4th International Symposium on Sino Swiss Evidence Science
7–8 September 2022

current directions for science, evidence and judicial proof

University of Lausanne
Faculty of Law, Criminal Justice and Public Administration
School of Criminal Justice

China University of Political Science and Law
Institute of Evidence Law and Forensic Science
中国政法大学证据科学研究院

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Symposium Statement

Welcome to the **4th International Symposium on Sino Swiss Evidence Science 2022 (4th ISSSES)!**

The 4th ISSSES will be held **online** on **Wednesday September 7 and Thursday September 8, 2022**. The symposium provides a forum for discussions on the current breakthroughs and new directions in the fields of evidence, science and the law, and the intersections of these fields. The symposium is organized by the School of Criminal Justice (University of Lausanne) and the Sino Swiss Evidence Science Research Center (SSESRC), jointly operated by the University of Lausanne (UNIL) and the China University of Political Science and Law (CUPL), chaired by Professor Baosheng Zhang, former vice president of CUPL.

The ISSSES scientific organizing committee is composed of Professors Christophe Champod and Alex Biedermann (UNIL), and Professors Baosheng Zhang, Xu Wang and Yuanfeng Wang (CUPL).

The symposium topic is:

Current Directions for Science, Evidence and Judicial Proof

The 4th ISSSES will promote the interchange of ideas between Chinese and Swiss lawyers, forensic scientists, criminologists, legal scholars and their foreign counterparts. Their perspectives on the advancement of the administration of justice in an interdisciplinary perspective will be of interest to all scholars and researchers who work on pending challenges at the frontiers of their respective fields of expertise, and who seek to develop and explore novel cross-disciplinary approaches.

The 4th ISSSES is supported by:

• The "Double First-Class" University Plan
• The "2011 Plan" of China – Collaborative Innovation Center of Judicial Civilization
• The "111 Plan" of China – Evidence Science Innovation and Talent Base

On behalf of the Hosts and Sponsors, we are delighted you are joining us for the 4th International Symposium on Sino Swiss Evidence Science 2022 (4th ISSSES). We are looking forward to fruitful exchanges on evidence and proof for the administration of justice through an interdisciplinary and international exchange.

Christophe Champod *&* Alex Biedermann
University of Lausanne

Baosheng Zhang, Xu Wang *&* Yuanfeng Wang
China University of Political Science and Law

Symposium Programme

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<tr><td colspan="4">Opening and welcome
Prof. Xu Wang
Institute of Evidence Law and Forensic Science, China University of Political Science and Law</td></tr>
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Prof. Ronald J. Allen, John Henry Wigmore Professor of Law
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<tr><td colspan="4">The admissibility of scientific evidence: exploring the significance of the distinction between foundational validity and validity as applied
Prof. Edward J. Imwinkelried, Edward L. Barrett, Jr. Professor of Law Em.
University of California Davis School of Law</td></tr>
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Day 1: Wednesday September 7th 2022

Forensic Science and Criminal Law (Switzerland and U.K.)

Zoom meeting ID: 896 1384 4162

Chair: Prof. Christophe Champod, Vice Dean and Head of School, Faculty of Law, Criminal Justice and Public Administration, School of Criminal Justice, University of Lausanne

Beijing	Lausanne	Chicago, IL	Davis, CA
14.00 h	08.00 h	01.00 h	23.00 h (Tue Sept 6th)

Opening and welcome

Prof. Christophe Champod, University of Lausanne

14.15 h	08.15 h	01.15 h	23.15 h (Tue Sept 6th)

Methodology for evaluating data from stylometric analyses

Valentina Cammarota, Ph.D. student, University of Lausanne

15.00 h	09.00 h	02.00 h	00.00 h (Wed Sept 7th)

Characterisation and classification of white automotive paint of same manufacturer with Fourier transform infrared spectroscopy and chemometrics

Lei Lei, Ph.D. student, University of Lausanne; Prof. Geneviève Massonnet, University of Lausanne

15.45 h	09.45 h	02.45 h	00.45 h (Wed Sept 7th)

Real time qualification and quantification of illicit drugs using handheld Near-Infrared spectroscopy connected with mobile phone application. An opportunity for forensic laboratories to cope with the trend toward the decentralization of forensic capabilities.

