

On the Integrity of the Structure of the Criminal Evidence Chain and its Legal Significance

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Abstract: In the process of constructing a society governed by the rule of law, criminal justice plays a crucial preventive role in maintaining social order and safeguarding citizens' rights. Its fairness, efficiency, and credibility are matters of great social concern. However, due to the influence of multiple factors, increasingly complex criminal methods have set higher demands for the collection, examination, and use of criminal evidence. In this context, the criminal evidence chain, as a key element in the determination of criminal cases, must maintain structural integrity. This paper first analyzes the definition and components of the criminal evidence chain, clarifying its central role in criminal proceedings. It emphasizes that the integrity of the evidence chain is essential for ensuring the fairness of case trials, protecting the legitimate rights of defendants, improving judicial efficiency, and enhancing judicial credibility. Based on specific needs, practical recommendations are provided to promote the continuous development of the criminal justice system and contribute to the construction of a fair and efficient rule-of-law society.

Keywords: Criminal Evidence Chain; Integrity; Legal Significance.

1. Introduction

With the rapid development of science and technology and the deepening of social transformation, the complexity of criminal behavior has posed higher requirements for criminal justice work. Criminal justice is key to maintaining justice and protecting human rights. In this context, the criminal evidence chain serves as a bridge connecting case facts and judicial decisions. Only by ensuring its structural integrity can judicial fairness be guaranteed and judicial efficiency improved. This paper explores the integrity of the criminal evidence chain and its legal significance, analyzing its core role in criminal proceedings and clarifying its profound impact on the fairness of case trials, the protection of defendants' rights, the enhancement of judicial efficiency, and the strengthening of judicial credibility [1-3]. In light of actual conditions, the paper proposes effective strategies for constructing and maintaining the integrity of the criminal evidence chain, providing valuable reference for criminal justice practice and promoting the continuous improvement and development of the criminal justice system.

2. A Brief Explanation of the Criminal Evidence Chain

2.1. Definition of the Criminal Evidence Chain

In a society governed by the rule of law, the criminal evidence chain is fundamental to judicial fairness. With the rapid advancement of society and the constant evolution of technology, criminal methods have become increasingly concealed and complex, posing new challenges for solving and adjudicating criminal cases. In this context, the criminal evidence chain, as a critical link in connecting fragments of a case and reconstructing the truth, is crucial for ensuring justice. The criminal evidence chain, a collection of interconnected and corroborative pieces of evidence that form a complete system of proof, requires that the evidence be logically cohesive and beyond reasonable doubt, ensuring the

full presentation of the truth. This reflects the comprehensive, in-depth, and meticulous investigation of the case by judicial personnel and the concentrated expression of the spirit of fairness and justice. In-depth exploration of the integrity of the criminal evidence chain and its legal significance is of great practical importance for enhancing judicial credibility, safeguarding human rights, and maintaining social stability.

2.2. Components of the Criminal Evidence Chain

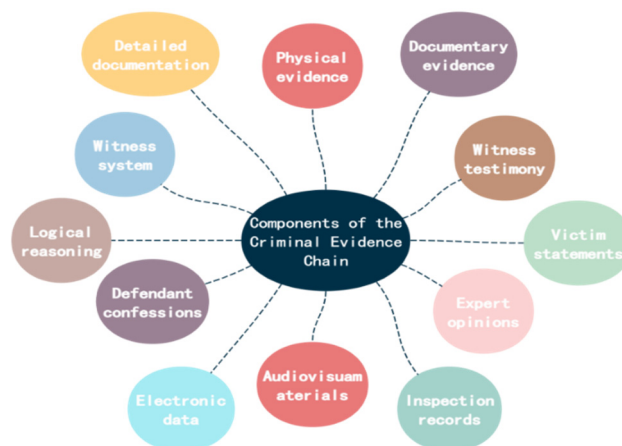


Figure 1. Components of the Criminal Evidence Chain

Given the complexity and variability of the criminal justice field, the components of the criminal evidence chain are diverse and crucial, each being unique and indispensable. These components are the products of continuous refinement and expansion in judicial practice, shaped by technological and social development. Physical evidence, with its objective existence and direct relevance, provides the most intuitive proof for a case. Documentary evidence, recorded in words or symbols, serves as an important basis for tracing the historical context of a case. Witness testimony and victim statements [4-5], though subject to subjective influence, can still play a vital

role in proving a case after rigorous examination and verification. Suspect or defendant confessions and defenses, while requiring corroboration with other evidence, are also significant due to their directness and self-referential nature. With technological advancement, new forms of evidence, such as expert opinions, inspection records, audiovisual materials, and electronic data, have emerged, offering more precise and efficient methods for proving cases. These components are interdependent and complementary, forming the solid foundation of the criminal evidence chain and supporting the realization of judicial fairness.

