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Research on Criminal Sampling Forensics Under The Background of Big Data

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Abstract

Sampling forensics, as a method of forensics that has long existed in the field of administrative law enforcement, has been gradually extended to the field of criminal proceedings. In the digital age, there is a large number of homogeneous evidence in some cases, in this case, the public security organs or the public prosecution want to carry out comprehensive evidence will undoubtedly lead to the phenomenon of high cost of evidence, low efficiency, or even can not achieve comprehensive evidence. At this time, the proposal of sampling forensics provides a new way to solve the difficulty of obtaining evidence of a large number of homogenous evidence. However, in criminal proceedings, the application of sampling evidence collection is still in its infancy, and there are still various problems. There are still different opinions on the nature, legality and specific procedure norms of sampling forensics in criminal proceedings. Therefore, this paper will focus on the issue of criminal sampling forensics, its nature, rationality and legitimacy, the problems in practice and the construction of criminal sampling forensics applicable procedures and specific norms to launch a discussion.

Keywords

Big data; Massive evidence; Sampling evidence collection; Method of proof.

1. Overview of the Development of Criminal Sampling Forensics under the Background of Big Data

1.1. Connotation and Characteristics of Sampling Evidence Collection

In criminal proceedings, sampling evidence collection refers to the method by which case investigators randomly select a certain number of objects from a large number of objects according to scientific methods as sample evidence, and then prove the evidence qualification of all objects. The following points can be summarized from the concept: First, the object of criminal sampling evidence has the feature of a large number of objects; Secondly, there is no special restriction on the types of objects, 20 covers all types of evidence; The purpose of sampling forensics is to infer the attributes of all the evidence based on the attributes of the sample evidence, and then confirm with other evidence in the case to make the final decision.

To define the attributes of sampling evidence collection, we should start with the purpose, operation mode and operation subject of criminal sampling evidence collection. Its purpose is to solve the problem of evidence collection. The operation mode and subject can refer to the criminal identification procedure. It is not difficult to find that sampling forensics is not only a new way of forensics, but also a new method of proof. From the point of view of program positioning, it is an unconventional procedure. From the content point of view, mixed interdisciplinary knowledge.

First of all, sampling forensics is a new way of forensics. The traditional evidence collection process emphasizes the comprehensive mining and extraction of potential evidence, but sampling evidence collection is different. Under the premise of reaching the sampling proportion defined by law, random sampling of part as sample evidence is a new evidence collection mode. Compared with the traditional way of evidence collection, it is less difficult, low cost and high efficiency.

Secondly, sampling forensics is a new method of proof. The method of proof is not invariable, the progress of information technology and the change of litigation demand promote the renewal of the method of proof. In the traditional proof process, the evidence presented is directly related to the facts to be proved. Since sampling forensics only extracts part of the sample evidence, in order to make the sample evidence prove the facts to be proved, a step needs to be added in the middle -- sample representative audit, that is, whether the sample evidence reflects the commonality of behaviors pointed to by all the evidence.

Finally, sampling forensics is an unconventional method of procedural forensics, the adjustment of the method of proof does not mean that sampling forensics is regarded as a conventional means, on the contrary, its application must be strictly limited. Criminal sampling technology is in the initial stage of development, the traditional evidence collection mode is still the mainstream, the mainstream method is not feasible to consider criminal sampling forensics.

1.2. Legislative Development of Sampling Evidence Collection

On August 30, 2022, the "Two high and One High" jointly issued the "Opinions on Several Issues on the Application of Criminal Procedure in Handling Information Cyber Crime Cases" (hereinafter referred to as "Opinions on Several Issues in Information Cyber Crime Cases"), of which article 20 added the rule of "proportional or quantitative evidence collection". Including rules for evidence selection, rules for evidence review and rules for evidence acceptance. In fact, in the existing laws and regulations, there are rules of "sampling evidence collection" which function similar to the rules of "proportional or quantitative evidence collection". Up to now, China has a total of 2 laws, 7 judicial interpretations, 68 department rules and other current effective laws and regulations provide for "sampling evidence collection". Sampling evidence collection was first applied to administrative procedures, and then extended to criminal proceedings. First of all, "sampling evidence collection" was first applied to administrative law enforcement and administrative punishment. Article 37 (2) of the Administrative Punishment Law of 1996 clearly stipulates from the legal level that "administrative organs may adopt the method of sampling evidence collection when collecting evidence." Although the law has been amended several times, it still maintains this provision. Subsequently, departmental regulations on administrative law enforcement and administrative penalties such as taxation, agriculture, health, food safety, intellectual property protection and public security administration extensively stipulated sampling evidence collection.

