of expert opinions and ensuring judicial justice. The study argues that measures such as constructing a diversified expert opinion initiation mechanism, refining evidence review standards, and strengthening guarantees for experts' appearance in court should be adopted to promote the scientific and standardized operation of expert opinions in criminal litigation.

Keywords

Expert Opinion; Criminal Litigation; Evidence Application; Expert Appearance in Courts

Introduction

In the practice of criminal justice, with the increase of technological crimes and complex professional cases, expert opinions, as a bridge connecting science and technology with judicial adjudication, have become increasingly important. From forensic pathological expertise revealing the cause of death, to document expertise identifying forged evidence, and electronic data expertise restoring digital tracks, expert opinions have become core evidence for solving specialized issues. However, phenomena such as "repeated expertise," "contradictory expert opinions," and "formalized court cross-examination" in judicial practice frequently occur, exposing institutional defects in the application of expert opinions. According to the judicial statistics of the Supreme People's Court, in 2023, cases involving expert opinions

accounted for 47.3% of all criminal cases heard by courts nationwide, among which cases with second-instance judgment modifications due to disputes over expert opinions accounted for 18.6% of the total modified judgments. [^footnote0] This data not only reflects the extensive application of expert opinions but also highlights the substantial impact of their application issues on judicial justice. Based on the entire process of criminal litigation, this paper analyzes the application dilemmas of expert opinions from both normative and practical dimensions, attempting to provide solutions for constructing a scientific and efficient application system for expert opinions.

1. Theoretical Interpretation of Expert Opinions

1.1. Concept and Characteristics of Expert Opinions

An expert opinion refers to a written opinion formed by a subject with specialized knowledge or skills after accepting an assignment or engagement from a judicial organ to scientifically identify and judge specialized issues involved in a case. As one of the eight types of evidence explicitly stipulated in Article 48 of China's Criminal Procedure Law, its essence is an intervening interpretation of case facts by professional knowledge, with the following significant characteristics:

Scientific Foundation

The formation of expert opinions relies on professional principles of natural and social sciences. For example, DNA identification is based on molecular biology principles, and toxicological analysis relies on chemical detection technology. Taking drug cases as an example, experts analyze the components of suspicious substances through gas chromatography-mass spectrometry, and the accuracy of their conclusions directly depends on the scientificity of instrument precision and detection methods. This characteristic based on empirical science distinguishes it from mere empirical judgment.

Professional Subjectivity

The subject who issues an expert opinion must have statutory qualifications. China's Administrative Measures for Forensic Experts clearly require experts to pass professional qualification examinations and obtain practice certificates. For example, forensic clinical experts need both a medical professional background and forensic qualifications. This professional barrier makes it difficult for non-professionals to effectively question the expert process, forming an evidentiary characteristic of "professional knowledge monopoly."

Opinion Attribute

Different from objective evidence such as physical evidence and documentary evidence, expert opinions are essentially subjective judgments of experts on specialized issues. Even using the same identification method, different experts may draw different conclusions due to differences in experience and technical parameter selection. For instance, in traffic accident liability identification, the calculation of

speed from brake marks may have deviations due to differences in friction coefficient values, reflecting the subjective opinion attribute of expert opinions. Dependent Characteristic.

1.2. Core Differences Between Expert Opinions and Other Evidence

Compared with traditional evidence such as witness testimony and physical evidence, the particularity of expert opinions is reflected in three dimensions:

Different Formation Mechanisms

Witness testimony originates from the witness's direct perception of the case facts, while expert opinions are secondary processing of submitted materials by professional subjects, requiring derivation of conclusions through scientific methods. For example, in a homicide case, an eyewitness's statement that "the murderer wore a red coat" belongs to direct perception, while a forensic doctor's inference of the time of death through autopsy belongs to professional derivation. [^{footnote2}]

Different Objects of Proof

Physical evidence, documentary evidence, etc., prove case facts by their own physical attributes or recorded contents, while expert opinions specifically solve "problems beyond the scope of ordinary cognition," such as the authenticity of a signature on a document or the criminal responsibility capacity of a mentally ill person. This pertinence to specialized issues makes it a "professional translator" of judicial adjudication.

Different Cross-Examination Requirements

The cross-examination of ordinary evidence focuses on the legality of the source and the authenticity of the content, while the cross-examination of expert opinions involves professional fields such as the scientificity of identification methods, the precision of instruments and equipment, and the qualifications of experts. The Interpretation of the Supreme People's Court on the Application of the Criminal Procedure Law of the People's Republic of China (2012) clearly lists the review points of expert opinions in Article 84, including the qualifications of the expert institution, the compliance of the identification procedure, and the sufficiency of the argumentation process, reflecting the special review requirements for their professionalism. negotiation. Advance notice termination reflects the law's protection of workers' rights and interests, giving workers a certain buffer time to find new job opportunities.