3. The Legal Significance of the Integrity of the Criminal Evidence Chain Structure

3.1. Ensuring the Fairness of Case Trials

In criminal justice, the fairness of case trials guides the direction of the law and serves as the cornerstone of public trust in the judicial system. The integrity of the criminal evidence chain is crucial in ensuring that the evidence is tightly connected, logically rigorous, and mutually corroborative. This provides judges with a comprehensive and truthful repository of evidence, allowing them to delve into the core of the case for meticulous analysis and judgment. In this process, a complete evidence chain enables judges to uncover the truth and effectively resist the intrusion of partial or false information. This respects the rights of the defendant and responds to societal expectations. By ensuring the integrity of the evidence chain, the authority and credibility of judicial decisions are significantly enhanced, further strengthening the public's trust and support for the judicial system and injecting endless momentum into the development of a rule-of-law society[6].



Figure 2. The Significance of Enhancing Judicial Efficiency

3.4. Enhancing Judicial Credibility

In the process of building a rule-of-law society, public trust in judicial fairness does not come from thin air but is deeply rooted in the recognition of the fairness and transparency of case trials. The integrity of the criminal evidence chain is key to enhancing judicial credibility. In the age of information, the public's focus on judicial activities is sharper, as they care not only about case outcomes but also about witnessing the realization of justice. The integrity of the evidence chain requires that every step in the collection, preservation, identification, and presentation of evidence follows a legal trajectory, ensuring no omissions or deviations. By presenting an impeccable evidence chain to the public, judicial proceedings appear fair and rational, motivating judicial authorities to continually improve and respond to public expectations with more just and efficient trials.

3.2. Protecting the Rights of the Defendant

To accurately reconstruct the truth of the case, a complete evidence chain is needed for support. In the criminal justice system, it is essential to protect the defendant's personal rights by clearly presenting the defendant's actions and revealing the internal connections between the facts of the case. After obtaining sufficient evidence, the complete evidence chain assists judges in making fair decisions. In this context, the guilty will face legal sanctions for their actions, while the innocent will be spared wrongful accusations. However, when the evidence chain is incomplete or contradictory, defendants have the right to challenge it and protect their rights through legal means. This protection reflects the fairness of the judicial system, improves the transparency of judicial proceedings, and ensures that the verdict is both just and reasonable.

3.3. Enhancing Judicial Efficiency

A complete and clear evidence chain significantly enhances judicial efficiency, accelerating judges' understanding of the facts and reducing the time spent analyzing evidence. It optimizes the allocation of judicial resources and minimizes the points of contention during trials. With both parties in agreement on the factual foundation, unnecessary disputes and delays are avoided. This efficient and orderly process alleviates the litigation burden on parties, reflects the judicial system's concern for public interests, and embodies the core principle of justice for the people. Thus, strengthening the integrity of the criminal evidence chain is key to improving judicial efficiency and promoting social harmony[7-8]. By continuously refining each step of evidence collection, examination, and recognition, every case can be handled justly and efficiently within the legal framework.

4. Construction and Maintenance of the Integrity of the Criminal Evidence Chain Structure

4.1. Strict Adherence to Legal Procedures

In a society governed by the rule of law, procedural justice is regarded as an essential safeguard for achieving substantive justice. Throughout all stages of the collection, preservation, identification, and analysis of criminal evidence, strict adherence to legal procedures is a basic requirement for judicial activities (see Table 1) and is key to maintaining the integrity of the evidence chain. Adhering to these procedures stems from a profound understanding of judicial fairness and human rights protection. Given the evolving social landscape, people are increasingly aware that the legality and validity of evidence depend not only on the truthfulness of its content but also on the process by which it is collected and handled.

During the evidence collection phase, any illegal methods, such as coercion, inducement, or deceit, constitute serious violations of the parties' lawful rights. Even if the content of such evidence is true, it will be excluded from the chain due to procedural violations. Similarly, during the evidence preservation and identification phases, strict adherence to legal procedures is necessary to ensure the originality, completeness, and reliability of the evidence. Special attention must be given to new forms of evidence, such as electronic data, to ensure the full-chain compliance of their collection, extraction, storage, and presentation, so that technical mishandling does not lead to evidence being invalidated. Strict adherence to legal procedures is a test of the professional competence of judicial personnel and an embodiment of the spirit of the rule of law.

