



On the Cross-Examination of Criminal Cases in Online Court

Yikun Xia^(✉)

Criminal Investigation Police University of China, Shenyang 110000, Liaoning, China
xyk199703@126.com

Abstract. Evidence must be rebutted, challenged, and verified by both the prosecution and the defense before it can be used as the basis for deciding cases in court. With the gradual rise of digital justice, online court hearings are widely used in the criminal field because of their ability to save judicial resources and improve trial efficiency, but the application of online court hearings also has implications for the conduct and effectiveness of cross-examination activities between the prosecution and the defense in court. It is important to strictly implement the requirements of the substantiation of court hearings, to take the protection of litigation rights as the basic position, to clarify the scope of application of online court hearings in criminal cases, to construct rules for the cross-examination of different forms of evidence, and to use technical means to solve the difficulties in the interface between different physical spaces, so as to achieve a balance between efficiency and justice values and to make online court hearings in criminal cases better safeguard social justice.

Keywords: criminal cases · online court hearings · evidence · cross-examination activities · litigation rights

1 Introduction

Article 1 of the Online Litigation Rules of the People's Court (hereinafter referred to as the Online Litigation Rules) clearly states that parties may conduct some or all of their litigation activities online, including the exchange of evidence and court hearings, and specifies in Article 3, item 2, that criminal cases may be the object of application of online litigation. Implementation of the digital rule of law is an inevitable orientation in line with the development of science and technology and the transformation of the social governance model from hierarchical governance for smart governance [1]. Among them, the online court hearing of the people's court is an important element of the cardinal rule of law. According to some scholars, since the outbreak of the new pneumonia epidemic, the proportion of criminal cases being heard online has increased significantly, with almost all criminal cases being heard online, except in cases where the defendant is not in custody [2]. Data from the Shanghai High People's Court reveals that criminal and civil cases account for 91.2% of online court hearings in the city, with a total of 13,173 cases heard online from February 3 to April 28, 2020, for example, taking an average

of 1.1 h per session. [3] compared to offline court hearings, which can take several hours or even a full., online court hearings can greatly improve trial efficiency and save judicial resources. However, criminal cases are different from civil cases in that civil proceedings are characterized by negotiation and “reasoned adjudication” [4], and are characterized by mediation and settlement of disputes, with the standard of proof being set at “preponderance of the evidence The standard of proof is defined as “preponderance of the evidence”. In contrast, criminal proceedings, because of their strong accountability and the severity of the outcome, the standard of proof is also more stringent, and if the defendant is found guilty at the trial stage, it must be “beyond reasonable doubt”, so that the facts of the case have certainty and uniqueness of conclusion, to avoid the occurrence of wrongful convictions. In the face of the differences between the procedural characteristics of civil cases and criminal cases, and in the absence of more reasonable and clear regulation of online court hearings in criminal cases, the widespread use of online court hearings in criminal cases will have a negative impact on the conduct and effectiveness of cross-examination.

2 Connotations and Characteristics of Cross-Examination

The questioning of evidence means that it must be rebutted, challenged and verified by both the prosecution and the defence before it can served as a basis for a court case. The development of cross-examination can be traced to the struggle for human rights in the West. In the seventh and eighth centuries, the “oath of confession” was a method of trial in which each side sought witnesses to help it take a certain oath, and if one side will break the oath in the future, it lost the case. In the 15th century, civil law countries gradually established a system of statutory evidence, which gave citizens a certain right to cross-examination, but as the trial was almost exclusively controlled by the judge, the cross-examination process was an investigation by the judge rather than a rebuttal by the prosecution and the defence, and the cross-examination by the prosecution and defence had no substantial impact on the trial. The right to cross-examination is greatly restricted, and cross-examination in court is almost a formality [5].