Prof. Pierre Esseiva, University of Lausanne; Florentin Coppey, M.Sc., University of Lausanne

16.30–16.45 h	10.30–10.45 h	03.30–03.45 h	01.30–01.45 h

Break (15 min)

Chair: Prof. Alex Biedermann, University of Lausanne

16.45 h	10.45 h	03.45 h	01.45 h

The contribution of bodycam images in a forensic perspective – testing the waters

Prof. Olivier Delémont, University of Lausanne; Michaël Meyer, Ph.D., University of Lausanne

17.30 h	11.30 h	04.30 h	02.30 h

Data science for digital forensics: Promises and pitfalls

Prof. Rebekah Overdorf, University of Lausanne

18.15 h	12.15 h	05.15 h	03.15 h

Expert evidence exceptionalism reconsidered

Prof. Paul Roberts, University of Nottingham & China University of Political Science and Law

19.00–19.15 h	13.00–13.15 h	06.00–06.15 h	04.00–04.15h

Closing words (discussion and conclusion) of Day 1

Prof. Christophe Champod, University of Lausanne

Day 2: Thursday September 8th 2022

Evidence Law and Forensic Science (China)

Zoom meeting ID: 896 1384 4162

Chair: Prof. Dong Zhao, Vice Dean of the Institute of Evidence Law and Forensic Science, CUPL

Beijing	Lausanne	Chicago, IL	Davis, CA
09.00 h	03.00 h	20.00 h (Wed Sept 7th)	18.00 h (Wed Sept 7th)

The referential significance of ENFSI Guideline to Chinese forensic science evaluation

Prof. Baosheng Zhang, China University of Political Science and Law

09.50 h	03.50 h	20.50 h (Wed Sept 7th)	18.50 h (Wed Sept 7th)

Paradigmatic development of forensic science

Prof. Guiqiang Wang, Institute of Forensic Science, Ministry of Public Security

10.40 h	04.40 h	21.40 h (Wed Sept 7th)	19.40 h (Wed Sept 7th)

Regulating the use of electronic evidence in Chinese courts: Legislative efforts and academic debates

Prof. Zhiyuan Guo, China University of Political Science and Law

11.30–14.00 h	05.30–08.00 h	22.30 h (Wed Sept 7th) – 01.00 h (Thu Sept 8th)	20.30–23.00 h (Wed Sept 7th)

Break (2.5h)

Chair: Prof. Zhong Zhang, Vice Dean of the Institute of Evidence Law and Forensic Science, CUPL

14.00 h	08.00 h	01.00 h (Thu Sept 8th)	23.00 h (Wed Sept 7th)

Establishing forensic accounting appraisal standards to provide technical support for combating network crimes — Taking Bao Xx and other major Telecom fraud cases as an example

Zaiyong Deng, Director, Criminal Department of Sichuan Xinggrong Law Firm

14.30 h	08.30 h	01.30 h	23.30 h (Wed Sept 7th)

Truth in the criminal procedure: a comparative study

Dr. Chenchen Wang, China University of Political Science and Law

15.00 h	09.00 h	02.00 h	0.00 h (Thu Sept 8th)

Causes of repetitive forensic examinations and methods of dispute resolution for prosecutors and judges

Dr. Juntao Zhang, People's Procuratorate of Luoyang City

15.30 h	09.30 h	02.30 h	0.30 h

Court, organization and actor: an empirical study on the Formation of facts in criminal cases
Jiayuan Zhang, Ph.D. student, China University of Political Science and Law

16.00 h	10.00 h	03.00 h	01.00 h

The right of pledge and countermeasures for functional failure in the digital age

Shibo Wang, Ph.D. student, People's Public Security University of China

16.30–17.00 h	10.30–11.00 h	03.30–04.00 h	01.30–02.00 h

Discussion and closing – Prof. Baosheng Zhang and Prof. Christophe Champod

Abstracts

(in alphabetical order according to last name)

New directions for evidence science

Ronald J. Allen, *John Henry Wigmore Professor of Law*

Northwestern University Pritzker School of Law, Chicago, IL, USA

Trials, legal systems, governments, and market economies are all complex adaptive systems. Viewing them in that light opens up new avenues for research, and leads to a possibly unprovable supposition that human flourishing will be enhanced at the intersection of societies with a commitment to the rule of law, market economies and responsive legal systems of which the common law is the paradigmatic example. These complex adaptive systems have the advantage of feedback mechanisms that may facilitate the intelligent exploitation of the vast amount of information contained in each of the systems. An important component of all of this is the law of evidence, which will be analyzed from the perspective of complexity theory.