Secondly, "sampling evidence collection" was the first to introduce criminal proceedings in intellectual property crime cases. Article 3 of the 2011 "Opinions on Several Issues concerning the Application of Law in Handling Criminal Cases of Intellectual Property Infringement" stipulates: "When handling criminal cases of intellectual property infringement, public security organs may collect samples of evidence according to work needs, or consult administrative law enforcement departments at the same level and relevant inspection institutions to assist in sampling and collecting evidence. If laws and regulations have provisions on sampling institutions or sampling methods, they shall entrust the prescribed institutions and collect samples in accordance with the prescribed methods." This is the first time sampling evidence collection has been introduced in criminal judicial interpretation, because "subject to higher requirements and standards for proof, traditional criminal procedures are cautious about sampling proof methods, which are mainly used in limited scenarios such as inspection and identification, and the transformation of administrative evidence into criminal evidence".

Finally, "sampling forensics" has gradually expanded to include expedited procedures in criminal cases, telecom network crime cases and drug crime cases. In 2015, the "two high two" "Summary of the Pilot work of the Criminal case expediting Procedure Symposium (II)" Article

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8 stipulates that "for items that are related to the case, whose nature is uncertain, and whose quantity is large or need to be sampled in batches, the person in charge of the public security organ at or above the county level may sample and collect evidence". In 2016, "two high one" "Opinions on several issues concerning the application of law in criminal cases such as Telecommunications network fraud" Article 6 item 1 also stipulates that "Handling telecommunications network fraud cases, due to the limitations of objective conditions such as the number of victims, can not collect victim statements one by one, can be combined with the collected victim statements, As well as verified bank account transaction records, third-party payment settlement account transaction records, call records, electronic data and other evidence, comprehensive identification of the number of victims and the amount of fraud funds and other criminal facts." In 2016, the "Two high and one high" "Provisions on Several Issues in the Procedure of Drug Extraction, Seizure, Weighing, sampling and Submission in Drug Crime Cases" made detailed provisions on the principles and specific operations of sampling and obtaining evidence in drug cases. Similarly, Article 22 of the Provisions on the Handling of CyberCrime Cases by the People's Procuratorates of the Supreme People's Procuratorate in 2021 has similar provisions, "For a large number of similar evidential materials, when proving whether they have the same nature, characteristics or functions, they can be sampled for verification due to objective conditions." In addition, there is the "proportional or quantitative evidence collection" rule stipulated in Article 20 of the "Two High and One High" and "Opinions on Several Issues of Information Cyber Crime Cases" mentioned above in 2022.

2. The Current Dilemma of Criminal Sampling Evidence Collection in the Context of Big Data

2.1. Lack of Legal Norms

The Criminal Procedure Law does not make specific provisions on the specific operation and evidence effectiveness of sampling evidence collection procedures, and the practical departments can only carry out sampling evidence collection based on judicial interpretation and relevant normative documents. Its own legislative level is relatively low, and the most basic issues are not clear, and there are large differences among departments, industries and regions. It is difficult to respond to the requirements of all kinds of case detection in the era of big data. In the investigation and handling of illegal business crimes (tobacco) cases, the "Counterfeit and shoddy cigarettes Identification and Inspection Procedures" are complied with. Because the regulations are very detailed, the court usually recognizes the scientific nature of the sampling method, and focuses on whether the sampling and forensics procedures are legal and compliant. However, when dealing with other types of cases with a large amount of evidence, due to the lack of legal norms, judges have relatively large discretion. Judges need to examine whether the sample evidence represents the overall homogeneous evidence by relying on free mental evidence, which increases the difficulty of identification and requires a high level of judgment for judges.

