

Research on the Relationship between Criminal Technology Appraisal and Judicial Appraisal

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Abstract: As the product of the development of science and technology to a certain extent and stage, criminal technology, criminal technology identification and judicial identification have been harmed by the vague and mixed use of theory and practice due to the application of their own technical means, which has affected the scientization of investigation, restricted the scientization of trial and even hindered the deepening of judicial identification system reform. The causes and changes of its fuzzy and mixed use are traced back and investigated. It is found that the differences between them in the scope of technology, reliability and function of results should be distinguished. In the process of deepening the reform of judicial identification system, in addition to the preliminary theoretical demarcation of criminal technology, criminal technology identification and judicial identification, it is also necessary to establish the access system and elimination system of judicial identification technology, and the transformation mechanism from criminal technology identification to judicial identification to adjust to it.

1. Introduction

China's criminal procedure law places identification in the legislative position of investigation, which makes investigation practice more dependent on criminal technology, especially the function of criminal technology identification, so that judicial identification is replaced by criminal technology in discipline construction, and also gives birth to the habit that early theoretical research and textbooks regard judicial identification as one of the main contents of investigation. This kind of theoretical guidance, especially the concrete image formed by the strong dependence of investigation on criminal technology and the close relationship with identification, casts the external "picture" of the dependence or even dependence of judicial identification on criminal technology, so that in judicial practice, the judicial identification system established by the authorities of the identification institution is formed. Driven by multiple factors such as litigation efficiency, investigation convenience and the external situation of timely investigation, the investigation organization with insufficient technology combines the identification organization with the Criminal Technology Department, and gradually evolved into the basic mode of integration of criminal technology, criminal technology identification and judicial identification. The decisive factor behind the formation of this pattern, the establishment of the theory and the long-term existence of the system is the science and technology it carries. To some extent, the neutral colorless nature of science and technology makes scholars mix and use criminal technology, criminal technology identification and judicial identification indiscriminately, and the original boundaries are more blurred because of being covered^[1].

2. Summary of Criminal Technology Appraisal and Judicial Appraisal

2.1 Criminal Technical Identification

Criminal technical identification refers to the activities that the appraisers make use of the traces, articles and relevant archives in the investigation process to compare, detect and identify the suspicious people, objects and their reflected images. It includes not only identification by

technology, but also identification by organizational data. In many cases, criminal technical identification is the identification activity of finding and confirming comparative samples or suspicious objects, which is the investigation activity in the early stage of judicial identification. Generally speaking, the identification of criminal technical identification is a means of investigation. Its main purpose is to find and preserve the evidence about the criminal and the criminal behavior (including the result of the crime) by applying the laws of natural science, which is different from the identification in the trial. In investigation, although criminal technology identification is used as an activity to assist and serve investigation, its technology application is covered by criminal technology, but its applied technology is still different from general criminal technology, not all criminal technology can be applied to criminal technology identification, it belongs to a part of criminal technology with special requirements^[2].

The techniques applied in criminal technology identification are mostly concentrated on “techniques of identification and evidence identification”, which are embodied in trace inspection techniques, document (including handwriting) inspection techniques, criminal physical and chemical inspection techniques, criminal biochemical inspection techniques, voiceprint identification techniques, odor (including police dog) identification techniques and psychological measurement(Lie detection) technology, human body appearance recognition technology and computer recognition technology in network investigation. Some criminal identification technologies are not suitable for judicial identification at present, such as footprint identification technology, odor identification technology, psychological testing (lie detection) Technology, human body appearance identification technology, etc., but the results of the application of these technologies can be used as the basis for obtaining investigation clues, determining the scope of investigation and even determining the evidence of criminal suspects, as well as for case analysis and making investigation plans. Some relatively mature and highly objective instruments and laboratory assisted criminal technology identification technology can be used as judicial identification technology. Such as trace test technology, document (including handwriting) test technology, criminal physical and chemical test technology, criminal biochemical test technology. However, when the results of the application of these technologies are used as evidence, they need to go through strict notification procedures to reflect the nature of litigation. ① The technology of criminal identification should be open. As a part of criminal technology, the scope of application of criminal identification technology is relatively narrow compared with criminal technology^[3].(Figure 1)