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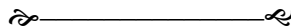
Methodology for evaluating data from stylometric analyses

Valentina Cammarota, M.Sc. (Ph.D. student)

University of Lausanne, School of Criminal Justice, Lausanne, Switzerland

The best-known form of document analysis in forensic science is based on elements correlated to the handwriting of the person, as well as the physical analysis of the paper, the writing instrument and possible printing characteristics. Less known is the use of stylometry for document analysis.

A Swiss software package for the analysis of a writer's style through characters in a script has been developed by OrphAnalytics SA. The main purpose of this style analysis is to support text attribution to one (or more) author(s). The software is based on an approach that that selects and quantifies text elements able to identify relevant patterns in a text. The syntax of the text can thus be described. This PhD project will (a) describe the multivariate structure of the data and will (b) implement a probabilistic methodology to describe how data can be used to discriminate between hypotheses of interest regarding (1) textual authorship, (2) textual time evolution and (3) textual style evolution.

The inferential probabilistic approach will be extended to solve the problem of rational decision-making (i.e. how to justify a decision on authorship).

Methodology and models from this study will also be of value for scientists working in a variety of other areas including biometry, anthropology and legal medicine.
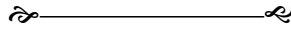
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The contribution of bodycam images in a forensic perspective – testing the waters

Prof. Olivier Delémont[1] & Dr. Michaël Meyer[2]

[1] *University of Lausanne, School of Criminal Justice, Lausanne, Switzerland*
[2] *University of Lausanne, Institute of Social Sciences, Lausanne, Switzerland*

Body-worn cameras, also known as bodycams, are part of the core equipment of many police services around the world. Their use, aiming in the first place at reducing violence from and against police officers, has been scrutinized by a collection of implementation studies. The results of the latter showed that the expected effects of the introduction of bodycam is highly disparate and influenced by many structural, societal and operational factors.

As part of a joint pilot project by a cantonal and a municipal police forces in Switzerland on the use of bodycams, we decided to broaden the standard spectrum of the evaluation analysis accompanying this measure, exploring dimensions that are not yet well considered. One of those was to assess the potential of images recorded by bodycams in a forensic perspective.

A case study was undertaken on 15 situations, with a thorough examination of 7 of them, involving a sequence of actions taking place indoors and outdoors, day and night. This study highlighted 3 areas where images recorded by bodycams can make an interesting contribution in a forensic perspective: the provision of information to support the reconstruction of events, the potential to identify persons of interest, but also the documentation of the evolution of the scene of crime before the involvement of crime scene investigators.

Our presentation shows, with examples, the utility of bodycam images in a forensic perspective. It also has the purpose of feeding the reflections on the changing role of images in criminal investigation, and the added value to recognize the image as traces belonging to forensic science.

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Establishing forensic accounting appraisal standards to provide technical support for combating network crimes — Taking Bao Xx and other major Telecom fraud cases as an example

Zaiyong Deng, *Director*

Criminal Department of Sichuan Xinggrong Law Firm, Sichuan, China

Cybercrime was rampant. Cracking down on internet crime has its practical necessity. Nevertheless, most of the people are taking a negative view on forensic accounting, for example that forensic accounting is basically based on oral evidence, that both the purpose and object of forensic accounting are beyond the matters entrusted and the inspection of material source, that the conclusion of forensic accounting report implies identification, that forensic accounting relies on audit methods for achieving evidence, etc. The above situation has seriously affected the

implementation of strict judicature and judicial justice. The irregularities of forensic examination behavior are concentrated in the whole process, such as extraction, preservation, submission, authorization and identification. Therefore, the whole process needs to be standardized. Establishing scientific standards of entrustment, examination, restriction and prevention of forensic accounting will be of great benefits to restrain the disorder of forensic accounting, promote judicial justice and prevent unjust, erroneous and wrongful cases.
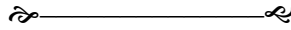
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Real time qualification and quantification of illicit drugs using handheld Near-Infrared spectroscopy connected with mobile phone application: an opportunity for forensic laboratories to cope with the trend toward the decentralization of forensic capabilities.