Economic layoffs: When an employer faces the circumstances specified in Article 41 of the Labor Contract Law, such as reorganization in accordance with the Enterprise Bankruptcy Law, serious difficulties in production and operation, corporate transformation, implementation of major technological innovation or adjustment of business methods, and still needing to reduce staff after changing labor contracts, etc., and the number of staff to be laid off reaches 20 or more, or although less than 20, accounts for more than 10% of the total number of employees in the enterprise, it may implement layoffs. Given that economic layoffs are related to the vital inter-

ests of a large number of workers, the law sets strict regulations on its procedures. Employers are required to explain the situation to the trade union or all employees 30 days in advance, listen to the opinions of the trade union or employees, report the layoff plan to the labor administrative department, and then implement it.

1.3. Core Differences Between Expert Opinions and Other Evidence

From the Perspective of Litigation Process

The value of expert opinions runs through all stages of criminal litigation: in the investigation stage, toxicological expertise can guide the investigation direction, such as determining the type of poisoning through gastric content detection; in the prosecution review stage, judicial accounting expertise can clarify the amount involved in economic crimes, providing a basis for conviction and sentencing; in the trial stage, psychiatric expertise can affect the determination of criminal responsibility capacity and decide the application of punishment to the defendant.

From the Perspective of Evidence System

Expert opinions have dual functions of "evidence reinforcement" and "dispute resolution." On the one hand, they can strengthen the probative force of other evidence, such as fingerprint identification confirming the relevance of on-site physical evidence; on the other hand, when other evidence is contradictory, expert opinions can make authoritative judgments through scientific methods. For example, when multiple confessions are inconsistent, lie detection expertise may become a breakthrough point (although lie detection conclusions are not currently recognized as statutory evidence in China, they are often used as a reference in practice).

From the Perspective of Judicial Justice

Expert opinions compensate for judges' lack of professional knowledge and reduce subjective judgment deviations by introducing scientific and technological means. For example, in environmental pollution cases, evaluating ecological restoration costs through environmental damage expertise can avoid unbalanced adjudication caused by relying solely on empirical sentencing, reflecting the support of technology for judicial rationality.

2. Application Status of Expert Opinions in Criminal Litigation

2.1. Scope of Application in Judicial Practice

Currently, expert opinions have been widely applied in various criminal cases, which can be divided into five major categories according to professional fields:

Forensic Expertise

Including forensic pathology, clinical, psychiatric, toxicological, and physical evidence expertise, it has the highest utilization rate in personal injury and death cases. Data from the Higher People's Court of Jiangsu Province in 2023 shows that forensic clinical expert opinions were adopted in 92.7% of intentional injury cases. [^{footnote3}]

Physical Evidence Expertise

Covering document expertise, trace expertise, Trace evidence expertise, etc., it is commonly used in cases such as fraud and forgery of official documents and seals. For example, distinguishing the authenticity of signatures through handwriting expertise provides key evidence for fact-finding in contract fraud cases.

Audio-Visual Materials Expertise

Including the authenticity identification of audio and video recordings and electronic data recovery, it is widely applied in cyber crimes and intellectual property crimes. In a cross-border telecom fraud case, recovering deleted chat records from the involved mobile phone successfully fixed the contact evidence of the criminal gang.

Environmental Damage Expertise

With the increase of ecological crime cases, this type of expertise is used to assess the degree of environmental pollution and ecological restoration costs, such as environmental damage assessment in illegal hazardous waste dumping cases.

Judicial Accounting and Intellectual Property Expertise

In economic crimes, judicial accounting expertise is used to calculate the amount involved, and intellectual property expertise is used to confirm the fact of patent and trademark infringement.

2.2. Regulatory System under the Current Legal Framework

China's regulations on expert opinions are mainly reflected in three levels:

Criminal Procedure Law Level

The fourth chapter "Evidence" of the Criminal Procedure Law specially stipulates the legal status of expert opinions. Articles 146 to 149 clarify the initiation procedures of expertise (designated or engaged by public security organs), expert withdrawal, and notification of expert opinions. The revised Criminal Procedure Law in 2018 added Article 197, stipulating that "if the public prosecutor, the parties, or the defender or litigation agent has an objection to the expert opinion, and the people's court deems it necessary for the expert to appear in court, the expert shall appear in court to testify," strengthening the expert's obligation to appear in court.

