

# A Jurisprudential Inquiry into Investigatory Processes in American Courts

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**Abstract.** This paper investigates how the American courts investigate and collect evidence from the perspective of legal theory and emphasises the theoretical basis and practical practice of American judicial procedure. It addresses adversary-system structures and procedural safeguards in standard law systems, focusing on the constitutional foundations (particularly the Fourth and Fifth Amendments) and federal rules of evidence as they determine the scope and admissible nature of proof. Using literature analysis, comparative perspectives, and case studies, this article examines how foundational principles of procedural justice (such as the burden of evidence and the exclusionary rule) have emerged through seminal cases (such as Mapp, Miranda, and Brady). This article will further explore the dual tension between protecting individual rights and ensuring an efficient legal process, focusing on the concept of discovery. The main conclusion of this paper is that although the US adversarial framework aims to uphold justice through strong procedural safeguards, it faces ongoing debates in areas such as technological progress, privacy versus public safety, and investigative procedures. Overall, this study argues that understanding the underlying jurisprudential underpinnings, covering theoretical, constitutional provisions, and practical disputes, is critical to understanding the evolving characteristics of US court investigations.

**Keywords:** United States Courts; Investigation; Evidence Collection; Jurisprudence; Adversarial system.

## 1. Introduction

In modern criminal justice systems, how a court investigates and gathers evidence is often as crucial as determining guilt or innocence. In the American common law tradition, the “investigative discovery” procedure is notable for its adversarial spirit, with the prosecution and the defence each bearing the burden of uncovering the facts. The Constitution of the United States, mainly the Fourth, Fifth, and Sixth Amendments, lays down strict boundaries to protect the rights of individuals from being violated by the overreach of government power. As a result, mechanisms such as exclusion rules, Miranda warnings, and prosecutor disclosures (Brady obligations) have developed to ensure that due process (and not just expediency) guides criminal investigations.

In this context, it is crucial to understand the jurisprudential rationale behind investigations in US courts. While much of the procedural work focuses on boldface rules, this paper studies and emphasises these rules' philosophical and theoretical foundations. Specifically, this paper examines the basis of adversative litigation, the rationale for the burden of proof and the standard of evidence, and the tension between the “crime control” and “due process” models proposed by Herbert Parker. This duality explains why U.S. courts, especially the Supreme Court, have consistently prioritised constitutional protections over pure efficiency yet remain subject to ongoing arguments over technology-driven evidence, privacy concerns, and the broader pursuit of procedural fairness.

This paper used literature analysis, comparative studies, and case studies as its methodology. Seminal decisions, including *Mapp v. Ohio*, *Miranda v. Arizona*, and *Brady v. Maryland*, have exemplified how broad constitutional principles are implemented in everyday policing and prosecution. References to other legal systems provide a comparative perspective highlighting the unique qualities of adversarial justice in the United States.

Structurally, the discussion is divided into five sections to ensure coherent coverage of the underlying theoretical and practical challenges. Section 2 will explore the jurisprudential foundations of

investigative forensics in US courts and the core ideas of adversarial, procedural justice, constitutional constraints (such as the Fourth and Fifth Amendments), and federal rules of evidence. Section 3 will elaborate on the practice and controversy of American court investigation and evidence collection and intensely discuss the operational characteristics of evidence discovery, plea bargaining, and the changing role of legal actors. It also explores the impact of technological advances on privacy and standards of evidence. Section 4 will provide a forward-looking view of future trends in the investigative forensic system in the United States and assess how modernisation and comparative insight can foster reform, including the integration of new investigative techniques and cross-pollination with inquiring elements. Section 5 (conclusion) will synthesise this paper's main findings and criticisms, reaffirming the legal-rational philosophy that supports the US investigative process while acknowledging ongoing challenges concerning efficiency, fairness, and protection of fundamental rights.

This article will combine philosophical perspectives, constitutional interpretation, and related controversies to show how the U.S. investigative framework ensures it operates within an evolving legal balance.

## **2. Jurisprudential Foundations of Investigatory Procedure**

### **2.1. Adversarial Judicial and Investigative Fairness**

From an adversarial perspective, an investigation is not just a neutral fact-finding mission but a strategic exercise designed to convince everyone. The system assumes that if both parties are given an equal opportunity to present and test evidence, then the truth will emerge. Therefore, the impartiality of the investigation process is of Paramount importance to the legitimacy of the judgment itself, ensuring that the legal rights of the accused are protected [1].