Prof. Pierre Esseiva & Florentin Coppey, M.Sc.

University of Lausanne, School of Criminal Justice, Lausanne, Switzerland

The analysis of drugs (illicit products or counterfeit medicines) faces many challenges, mainly regarding the production of timely and reliable results and the production of added value from the generated data. It is essential to rethink the way this analysis is performed, in order to cope with the trend toward the decentralization of forensic applications. This presentation describes the quantitative and qualitative validation of an ultra–portable near-infrared detector connected to a mobile portable application. This methodology allows one to analyse and display results to end users within 5 seconds. The possibility to geolocate the measurements and to monitor them in real-time generates a new set of tools to interpret the data and to extract intelligence.

We will describe the building and deployment of dedicated databases as well as the development of statistical models and their validation. A particular focus will be placed on the presentation of real case studies demonstrating the utility of the approach as well as the use of these results in a legal perspective.

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Regulating the use of electronic evidence in Chinese courts: Legislative efforts and academic debates*

Prof. Zhiyuan Guo

China University of Political Science and Law, Beijing, China

With the rapid development of science and technology, especially the popularization of internet and social media, electronic evidence such as emails, blog posters, instant messages, electronic trading records, communication records, and logon logs has become a new addition to the evidence family all over the world. China officially recognized electronic data as one of its legal evidence categories since 2012 when the Criminal Procedure Law and the Civil Procedure Law were revised. It is commonly held that the use of this new evidence should follow different evidential rules because electronic data has some different features than other traditional evidence. To regulate the use of electronic evidence in criminal cases, Chinese Supreme People's Court (SPC), Supreme People's Procuratorate (SPP) and Ministry of Public Security (MPS) jointly issued *the Provisions on Several Issues concerning the Collection, Taking, Examination, and Judgment of Electronic Data in the Handling of Criminal Cases* in 2016. The Ministry of Public Security then issued a more detailed *Rules of*

Obtainment of Electronic Data as Evidence in 2019, trying to solve practical problems encountered in collecting, taking, and inspecting electronic data. The SPC included some new provisions on the use of electronic evidence in handling civil cases when it revised the *Civil Evidence Rules* in 2019. These legal documents not only provide a general legal framework for the use of electronic evidence in both civil and criminal proceedings, but also provide helpful technical guidance and procedural rules on how to collect and examine digital evidence. However, very few law researchers in China conduct in-depth research on this topic due to its interdisciplinary nature between law and technology, let alone English literature. This paper tries to overview the key issues on the collection, taking, examination and judgement of electronic evidence in criminal and civil cases, identify the weak points of current legislation, and put forward some legislative proposals for future reforms.

* This paper is based on a presentation given at the 17th Asian Law Institute (ASLI) Annual Conference in 2021.
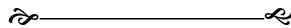
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The admissibility of scientific evidence: exploring the significance of the distinction between foundational validity and validity as applied*

Edward J. Imwinkelried, *Edward L. Barrett, Jr. Professor of Law Em.*

University of California Davis, School of Law, Davis, CA, USA

The thesis of this article is that in order to correctly enforce the distinct requirement for proof of validity as applied, courts need to more carefully examine the parameters of the validation studies used to establish the general foundational validity of an expert methodology. In particular, the courts must determine the methodology's extent or range of validation demonstrated in those studies and should find validity as applied lacking when the proponent's expert attempts to employ the methodology in a fact situation exceeding that range. To develop that thesis, the article proceeds in two parts. The first part of this article discusses foundational validity. Initially, this part describes the concept from a scientific perspective. The part then demonstrates that the courts have incorporated the concept of foundational validity into their admissibility analysis.

Part two turns to the principal focus of this article, namely, validity as applied. Just as part one examines foundational validity from both the scientific and legal viewpoints, part two adopts the same approach to validity as applied. To begin with, part two demonstrates that the cases and court rules differentiate between the concepts of foundational validity and validity as applied. Part two then demonstrates that the validity as applied concept is deeply embedded in scientific reasoning, especially in metrology, the science of measurement. Next, part two notes the striking analogy between a judicial determination of whether to extend a common-law precedent to a new fact situation and a judicial decision whether to permit an expert to apply a methodology to a fact situation beyond the precise parameters of the validation studies. Part two elaborates on the practical challenge facing a judge required to make the latter decision. Part two argues that if the judge lacks the information necessary to evaluate the propriety of an expert extrapolation, the outcome should be the exclusion of the testimony about the extrapolation. The judge should assign the proponent of the extrapolation the burden of proof on the defensibility of the extrapolation.