2.2. Difficulty in Connecting Evidence

In the process of administrative law enforcement, administrative organs have been able to mature the application of administrative sampling evidence collection methods, but China's Criminal Procedure Law has not made corresponding provisions for the application of criminal sampling evidence collection, and the system is not clear in the legal level. Although the evidence collected by administrative law enforcement can become the basis of criminal judgment, the "sampling evidence" obtained by administrative sampling has no corresponding relationship in criminal procedure, which leads to the difficult situation of transforming administrative sampling evidence into criminal evidence.

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China's criminal law adopts the "qualitative + quantitative" conviction model, and the number and amount of crimes are accurately measured, which means that even if the amount of items involved is huge, the investigation organ must also achieve sufficient evidence, which is the bottom line requirement. In the era of data explosion, the difficulty of obtaining evidence gradually increases under the existing judicial resources and conditions of obtaining evidence. However, the evidence collection process and evidence review requirements of the two laws are different, so the evidence can not be "unimpeded" on both sides, the main purpose of criminal litigation activities is to punish crimes, limited by the seriousness of the interests involved, criminal procedure law strict requirements on the process of evidence collection, strict restrictions on the subject of evidence collection, the provision of evidence collection methods and procedures. In contrast, the field of administrative law enforcement is more relaxed, which is generally reflected in the way of inquiry, the place of operation, the difference of the right to inform the obligation and the different evidence review procedures, etc., which leads to that under some circumstances, the criminal court finds that the sample evidence obtained by the administrative law enforcement organs has flawed evidence qualification, or even lacks qualification, and can only be rejected.

2.3. Ignorance or Arbitrary Application of Oriminal Sampling Evidence

Since the legality of criminal sampling evidence collection is not clearly defined in the Criminal Procedure Law, and other normative documents are rarely involved, the judicial organs are unable to obtain clear legal authorization to implement criminal sampling evidence collection methods, making the judicial organs unclear about the applicable premise of criminal sampling evidence collection. Do not know when criminal sampling evidence collection can be applied, do not know the normative procedures of criminal sampling evidence collection, do not know how to analyze the results of criminal sampling evidence collection, judicial organs in the face of cases where criminal sampling evidence collection can be applied, do not know how to start criminal sampling evidence collection procedures, so they can only refuse the application of criminal sampling evidence collection methods. It may lead to the failure to prove the criminal facts of a massive object of evidence, so that the court's determination of the defendant appears abnormally light conviction or random crime.

Secondly, due to the differences in the investigation ability and technical means of public security organs at all levels in the country, public security organs in some areas do not know how to use criminal sampling and evidence collection methods, while public security organs in some places use criminal sampling and evidence collection methods at will, and abuse of criminal sampling and evidence collection methods will not only weaken the effectiveness of sampling and evidence collection. It may even lead to incorrect criminalization or excessive punishment. Criminal sampling evidence collection depends very much on the judgment of the rule of thumb, the number of proof samples can achieve the effect of partial proof of all, that is, the sampling proportion itself is difficult to make a clear figure definition, in practice, basically rely on the experience of judicial personnel judgment. However, such judgment should reach a standard, that is, at least in a certain area, can obtain the general recognition of the case handling organs and personnel, that is, in line with the evidence law of "reasonable acceptability", which depends on the rule of thumb judgment. However, the lack of uniform applicable standards for criminal sampling evidence collection makes the local public security organs apply criminal sampling evidence collection at will, and it is easy to exclude the obtained evidence at will.

3. The Necessity and Feasibility of the Application of Criminal Sampling Evidence Collection under the Background of Big Data

3.1. The Necessity of the Application of Criminal Sampling Evidence Collection

When proving traditional crimes, the evidence to be identified is relatively small in both quantity and scope. In order to ensure that the criminal facts can be accurately identified, the judicial authorities usually adopt the concept of precision justice, requiring objective and accurate confirmation between the criminal facts and evidence, especially for the quantitative requirements of some crimes, the accurate measurement model is adopted. However, in the face of quantified evidence, there are certain difficulties in accurate confirmation, which also makes the application of criminal sampling evidence collection method necessary.