The bourgeois revolution in England in the 17th century and the struggle for human rights under the slogan of “rights and freedoms” also contributed to the emergence of the contemporary system of evidence, of which the burden of proof and the standard of proof rules were the main elements. With the codification of the Western evidence system and the promotion of legal transplantation, more and more countries and regions have recognized the examination of evidence, the most landmark being the International Covenant on Civil and Political Rights (hereinafter referred to as “the Covenant”) adopted by the United Nations General Assembly in 1966. The International Covenant on Civil and Political Rights were adopted by the United Nations General Assembly in 1966. With the continuous promotion of the rule of law in China, the provision that “evidence shall not be used as the basis for the determination of a case without cross-examination” was also incorporated into Article 63 of the Interpretation of Criminal Procedure, which was amended in 2012. Article 50(2) of the Criminal Procedure Law stipulates that the premise of the evidence as the basis for the case is to verify the truth, and Article 55(2)(3) stipulates that verification by legal procedures is one of the conditions for the truthfulness and sufficiency of the evidence. As an important activity that is held during the

trial process, cross-examination is implicated in the realization of the value of justice in criminal proceedings. In order to promote the reform of trial-centred criminal litigation, the Supreme People's Court, together with four other ministries and commissions, issued the Opinions on Promoting the Reform of the Trial-Centred Criminal Litigation System (hereinafter referred to as the "Reform Opinions") in 2016. And then, in order to better guide the trial practice of courts at all levels, the Supreme People's Court issued the Implementation Opinions on Comprehensively Promoting the Reform of the Trial-Centred Criminal Litigation System (hereinafter referred to as the Implementation Opinions on Reform) in 2017, with both documents providing more comprehensive provisions on the cross-examination of criminal proceedings. Article 11 of the Opinions on Reform, in addition to proposing that the right to cross-examination of the prosecution and the defence at the trial stage should be guaranteed in accordance with the law, also states that evidence in dispute should be cross-examined separately, and that the cross-examination of evidence that is not in dispute between the prosecution and the defence at the pre-trial conference may be simplified. The Opinions on the Implementation of Reform also re-emphasize the concept that "evidence shall not be used as the basis for a case without cross-examination" and that "the right of cross-examination of the prosecution and the defence shall be guaranteed in accordance with the law". Accordingly, the examination of evidence in criminal cases in China has the following characteristics.

First, cross-examination is a statutory part of the proceedings in court. The discussion on "legal or not" is usually found in summary and expedited proceedings, although Article 219 of the Criminal Procedure Law specifies that summary proceedings are not subject to the procedural provisions of court debate and Article 224 stipulates that expedited proceedings are generally not subject to court investigation and court debate. In practice, some judges often ignore the evidence objections raised by the defence on the grounds that "the Criminal Procedure Law does not contain summary procedures and expedited procedures to be cross-examined". In this regard, the Interpretation of Criminal Procedure gives a clear and detailed response, Article 365 of the Interpretation of Criminal Procedure stipulates that "in the summary procedure, the evidence that is not objected to by the prosecution and the defence may only state the name of the evidence and the matters proved, but the evidence that is objected to or considered necessary for court investigation shall be produced and cross-examined"; Article 372 stipulates that the application of speedy trial Article 372 stipulates that when a case is heard under the expedited procedure, after the indictment is read out by the public prosecutor, the judge shall ask the defendant for his opinion on the evidence charged. It can be observed that the summary and expedited procedures for criminal cases do not exclude the examination of evidence, but still make it an important part of the trial in summary and expedited procedures.

Secondly, cross-examination is a legitimate right of the criminal defendant. At present, China's criminal procedure law has not yet clarified the subject of the right to cross-examination. However, according to the provisions of the Criminal Procedure Law on the allocation of the burden of proof, whether it is a public prosecution case or a private prosecution case, the burden of proof is on the prosecution, the criminal defendant against the prosecution's evidence to refute, question and verify the activities. The right of proof in criminal proceedings is often defined as the "right of proof of

the criminal defendant”, and the right of proof is a fundamental right of the criminal defendant in developed countries under the rule of law [6]. In the case where the scope of the right to cross-examine is still open to discussion, the general theory adopts the view that the defendant is the subject of the right to cross-examine, which is supported by two points of jurisprudence: one is the principle of presumption of innocence. In order to refute the presumption of innocence, the prosecution has to make the evidence meet the standard of “certainty and sufficiency”. In order to avoid unfounded and unjust judgements, the law gives the criminal defendant the right to confront the prosecution with the right to cross-examine. Secondly, the principle of defence, one of the elements of which is that the criminal defendant has access to a lawyer throughout the proceedings in order to enhance his or her ability to exercise rights of defence [7]. It is evident from this that the defence function exercised by the lawyer is derived from the right of the criminal defendant to defence, and is only a “help” to the criminal defendant, not a right of the defendant in its own right. In the same way, the right to participate in criminal proceedings is derived from the provision of the law or authorisation, and does not have an independent intention. The consequences of participation are borne by the agent [8]. Therefore, the art of cross-examination is only a manifestation of the will of the accused, i.e. the criminal defendant.