Adversarial systems require rules to ensure both parties act under specific legal and ethical standards. For example, the presumption of innocence places the burden of proof squarely on the prosecution. Where the facts are uncertain, the “beyond a reasonable doubt” standard protects individuals from conviction. These rules encourage investigators to seek only credible, admissible evidence and to avoid using coercive or illegal means to take evidence.

The due process extends these safeguards. It requires that all stages of an investigation, from surveillance to searches to interrogations, be carried out within the law. Courts not only adjudicate facts at trial but act as guardians of rights before trial, excluding evidence if the means used to obtain it violate constitutional norms.

### **2.2. Constitutional Basis**

Two constitutional provisions have been significant in shaping investigative conduct: the Fourth and Fifth Amendments.

The Fourth Amendment defends individuals against unwarranted searches and seizures. Law enforcement must secure a writ based on good cause with limited exceptions to perform investigations [1]. The clause establishes boundaries against random privacy invasions while mandating that evidence gathering follow legal procedures. State courts did not always address Fourth Amendment violations before the 1960s.

This changed with *Mapp v. Ohio*. The Court extended the exclusion rule to state proceedings, which only applied to federal courts until then. Henceforth, any evidence obtained violating the Fourth Amendment will not be admissible in any court in the United States [2].

The Fifth Amendment protects against forcible self-incrimination. In *Miranda v. Arizona*, the court acknowledged the inherent coercive pressures of custodianship. To ensure that any confession is voluntary, the court stipulates that suspects must be informed of their right to remain silent and consult a lawyer [3]. Unless these warnings are issued, statements made in custody cannot be used at trial.

Together, these amendments establish that legitimacy matters at every investigation stage- in results and methodology. They reflect a belief that the rule of law is upheld not by catching every criminal but by ensuring that the innocent are never unjustly punished.

### **2.3. Exclusion Rules in Typical Precedents**

The exclusion rule is one of the most controversial and influential judicial remedies in criminal proceedings in the United States. Before the Mapp case, state prosecutors could introduce evidence obtained through illegal searches with little consequence. The Court's decision in Mapp attempted to redress this imbalance by making constitutional rights enforceable through judicial remedies [2].

The facts of Mapp v. Ohio illustrate the stakes: police forced their way into Dollree Mapp's home without a warrant, claiming to search for a fugitive. Instead, they found allegedly obscene material that was used to convict her under Ohio law. The Supreme Court overturned this decision, declaring that an unconstitutional search contaminated the evidence.

Justice Clark's majority opinion emphasised that the Fourth Amendment would be a dead letter without the exclusion rule. He wrote, "Nothing destroys a government more than failing to obey its own laws [2]." The Court also noted that deterrence alone is not enough; justice requires that courts not participate in rights violations by permitting using illegally obtained evidence.

Critics have long argued that exclusions allow criminals to escape "technical" sanctions. Judge Benjamin Cardozo famously asked, "Should a criminal go free because a police officer made a mistake [4]?" Proponents, however, argue that the rule forces the police to uphold the Constitution and the legitimacy of the judicial system. Without it, constitutional rights may exist only in theory.

The impact of Mapp was immediate and far-reaching. Police departments have been forced to train officers in search and seizure law, judges have become more aggressive in assessing the admissible nature of evidence, and prosecutors have to evaluate the strength of evidence and how it was obtained. In short, Mapp changed the rules of criminal investigation to institutionalise compliance with the Constitution as part of routine police work.

## **3. Practice and Controversy of American Court Investigation and Evidence Collection**

### **3.1. Evidence Collection Methods and System Characteristics**

In American criminal litigation, discovery and plea bargaining constitute the two leading confrontation system practices [5]. Through the full exchange of evidence before trial, all parties can avoid a 'surprise' trial so that the prosecution and defence focus on the facts and legal disputes rather than the procedural imbalance caused by information asymmetry [6]. The American Bar Association (ABA) puts forward in its criminal justice standards that the prosecution should actively disclose the defendant's statements, physical evidence, expert reports, and any materials that may reduce criminal responsibility or prove the defendant's innocence to ensure that the defendant has enough information when deciding whether to plead guilty or not [7, 8]. In some cases, the defendant must provide advance notice of a specific defence, such as an alibi or a mental disorder, so the two parties can fight on the same basis.

Plea bargaining also profoundly affects the direction and depth of investigation and evidence collection. Most criminal cases are concluded by the defendant's guilty plea in exchange for reducing the crime or the sentence under the prosecution's advice to achieve the dual goals of litigation efficiency and risk control [5]. However, the confrontation system's supposed procedural fairness may be undermined when the defendant is forced to plead guilty because of insufficient resources or lack of a competent lawyer's assistance. At this point, whether the Discovery system can fully protect the defendant's right to know is the key to ensuring the plea agreement's legality and legitimacy. Because if the party knows nothing about the key information held by the prosecution, it is difficult to make a voluntary choice and conform to their rights and interests when pleading guilty [6].