3.1.1. Difficulty in Proving and Limited Evidence Resources

In China's current intellectual property crime cases, food safety crime cases and illegal business crimes and other criminal cases, the main reasons leading to the difficulty of proof can be summarized as four aspects: first, the amount of evidence is large; Second, the defendant is unwilling to truthfully confess because of a fluke mentality; Third, in some crimes, the criminal law takes the result and the amount as the basic basis for conviction, or as an important reference for sentencing, but in the actual operation process, due to the huge amount of material evidence, judicial resources are very limited, it is difficult for case investigators to fully prove according to the requirements of the criminal law, which leads to difficulties in proving; Fourth, Professor Zongzhi Long's assertion of "limited evidence resources" can also explain this problem directly. According to the law of analogy economics, the resources are limited, so is the evidence resources in litigation. What people get are scattered into countless pieces of evidence resources, and it is very difficult to put them together into a jigsaw puzzle that can be restored as much as possible. In the whole process of proof, evidence resources must change with the passage of time, damage and loss, and may even be consumed because of the exclusion of illegal evidence and other reasons, which leads to the fairness and justice pursued by the parties is difficult to achieve, so all parties in the process of litigation should make good use of very valuable and limited evidence resources, reasonable distribution, to maximize the proof.

3.1.2. Common Requirements of Judicial Fairness and Proof Efficiency

Fairness and justice is the ultimate value pursuit of judicial procedures, but not the only purpose, the efficiency and fairness of criminal litigation activities should balance each other, if excessive pursuit of judicial fairness, the use of accurate confirmation in the face of massive homogeneous evidence will inevitably reduce the efficiency of proof, cause the public security organs to take evidence for a long time, resulting in other procedures of the case slow. Or the accumulation of other criminal cases, so that the cases that could be simplified can not be dealt with quickly, the result not only weakens the efficiency of judicial proof, but also affects the credibility of judicial adjudication activities.

At the same time, in the long process of obtaining evidence, the evidence materials may be damaged due to high storage costs or storage difficulties, which will further affect the identification of criminal facts in the case. For example, in the case of destroying wildlife resources, the live breeding of wild animals requires a large area of cages and professional feeders and veterinarians. At the same time, the dead body and its products have the characteristics of easy corruption and difficult preservation. When investigating the case of destruction of wildlife resources, the public security organs usually find a large number of wild animal remains as evidence. Usually, these wild animal remains have been decapitated, skinned and disassembled. When checking the objectivity of such evidence, a large number of external identification information of wild animal remains has been lost. The public security organs can only verify the species status of the remains through DNA comparison technology. First of all, the cost of this kind of DNA verification technology is very high, and the cost of obtaining evidence for the whole case has increased greatly. Secondly, DNA verification technology can only be carried out one by one, and it is impossible to conduct large-scale mechanized verification, which leads to slow verification progress of the whole case. If DNA verification is carried out one by one for the wild animal residues seized, the efficiency of proving the whole case will be greatly reduced. At the same time, because the wild animal residues themselves are easily corrupted, it is very difficult to preserve. It is easy to lead to the loss of evidence of wildlife remains, which ultimately affects the identification of the crime facts of the entire case.

China's "Criminal Procedure Law" Article 156 and Article 208, for the investigation and trial of criminal cases have a clear legal time limit, only encounter special circumstances or complex cases can apply for delay of time limit, legal time limit is to protect the rights of the defendant, and in the face of massive evidence there are difficulties in obtaining evidence, One by one accurate confirmation is impossible to complete in a short period of time, while the verification process of mass evidence is also very slow, if only the pursuit of judicial justice, may be extended after the legal period may not be able to achieve the purpose of full evidence, proof. The delay of criminal procedure time will inevitably make the rights of the defendant in a state of uncertainty for a long time, which is not in line with the purpose of the criminal legal period system, and criminal sampling evidence can significantly improve the efficiency of judicial proof, reduce the possibility of the detained defendant being delayed detention period, so as to promote the efficiency of judicial proof and achieve the purpose of protecting the human rights of the defendant.