Thirdly, cross-examination is really of action guaranteed by law. Cross-examination plays a decisive role in “ensuring that the court trial plays a decisive role in ascertaining the facts, identifying evidence, protecting the right to appeal and adjudicating fairly” [9]. For example, Article 58(2) of the Criminal Procedure Law gives criminal defendants and their defenders and legal representatives the right to apply for the exclusion of illegal evidence, and Article 25 of the Provisions on the Exclusion of Evidence provides that if the defendant or defender submits materials relating to clues of illegal evidence before the trial, the public prosecution can submit corresponding evidentiary materials to refute them, and Article 31(4) expressly provides that the public prosecutor, the defendant and his or her defender can apply for the exclusion of illegal evidence. The defendant and his or her advocate may cross-examine and debate the legality of the collection of evidence. Article 40 of the Regulations on the Exclusion of Evidence stipulates that if the defendant and the defence apply for the exclusion of illegal evidence in the first instance, but the court uses it as the basis for the case without examining it in accordance with the law and it may affect a fair trial, the court of second instance may rule that the original verdict be quashed and sent back for retrial. For example, in the process of questioning general evidence, the Interpretation of Criminal Procedure, Article 249 and Article 250 clarify that if the prosecution and the defense disagree on the testimony of witnesses, expert opinions, the investigation of the case, the sources of evidence, the authenticity or legality of the evidence, the court shall notify the witnesses, experts, investigators or investigators to appear in court if the court considers it necessary.

3 Adverse Effects of Criminal Online Court Hearing on Cross-Examination

Online trials are usually conducted using video and data interconnection technology, with the prosecution and defence not in the same physical space, or with the prosecution and the trial judge in the same physical space and the defence in another physical space,

but whatever the physical space relationship, the ritual and majesty of the courtroom trial is somewhat diluted. In terms of the types of evidence, different types of evidence have distinctive characteristics, and the key to and ways of cross-examination differ. Physical evidence mainly includes physical evidence, documentary evidence, investigation and examination, identification, investigation experiment and other transcripts, as well as electronic data and audio-visual materials. In traditional offline court trials, physical evidence, documentary evidence and transcripts of the investigation and examination, identification and investigation experiments are characterised by their objectivity and are not easily distorted. Verbal evidence is proof of a person's statement, presented in the form of a written record. Statutory verbal evidence of China's criminal proceedings mainly consists of witness testimony, the confession and defence of the suspect or defendant, the victim's statement and expert opinion. Compared to physical evidence, verbal evidence is less objective and reliable because it comes from human verbal expressions, coupled with the fact that there are differences in the value pursuits of diverse subjects. The generalised application of online court hearings to criminal cases, subject to the limitations of internet technology itself, may result in poor communication in court hearings, "distortion" of evidence display and even tampering and forgery of evidence, bringing many potential adverse effects to the cross-examination of criminal cases in online court hearings.

It is also worth noting that the physical evidence in the audio-visual information, electronic data itself relies on electronic technology to form and store in the electronic media, the traditional offline court hearings on the focus of its cross-examination is mostly limited to the authenticity and integrity, that is, whether there is tampering, editing and other circumstances. In terms of the current practice of online court hearings in criminal cases, the application of audio-visual materials and electronic data evidence in online court hearings has become the mode of "court information technology + electronic technology of evidence", "technology" corresponding to "technology". The authenticity and integrity of the model is more favourable to be safeguarded, so the following will not analyse the impact of online criminal court hearings on audio-visual information and electronic data evidence.