Table 1. Legal Procedure Requirements

Link	Legal Procedure Requirements
Collection of evidence	Legal authorization
	Right to be informed
	No coercion, inducement, or deceit in obtaining confessions
	Witness system
Evidence fixation	Timely preservation of evidence
	Maintain original condition
	Detailed documentation
	Sealed storage
Identification of evidence	Selection of qualified appraisal agencies
	Adherence to appraisal standards
	Transparent and open appraisal process
	Scientific and accurate appraisal conclusions
Evidence analysis	Comprehensive review of evidence
	Exclusion of illegal evidence
	Comprehensive analysis and judgment
	Adherence to logical reasoning

4.2. Enhancing the Comprehensiveness of Evidence Collection

Comprehensive evidence collection is the prerequisite for accurately reconstructing case facts in judicial practice, directly influencing the fairness of the judicial process. Criminal investigation officers, as the main force in the field, must be deeply aware of their responsibilities and adhere to the principle of comprehensive evidence collection during investigations. They must approach their work with an open mind and rigorous attitude, gathering all evidence related to the case, including both direct and indirect evidence. Additionally, investigators must enhance their insight and judgment, systematically organizing the collected evidence to clarify its complementary and interconnected nature, thereby constructing a complete evidence chain. Whether direct or indirect, both types of evidence are equally important. Although indirect evidence cannot directly indicate the facts of the case, it can reveal the truth through logical reasoning. By thoroughly investigating and analyzing indirect evidence and combining it with direct evidence, criminal investigators can objectively determine the facts of the case, contributing to social harmony and stability through their judicial efforts[9].

4.3. Strengthening the Rigorousness of Evidence Review

To accurately grasp the facts of a case, courts should

conduct rigorous reviews of the relevant evidence during criminal trials. Given the diverse nature of criminal cases today and the increasingly complex forms of evidence, judicial personnel must adopt a cautious attitude when examining the evidence chain from all angles and at multiple levels. Each piece of evidence must be carefully reviewed for authenticity, legality, and relevance, while thoroughly analyzing the logical relationships between the pieces of evidence and assessing their corroborative strength to ensure the integrity of the evidence chain. Any factors that might affect the fairness of the trial should be excluded. Each piece of evidence must withstand the scrutiny of both the law and history[10]. Through meticulous reviews, courts can more accurately reconstruct the facts of a case, providing a solid foundation for the fairness of the final judgment. This process also serves as a test of the professional competence and ethics of judicial personnel, ensuring they maintain a high degree of responsibility and rigor throughout the trial.

4.4. Enhancing Evidence Protection and Technical Support

With the rising comprehensive national strength of China, modern information technology has been widely applied across various fields, achieving significant results. The application of modern technologies to the judicial field has changed both the forms and content of evidence. Protecting evidence and increasing technical support have become key concerns in the judicial domain[11-12]. While technological advancements provide opportunities for judicial personnel, they have also led to a significant increase in high-tech crime rates. Traditional methods of data protection can no longer meet current demands. To ensure the authenticity and completeness of evidence, cutting-edge technologies such as blockchain, data encryption, and electronic signatures must be introduced to the evidence collection, storage, and transmission processes, preventing malicious tampering and ensuring the stability of the evidence chain. Additionally, a systematic approach to evidence management must be vigorously pursued, leveraging the advantages of cloud computing and big data to optimize evidence management processes, enabling centralized storage, quick retrieval, and intelligent analysis of evidence. This enhances judicial efficiency and provides comprehensive support for case trials. Therefore, evidence protection is both a demand of the times and a necessary choice for improving judicial fairness and efficiency.

5. Conclusion

In summary, as the rule-of-law society evolves and judicial practice continues to explore new frontiers, the integrity of the criminal evidence chain structure is no longer a simple theoretical issue but a matter closely related to judicial fairness, human rights protection, and social stability. The increasing complexity of social environments and technological advancements has introduced new challenges for criminal case trials. Strengthening the integrity of the criminal evidence chain can improve the precision and scientific nature of evidence rules in judicial practice, aligning with the societal expectations for fairness, justice, and efficient and transparent trials. As the construction of the rule of law continues to advance, the integrity of the criminal evidence chain will receive greater attention. Through a series of measures, a more robust and efficient criminal evidence

chain system can be constructed, contributing to the realization of judicial fairness and the maintenance of social stability.

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