In the face of homogeneous mass evidence background conditions, on the basis that the basic criminal facts of the case can be confirmed by criminal sampling evidence, it is necessary to avoid accurate verification of mass evidence one by one, which can appropriately weaken the pursuit of accurate justice, in exchange for improving the efficiency of criminal proof. However, sampling forensics can balance the relationship between fairness and efficiency. In the face of mass evidence, criminal sampling forensics takes the form of sampling a small amount of representative evidence. Only by analyzing a small amount of sample evidence, the whole case facts can be presumed accordingly. Compared with accurate verification one by one, criminal sampling forensics takes less time to analyze a small number of samples of evidence, which reduces the time of accurate verification one by one by judicial organs, and is also conducive to shortening the entire procedure consumption time, saving judicial proof resources, and improving judicial proof efficiency.

3.2. The Feasibility of Criminal Sampling Evidence Collection

3.2.1. Sampling Evidence Collection Has Not Lowered the Standard of Proof

At present, some scholars hold different opinions on sampling forensics, mainly for the following reasons: First, sampling forensics lacks applicable specific norms, and legal response is absent. From the conditions of application to sample selection to method selection, from extraction to storage to submission for inspection, as well as subsequent evidence, cross-examination can not be reached in each criminal case; The second reason is that some scholars have pointed out that in Western countries, the criminal justice system often distinguishes the qualitative and quantitative aspects of criminal behavior, and takes "beyond reasonable doubt" as the proof standard in the qualitative process, but does not stipulate the quantity and amount, so as to reduce the difficulty of proof. The amount only affects the quantitative and sentencing. At the quantitative stage, lenient procedural rules and different standards of proof are adopted, giving judges greater discretion. In contrast, in China, there is no clear division between qualitative and quantitative, the whole case should reach a unified standard of proof. However, the use of sampling evidence means that the facts of the case are not proved by all the evidence, but through the proof of the sample, and the rule of thumb and other facts are presumed to

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indirectly prove the facts of the case, which is a departure from the unified standard of proof in criminal cases, and will lead to the failure to achieve the proof effect of "beyond reasonable doubt". However, this is not the case.

In our country's long-term judicial practice, the academic circle has long adhered to the viewpoint of "objective truth theory" on the issue of proof standards in criminal cases, and held that legal truth can not replace objective truth. However, subject to many possible reasons such as subjective and objective, not every case can be proved to the degree of objective truth. In the face of reality, raising the probability value of proof, moving closer from "legal truth" to "objective truth", taking "objective truth" as the pursuit and goal of judicial activities, is more in line with the current situation of judicial practice in our country, and is a feasible idea to improve the method of proof.

When sampling evidence is adopted as a new, flexible and flexible method of proof, the case handling personnel should ensure its rationality and legitimacy. As long as sampling is carried out in accordance with the procedures prescribed by law, adhering to the sampling principle, selecting the right sampling method, improving the sampling steps, supervising the sampling procedure and strengthening the review of sampling results, the problems such as the increasing probability caused by the increase of human intervention in sampling evidence collection can be solved, which should not be the reason for denying sampling evidence collection.

At present, some scholars believe that sampling evidence collection will lead to the reduction of the standard of proof, that the results of sampling evidence can only reach the "highly probable" standard of proof, so it can only be applied to the field of administrative law enforcement or civil litigation cases. The root of this misunderstanding lies in the failure to correctly understand that the objectivity of the standard of proof is aimed at the whole facts of the case, rather than the individual component elements or the provability of one of the components. Article 55 of the Criminal Procedure Law stipulates that "the evidence of the whole case should be integrated, and the facts determined have been beyond reasonable doubt". What the standard of proof points to is not individual evidence from beginning to end, but the proof requirements that the whole case evidence should meet on the whole case facts. A single evidence can not be used as the basis for the final case, there must be multiple evidence to confirm each other, combined to play a proof role, may make the whole case evidence to form a relatively complete evidence chain, but also make the case facts to meet the requirements of higher probability. As one of the evidence of the whole case, the result of sampling evidence will not directly play a decisive role in the judge's heart evidence. To form the heart evidence "beyond reasonable doubt", the judge also needs to analyze other evidence involved in the case according to personal experience and knowledge background, and judge the proof power of the evidence, the connection between the evidence and the relationship between the evidence and the case facts.