3.1 "Distortion" of Physical and Documentary Evidence and Objectivity of Evidence

Physical evidence often plays a very crucial role in criminal cases owing to its extremely high objectivity in the trial of criminal cases. However, it should be noted that in practice, physical evidence can take different forms, with solid, gaseous and liquid possibilities, and its volume can also vary. In traditional offline trials, the production of physical evidence can be in the form of original objects or photographs. For some tangible evidence with special physical properties such as smell and colour, the production of original objects can make the prosecution and the defence and the court have a more intuitive feeling, and also help the effectiveness of the cross-examination. For some sensible evidence that is not easy to produce, such as the original is too large, not easy to preserve, etc., usually use the photo way to produce, cross-examination. Although photographs can reflect the factual state of the physical evidence to a certain extent, they still have a certain degree of distortion. In this regard, the court requires that the photographs took

must be verified with the original object, and only when verified as genuine can they be used as the basis for the case. However, when using the online court format, due to the distance of physical space, it is obvious that the evidence cannot be presented in front of the defence in its original form, even if the prosecution presents the original, but the defence is still unable to fully perceive it with their senses in front of the screen, especially when the evidence is characterised by smell and colour, it is even more impossible to judge it during cross-examination.

The role of documentary evidence is to provide ideas or to prove the facts of the case by its content, which is mostly carried in written documents or other objects. The objectivity and authenticity of documentary evidence can be judged by proving its source, the legality of its preservation and the results of the judicial appraisal to support it. For this reason, the prosecution usually produces photocopies or originals of the evidence in offline trials and, when in a position to make sure that the evidence is not tampered with, produces the original evidence. When the trial is conducted online, the documentary evidence is subject to similar difficulties as the tangible evidence. The party presenting the evidence has the original document, but also other versions such as originals and photocopies, and has a more comprehensive and objective sense of the content and carrier of the documentary evidence, which the defence can still only refute by visual judgement through pictures or videos.

3.2 “Asynchronous” Cross-Examination of Verbal and Transcript-Type Evidence and the Principle of Centralized Hearings and Direct Verbalization

When witnesses testify, they may deliberately provide false testimony due to their special status or interests, or they may be unable to give false testimony due to the limitations of their perception. Suspects and defendants are the subject of convictions and sentences in criminal proceedings and have a personal interest in the outcome of criminal proceedings, so suspects and defendants often provide incorrect facts or conceal the truth when making confessions and defences. Even in cases where the suspect or defendant pleads guilty or guilty to a crime, his or her confession and defence may still be inconsistent or even retracted, making the suspect's or defendant's confession and defence unstable. In the victim's statement, the victim is prone to deliberately expand or reduce the facts of the case founded on the consideration of retribution for the perpetrator or the restoration of his or her own interests, and the possibility of falsehood is greater.

Unlike physical evidence and documentary evidence, the transcripts of the investigation and examination, identification and investigation experiments are formed in the process of investigation and examination of the case scene by the case officer, and are an objective record of the chase scene. Although this kind of evidence is formed after the crime, it is not subjectively influenced by the case officer, so it is still sensible evidence. The examination of the transcripts of the inspection, identification and investigation experiments usually revolves around whether the inspection, identification and investigation experiments were conducted in accordance with the law, whether the transcripts were produced in accordance with legal norms, and whether the transcripts were comprehensive and detailed. There are different views on the probative role of investigation and examination, identification and investigation experiments, etc. Some scholars believe that they are a means of verifying evidence, while others believe that they are used as

a kind of independent evidence to prove the facts of the case. At present, the general theory in China is that investigation and examination, identification and investigation experiments and other transcripts are a means of preserving the traces and objects left behind by criminal activities, in order to supplement other evidence to prove the facts of the case [10]. In judicial practice, in addition to the role of supporting evidence, the transcripts of inspection, identification and investigation experiments are more crucial in proving the legality of the case. In the course of the trial, the examination of the transcripts of the investigation and the field notes was also debated in relation to the legality of investigative actions of the investigators.