The conclusion argues that in order to properly enforce the validity as applied requirement in the future, the courts must scrutinize validation studies far more closely than most courts have done in the past. The courts must move beyond a fixation with the quantitative aspects of validation studies and expand their focus to include the qualitative aspects of the studies, that is, the conditions under which the methodology was validated. The courts can give the proponent of an

extrapolation a powerful incentive to provide the trial judge with the information needed to make informed rulings on the validity as applied issue by making it crystal clear that the proponent has the burden of establishing an empirical justification warranting any application of the methodology that seemingly exceeds the demonstrated range of validation. The Supreme Court's forceful language in *Joiner* and the explicit prescription in Federal Rule 702(d) demand nothing less.

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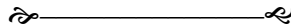
Characterisation and classification of white automotive paint of same manufacturer with Fourier transform infrared spectroscopy and chemometrics

Lei Lei, M.Sc. (Ph.D. student) & Prof. Geneviève Massonnet

University of Lausanne, School of Criminal Justice, Lausanne, Switzerland

Discriminating paint chips of the same colour has always been a challenge in automotive paint examination. The process is even more difficult when these paints originate from the same manufacturer. Fourier transform infrared spectroscopy (FTIR) is an effective and non-destructive method that is most commonly used to differentiate automotive paint.

In this study, A total of 136 white automotive paints (coming from 62 different vehicles) from one single manufacturer (Volkswagen) were prepared and analysed by FTIR. Principle component analysis and multi-block techniques were used to characterise and classify these samples. The discriminating power for each layer was calculated in order to evaluate which layer can contribute to the greatest distinction. The inter-sample and intra-sample variability were evaluated. Identifying factors (such as model, topcoat color code, production year, assembly plant) were also explored to determine which factor contributes the greatest towards non differentiation of samples.

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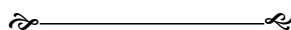
Tainted confessions: Police interrogation notes in Chinese criminal justice process

Prof. Thomas Man

Peking University, School of Transnational Law, Shenzen, China

Police Interrogation Notes (PINs) are hand-written or typed notes of police interrogation of the accused in pre-trial investigative stages of criminal justice process. As one of the statutorily recognized form of evidence, PINs are routinely admitted in criminal trials and widely adopted as the basis for criminal verdict. Based on some recent empirical study, this paper examines the reliability of PINs as the accused out-of-court confession in terms of their faithfulness to the accused oral statements made during the police interrogation. It reveals serious discrepancies between the accused oral statements and the resulting PINs prepared by the interrogation officers, calling into serious questions to the practice of using PINs as the evidential basis for guilty verdict against the accused.
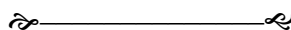
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Data science for digital forensics: Promises and pitfalls

Prof. Rebekah Overdorf

University of Lausanne, School of Criminal Justice, Lausanne, Switzerland

New machine learning-based tools like facial recognition and authorship attribution promise to speed up forensic investigations by helping automating manual processes and evaluate evidence in new ways. However, the requirements for these technologies in forensics settings differ greatly from the commercial and academic settings in which they are often developed. In particular, forensics applications require a high degree of certainty in a result in order to avoid false accusations. This requirement is stronger than most other settings, which can tolerate a certain number of errors in exchange for a model which performs well on average. This certainty can also be undermined by adversarial activities that attempt to evade machine learning systems, which must be especially accounted for in situations which involve criminal activity. In this talk I will examine some of the potential uses of machine learning-based tools and their drawbacks and limitations in the criminal justice setting.

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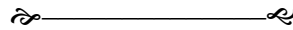
Expert evidence exceptionalism reconsidered

Paul Roberts, *Professor of Criminal Jurisprudence*

University of Nottingham, School of Law, Nottingham, UK
*& Adjunct Professor of Law, China University of Political Science and Law, Beijing, China*

English common law has for centuries treated 'expert witness testimony' as a special case. The ordinary rules of evidence, such as those excluding hearsay and the expression of 'opinions', do not straightforwardly apply to forensic scientists and other 'expert' witnesses. Conversely, special evidentiary doctrines not applicable to ordinary witnesses of fact have been crafted to try to cope with the special forensic challenges posed by experts, including risks of bias and excessive deference from fact-finders potentially 'blinded by science'. We might characterise the common law's traditional approach as exhibiting an implicit 'expert evidence exceptionalism'.