3.2.2. Sampling Evidence Collection Conforms to the Objective Needs of Criminal Proceedings

First of all, in criminal cases involving a large number of objects of proof, if the pursuit of absolute fairness and justice, and take evidence one by one, one by one to complete the proof, it will inevitably lead to the waste of judicial resources and the delay of the litigation cycle, and then lead to the passive consumption of evidence resources, and may even be due to the storage, poor storage and other human factors lead to the variation of evidence, damage. It is not conducive to protecting the rights and interests enjoyed by the parties in accordance with the law. Therefore, in such specific situations, we should dilute the pursuit of absolute fairness, but strive to improve efficiency under the premise of ensuring relative fairness, balance the mutual relationship between the two, and rationally allocate judicial resources.

Secondly, in cases involving a large number of proof objects, a large number of physical evidence plays a very key role in the evidence of the above cases, which is indispensable and has irreplaceable significance. However, in practice, due to limited judicial resources and tight investigation deadlines, it is often impossible to achieve complete evidence collection and identification for these material evidence. The implementation of sampling evidence collection can alleviate this contradiction to a great extent. By exploring and observing the overall law and nature of sufficient samples selected, it will neither waste the great proof value of the object of proof, nor neglect the benefit due to excessive pursuit of absolute fairness. The material evidence completed by sampling evidence collection is an important link in the chain to confirm the criminal behavior and the seriousness of the case. Moreover, the evidence obtained by sampling evidence collection can not only prove the objective elements of the defendant's behavior, but also infer the subjective state of the defendant.

4. The Systematization of Criminal Sampling Evidence Collection Rules under the Background of Big Data

At present, the rules of sampling evidence collection in criminal laws and regulations are relatively rough, in order to better apply in criminal proceedings, a separate criminal judicial interpretation should be formulated to build systematic rules of criminal sampling evidence collection. At the same time, it should be noted that because sampling evidence collection effectively reduces the burden of proof of the prosecution, in order to avoid the abuse of sampling evidence collection by the prosecution in practice, it is necessary to conduct reasonable restrictions on sampling evidence collection. In addition, because the rules of sampling forensics in administrative procedures developed earlier, so in the systematic process of criminal sampling forensics rules can be based on the special requirements of criminal proceedings, the rules of sampling forensics in administrative procedures for reference, and adapt to the specific needs of mass evidence in the digital age. The systematic rules of criminal sampling evidence collection can be stipulated in detail from several aspects such as application conditions, application scope, sampling methods, specific procedures and procedural cohesion.

4.1. Conditions for Application of Criminal Sampling Evidence Collection

The use of criminal sampling evidence as a presumption is used to "deprive the accused of life, freedom and other most basic and serious rights and interests, there is indeed a greater risk... It must be used in the exhaustion of other difficulties to prove the solution still can not be solved before criminal sampling evidence. And in the case that the relevant conditions are not fully available, only limited attempts can be made in specific cases, and it must not be carried out too quickly, otherwise it will cause the society to question the fairness of justice." Therefore, in criminal proceedings must first clear the applicable conditions of sampling evidence, beware of abuse, "information network crime cases several issues Opinions" article 20, paragraph 1 of the conditions of sampling evidence restrictions have a certain rationality: 1. The number is particularly large; 2. of the same nature, character or function; 3. It cannot be collected one by one due to objective conditions. For the first and second conditions, "because the object of statistical study of the characteristics of aggregate quantities is to discover and reveal the laws of phenomena, and the laws of phenomena can only be revealed by extensive observation." Therefore, the population should be statistically composed of a sufficient number of homogeneous units ". This is why criminal sampling forensics based on the principle of statistics must require a large number of forensics objects and have homogeneity. For the third condition, the judgment that it is impossible to collect one by one because of objective conditions actually implies that comprehensive forensics is objectively impossible or extremely uneconomical in efficiency, so that criminal sampling forensics can be adopted. For example, some scholars suggest that in the cases of information network crimes involving stakeholders, "there are often many victims, and it is impossible to make a record one by one. In principle, for the victims in the province, a record should be made; For victims outside the province, a certain proportion of sampling can be determined to make the record ".