In view of these characteristics, article 56 of the Code of Criminal Procedure states that if the officer in charge of the case is unable to give a reasonable explanation for the Defence's challenge. It shall not be applied as evidence. This implies that in order for the prosecution to give an explanation to a defence challenge, the case officer who produced the relevant material must appear in court to explain it. Rule 5(3) of the Online Litigation rules clarifies that witnesses and experts who need to testify. Argue or make statements may be transferred to an offline format upon review by the People's Court. Article 26 also provides for the manner in which witnesses, experts, etc. appear in online court hearings, i.e. they shall participate in court hearings for cross-examination at a place designated by the People's Court, and if the parties have objections to the online appearance of witnesses, experts, etc. and have reasonable grounds, or if the People's Court deems it necessary, it shall require witnesses, experts, etc. to participate in court hearings offline.

A review of the above-mentioned provision reveals that the presentation and examination of verbal evidence are conducted in the manner of "online as the principle and offline as the exception". However, the Online Litigation Rules do not stipulate whether the prosecution and defence and the relevant participants in the proceedings will switch to offline participation if the witness or expert testifies, argues or makes a statement offline, or whether the corresponding information will be transferred to the online court system after the witness or expert has completed his or her testimony, argument or statement in an offline format. At the same time, there is no requirement that the participation of the trial judge, the prosecution and the defence and the relevant participants in the proceedings when witnesses and experts testify, argue or make their statements independently in an offline manner. The principle of centralised hearing requires that criminal proceedings not be interrupted at will. It stipulates that the members of the court, the prosecution and the defence and the relevant participants in the proceedings be present when the evidence is adduced and cross-examined [11]. This is also a reflection of the principle of direct speech. In the absence of a clear answer to the above questions, the arbitrary choice of courtroom format is designed to undermine the authenticity and equality of the courtroom examination, and violate the principle of centralized trial and direct speech.

3.3 Poor Interface of Procedures for the Appearance of Relevant Persons in Cross-Examination

The above analysis shows that, in the process of cross-examination of verbal evidence and transcript-type evidence, the relevant subject may have an obligation to appear in court after the statutory procedures are deemed necessary to testify or explain. However, the

Online Rules of Procedure do not contain the attendance of witnesses, experts and case officers in court in a sufficiently strict manner, or even in a procedural manner. Article 37(2)(3) of the Online Litigation Rules provides that witnesses and experts in online court hearing in criminal cases shall generally appear in court in an offline manner, unless otherwise provided by law or judicial interpretation. This article clarifies the principle that even if online court hearing is applied, experts will still appear offline. Article 253 of the Interpretation of Criminal Procedure provides that a witness may testify by video if he or she is seriously ill or has difficulty moving, has difficulty in transportation, is abroad and unable to return for a short period of time, or for other objective reasons. Article 14 of the Regulations on Court Investigation of Ordinary Procedures for Handling Criminal Cases of the First Instance by the People's Courts (for Trial Implementation) (hereinafter referred to as the Regulations on Court Investigation of Ordinary Procedures for Criminal Cases of the First Instance) extends the applicable subjects who are unable to attend court due to objective reasons to experts and investigators, and clarifies that in addition to video means, other remote means may also be used to appear in court. It can be seen that if witnesses, experts and other subjects are required to appear in court in the course of online court hearings in criminal cases, this means that the relevant subjects have to comply with the offline court hearing norms when they appear in court, however, when the relevant subjects are unable to appear in court due to objective reasons, according to Article 14 of the Regulations on Court Investigation of First Instance Ordinary Procedures in Criminal Cases, the procedure may be reversed to the online form.

4 The Path to Break the Online Trial Cross-Examination of Criminal Cases

The online era is approaching, and online litigation has the opportunity to take off in a big way. The online court hearing as part of the online litigation, cross-examination and is an important part of the online court hearing, analysis of its current criminal cases online court hearing cross-examination in the normative level and practice of the dilemma, and the criminal cases online court hearing cross-examination link to improve the path, is to maintain the litigation rights of the subjects, to ensure the effectiveness of cross-examination, to promote the substantive requirements of the court hearing, many scholars also from the criminal cases online court hearing place requirements In addition, many scholars have suggested that online court hearings should be equally effective as offline court hearings. In addition to the above-mentioned points, the following aspects can be considered in order to improve the cross-examination of criminal cases in online court hearing.

