证据理论与科学

——第四届国际研讨会论文集

常林 张中◎主编

中国政法大学出版社

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Preface

前 言

为促进证据理论与科学的国际学术交流和跨学科研究，中国政法大学证据科学研究院于2007年9月、2009年7月、2011年7月成功举办了第一、二、三届证据理论与科学国际研讨会。2013年7月20~21日，由司法文明协同创新中心、国际证据科学协会主办，中国政法大学证据科学研究院承办，法庭毒物分析公安部重点实验室协办的第四届证据理论与科学国际研讨会在北京隆重召开。来自中国大陆和台湾地区的代表一百三十余人，以及来自美国、英国、西班牙、意大利、荷兰、匈牙利、瑞士、澳大利亚、韩国等国家的二十余人，共一百五十余位证据法学家和法庭科学家齐聚一堂，围绕证据理论与科学展开了深入的研讨。

第四届证据理论与科学国际研讨会的主题为“证据科学与司法文明”，下设4个专题：①证据法如何推动司法文明；②证据法与社会和谐；③法庭科学与司法公正；④法庭科学与事实发现。本次国际研讨会的会期共两天，日程分为两个阶段：第一天上午由五位中外专家就证据法学、法庭科学的最新研究进展作大会主题报告；随后的一天半中，会议分为证据法学和法庭科学两个分会场进行相关主题交流。在每个专题中，均由来自国内外的4~6位学者围绕一个主题进行发言，与会专家再就发言和研讨主题进行深入讨论。

国际证据科学协会主席、美国西北大学威格莫尔特座教授罗纳德·J. 艾伦在致辞中代表国际证据科学协会对会议对各位参会者表述感谢。他指出，证据法对于法制和文明意义重大，理性和人类文化的共同点，普世的人类状逻辑和知识连贯性，使得世界各国的证据法研究具有共性。证据法已经成为中国法制建设的重要领域，但是目前证据问题的研究还不够，此次国际研讨会的召开非常重要。在主旨演讲中，艾伦教授就《证据改革的框架》、瑞士洛桑大学的克里斯托弗·山普教授就《在DNA转移问题上对DNA证据和专家意见的理解》、北京大学的陈瑞华教授就《新法定证据主义》、意大利帕维亚大学的米歇尔·塔鲁弗教授就《证据、事实与法制》进行了深入研讨和交流，四川大学龙宗智教授介绍了《我国非法口供排除的“痛苦规则”及相关问题》，并从证据学的角度对聂树斌案件做了法理研判。

20日下午开始，会议分为证据法学和法庭科学两个分会场，与会代表围绕各自的主题进行了深入交流。在证据法学分会场，中外代表证据法学理论和实务中的热点问题进行了主题发言，并回答了其他代表的发言。在法庭科学分会场，法庭科学家围绕法医学、物证技术等领域的问题做了分会场发言，并和与会代表进行了讨论。经过一天半的议程，代表之间就证据科学中的一些焦点问题达成了共识，并对争议问题交换了意见。

21日下午，国际证据科学协会第一届理事会第二次全体会议举行，会议将讨论过去两年来协会的工作，吸收了3位新理事，并对2015年第五届国际研讨会的筹备工作进行了讨论。

在两天的会议中，不同国家、地区的学者对于证据科学领域的前沿问题展开了理论和实践方面的讨论，分享着各自的经验、知识和思考；不同学科的研究者对相同的问题提供了不同角度的思考路径和研究方法，为问题的深入研究和解决方案提供了更多的参考依据。可以说，证据理论与科学国际研讨会已成长为一个比较成熟的证据科学国际论坛，成为全世界证据法学家和法庭科学家开展跨学科交流的一个重要平台，各国专家通过会议能够达到发现问题、增加共识、协调差异的目的，这既推动了学术和思想的碰撞，也加深了各国学者的相互理解和友谊。

论文集出版是证据理论与科学国际研讨会的重要成果。为了让广大学界同仁更多地了解第四届证据理论与科学国际研讨会的会议情况和学术成果，大会组委会决定出版本次国际研讨会论文集。本次会议共收到投稿论文157篇，其中证据法学论文50篇，法庭科学论文75篇（其中9篇仅有英文摘要），英文论文32篇。大会组委会邀请相关专家对投稿论文进行匿名评审，共录用中文论文141篇，其中证据法学35篇，法庭科学74篇；英文论文32篇，其中证据法学9篇，法庭科学23篇。研讨会结束后，组委会逐一与参会者联系，获得作者将论文编入论文集出版的授权，并要求作者根据会议情况修改论文后发回，进行编辑加工，最终呈现在各位读者面前。

