

The Refoundation of Evidence Law

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I. PREFACE

This article examines and criticizes the conventional evidence doctrine and its core principle (albeit with exceptions) of legally unregulated fact-finding. New foundations for evidence law are offered that reflect a principled allocation of the risk of error in conditions of uncertainty. Such conditions are present in virtually every litigated case. This article opposes the doctrine of 'free proof'. That doctrine underlies the current flowering of discretion in judicial fact-finding and is responsible for the ongoing abolition of evidentiary rules. The evidence law theory developed in this article is of course itself theory-dependent. Far from claiming the theory here is uniquely correct rather than simply valid, I shall be satisfied by its survival as yet "another view of the Cathedral".¹ Nonetheless, evidence law as conventionally portrayed can hardly be compared with Monet's Cathedral. It is conspicuously more like Pisa's Leaning Tower. This article aims at returning the leaning tower of evidence law to an upright position.

II. THE ABOLITIONIST WAVE

Every system of adjudication resting upon the Anglo-American legal tradition contains a framework of rules, principles, and doctrines which governs the admission, examination, and evaluation of evidence. Categorized as 'Evidence Law' in scholarly writings and in law school curricula, such frameworks seem to have the same status as other specialized branches of the law. This however is only apparent; the actual status of evidence law is unclear. Few people (if any) would advocate the idea of repealing contract law, criminal law, or constitutional law. Many, in

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1. This metaphor is borrowed from Guido Calabresi & A. Douglas Melamed, "Property Rules, Liability Rules, and Inalienability: One View of the Cathedral" (1972) 85 Harv. L. Rev. 1089.

contrast, would readily join Bentham's notorious claim that rules of evidence should, in principle, be abolished.² This abolitionist claim has permeated legal discourse for almost two centuries.³

Evidence law is also a peculiarly Anglo-American phenomenon. It is not recognized as a branch in most European continental countries.⁴ In most European legal systems, admission, examination, and evaluation of evidence are governed solely by common sense, logic, and general experience. Evidentiary rules are scarce. They typically include burdens and standards of proof (decision-making under uncertainty is common to all legal systems), the 'best available evidence' requirement (this is dictated by common sense)⁵, and provisions controlling presentation of proof in order to promote efficiency and fairness of the trial. The latter are categorized as belonging to the law of procedure rather than evidence.⁶ Rules pertaining to fact-finding also include provisions that prevent disclosure of confidential and otherwise secret information.⁷ Akin to Anglo-American privileges, these rules are classified as belonging to the substantive law. In addition, there are provisions

2. Jeremy Bentham, *Rationale of Judicial Evidence*, vol. V (London: J. W. Paget, 1827) at 477-94.

3. See Bentham, *ibid.*; Charles F. Chamberlyne, "The Modern Law of Evidence and Its Purpose" (1908) 42 Am. L. Rev. 757; Learned Hand, "The Deficiencies of Trials to Reach the Heart of the Matter" in *Lectures on Legal Topics, 1921-1922* (New York: Macmillan, 1926) at 96-104; John H. Wigmore, *A Treatise on the Anglo-American System of Evidence in Trials at Common Law* §8c 3d ed. (Boston: Little, Brown, 1940) (endorsing many of Bentham's claims, but not supporting a wholesale abolition of evidentiary rules); Kenneth C. Davis, "An Approach to Rules of Evidence for Non-Jury Cases" (1964) 50 Am. Bar Assoc. J. 723 at 726 ("Our sick body of evidence law will get well sooner if our American doctors will consult with some European evidence doctors"); Kenneth C. Davis, *Administrative Law Treatise*, 2d ed. (San Diego, CA: K.C. Davis, U. of San Diego, 1980) §16:2. For discussions of this claim see William L. Twining, *Theories of Evidence: Bentham and Wigmore* (London: Weidenfeld & Nicolson, 1985); A.D.E. Lewis, "The Background to Bentham on Evidence" (1990) 2 *Utilitas* 195; Stephan Landsman, "From Gilbert to Bentham: The Reconceptualization of Evidence Theory" (1990) 36 *Wayne L. Rev.* 1149.