Judicial Interpretation Level

The Regulations of the Supreme People's Court, the Supreme People's Procuratorate, and Other Six Departments on Several Issues Concerning the Implementation of the Criminal Procedure Law and the Interpretation of the Criminal Procedure Law of the Supreme People's Court elaborate on the review standards and cross-examination procedures of expert opinions. For example, Article 85 of the Interpretation of the Criminal Procedure Law lists seven circumstances in which expert opinions should be excluded, including unqualified expert institutions, illegal identification procedures, and inconsistent expert opinions with other evidence that cannot be reasonably explained.

Departmental Regulations and Industry Norms Level

Departmental regulations such as the General Rules for Forensic Appraisal Procedures and the Administrative Measures for Forensic Appraisal Institutions of the Ministry of Justice specify the qualification management of expert institutions and the operation of appraisal processes; industry standards such as the Forensic Clinical Appraisal Specifications of the Chinese Medical Association provide technical guidance for appraisal methods.

2.3. Analysis of Typical Cases in Judicial Application

T"Zhejiang Zhang's Uncle-Nephew Rape Case"

In this case, the DNA Test Report issued by the Material Evidence Appraisal Institute of the Hangzhou Public Security Bureau showed that "no STR typing was detected in the victim's No. 8 test material, excluding the Zhang's uncle and nephew." However, the original first-instance judgment did not adopt this expert opinion and still convicted the two. It was not until the retrial by the Zhejiang Provincial Higher People's Court in 2013 that the judgment was reversed and the two were acquitted based on this expert opinion and newly supplemented biological material expert conclusions. [^footnote4] This case exposes two major problems in the adoption of expert opinions: first, insufficient attention to expert opinions favorable to the defendant; second, the lack of a review mechanism when expert opinions contradict other evidence.

"Fudan Poisoning Case"

The poisoning behavior of the defendant Lin Senhao caused the victim's death. The Forensic Toxicological Chemistry Test Report issued by the Shanghai Forensic Appraisal Center confirmed that the victim's urine contained dimethyl nitrosamine. This expert opinion, mutually Confirm with the defendant's confession and witness testimony, became the key evidence for conviction. This case reflects the core role of expert opinions in constructing an evidence chain in complex cases and shows that when expert opinions form a complete proof system with other evidence, their evidentiary effect is fully exerted.

2.4. Unclear Criteria for Determining Ineligibility during the Probationary Period

When employers terminate labor contracts on the grounds that "the worker is proved not to meet the employment criteria during the probationary period," the lack of specific legal provisions regarding "employment criteria" has led to inconsistent determination standards in practice.

Case 5: An enterprise recruiting salespersons simply stated in its recruitment advertisement that candidates must "have good sales abilities." After employee Qian started his probationary period, the enterprise terminated his labor contract, claiming that he did not meet the employment criteria because his sales performance fell short of expectations. Qian argued that the enterprise had not clearly de-

fined specific employment criteria and that he had worked to the best of his ability during the probationary period. The arbitration institution ruled that the enterprise failed to provide clear and specific employment criteria or sufficient evidence that Qian did not meet these criteria, rendering the termination illegal.

In cases of terminating labor contracts during the probationary period, employers should clearly inform workers of specific employment criteria during recruitment and conduct objective and fair evaluations of their performance during the probationary period. However, in practice, many employers set vague employment criteria or lack objective standards and due process in the evaluation process, thereby infringing on workers' rights and interests.

3. Practical Problems in the Application of Expert Opinions

3.1. Structural Defects in the Expertise Initiation Procedure

China's Criminal Procedure Law mainly grants the right to initiate expertise to public security, procuratorial, and judicial organs, and criminal suspects and defendants only have the right to apply for supplementary or re-expertise. This "doctrine of authority" model leads to three major problems in the initiation procedure in practice:

Restricted Right of the Defense to Initiate Expertise

Due to the lack of the right to initiate expertise, defendants and their defenders often face the dilemma of "having doubts but being unable to obtain expertise." In an intentional injury case, the defendant claimed that the victim's injury had healed, but the public security organ did not conduct a re-examination, and the court convicted based on the original expert opinion. The defense could not overturn the original conclusion due to the lack of the right to initiate expertise.