本次证据理论与科学国际研讨会的成功举行，得益于司法文明协同创新中心、国际证据科学协会、法庭毒物分析公安部重点实验室的鼎力相助。本次会议的成功举行，得益于中国政法大学证据科学研究院的诸多教师，以及该院2010级、2011级法律硕士研究生付出的巨大努力。本届论文集的顺利出版，中国政法大学证据科学院褚福民、汪诸豪、郝红霞、连园园等老师，以及中国政法大学出版社编辑们付出了很多辛劳。在此一并表示感谢！

编　者

2014年3月

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Ⅱ 法 庭 科 学

The Framework for the Reform of Evidence

Ronald J. Allen *

Thank you for those kind words of introduction. It is a great pleasure to be addressing you today, and a distinct honor. I have been working with the faculty of CUPL and other Chinese Universities for over a decade now, and this is my fifteenth trip to China to do lectures and meet with colleagues concerning matters of mutual interest. What began for me as a somewhat exotic excursion into the law of another nation has now become a part of the fabric of my life. And as a teacher and scholar, it is particularly gratifying to see the great progress that has been made in China through the contributions of the many Chinese scholars I have been privileged to have study with at Northwestern University, and with whom I have interacted over the years in China and the United States.

The general title of this conference may appear a bit audacious. It is not often that a field of study implies through the title of its conferences that the scholars of that field believe that their efforts have contributed to the rule of law and the progression of civilization. Lest anyone think that the Chinese scholars who have organized this conference have belied their normal humility, I should hasten to point out that I was the one who suggested the title. The reason I suggested it is that it hints at a great and significant truth, in fact two truths really. First, that the field of evidence is critical to the rule of law. Second, that the rule of law is critical to the progression of society. I would go further and say that the single most important field of study to the rule of law is evidence, and that society can only progress within the rule of law.

You in China have confirmed these truths with a natural and in my opinion regrettable experiment that we in the West call the Cultural Revolution. Among the many things that occurred during that lamentable time was the essential shutting down of the legal system, and the shutting of all but one of the law schools, I believe. This had the predictable effect of devastating the economy and causing a horrific drop in the gross domestic product of China. This natural experiment, though, continued after the end of the Cultural Revolution when your government liberalized the economy. At first there was a great burst of productivity, but it quickly began to subside, and the reason is precisely that a functioning legal system is an absolute requirement of a productive society. The creation of wealth depends on trade, but trade will not occur except

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I am indebted to Jiang Yujia, a second year law student at Northwestern University, for her research assistance.

through barter within a functioning legal system. It was the recognition of this fact that led your government to begin the long process of reestablishing a functioning legal system, a process that continues to this day.

As I will talk about in a few minutes, at the heart of that process is indeed the law of evidence, and thus I will say again what I have said before in China: Those of you in this room who are studying and furthering knowledge about the field of evidence, and its handmaiden procedural fields, are the single most important part of your country's continuing progress. Without you and your efforts, or without the continuing improvement of evidence and procedure, the economy will be retarded in its growth and rights will be meaningless; without the production of wealth, the aspirations of modern societies cannot be realized. More importantly, without accurate fact finding rights essentially have no significance whether those are economic, human, or political rights. These are the things that I want to talk with you about today, and I will begin with the rule of law.

There is great interest today in China and the world at large in the rule of law. The phrase "the rule of law" can mean many different things, however. What I mean by the phrase, and what all countries interested in the twin aims of stability and progress should mean by the phrase is, first, that there are generally agreed upon determinants of what makes a demand, command or order binding upon a certain set of people. H. L. A. Hart referred to this as the "rule of recognition," by reference to which a person can determine what is authoritative within a society.[1] As Hart pointed out, more is needed, including rules that allow a society to change its authoritative commands, its "law," in light of changed circumstances that the evolution of society invariably brings. These are often located in modern times in constitutions, such as that of China and the United States, that create certain institutions with such power. Yet, as Hart further pointed out, more is needed still, including a means of enforcing authoritative commands and resolving disputes about them. This again in modern times typically falls to courts and forms of adjudication. There is much more to be said about the philosophical basis of "the rule of law," of course, including the mechanisms for enforcement of commands emphasized by John Austin,[2] the hierarchical nature of law emphasized by Hans Kelsen[3], and the relationship between law and morality that has driven the Har – Dworkin debate that has occupied a good deal of modern western jurisprudence for the last forty years, but I will put aside for today's purposes these deep and interesting questions and simply focus on the prerequisites for the rule of law identified by Hart, for they capture the conventional meaning of "the rule of law" as it is being used in conventional discourse, I believe.