In terms of the division of roles, the lawyers, the judge, and the jury in the adversarial system of the United States do their jobs: the lawyers of the prosecution and the defence lead the fact-finding, collect favourable evidence and cross-examine in the court. The judge is responsible for procedure management and evidence admissibility ruling, and usually does not take the initiative to lead the investigation. The jury is responsible for making a factual determination of the evidence presented at the trial stage [5]. This mode can not only stimulate the power of the prosecution and defence to obtain evidence actively but also put forward higher requirements for the level and resources of lawyers, which often leads to doubts about the actual fairness of the procedure.

These practical challenges--including the asymmetry of information, disparity of legal resources, and limited judicial supervision over investigation--call for institutional innovations, which will be further discussed in the following section.

### **3.2. Technological Development and Legal Challenges**

In contemporary judicial practice, electronic evidence collection and considerable data investigation are increasingly popular, bringing new challenges to the traditional investigation and evidence collection model. A large amount of criminal evidence exists in digital form on computers, smartphones, social platforms or cloud databases, with which law enforcement departments can trace the network trajectory or social relationship of suspects [7]. Although this can improve detection efficiency, it also makes procedural justice face a severe test. On the one hand, the mutability, quantification and professionalism of digital evidence require the court and the defence to have the corresponding technical ability to verify the authenticity. On the other hand, when the prosecution has big data investigative tools and the defendant has limited resources, the information asymmetry may expand again [7]. Therefore, the academic community calls for strengthening the Discovery rule to include a detailed electronic evidence disclosure mechanism so that the defence and its technical advisers can thoroughly test the integrity of the data and the legal acquisition process and maintain the balance of rights under the confrontation system [8].

At the same time, the conflict between privacy and public safety is becoming more and more fierce in the digital age. Investigation agencies or courts need more flexible forensic methods to deal with cybercrimes or terrorist activities, so they often call for more extensive monitoring of personal information and communication records [7]. However, the move not only involves the Fourth Amendment's protection against unreasonable searches but also challenges the privacy of individuals in virtual space. Studies have pointed out that the lack of precise judicial writs mechanisms and disclosure obligations for big data and cloud-based search methods may lead to excessive squeezing of citizens' digital privacy rights [9]. In this context, it is necessary not only to ensure the efficiency of the investigation but also to keep the constitutional principles, which put forward unprecedented requirements for the investigation and evidence collection system of the United States: not only to establish judicial review procedures suitable for digital evidence and data analysis but also to give the defendant the same opportunities in digital evidence interrogation [8].

These issues--ranging from the technical complexity of digital forensics to the erosion of privacy protections--demand proactive legal and institutional responses, which are explored in the next section.

## **4. The Future Trend of the American Court Investigation and Evidence System**

### **4.1. Technological Progress and Institutional Innovation**

In response to the technological and normative gaps discussed above, this section explores how innovation may reshape evidence systems to strengthen efficiency and fairness.

Because of the rapid development of new technology, the American court investigation and evidence collection system is entering a period of transformation. Innovative technologies such as artificial intelligence (AI), blockchain, machine learning and big data analytics constantly infiltrate judicial

practice and profoundly impact how evidence is obtained, managed and reviewed. In the current situation, the adversarial litigation system needs to meet the challenges brought by innovation and has the opportunity to achieve a higher level of upgrading.

Firstly, the application of artificial intelligence (AI) in forensic practice is increasingly diversified. With its powerful data analysis ability, AI can quickly screen out keywords and relevant clues from huge digital documents, thus providing practical assistance for prosecutors and defence lawyers in case research and judgment [10]. This increase in efficiency allows lawyers to more accurately identify key evidence in complex economic crimes or cross-border cases. It helps prosecutors dig through vast amounts of electronic data for potential violations. Researchers of AI-enhanced Evidence point out that AI can automatically enhance video and audio processing and pattern recognition to help lock suspect targets or eliminate redundant information [10].

However, potential biases in AI algorithms, inadequate training data, or opaque models may lead to new risks of procedural injustice and misjudgment. For example, Deepfake technology or failure of automated detection can distort the truth, and it is necessary to introduce stricter authentication rules for AI-assisted evidence, professional review mechanisms, and even institutionalised supporting measures such as requiring source code or algorithm audit reports.