4. The best general discussion of this phenomenon can be found in Mirjan R. Damaška, "Evidentiary Barriers to Conviction and Two Models of Criminal Procedure: A Comparative Study" (1973) 121 U. Penn. L. Rev. 506; and in Mirjan R. Damaška, *The Faces Of Justice and State Authority* (New Haven, CT: Yale University Press, 1986). See also J.F. Nijboer, "Common Law Tradition in Evidence Scholarship Observed from a Continental Perspective" (1993) 41 Am. J. Comp. Law 299 at 301 ("By the way: Before 1838 evidence *was* traditionally *not* seen as a part of procedural law. In the eighteenth century it was often viewed by Dutch legal scholars as a special subject 'an sich'"); and consider the following statement made by a German jurist Hermann Kantorowitz:

From the ruins of torture arose triumphantly, to the horror of all the despondent, free proof-assessment, the pride of the present.

James E. Herget & Stephen Wallace, "The German Free Law Movement as the Source of American Legal Realism" (1987) 73 Va. L. Rev. 399 at 415.

5. See, e.g., Damaška, *ibid.* at 540-41 (proof beyond reasonable doubt as a general requirement); Nijboer, *ibid.*, at 309 (best available evidence as a general requirement).

6. See Nijboer, *supra* note 4 at 301 ff. For discussion of some of these rules see Richard S. Frase, "Introduction" in *The French Code of Criminal Procedure, The American Series Of Foreign Penal Codes*, vol. 29 (Littleton, CO.: F.B. Rothman, 1988) at 21-31.; Eberhard Schmidt, "Introduction" in *The German Code of Criminal Procedure, The American Series of Foreign Penal Codes*, vol. 10 (Littleton, CO.: F.B. Rothman, 1965) at 13-17; John H. Langbein, *Comparative Criminal Procedure: Germany* (St. Paul, MN: West Publishing, 1977) at 61-86.

7. See, e.g., §§52-53a of the *German Code of Criminal Procedure* (privileges applying, *inter alia*, to fiancés, spouses and some other relatives of the accused, to clergymen, to patient-physician and attorney-client relationships and to governmental secrets).

that immunize written agreements from being destabilized by oral testimony.⁸ Functioning similarly to the Anglo-American 'parol evidence' doctrine,⁹ these provisions are commonly regarded as part of the contract law.¹⁰ Legal systems of the European continent occasionally contain some additional rules describable as evidentiary,¹¹ but these are extremely rare and sporadic.

Anglo-American laws of evidence have been much richer in the past than at present.¹² Unlike other branches of the law which progressed towards enrichment and complexity, evidence laws have been gradually disembellished and simplified. Stripped of many of their intricacies, the rules and doctrines combining these laws have been reduced into tiny islands in the ocean of 'free proof'. Archaic rules, which once exerted severe constraints upon the admission of potentially probative evidence, have been abrogated. Other sources of evidential inadmissibility, namely, 'hearsay', 'opinion', and 'character evidence' rules, have been renovated. Their renovation (culminating in the U.S. with the enactment of the Federal Rules of Evidence¹³) has narrowed them down by introducing into each of them both definitional flexibility and exceptions. These and other evidentiary rules, including those that control testimonial competency, judicial notice, and 'corroboration', have effectively been replaced by discretionary standards and guidelines. These often assume the form of jury instructions.¹⁴ Judicial fact-finding has become an almost uninhibited inquiry into relevant past events. Its main focus has been shifted to the 'weight' or 'probative value' of the evidence; and it is common sense, not Common Law, that presently functions as its principal guide.