The attractions of the Hartian view, and why so many people around the world are calling for reform that takes societies in that direction, are as profound as they are obvious. Law in the

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[1] H. L. A. Hart, The Concept of Law.

[2] John Austin, *Lectures on Jurisprudence, or The Philosophy of Positive Law*, Two Vols., R. Campbell (Ed.), 4th edition, rev., London: John Murray; Reprint, Bristol: Thoemmes Press, 2002.

[3] Hans Kelsen, The Pure Theory of Law (1934).

Hartian sense is part of the glue that holds society together peacefully. It provides the means by which rights and obligations can be known in advance, and negotiated around. I own something. You want it. You need to negotiate with me over its price rather than just seize it arbitrarily. There is thus a critical sense in which the law, rather than being restrained, is liberating. It channels the ways in which people can construct their lives and pursue their livelihoods and removes the risk of arbitrary and unpredictable intrusions into their personal spheres, whether from governments or other individuals.

In this social dynamic, it is conventional to attribute the values of the rule of law primarily to the articulation of rights and their reciprocal obligations. There is some important truth to this view, but it obscures something equally profound, which is that without accurate resolution of disputes—without accurate fact finding, in other words—rights and obligations are meaningless. I have made this point to you many times in my lectures in China, but let me remind you once again, for the point cannot be emphasized enough, that facts are prior to and determinative of rights and obligations. Without accurate fact finding, rights and obligations are meaningless. Consider the simple case of ownership of the clothes you are wearing. Your ownership of those clothes allows you the "right" to possess, consume, and dispose of those assets, but suppose I demand that you return "my" clothes. That is, I insist that the clothes that you are wearing actually belong to me. What will you do? You will search for a decision – maker to whom you will present evidence that you bought, made, found, or were given the clothes in question, and, if successful in this effort, the decision – maker will indeed grant you those rights and impose upon me reciprocal obligations. The critical point is that those rights and obligations are dependent upon what facts are found and are derivative of them. The significance of this point cannot be overstated. Tying rights and obligations to true states of the real world anchors rights and obligations in things that can be known and are independent of whim and caprice. This is why the ideas of relevance and materiality are so fundamentally important to the construction of a legal system. They tie the legal system to the bedrock of factual accuracy. This point is truly universal. On the one hand, neither rights nor obligations nor policy choices can be pursued in the absence of knowledge of the actual, relevant states of affairs. On the other hand, tying rights to facts gives them solidity and stability so that they cannot be removed arbitrarily.

As many of you know, often when I emphasize the importance of facts, I use property rights as the example. Let me give another example, this time of a human right. At this point in events like this, most people normally expect an American to be critical of the Chinese record on human rights, but that is not the example I wish to discuss. Instead, it is the spying by the American government on its own citizens, foreigners, and even foreign sovereigns that has been disclosed by Edward Snowden. I am not sure whether I think Mr. Snowden should be treated as a hero or a traitor, but I am confident that without his disclosures I and my countrymen would have been completely oblivious to the massive violations of our rights that have taken place during the Obama administration. Without that knowledge, there is simply no way I or anyone else could have vindicated our rights. Without the facts, one can almost say that no violations oc-

curred.

Thus, it is not just adjudication in the Hartian triumvirate that matters, but accurate adjudication. Again as I've said many times in China, that is why those of you who are studying and advancing knowledge about evidence, procedure, and the structure of legal systems, and bringing that knowledge to bear to reform your law are absolutely fundamental to the continuing progression of your country. As you have moved from a less arbitrary to more predictable legal system, your prosperity and ability to flourish have improved commensurately. I commend you for your astonishing achievements, am humbled to have played a small role in them, and charge you to continue in these efforts.