Repeated Expertise and Waste of Expertise Resources

The three organs of public security, procuratorate, and court can independently initiate expertise, resulting in multiple expert opinions on the same specialized issue. In a bribery case, the investigating organ, procuratorial organ, and court respectively entrusted expert institutions to appraise the involved financial accounts, forming three expert opinions with different conclusions, which not only prolonged the litigation cycle but also triggered doubts about judicial credibility.

Abuse of Expertise Caused by Vague Initiation Standards

Due to the lack of clear standards for judging "specialized issues," some case handlers include issues within the scope of ordinary cognition in expertise, such as conducting "injury tool expertise" on obvious knife wound patterns, wasting expertise resources.

3.2. Practical Dilemmas in the Admissibility Standards of Expert Opinions

Although judicial interpretations list the review points of expert opinions, there is still arbitrariness in admissibility in practice:

Formal Review Prevails over Substantive Review

Most judges only review formal elements such as the qualifications of expert institutions and the signatures of experts, lacking substantive review of the scientificity of identification methods and the logic of the argumentation process. In a traffic accident case, the expert institution used the "brake mark empirical formula" eliminated by industry standards to calculate speed, and the judge directly adopted it without discovering the technical defect, leading to sentencing deviation. Lack of a Mechanism for Handling Contradictory Expert Opinions

When multiple expert opinions have conflicting conclusions, the court often adopts a "selective admissibility" strategy, lacking in-depth investigation into the causes of the contradiction. In a intentional homicide case, two psychiatric expert opinions respectively determined that the defendant had "full criminal responsibility capacity" and "limited criminal responsibility capacity." The court finally adopted the former on the basis of the "majority opinion" but did not explain the reason for excluding the minority opinion.

Excessive of the Evidentiary Effect of Expert Opinions

Some judicial personnel regard expert opinions as "scientific conclusions" and ignore their subjective opinion attribute. In a theft case, the price appraisal institution valued the involved cultural relics significantly higher than the market price, and the judge directly adopted it without reviewing other evidence, leading to an error in the convicted amount.

3.3. Operational Barriers in the Expert Appearance System

Although the Criminal Procedure Law stipulates the expert's obligation to appear in court, the attendance rate in practice is less than 5%, mainly due to:

Absence of Legal Consequences

For experts who refuse to appear in court without justifiable reasons, the current law only stipulates that "the expert opinion shall not be used as the basis for adjudication," lacking disciplinary measures against the expert personally, such as fines or professional qualification restrictions, resulting in insufficient deterrence.

Imperfect Appearance Guarantee Mechanism

The transportation, accommodation, and other expenses for experts to appear in court are often borne by their affiliated institutions, and there are hidden dangers to personal safety. An expert in a drug case was threatened by the defendant's relatives due to appearing in court and refused to participate in any subsequent case appearances.

Inadequate Cross-Examination Ability Restricts Appearance Effect

Due to the lack of professional knowledge, the cross-examination of expert opinions by defenders mostly stays at the formal level of "whether the qualifications are legal," and it is difficult to carry out effective questioning on technical details, resulting in the formalization of expert appearances.

3.4. Limited Judicial Remedies for Expert Opinions

When the parties are dissatisfied with the expert opinion, they can only apply for supplementary or re-expertise, but there is a problem of "difficulty in applying for re-expertise" in practice: the court's review standards for re-expertise applications are unclear and often rejected on the grounds of "no justifiable reason." In a fraud case, the defendant applied for re-expertise on the signature of the involved contract, and the court refused on the grounds that "the original identification procedure was legal," but in fact, the comparison sample used in the original identification was not the defendant's own handwriting. The limitation of this relief channel makes it difficult to correct wrong expert opinions.

4. Improvement Paths for the Application of Expert Opinions

4.1. Constructing a Diversified and Balanced Expertise Initiation Mechanism

Moderately Expanding the Defense's Right to Initiate Expertise

It is proposed to allow criminal suspects and their defenders to apply for independently entrusting expert institutions to conduct expertise on the premise of providing reasonable reasons during the investigation stage, and the investigating organ shall not refuse without justifiable reasons. For example, Paragraph 164 of the German Criminal Procedure Law stipulates that the defendant has the right to apply to the court to appoint an expert, which China can learn from to break the monopoly of public power on expertise initiation.

Establishing an Expertise Initiation Hearing System

For the initiation of expertise in major and complex cases, a hearing procedure can be introduced, allowing both the prosecution and defense to express opinions on matters such as "whether it belongs to a specialized issue" and "whether the identification method is scientific," and the court makes an initiation decision based on the hearing situation. This can both avoid abuse of expertise and protect the defense's right to participate.