Fig.1 Criminal Technology Identification

2.2 Judicial Expertise

Judicial appraisal refers to the activities in which the appraisers use science and technology or expertise to identify and judge the special issues involved in the litigation and put forward appraisal opinions. The result is mainly as evidence to prove the facts of the case. Generally speaking, “the identification system takes the court as the main body, on the contrary, the criminal identification takes the investigation organ as the main body, which is different.” Judicial identification and criminal technical identification are two different legal issues. Criminal technical identification is a

kind of identification activity in the traditional sense before the end of criminal investigation. In essence, it is a kind of identification activity, and its result can not be completely used as the evidence for the final decision. Some identification data are limited to criminal technical identification due to the independent control of the investigation organization, such as the comparison of fingerprints left on site and fingerprint database, and the comparison of DNA database. Compared with criminal technology identification, some criminal identification technologies can not be used as judicial identification technologies, such as footprints identification technology, police dog technology, criminal appearance technology, psychological measurement (lie detection) technology. Among them, the police dog technology refers to the criminal application technology which can make the police dog play a role in the investigation, case solving and security prevention through the training of police dog and scientific organization. Mainly used in tracking, identification, search, patrol, escort, rescue and other activities. Criminal appearance technology is a special criminal technology for investigators to solve the problem of personal identity in a case according to the physiologic and anatomical characteristics of appearance and the characteristics of appearance structure. It mainly includes the technology of superimposition of cranial images, the technology of restoration of cranial images, the technology of identification of human images, the technology of oral appearance and imitation of images, the technology of identification and camouflage of appearance, the technology of combination of human images and the computer of criminal appearance Establishment of information files. These techniques are not suitable for judicial identification at present because they do not reach the reliability and credibility as the final evidence^[4].



Fig.2 Judicial Identification

3. The Relationship between Criminal Technical Appraisal and Judicial Appraisal

Criminal technology, criminal technology identification and judicial identification are all related to the application of science and technology. Some technologies have some similarities in their application, and even can become common technologies. However, due to the sequence of criminal technology, criminal technology identification and judicial identification in criminal proceedings, there are different requirements for technology application in different stages of proceedings due to different tasks, especially for the cost of technology application and the cost of litigation economy, the application of technology should be different in scope, degree and result needs. At the same time, technology There are also differences in technical application methods due to different emphasis and characteristics. At present, these problems have not been paid enough attention in theory or in practice, and there are even some vague understanding and views^[5].

“In modern times, even if there is a system of identification in criminal proceedings, there is expert help when conducting investigation activities. If investigators don't arm themselves with all kinds of special knowledge, if they can't personally use all kinds of special scientific and technological means in investigation activities, it is impossible to carry out all investigation practice activities. And it is also necessary for investigators to have these expertise to use the help of experts to correctly entrust appraisal and evaluate appraisal results. “ Although the importance of criminal technology in investigation is increasingly prominent, it is not desirable and unnecessary in practice if all the applications of science and technology are regarded as forensic technology. Some scholars

call all the evidence materials related to science and technology as “scientific evidence”, which is a typical theoretical reflection of vagueness of criminal technology, criminal technology identification and judicial identification. Based on the objective and neutral requirements of the conclusion as evidence, especially the differences of technology in criminal technology, criminal technology identification and judicial identification application, they should be distinguished in theory and practice. As an auxiliary means of investigation, criminal technical identification has the characteristics of internal and unilateral in the whole litigation structure, while the judicial identification based on the trial needs to be open and neutral, which is more reasonable and legitimate to be made by a neutral third party^[6].