There are thus aspects of the law structuring dispute resolution—evidence and procedure—that have universal aspects. And of course accurate dispute resolution involves rational people deliberating upon reliable evidence, which introduces more universal attributes into the mix. However, structuring dispute resolution is not just a matter of optimizing these universal aspects of the enforcement of rights and the meaning of rationality. It also has a heavily contextualized component. Here there are three critically important points to comprehend. The first point is that all rules that structure the process of proof, are derived from and implement a theory of dispute resolution. The dominant theory of dispute resolution in the United States is the adversarial process, but this is not universal. The second and related point is that theories of dispute resolution, such as the adversarial system or continental (sometimes called the inquisitorial) system, are themselves derived from underlying conceptions of the appropriate role of government in the resolution of disputes between private individuals in civil cases and in the prosecution of criminal cases. In the Anglo American tradition, the role of the government in private dispute resolution has been largely facilitative. The government provides a fair and disinterested forum for the impartial resolution of private disputes, and that is essentially all the government has an obligation, or even a right, to do. In an extraordinary way, this conception of dispute resolution affects criminal cases as well. The government prosecutes cases, but the government is conceived of as analogous to a private party that stands on equal footing with the other private party, the defendant, before the courts. The courts are neutral, in other words, and are not part of the organs of government structured to further the government's specific policy interests in the particular trial; indeed, as is well known, the courts in the United States are famous for obstructing the policy objectives of the government through such things as exclusionary rules. Again, this is not a universal characteristic of legal systems. The third preliminary point is at a deeper conceptual level. The judiciary and the other branches of government are all designed to further the political aspirations reflected in the founding documents and traditions of the country, such as the United States Constitution and the Chinese Constitution. This injects another contingency into the analysis, because not all countries have commensurate political theories. For example, the central political problem of governing in the United States is a principal – agent problem: The Government is the agent of the people, and the primary problem is how the principal—the people—can control its agent—the Government. This concern about

controlling and limiting the central government out of fear of its tendency to concentrate power in itself is what explains the two defining features of the political structure of the United States, federalism and separation of powers. This stands in stark contrast with numerous eastern sovereigns in particular. For example, you have long had a theory of unitary political power located in the Communist Party, and thus the central political problem is the efficient implementation of the policy objectives of Government. These differences plainly affect the legal systems that are constructed in their reflection. One would predict that the Chinese government will tend to exercise more power and control in the dispute resolution process in order to efficiently implement its policy goals. In contrast, in the United States the government has more limited power and the courts are primarily a disinterested forum.

These two distinctions between types of legal systems and theories of government do not necessarily involve stark contrasts but come in many different shades. For example, the conception of the role of the government in the resolution of disputes is not uniform even in representative democracies that otherwise share many traits. In many Western European countries, for example, disputes are not "private" matters to the extent that they are in the United States, and the government plays a much more active role in virtually all phases of litigation. The government often is more actively involved in investigation, and the trial process is controlled more by the court than is true in the United States. This reflects the view that disputes between citizens have a public feature, and thus that the resolution of disputes is a matter of collective concern. In the United States, by contrast, private disputes are not understood to be matters of social concern for the most part, and the government plays a much less active role. The parties are responsible for investigating and preparing the case for trial, and in large measure controlling the presentation of evidence at trial. Similarly, appellate courts often purport to decide cases based only on the arguments presented to them by the parties, thus generating the possibility that cases with virtually identical facts will be decided differently due to the legal arguments advanced. The critical point to understand is that the obligation of the court extends to deciding the case correctly based on what the parties have put forth rather than to decide it "correctly" for all purposes.

The structure of legal systems is also affected by two additional variables. The first involves legal epistemology, which refers to beliefs concerning how effective different forms of dispute resolution are in producing accurate verdicts. In the United States, it is generally although not universally believed that adversarial investigation and presentation of evidence is more likely to yield a verdict consistent with the truth than is a process more dominated by a tribunal. The parties know their case better than anyone else and have the proper incentives to invest the optimal resources in dispute resolution. A government bureaucracy normally would be a poor substitute for the more thorough knowledge and more finely calibrated incentives of the parties. Those who favor more inquisitorial systems emphasize that control by a disinterested tribunal will lead to less abuse and manipulation of the evidence, which they believe may increase the chance that verdicts consistent with the truth will emerge.

The pursuit of truth is not the only social good, however, and there are disagreements about how that particular social good interacts with others, such as privacy. In the United States, the general view is that in civil cases the parties should have essentially unfettered access to all the pertinent information concerning a dispute before the trial begins. The process of obtaining that information is called discovery, and its robustness is one of the defining features of the American legal system. The idea is that trial should truly be an epistemological event and not full of either surprises or road blocks. However, all countries compromise the pursuit of truth by favoring from time to time other values, as I have discussed in various lectures here in China. What values outweigh truth again is quite socially contingent.