On closer inspection, Expert evidence exceptionalism is not limited to doctrinal special treatment in the adjustment of exclusionary rules. Experts are also afforded special institutional status in criminal proceedings, reflected in both procedural advantages and additional professional duties. In more theoretical terms, we might also say that experts enjoy special epistemological authority in the courtroom, inasmuch as their very classification as experts invites deference to their expertise. Finally, forensic science (and other expert witness testimony) is special in disciplinary terms, to the extent that it has become a discrete – and burgeoning – field of academic research and practice, somewhat distanced from mainstream legal or evidentiary scholarship.

The orthodox common law account of (in my terms) expert evidence exceptionalism is open to challenge. For example, Schauer and Spellman (2013) argue that "if expert testimony is less subject to overvaluation than the traditional view supposes, and non-expert direct or factual testimony more subject to overvaluation, the gap between the two evaporates".

In this paper, I reconsider the extent to which the orthodox disciplinary conception of expert evidence exceptionalism is reflected in contemporary legal practice in England and Wales. Much of this ground is well-trodden and extensively raked over by legal theorists and forensic scientists. Re-examination nonetheless sheds fresh light on familiar issues. One aspect of a more nuanced approach to expert evidence exceptionalism, I suggest, would decentre theorists' preoccupation

with epistemological authority (and puzzles) of expertise, and pay more attention to the institutional status of forensic scientists and other experts as *professional* witnesses. Refocusing the issues in this way would incidentally promote well-informed and useful comparative discussions within and beyond common law procedural systems.

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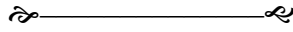
Truth in criminal procedure: a comparative study

Dr. Chenchen Wang

Institute of Evidence Law and Forensic Science, China University of Political Science and Law, Beijing, China (Research Fellow, Lecturer) & Institute of Criminal Sciences and Justice, University of Bordeaux, France (Fellow)

Different understandings of the truth lead to different opinions about truth in different legal systems. Whether the purpose of the criminal procedure is to seek the truth depends largely on the definition of the word "truth". Whether in the adversarial or inquisitorial procedure, judicial truth is neither a philosophical truth nor historical truth. Judicial truth is only a solution to disputes concerning forms of procedure that bypass the unattainable absolute truth. The forms of procedure are different in the adversarial and inquisitorial procedures, such as a unanimous decision vs. majority decision or beyond a reasonable doubt vs. *intime conviction*. The judicial truth is related to discourse, and the trial in any mode of procedure is the field of direct application of discourse. However, in different modes of procedure, the subjects of discourse are different, and the time and place of discourse are different. The preconstitution of documentary evidence in the inquisitorial procedure and the immediate orality of the adversarial procedure each serve the truth that must remain a quest.
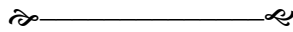
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Paradigmatic development of forensic science

Prof. Guiqiang Wang

Institute of Forensic Science, Ministry of Public Security, Beijing, China

In the past three decades, revolutionary progress of forensic science has appeared, including: i) the improvement of analytical technology, such as DNA testing; ii) the development of evaluation and interpretation of forensic results, such as the probabilistic evaluation of DNA data; iii) the innovation of the application of forensic science, such as the development of forensic intelligence. As a result, the paradigm of probabilistic evaluation of forensic findings not only improved the scientific validity and maximized the evidential value of forensic reports, but also reshaped the framework of forensic science, which presented much more significant progress than technology. Nevertheless, the assessment, expression, understanding and application of probabilistic evaluation of forensic data is more complex than that of the traditional forensic reports, which brings unprecedented challenges to the judicial field. This report discusses the basic framework of the modern forensic science paradigm as well as its development in the near future, including: i) the classical paradigm of forensic science where the opinion is made by the threshold of the characteristic comparison; ii) the probability paradigm of forensic science where the opinion is made by the probabilistic evaluation of the characteristics; iii) the third paradigm of forensic science

where the opinion is made by probabilistic evaluation of similar scores; iv) the exploration of the forensic science paradigm — opportunities and challenges.
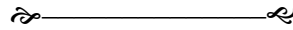
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The right of pledge and countermeasures for functional failure in the digital age