4. The Adjustment of the Relationship between Criminal Technical Identification and Judicial Identification

4.1 Establishing the Access and Elimination System of Forensic Technology

Although the judicial expertise in China has gone through 50 years Many years of practice, but for which science and technology or expertise can be used as identification technology in judicial identification activities, there has not been a unified evaluation system and standardized indicators, resulting in some technologies that are not robust, effective and verifiable as judicial identification technology, such as lie detection technology, bone age identification technology, human body appearance identification technology, police dog Technology and so on, even some appraisal institutions still use some so-called self-made technologies that are not disclosed. ① There are still traditional “pragmatism” habits and a simple extensive stage for our use in the technical level of judicial identification in China. Some backward or obsolete identification technologies are still applied in judicial identification. For example, the failure rate of PCR polyacrylamide silver staining electrophoresis in DNA identification is as high as 50%, which should be eliminated as a judicial identification technology. ② The problem goes far beyond that. Judicial expertise in the technical level has been far from meeting the needs of modern litigation, some of which have affected judicial justice. Faced with the reality that new technology is constantly emerging and litigation demands high requirements for judicial expertise, the competent department of judicial expertise should combine the practice of judicial expertise with reference to foreign experience, ③ organize national authoritative experts to evaluate and clean up the authentication technology by using reliability evaluation indexes such as verifiability index, technical maturity index and technical robustness index, and establish judicial expertise Technology access and elimination system, timely release access and elimination of forensic technology to meet the basic requirements of judicial activities for forensic as evidence^[7].

4.2 Establishing the Transition Mechanism from Criminal Technical Expertise to Judicial Expertise

The differences of criminal technology, criminal technology appraisal and judicial appraisal in technology application and the different requirements of litigation not only require the theory to distinguish criminal technology, criminal technology appraisal and judicial appraisal, but also require the establishment of the transformation mechanism from criminal technology appraisal to judicial appraisal in the system, so as to ensure that the criminal technology appraisal meeting the standards of judicial appraisal can be transformed into judicial appraisal Judicial identification, so as to improve the efficiency of litigation and save identification resources. According to the internal requirements of the reform of the judicial expertise system, the transformation mechanism from criminal technical expertise to judicial expertise needs to be reformed in the following aspects: first, the separation of the criminal technical department and the criminal technical expertise institution. Second, the criminal technology appraisal institutions accept the registration management of the judicial administrative department. The third is that the criminal identification technology belongs to the identification technology that the judicial administrative department has access to. Fourth, the criminal technology identification laboratory has been certified by the state. Fifth, the conclusion of

criminal technology appraisal should be clear (positive or negative conclusion). Sixthly, the criminal technology appraisal shall perform the notification procedure according to law. The seventh is to establish the relief procedure of criminal technical identification^[8].

5. Conclusion

With the development of democracy and legal system in our country, especially the promotion of the idea of procedural justice, the modern litigation system strongly requires that the judicial appraisal should be transformed from the investigation behavior to the litigation proof behavior. The pivotal role of judicial appraisal in the litigation process also urgently needs its transformation from the technical reconnaissance means to the basis of the judicial justice. However, these subtle changes and inherent needs have not attracted the attention of the theoretical and practical circles. The indifference of theory to system demand not only aggravates the tension between criminal technology, criminal technology identification and judicial identification in litigation, especially some theories fail to distinguish them clearly and keep appropriate restrictions on technology application, which makes the relationship between them more ambiguous and difficult to determine. This seemingly simple problem does not need to be studied theoretically. In essence, it silently sets up many theoretical and institutional obstacles to the reform of the existing judicial expertise system in China, which leads to many problems in practice and becomes one of the controversial systems. These problems not only affect the scientization of investigation, restrict the justice of trial, but also hinder the deepening of the reform of judicial identification system. Therefore, it is necessary to make a reasonable definition of criminal technology, criminal technology identification and judicial identification, clear the boundary to eliminate the potential resistance of judicial identification system reform, and then scientifically optimize the allocation of judicial identification resources, so as to play their absolute advantages and due functions in the process of litigation.

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