4.1 Upholding the Basic Position of Litigation Rights Protection

Firstly, the right to information of litigation participants should be guaranteed, and they should be fully and truthfully informed of the process, requirements and methods of online court hearings and cross-examination sessions, as well as their rights and obligations, and the way to resolve major disagreements that arise. For example, Article 4 of the Online Litigation Rules makes it clear that the application of online litigation

procedures should be subject to the consent of the criminal defendant and that he or she should be informed of the procedural aspects and methods of participation. If the criminal defendant is a minor, it is clear that the cognitive ability of minors is unable to make a full and rational judgment on online litigation, so it is possible to adopt a system in which the legal representative or one of the defenders of the defendant in public prosecution cases, and the legal representative, litigation agent or one of the defenders of the defendant in private prosecution cases, are present and confirm whether the online court hearing is applicable, thus complementing the criminal defendant's right to information.

Secondly, the right to self-determination of the participants in the proceedings should be guaranteed. At present, the application of China's right to self-determination is mostly limited to the criminal defendant [12], which also means that when the criminal defendant is unable to fulfill his or her procedural rights or has difficulties in using online technology, his or her legal representative, litigation agent or defender can only passively rely on the criminal defendant. Therefore, the right to self-determination should be appropriately expanded, in the case of the authorization of the parties, the legal representative, litigation agent or defender can choose to use the procedure within the scope of the true intention of the parties.

Once again, the right to procedural self-determination should be granted to victims in criminal prosecution cases, their legal representatives and their legal representatives. Although we have made victims one of the parties to criminal proceedings, they are not involved much in the trial of public prosecution cases, except for the right to apply for recusal and the role of assisting the prosecution in bringing charges against the criminal defendant. However, we cannot deny that, whether it is the traditional adversarial justice or the cooperative justice that has received much attention in recent years, how to strengthen the restoration of the interests of victims and the protection of their rights and interests through criminal proceedings has always been hotly debated by the academic community. The newest product in the world is the online criminal trial, which has been discussed above.

Finally, remedial safeguards for the participants' right to cross-examination should be strengthened. The Supreme People's Court, in its interpretation and application of the Online Litigation Rules, pointed out that the provisions on the exchange of evidence and the determination of evidence in online court hearing are in principle not apply to criminal cases [13]. However, the original offline court hearing rules were not formulated in consideration of the problems that may arise in the cross-examination session of online court hearings, such as distortion of physical evidence, tampering with verbal evidence and interruption of the cross-examination session due to technical failures, etc. If they are not combined with the characteristics of online. If the original rules of cross-examination are not combined with the characteristics of online trials, the legitimacy and fairness of online trials may be undermined in judicial practice.

4.2 Clarifying the Application Scenarios for Online Court Hearings in Criminal Cases

We should recognize the value of efficiency pursued by online court hearing. However, for criminal cases, especially major, difficult and complex criminal cases, if the balance between the value of efficiency and the value of justice is unreasonably tilted, it will be a

major setback for human rights protection. According to Article 3 of the Online Litigation Rules, the application of online court hearings is in principle limited to criminal cases that are subject to expedited trial procedures, with the exception of cases of sentence reduction and parole, but this article also provides for a bottom-up clause that criminal cases that are not suitable for offline court hearings for other special reasons may also be subject to expedited trial procedures. At the same time, the Online Litigation Rules do not provide a detailed explanation of “special reasons”, which have led to the phenomenon of judges ignoring the restrictions and applying online court hearing arbitrarily in practice. In addition to the condition that a sentence of up to three years’ imprisonment may be imposed, the application of the speedy trial procedure requires that the facts of the case are clear and the evidence is solid and sufficient. The person being prosecuted has pleaded guilty and pleaded guilty and has no objection to the application of the accelerated trial procedure. A guilty plea means that the person being prosecuted confesses truthfully to the crime and does not contest the facts of the alleged offence, thereby obtaining a preferential sentence. [14] in plea cases, the prosecuting and trial authorities seek greater judicial efficiency, while the person being prosecuted seeks a lenient sentence. This consultative justice based on cooperation of interests is usually not more controversial in court, and the simplification of evidence and cross-examination in the speedy trial process usually does not affect the litigation rights and substantive rights of the prosecution and the defence. Therefore, even if there are technical limitations such as unsynchronised communication, online court hearing in the speedy trial process usually does not have a significant impact on the examination of evidence in court. However, for more complex cases, especially those in which the death penalty may be imposed, we should carefully consider the application of online court hearing. The death penalty means the direct deprivation of the life of the person being prosecuted and is one of the most severe penalties in the system, for which we propose a senseless policy of prudent application. The word “prudent” here requires us to strictly implement the rules of evidence and to fully cross-examine evidence on a case-by-case basis, which is why the relevant authorities independently promulgated the Regulations on Evidence in Capital Cases. Accordingly, we can take the following ideas to alleviate the difficulties.