8. See, e.g., *Code Civil* (France), Arts. 1341-48.

9. See E. Allan Farnsworth, *Contracts* (Boston: Little, Brown, 1982) §§7.2, 7.3.

10. See James B. Thayer, *A Preliminary Treatise on Evidence at the Common Law* (South Hackensack, NJ: Rothman, 1898) 390; 512; Farnsworth, *ibid.* at §7.2.

11. E.g., rules that exclude illegally obtained evidence. See Walter Pakter, "The Exclusionary Rule in France, Germany and Italy" (1985) 9 *Hast. Int. & Comp. L. Rev.* 1; Craig M. Bradley, "The Exclusionary Rule in Germany" (1983) 96 *Harv. L. Rev.* 1032.

12. The following discussion draws on: Thayer, *supra* note 10, ch.12; Wigmore, *supra* note 3, §8; Ezra R. Thayer, "Observations on the Law of Evidence" (1915) 13 *Mich. L. Rev.* 355 at 364 ("ask any able and candid judge of some experience how far he goes by the books in ruling on questions on evidence. His answer will confirm what Mr. Choate once said to me in speaking of my father's Treatise on Evidence, then recently published. He said, 'Tell your father it is a good book, but it is a pity he did not publish it while there was still such a thing in existence as the law of evidence.'"); Charles McCormick, "Tomorrow's Law of Evidence" (1938) 24 *Am. Bar Assoc. J.* 507; Edmund Morgan & John Maguire, "Looking Backward and Forward at Evidence" (1937) 50 *Harv. L. Rev.* 909 at 922-23; Edmund Morgan, "The Jury and the Exclusionary Rules of Evidence" (1937) 4 *U. Chi. L. Rev.* 247; John Maguire, *Evidence: Common Sense, and Common Law* (Chicago: The Foundation Press, 1947) at 10ff; Edward Cleary, "Evidence as a Problem in Communicating" (1952) 5 *Vand. L. Rev.* 277; Jack Weinstein, "Some Difficulties in Devising Rules for Determining Truth in Judicial Trials" (1966) 66 *Colum. L. Rev.* 223; Philip McNamara, "The Canons of Evidence—Rules of Exclusion or Rules of Use?" (1986) 10 *Adelaide L. Rev.* 341; Thomas M. Mengler, "The Theory of Discretion in the Federal Rules of Evidence" (1989) 74 *Iowa L. Rev.* 413; William L. Twining, *Rethinking Evidence: Exploratory Essays* (Oxford: Blackwell, 1990) ch.6; David P. Bryden & Roger C. Park, "Other Crimes' Evidence in Sex Offence Cases" (1994) 78 *Minn. L. Rev.* 529 at 561 ("For centuries, the movement has been toward abolition of those evidentiary rules that have as their basis the danger of misleading the fact-finder. Jurists and scholars alike increasingly have agreed with Bentham that technical rules of evidence designed to prevent fact-finders from making mistakes are, at best, more trouble than they are worth.").

13. Later in this article, they will be referred to as FRE.

14. See McNamara; Twining; and Mengler, *supra* note 12.

This depiction of the abolitionist wave moving the Anglo-American laws of evidence would not be accurate without making one reservation. Rules furthering objectives which are alien to the ascertainment of facts have not been battered by this wave. Anglo-American legal systems continue to display their respect for confidentiality of certain communications and materials;¹⁵ most of these systems exclude probative evidence obtained by illegal means.¹⁶ These are just two representative examples of evidentiary rules thwarting fact-finding for the sake of other objectives and values. Such provisions are, however, properly classified as 'extrinsic' rather than 'auxiliary' to fact-finding.¹⁷ None of them lies in the central core of the Anglo-American fact-finding systems, where the eradication of formal legal structures has taken place.