The last important preliminary point to mention is the effect that juries or lay assessors have on the structure of a legal system. In the United States, juries are at once revered and simultaneously treated as alien intruders into the otherwise professional world of the law who must be regulated and controlled. A considerable part of the law of evidence and procedure in the United States is driven by the judge – jury divide. It should be looked at to inform the structure of evidence law in other countries only with this point well in mind.

To sum up, as we think about the structure or reform of evidence law, we must keep in mind these five points:

(1) Rules of evidence (and procedure) are part of a theory of litigation.

(2) Theories of litigation are themselves part of a theory of government.

(3) Theories of government vary dramatically.

(4) Dispute resolution involves fact finding, and there are disagreements about the most efficient and effective way to get to the truth, and relatedly the value of truth when it competes with other social goods.

(5) The presence of lay fact finders such as jurors may affect how the litigation process is otherwise structured.

The various issues that we have discussed above illuminate the depth and profundity of the conceptual foundations and implications of evidence, and together create the framework for the structure and reform of the law of evidence. What I have said so far may be conceptually useful, interesting, and perhaps even correct, but it is not very programmatically useful, is it? It situates the field of evidence in its larger context, but does not provide any sort of roadmap for the reformer of the law of evidence to follow. In what follows, I try to extract from the complex considerations referred to above the general considerations that must be attended to by the reformer of the law of evidence. The reformer of the law of evidence faces five general issues, or what I call "problems".

The Organizational Problem. The law of evidence is a critical mechanism to regulate the interactions of the various participants in the legal system: trial judge, jurors and other lay assessors, attorneys, parties, and witnesses (both lay and expert). The law of evidence constructs the framework for a trial. It allocates both power and discretion to each of the actors. However, the general framework for trials and the role individuals play within that

framework can be highly socially contingent. Thus, the reform of the law of evidence must ask not just what makes most conceptual sense, but also and equally important, what are the social expectations of the various participants? These two variables interact, of course. Sometimes the reformer should defer to social expectations and sometimes not. A good example of this is the increasing use in your various evidence enactments and proposals of what we in the United States call discovery. Robust discovery is somewhat new to China, and by advancing these proposals your reformers are slowly conditioning people to accept them, I believe. This point should be generalized, however, and throughout the law of evidence is woven the issue of the best analytical structure and what is socially expected or feasible.

The Epistemological Problem. How one constructs trials, and thus the rules of evidence one fashions to facilitate trials, is a function of beliefs concerning one of the fundamental questions of human thought—what does it mean to know something? A trial is an epistemological event at which claims of knowledge are advanced, considered, rejected, or accepted. The question of knowledge just discussed leads to another fundamental question: what is the purpose or purposes of trials? The typical response has much to do with accurate fact finding, and as we have tried to make clear that typical response has enormous significance. But, are trials like science in its pursuit of truth, and more importantly should they be? How do scientific and legal decision making differ? Unlike scientific pursuits, legal decision – making cannot defer judgment until more information is collected. Also, the judgment to be made is what actually happened rather than what the underlying universal laws might be. Most tellingly, perhaps, there is no organized body of knowledge that is applicable to the typical case, as there is in science. To the contrary, the fact finder has to import the necessary background knowledge for a decision. If, on reflection, trials do not seem a lot like science (at least some types of science), are they like history? The focus of history is on facts, but as a means, generally, of greater understanding. At trials, understanding is largely irrelevant (except as a matter of persuasion). Or is that not accurate? Should trials be the means by which social peace is restored and preserved regardless of any considerations of what "actually" happened? Whether, and to what extent, one thinks a scientific truth or a deep understanding of historical facts is obtainable will affect one's view of particular evidence rules.

In my opinion, the epistemological issue is critically important for Chinese reformers to concentrate on. You tend to refer to "evidence science". To be sure, there is much knowledge about evidence, the law of evidence, and the significance of both. But constructing legal systems and their constituent parts, such as the law of evidence, requires knowledge of a different sort rather than the aspiration of the hard sciences. It requires the weighing and balancing of numerous issues, and the accommodation of very diverse utility functions of many different people. Very little within the field of law is subject to controlled experiments of the sort that are the hallmark of the hard sciences, and one should not conflate the different types of pursuit of knowledge. Moreover, the law can and does adjust as social issues unfold. Much of what the reformer does is driven by reasonable compromises and responses to changed conditions rather