Firstly, cases are treated on the basis of the penalty that may be imposed, and a distinction is made by weighing whether a heavier penalty is likely to be imposed, for example, excluding from application cases where life imprisonment or the death penalty may be imposed. Secondly, based on the list of evidence handed over by the prosecution, and without considering the facts of the case that the evidence is intended to prove, a judgment is made in the pre-trial conference solely on the characteristics of the form of evidence itself as to whether it is susceptible to difficulties of cross-examination or significant disagreement. If the application of online courtroom trial is likely to cause difficulties in cross-examination or significant disagreement, the online courtroom trial should not be applied to the whole case.

4.3 Improving the Rules for Cross-Examination of Different Forms of Evidence

In the traditional trial cross-examination, different forms of evidence have targeted review focus. Now facing the promotion of the use of online courtroom trial, should

be combined with online cross-examination and the characteristics of each form of evidence clear focus on review, cross-examination content. In the case of physical evidence, for example, the original physical evidence should be prepared in court, except for those that are not suitable for movement or easy to preserve. For the original evidence that cannot be easily produced in court, an independent forensic procedure can be set up to allow the parties and their legal representatives, advocates and persons with expertise to verify the original evidence in offline form through the application before the court. For instance, when verbal evidence is cross-examined, the relevant subject should be present in court and his testimony and statements should be identified, recorded and preserved by the court system at the same time. For subjects who need special personal protection, their identity should be guaranteed and protected by technical means such as voice change and virtual images. For the examination of verbal evidence, in addition to the exceptional protection and identity verification of the person appearing in court, the interface between the online and offline aspects of the examination should also be given attention. The above-mentioned article proposes to further clarify and refine the application scenario of online trial of criminal cases through case triage, but in the face of the complicated judicial practice, the triage method alone cannot fully ensure the smooth conduct of online trial cross-examination, and may still face the problem of the interface between online and offline cross-examination. A poor connection between online and offline cross-examination may violate the principle of centralised hearing and direct speech. The solution can be found in Shanghai's online asynchronous litigation, which allows for effective asynchronous information, the core of which lies in "asynchrony" and "information symmetry". Challenges and comments on the evidence can be transmitted by one party to the relevant platform within a specified period of time, and can be accessed simultaneously by the court hearer and the other party, and rebutted and responded to within a specified period of time. Participants can engage in conversations, mediation, pre-trial meetings and court hearings in a simulated courtroom, in a form similar to a WeChat group chat, within a time frame specified by the judge. This approach ensures timely and comprehensive access to the information provided by each participant, while breaking with traditional simultaneous litigation, and facilitates the implementation of the principles of centralised hearing and direct speech.

5 Conclusion

Biedermeier has said that "justice is not just a pure idea or an imagined dream. It is also certainly entirely possible that the demands of justice will be widely realised in a nation or other community". It is true that promoting the development of online court hearings in criminal cases is bound to face the trade-off between the value of efficiency and the value of justice, but the two are by no means opposed or incompatible, and improving judicial efficiency on the basis of maintaining fairness and justice is what online court hearings in criminal cases should be about. The beginning and ending points for the substantive trial are the evidence, and the cornerstone for the effectiveness of the evidence is the protection of the right to litigation, supported by modern technology and the continuous improvement of the law to regulate it. We believe that online court hearing in criminal cases will promote the healthy development of digital justice with

its unique advantages. We have reason to believe that online court hearing in criminal cases will be a more scientific and intelligent way to uphold social justice. Although we cannot say that the era of numerical justice has arrived, we can foresee that we are moving towards this new era.

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