Shibo Wang (Ph.D. Student)

People's Public Security University of China, Beijing, China

The confrontation in the court trial is divided into the right-based confrontation and the tool-based power confrontation. In the process of promoting the transformation of powers from confrontation to rights confrontation based on the substantiation of court trials in China, there is a scene of simplified confrontation in confession cases and virtual confrontation in zero confession cases. At the same time, online court trials that have lost the "sense of confrontation", "dehumanized" big data evidence, overloaded massive data and blockchain evidence-based rules for presumption of authenticity, confrontation in the physical space centered on witnesses, in digital technology. It is necessary to respond to the challenges of data- and algorithm-centric virtual spaces. In view of this, it should be clearly established that the primary value of the confrontation mechanism in court trials is the protection of rights, otherwise it will be a crisis of existence in name only. The witnesses in court are determined based on the degree of human participation, and the defense's right to review the file is guaranteed by blockchain and privacy computing technology, so as to achieve a functional return to the right of pledge.
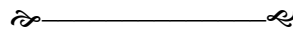
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The referential significance of ENFSI Guideline to Chinese forensic science evaluation

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Standardization is a critical step to improve the quality of forensic examination. The ENFSI Guideline creatively sets Balance, Logic, Robustness and Transparency as the principles to forensic examination, which requires forensic practitioners to evaluate the forensic findings with respect to particular competing propositions, to do the pre-assessment, and to present forensic findings on a Likelihood Ratio basis, etc. All these measures bear referential value for Chinese standardization of forensic examination. This paper explores the justification for the above European basic principles, put forward the principles of balance, logic, reliability and openness should be established in the standard of forensic examination in China, which should be carried out in the starting procedure and process control procedure of forensic examination. This is helpful to change the situation of lacking concept and unreasonable structure of China's Forensic examination.

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Court, organization and actor: An empirical study on the formation of facts in criminal cases

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On the whole, the influence of law on the formation of the practical appearance of facts lies in that it provides tendentious guidance for certain behaviors, provides legal and institutional bases for some practical behaviors, and endows actors with discretionary space. Indicators of organizational performance directly affect the specific behavior of judges in the process of fact formation and decision making. While the actor is a rational individual, rationality here implies not only that a person, when making a decision, "will always make what he thinks is the best choice among the possible alternatives known to him". It also emphasizes the initiative, cognitive tendency and limitation of actors. In fact, it is the active choices of judges as actors, as well as the practical behaviors of these actors under the guidance of their own limitations and many cognitive tendencies that finally transform the space and possibility provided by the aforementioned legal and organizational factors into the practical appearance of the fact-forming process.
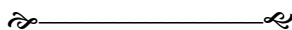
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Causes of repetitive forensic examinations and methods of dispute resolution for prosecutors and judges

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During the judicial process of cases, there were often multiple different forensic reports towards the same question in the same case. It became one of the most difficult problems for prosecutors and judges and led to erroneous or wrongful cases in the end.

The above situation arose for the following reasons: i) the existence of the pluralistic system of forensic identification; ii) the possibility that the parties can apply for repetitive forensic examinations; iii) the authority that the police have to start repetitive and complementary forensic examinations; iv) the authority that the prosecutors have to decide repetitive forensic examinations; v) the probability that the judges may search for forensic services from the independent organizations.

From the perspective of the prosecutorial agencies, they can deal with the case with multiple forensic reports through the following measures: i) increasing the technical evidence review of prosecutorial agencies; ii) properly making the decision on whether or not repetitive forensic examinations should be performed; iii) strengthening the court testimony of forensic scientists; iv) introducing expert witness to the court and strengthening the cross-examination of scientific evidence.

From the perspective of the court, they can deal with the case with multiple forensic reports through the following measures: i) encouraging the judges to achieve consultation from the experts; ii) strengthening their review of the forensic reports and improving their cognition of scientific facts; iii) increasing the entrustment of forensic examination by the court; iv) making a verdict of innocence and deciding exemption from criminal punishment when the essential evidence is questionable.

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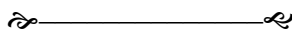
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