Standardizing the Application Standards for Re-Expertise

Clarify that circumstances such as "unqualified original expert institution," "wrong identification method," and "false identification materials" belong to situations where re-expertise should be conducted, and the court must approve qualified applications to unblock the relief channel.

4.2. Improving the Judicial Review System for Expert Opinions

Establishing a Dual Track System of "Formal Review + Substantive Review"

Formal review: Focus on verifying the qualifications of expert institutions, the qualifications of experts, and the compliance of identification procedures.

Substantive review: Introduce the "scientific reliability" standard to review whether

the identification method has passed peer review and is generally accepted by the industry (drawing on the U.S. "Daubert standard"). For example, for emerging voiceprint identification, it is necessary to review the scientific recognition of its technical principles. [^{footnote8}]

Constructing a Solution Mechanism for Contradictory Expert Opinions

When multiple contradictory expert opinions appear, the court can take three measures: first, entrust a third-party authoritative institution to conduct review expertise; second, organize experts to hold an expert demonstration meeting to explain technical disputes; third, introduce the "expert assistant" system (stipulated in Article 197 of the Criminal Procedure Law), where both the prosecution and defense hire experts to cross-examine expert opinions to help judges understand professional issues.

Strengthening the Corroboration Requirements of Expert Opinions with Other Evidence

Clarify that expert opinions cannot be the sole basis for adjudication and must form a chain with other evidence. In drug cases, in addition to drug composition identification, it is necessary to combine the defendant's confession, transaction records, and other evidence to prevent "exclusive reliance on expert opinions."

4.3. Improving the Guarantee Mechanism for Experts' Appearance in Court

Perfecting the Legal Liability System

For experts who refuse to appear in court without justifiable reasons, in addition to excluding the expert opinion, they can be fined (such as 5,000 to 20,000 yuan), and those with serious circumstances shall have their practice certificates revoked; for those who intentionally provide false expertise, pursue criminal responsibility for perjury (Article 305 of China's Criminal Law has stipulated the crime of perjury, but it is rarely applied in practice and needs to be strengthened in judicial application).

Constructing a Comprehensive Appearance Guarantee System

Expense guarantee: The transportation, accommodation, and lost work expenses for experts to appear in court shall be paid by the court from the judicial funds, no longer borne by the expert institutions.

Safety guarantee: For experts who may face personal threats, the public security organ shall provide necessary protection measures, such as concealing identity and changing residence.

Enhancing the Effectiveness of Court Cross-Examination

Strengthen professional training for defenders, which can be organized by the bar association on "practical cross-examination of forensic expertise" to improve the ability to question expert opinions; the court can organize a "pretrial conference" before the trial, where experts provide a preliminary explanation of the identification process to facilitate the prosecution and defense in preparing

cross-examination opinions.

4.4. Promoting Technological and Conceptual Innovation in the Application of Expert Opinions

Introducing Technological Means to Enhance Expertise Credibility

Promote the "blockchain evidence storage" technology to conduct blockchain evidence storage for the whole process of expert material extraction, custody, and submission, preventing the tampering of expert materials; develop an "intelligent review system for expert opinions" to automatically compare identification methods with industry standards through artificial intelligence and prompt potential technical risks.

Strengthening Judicial Personnel's Cognition of Scientific Evidence

Through regular training (such as the "Scientific Evidence Trial Practice" training course organized by the Supreme People's Court), enhance the review ability of judges and prosecutors for expert opinions, and avoid admissibility errors caused by lack of professional knowledge.

Cultivating the Concept of "Trial-Centered" Application of Expert Opinions

Clarify that the service object of expert opinions is court adjudication, not investigation and accusation. When reviewing expert opinions, the principle of "evidence adjudication" should be adhered to, and regardless of whether the expert opinion is favorable to the prosecution, it must go through strict cross-examination procedures to ensure that its evidentiary capacity and effect comply with legal requirements.

5. Conclusion

As a key link connecting science and technology with criminal justice, the scientificity and standardization of the application of expert opinions directly affect the realization of judicial justice. Currently, there are problems such as unbalanced initiation rights, vague admissibility standards, and low attendance rates in the application of expert opinions in China's criminal litigation, which urgently need to be solved through institutional innovation and practical improvement. In the future, it is necessary to construct a comprehensive application system for expert opinions from three dimensions of right allocation, review mechanism, and procedure guarantee, giving full play to the scientific proof value of expert opinions while restricting their possible subjective deviations through judicial procedures, so as to achieve the organic unity of scientific rationality and judicial rationality and provide a solid evidentiary support for fact-finding in criminal litigation.

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