On the other hand, distributed ledger technologies such as blockchain also bring new prospects for evidence management and authentication. Blockchain ensures evidence's time stamp and integrity through the immutable chain record and can provide cross-agency collaborative verification [11]. In traditional adversarial litigation, the originality and transmission chain of evidence are often the key dispute points. If blockchain technology is adopted, each operation in the forensics process will be traceability recorded, thereby reducing the possibility of forgery or destruction of evidence. Scholars have shown that blockchain is still in the pilot stage in the court, and its procedural significance and legal application still need to be further tested by judicial precedents [11]. Once legislation or judicial interpretation confirms the admissibility and credibility of blockchain-stored records, it may significantly reshape the way of evidence collection in the United States, making the collection, security, and authentication of electronic records more efficient and secure.

However, technological innovation also puts forward higher requirements for procedural justice. In the face of iterative applications such as AI, blockchain, and smart contracts, current evidence rules and review standards may not fully cope. For example, there are urgent questions about whether AI-processed images or synthetic audio are admissible and how parties can exercise their right to challenge algorithmic decision-making if they cannot understand it. Our courts may need to amend some evidence rules and add expert-assisted review procedures to ensure the legality and credibility of AI and blockchain evidence [10, 11]. If the judicial system can effectively absorb these technologies, it will significantly improve the efficiency and accuracy of evidence collection. At the same time, it is necessary to establish a firewall in legislation, judicial interpretation, and practical operation to prevent technology from undermining the legal order.

#### **4.2. Comparison and Integration with Other Legal Systems**

To address the systemic imbalances and access-to-justice concerns raised in Part 3, this section turns to comparative perspectives and institutional learning from civil law systems.

The adversative litigation mode of the United States started early and invested heavily in the application of science and technology. Still, it faced competition and challenges from civil law countries outside Europe and America. The civil law system (such as Germany, France and China) adopts the mode of ex officio or mixed litigation, and its investigation and evidence collection is usually dominated by the court or the pretrial judge, emphasising the active exploration of the truth [12]. In this mode, if the judicial organs can directly introduce AI or blockchain to process evidence, it will significantly reduce the imbalance caused by the disparity of lawyer resources because the lawyers on both sides do not undertake the main investigation task but rely on the power of the state to collect and review multi-party information. The judge's active intervention mode is more beneficial

in promoting the discovery of the truth of the case, and it also reduces the influence of the difference in the parties' ability. However, the information disclosure system and protection of the right of defence under the civil law system is relatively limited, and the confrontation of prosecution and defence is also weak, which is sometimes criticised for lacking sufficient confrontation and procedural transparency [12].

In recent years, countries worldwide have tended to absorb the advantages of different legal systems. For example, the United States is exploring simplifying trial procedures for some types of cases and introducing the initial idea of a Tech-Assisted Judge to reduce the excessive reliance on lawyers' evidence in the fact-finding stage [12]. Similarly, the civil law system is also introducing the system of cross-examination in the confrontation system and the defence lawyer's deeper involvement in the investigation procedure to improve the protection of human rights and the justice of litigation. Both also face the trend of integrating law and technology in the Internet and big data fields. Some scholars point out that 'litigation mixing' has become the general trend, and the US confrontation system and the civil law system's competence doctrine may further learn from each other's practices in the investigation stage to deal with the problems brought by transnational and cross-domain technical evidence [12].

From a macro point of view, while introducing the elements of the authority system, the United States will also adhere to the core spirit of the confrontation system, including the defendant's right to silence, the right of cross-examination and the principle of procedural equivalence. These rights established in the Constitution cannot be easily shaken. For the civil law system, a certain degree of confrontational reform helps to improve the transparency of procedures and the status of lawyers. It provides more possibilities for maintaining procedural justice and balancing investigative efficiency under the new technological environment.

### **4.3. Implications for Future Judicial Practice**

This section builds on the tensions identified in the previous discussion--particularly those concerning digital due process and procedural safeguards--and outlines recommendations for future judicial development.

Multiple interactions of 'law, technology, and jurisprudence' will accelerate the US investigation and evidence system.

Firstly, in response to technologies such as artificial intelligence, blockchain and considerable data investigation, the United States may further revise evidence rules at the federal or state level, establish a professional review process for AI-generated evidence, and require parties to provide detailed proof of the authenticity of blockchain storage [10]. Legislators may also introduce special regulations to define the responsibilities and obligations of technology suppliers and investigation organs to prevent the use of new technologies from over-mining citizens' privacy or leading to improper investigation. This may be the direction of future legal reform.