This relentless removal of formal legal structures, unprecedented in other areas of the law, has brought the Anglo-American fact-finding systems very close to their Continental counterparts.¹⁸ Fulfillment of Bentham's abolitionist prophesy is now felt to be part of the upcoming reality; indeed, some evidence law teachers have even started questioning the utility of their own enterprise.¹⁹ The most remarkable statement to this effect was made by the late Sir Rupert Cross, one of the most prominent evidence law scholars of this century, who is reputed to have announced "I am working for the day when my subject is abolished."²⁰ But occupational worries have been proven to be premature. Owing to the 'New Evidence Scholarship'—an interdisciplinary movement which shifted the main focus of the academic inquiry from evidentiary rules to the paradigms of reasoning about evidence²¹—the dissipation of formal legal structures no longer seems to threaten jobs. This movement should be credited for generating many important insights, of which the most remarkable are those produced by its stimulating inquiry into the canons of probability and induction applicable in adjudicative ascertainment of facts. This and related inquiries will certainly continue to occupy many minds and journals.²²

The abolitionist wave taking place in the Anglo-American fact-finding systems calls for an explanation. There are several factors that can possibly explain it. Pivotal among these factors is a sweeping endorsement of the empirical method in practical matters. Scientific and technological advances attributable to this method have fostered confidence in human cognitive capacities. They have also exposed the

15. See John W. Strong et al., *McCormick on Evidence*, vol.1 4th ed. (St. Paul, MN: West Publishing, 1992) at 268-72.

16. See, e.g., McCormick, *ibid.* ch.15; Andrew L.T. Choo, *Abuse of Process and Judicial Stays of Criminal Proceedings* (Oxford: Oxford University Press, 1993) at 88-118.

17. Wigmore, *supra* note 3, §11.

18. Karl H. Kunert, "Some Observations on the Origin and Structure of Evidence Rules Under the Common Law System and the Civil Law System of 'Free Proof' in the German Code of Criminal Procedure" (1966-67) 16 *Buffalo L. Rev.* 122.

19. See "Symposium: Does Evidence Law Matter?" (1992) 25 *Loyola L.A. L. Rev.* 629-1023. See also Roger C. Park, "Evidence Scholarship, Old and New" (1991) 75 *Minn. L. Rev.* 849 at 859-71.

20. See Twining, *supra* note 12 at 1.

21. See Richard Lempert, "The New Evidence Scholarship: Analyzing the Process of Proof" (1986) 66 *Boston U. L. Rev.* 439.

22. For a brief survey of the 'New Evidence Scholarship' see William Twining & Alex Stein, "Evidence and Proof" in *The International Library of Essays in Law and Legal Theory Areas—volume XI* (New York: New York University Press, 1992) at xxi-iv.

impracticality, if not unwarrantedness, of the metaphysically and otherwise postulated justifications of knowledge. Virtually all practical affairs have become governed by the experiential distinction between workable and non-workable hypotheses. The truth-value of a humanly formed hypothesis has almost become identified with its practical value, i.e., with its empirically testable workability. This empirical inductivism, often taken as exclusively rational, has been endorsed overwhelmingly. It has been endorsed not only by natural scientists, but also by many social scientists, political reformers, and just people at large. It is responsible for generating the social stance described as "epistemic confidence."²³

This endorsement of empirical inductivism has also had exclusionary implications. Constantly suspicious of any deductive reasoning that rests upon postulated foundations, it is responsible for shattering the idea of having 'moral truths' instead of a fragmented and diversified morality. Some foundationalists have been accused of promulgating 'the first principles', which—despite being self-proclaimed—have managed to outcast divergent forms of life. Some promoters of 'moral truths' have been accused of contributing to totalitarianism, racism, poverty, and other unquestionably heinous conditions; this has had further fortified the mood of suspicion about the domain of morality. Nurtured by the sharp contrast between human beings' spectacular achievements in science and technology, and their no less spectacular failures in morality and politics, this skeptical mood has grown into a constant and all-encompassing state of alert. This mood subjects to distrustful scrutiny any claim that seeks to justify coercion as a means of confining individuals to particular forms of 'official morality'. This mood (one of the salient traits of modern liberalism, which has intensified throughout this century²⁴) can be characterized as 'moral skepticism'.