4.2. Scientific Methods for Obtaining Evidence Through Criminal Sampling

4.2.1. General Requirements for the Scientificity of Criminal Sampling Evidence Collection Methods

In general, "Scientific sampling forensics, one is to ensure the representativeness of the sample, the second is to ensure the adequacy of the sample". The Supreme People's Procuratorate Guiding Case No. 100, "Chen Li and other eight people's Copyright Infringement Case", put forward the guiding opinion, "attention should be paid to examining whether the sample is representative, whether the sampling scope is consistent with other evidence, whether the sampling has randomness and other factors affecting the objectivity of sampling." There are generally two different methods to judge whether the sampling method is scientific: First, if the law or professional standards have special provisions on the sampling method of a certain evidence, as long as the specific sampling behavior meets the provisions, then it can be regarded as meeting the scientific requirements of the sampling method. Second, if there are no special provisions in the law or professional standards, then whether the sampling method is scientific needs to be evaluated by people with specialized knowledge.

4.2.2. Specific Methods of Sampling and Obtaining Evidence of Different Types of Evidence

Based on the representative requirements of sampling forensics and the characteristics of different types of evidence, the sampling methods of different types of evidence should also be different. In traditional types of cases that do not involve electronic data, sampling evidence collection methods generally have specific provisions. But mentioned the information network crime cases involving massive electronic data, because "the types of electronic data involved are complex, and the individual attributes of the same electronic data are very different, so the use of a single type of sampling method can not meet the practical needs." Therefore, some scholars have proposed that a typified sampling forensics method system should be constructed for the massive electronic data in the digital age: when the quantity of massive electronic data can be identified, random sampling should be taken. Among them, random sampling can be taken for homogeneous electronic data and stratified sampling can be taken for different quality electronic data; When the quantity of massive electronic data can not be identified, we can take "snowball" sampling or link tracking sampling. Of course, whether random sampling, equidistant sampling, stratified sampling or "snowball" sampling or link tracking sampling should be adopted for different types of evidence needs to be specified by criminal law or professional standards in combination with the characteristics of different types of evidence.

4.3. Specific Procedures for Obtaining Evidence Through Criminal Sampling

At present, the criminal judicial interpretation of sampling evidence collection procedures are relatively rough, but from the perspective of the system of criminal sampling evidence collection rules, there are still many problems to be specified.

4.3.1. Concretization of Sampling Procedure

First, the initiation of the sampling procedure. Based on the dual nature of sampling evidence collection, in order to avoid its abuse, even if the criminal law stipulates that sampling evidence collection can be applied in specific procedures and specific types of cases, its initiation should have certain restrictions. For example, Article 8 of the Summary of the Pilot Work Symposium on expediting procedures in Criminal Cases (II) in 2015 stipulates the approval procedure for sampling evidence collection, "for items that are related to the case, whose nature is uncertain,

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and whose quantity is large or need to be sampled and inspected in batches, sample evidence can be obtained with the approval of the person in charge of the public security organ at or above the county level." Similarly, Article 109 of the Provisions on Procedures for Handling Administrative Cases by Public Security Organs also provides that "sampling and obtaining evidence may be adopted when collecting evidence with the approval of the person in charge of the case handling department of the public security organs". For example, since sampling evidence collection in administrative cases requires the approval of the person in charge of the organ, then criminal proceedings that are more serious than administrative penalties should set up approval and start-up procedures. Therefore, it is suggested that if sampling evidence is to be taken in criminal proceedings, it must be approved by the head of the public security organ at or above the county level.