Secondly, concerning the regulatory mechanism and judicial interpretation, the court needs to support systems such as technology verification algorithm transparency when using new technologies and give the defence party a substantial right of cross-examination to ensure procedural equivalence [11]. Judges can employ technical experts or establish a special committee to review the operation principle of AI to avoid wrongful convictions caused by algorithmic bias or incorrect prediction [12]. At the same time, courts at all levels will also accumulate precedents to form unified rules for judging AI or blockchain evidence.

In addition, the trend of transnational cooperation and mixed legal systems is also worthy of attention. In the context of increasing cross-border cyber-crimes and international terrorist activities, transnational law enforcement and judicial cooperation are urgently needed. The United States may establish more electronic evidence-sharing or bilateral cooperation mechanisms with the European Union and other regions [13]. At the same time, the information exchange and program design under

the confrontation system also absorb the dominant elements of the civil law system, such as appointing neutral experts and strengthening the judge's review, to balance the resource gap between the parties. In the future, if a hybrid litigation mode with the advantages of confrontation and authority systems can be formed, it may bring more efficient and fair processing methods to complex science and technology cases.

Moreover, the deep integration of legal theory and technology must be ensured. In the final analysis, all institutional reforms should follow the core pursuit of individual rights and procedural justice in American legal theory. No matter how the technology develops, the constitution and the principle of due process will still be the boundary and criterion of the forensic process. In essence, the safeguard mechanism of the confrontation system will not be replaced. Still, it will be grafted with more technical means to ensure that the investigative ability and the protection of human rights are balanced [14, 15].

The investigative and evidence collection system in the United States will further evolve. It is necessary not only to use technology to improve the efficiency of detection and trial but also to be alert to the threat of technology to traditional procedural justice or the defendant's constitutional rights. Absorbing the experience of ex-post doctrine or mixed litigation mode of other countries may make a breakthrough in balancing the resources of the prosecution and defence and improving the quality of fact-finding. However, privacy protection, the right of defence, cross-examination, and other elements under the confrontation system will still be the foundation of the American system, and it is difficult to replace it fundamentally with technological change. In the end, the development direction of court investigation and evidence collection in the United States will rely on a solid foundation of legal theory, flexibly absorb new technologies, and at the same time absorb the reform nutrients suitable for the judicial environment of the United States from the legal systems of other countries, to continuously maintain the balance of justice and efficiency in the tide of The Times.

## **5. Conclusion**

To sum up, the investigative procedure of the American court has been evolving under its profound legal tradition and constitutional protection. The Fourth Amendment establishes the core rule of excluding illegal evidence through the Mapp case, and the Fifth Amendment establishes the obligation mechanism of the right of notification and the right of silence in the Miranda case, which jointly build the first line of defence of procedural justice. These institutional arrangements emphasise that legal procedures determine the legitimacy of results and constitute the boundary of exercising state power.

Under the adversarial system structure, the prosecution bears the burden of proof and must comply with the entire disclosure obligation established by Brady. The evidence discovery mechanism and the plea-bargaining system ensure the equivalence of prosecution and defence and reduce the risk of surprise trials. However, substantive justice may be compromised if the defendant pleads guilty hastily because of insufficient legal resources. Therefore, strengthening the disclosure system and the right of the defendant to know is the key to maintaining the legitimacy of the confrontation system.

Contemporary science and technology have had a profound influence on traditional methods of investigation. The intervention of artificial intelligence and big data improves the efficiency of case analysis but also brings problems such as evidence verifiability, algorithm bias and digital privacy. A blockchain can fix the chain of evidence, but it still needs a judicial test of its procedural integrity and admissibility. In response to these challenges, the US judicial system is trying to establish new mechanisms through legislation and precedent, including algorithm transparency and technical expert-aided review, to avoid technical means from evading due process guarantees.

At the same time, the comparison with the civil law system also brings institutional reflection. In France, family investigations are dominated by judges to reduce the bias caused by the unequal ability of lawyers. However, it has been criticised for lack of information disclosure. In recent years, the

United States has also tried to introduce the auxiliary mechanism of trial technology. At the same time, the civil law system has absorbed confrontation elements such as cross-examination, reflecting the trend of "litigation mixing". In addition, in terms of transnational cybercrime and evidence collaboration, the United States is cooperating with the European Union to promote electronic evidence sharing and rule harmonisation.

Looking forward to the future, the development of investigation and evidence systems in the United States should continue to take the constitutional principle as the cornerstone, integrate the progress of science and technology and the inspiration of comparative law, and build a dynamic balance between procedural justice and investigation efficiency. No matter how the technology evolves, the core values represented by the right to silence, the right to defence and the exclusionary rule of illegal evidence will remain unwavering and will continue to guide American justice in the new era of complexity and change.

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