Second, expert assistance in sampling and forensics. Because sampling forensics needs to use the principle of sampling statistics, it must be assisted by people with specialized knowledge to avoid sampling forensics methods do not conform to the principle of sampling statistics, resulting in the presumption of facts may appear large deviations. Of course, in specific types of cases, if the criminal law or professional standards (such as the "counterfeit and shoddy cigarettes Identification Inspection Procedures (Trial)" mentioned above) have detailed provisions on sampling methods, sampling methods are relatively simple, then there is no need for expert assistance.

Third, the list of sampling evidence should be made. In this regard, you can refer to the provisions of chapter 36 of the "Rules for Law Enforcement of Public security Organs (3rd edition)", you should "issue a list of sampling evidence" on the spot, indicating the cause of the case, the unit handling the case, the name of the holder of the sampled items, such as identity, sampling time and place, as well as the name, specification, quantity, characteristics of the sample, etc. Confirmed by the signature of the personnel, the holder of the sampled items or the witness, the holder of the sampled items refuses to sign, the personnel should indicate on the list of sampling evidence. The List of Sampling Evidence for collection of Evidence shall be made in duplicate, with one copy to be delivered to the holder of the sampled articles and the other attached to the copy ".

Fourth, the right to know, the right to participate and the right to be present in sampling evidence collection. Some commentators believe that "due to the particularity of the public security organs in handling criminal cases, in order to ensure the smooth progress of investigation work, in practice, the parties are not required to be present before sampling evidence collection." Similarly, light light, "fire rescue agencies handling administrative case procedures" article 38 stipulates, "sampling evidence, should notify the parties present, the parties refuse to show up or temporarily difficult to determine the parties, can be witnessed by the present disinterested person." From the perspective of protecting the rights of the accused, the accused or the defense lawyer should have the right to be present for criminal sampling evidence collection. Therefore, the prosecution should notify the accused or the lawyer before the criminal sampling to ensure the justice of sampling collection, especially the accused's right to know and participate in sampling collection.

4.3.2. Explanation and Objection of Sampling Results

First, the situation of sampling evidence needs to be explained and demonstrated. Sampling evidence collection should follow the principle of sampling statistics, so it must be detailed explanation and demonstration of sampling evidence collection, otherwise the participants and the judge can not effectively review the scientific nature and legality of sampling evidence collection.

Second, criminal sampling evidence collection is a rebuttable presumption, so the accused must be given and fully guaranteed the right to object and refute the right of criminal sampling

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evidence collection. However, Article 20, paragraph 3, of the Opinions on Several Issues of Information Cyber Crime Cases only stipulates that "the people's procuratorate and the people's court shall review and confirm the evidence obtained in combination with other evidence materials, as well as the defense and defense opinions of the criminal suspect, defendant and their defenders", and does not stipulate that if the accused has objections to the sampling and forensics results, These need to be further refined provisions.

5. Conclusion

In essence, sampling forensics proof is a method of reasoning based on scientific laws, which can be divided into numerical sampling forensics proof and non-numerical sampling forensics proof. The facts to be proved by non-numerical sampling evidence are generally general facts such as subjective purpose and objective behavior, which can be directly determined by the judge after free heart evidence. What the numerical sampling evidence needs to prove is the definite value, and the identification of the value is often difficult to meet the requirements of precision and clarity, so there are proof obstacles. In essence, sampling evidence is a special proof method, which generates new evidence different from the sample evidence. In order to realize the standardized operation of sampling evidence as a whole, we should expand the standardized positioning of sampling evidence from procedural method to evidence method. Accordingly, the law of our country should clarify the evidence status of the sample evidence report as soon as possible, and improve the system guarantee of sample evidence proof around the sample evidence report. Finally, it should be noted that, for the convenience of the research, this paper will study the sampling evidence independently, but the basic principles of sampling evidence and the relevant theories of standardized operation in this paper can also be used for reference and appropriate application to the sampling identification certificate and the identification sampling certificate.

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