A combination of epistemic confidence and moral skepticism can explain the abolitionist wave in evidence law in the following way:

- (1) Epistemic rationality cannot and should not be controlled by the law. It is the law itself, in so far as its reliance on facts is concerned, that ought to be subordinated to the canons of epistemic rationality. Judges and jurors do not therefore need any special rules that will tell them how to resolve disagreements about empirical facts. Armed with experiential knowledge, which proved to be creditworthy, they are capable of resolving such disagreements by relying on evidence;
- (2) This, however, is not the case with disagreements about values. Such disagreements have no antecedently fixed solutions. Therefore, to bestow upon individual judges the power of making legally enforceable value-preferences would

23. See L. Jonathan Cohen, "Freedom of Proof" in William Twining, ed., "Facts in Law" (1983) 16 *Archive für Rechts- und Sozialphilosophie* 1; Twining, *supra* note 12, ch.3; Peter Tillers & David Schum, "Hearsay Logic" (1992) 76 *Minn. L. Rev.* 813 at 815 ("The law of evidence, by its nature, is a type of epistemological theory. The epistemology of the American law of evidence has an empiricist tinge.").

24. See Edward A. Purcell Jr., *The Crisis of Democratic Theory: Scientific Naturalism and the Problem of Value* (Lexington: University Press of Kentucky, 1973); James Fishkin, *Beyond Subjective Morality* (New Haven, CT: Yale University Press, 1984); James Fishkin, "Liberal Theory and the Problem of Justification" (1986) XXVIII *Nomos* 207.

amount to licensing judicial dictatorship. Enforceable value-preferences can only be determined by 'social agreement', namely, by the law. Law, after all, has proved to be the only viable, albeit imperfect, common denominator of society which is both liberal and pluralist.²⁵

Driven solely by the epistemic confidence, the abolitionist wave has therefore left intact most evidentiary rules which incorporated preferences of value. It is only those rules that clashed with epistemic confidence that have been targeted by the abolitionist.²⁶

Bentham's abolition project, originally designed to be all-encompassing,²⁷ has thus been realized only partially. Based on utilitarian grounds, Bentham valued rectitude of decision as an overarching goal of evidence law.²⁸ This monistic approach, which favored a 'natural system' of free proof, as imported from 'family tribunals',²⁹ was however unaffordably simplistic. The appealing simplicity of the procedures of family tribunals must be understood as contingent upon family solidarity and upon the commonality of its members' interests.³⁰ These are regarded, within the family's altruist milieu, as values that ordinarily prevail over peculiarly personal interests of family members.³¹ Because of the complexity and alienation that characterize modern society, such commonality of interests cannot seriously be claimed to exist today. What does exist is a plurality of purposes, moral sentiments, and forms of life; some combination of these factors may override rectitude of decision for the sake of other values. Take, for example, those who firmly believe that enforcement of the criminal law should be as efficient as it can ever get to be. These people would be in favor of admitting all probative evidence, an idea which may not be shared by others, who are willing to constrain law-enforcement when it posits a serious threat to individual privacy or when it weakens the safeguards against police brutality. To suggest that these and other clashing moral outlooks can somehow be measured against each other (let alone objectively reconciled³²) is to allude to superior principles of morality. Contemporary moral skepticism reacts to such allusions with suspicion, if not outright rejection. Thoroughly defiant towards sweeping straight-line settlements of moral and political issues, this ideology has prevented the Anglo-American laws of evidence from being transformed into fixed hierarchies of values headed by a Benthamite "rectitude of decision."³³

25. Cf. Joseph Raz, *The Morality of Freedom* (Oxford: Clarendon Press, 1986) at 181.

26. Cohen, *supra* note 23 at 12-14.

27. See Twining, *supra* note 3 at 66-100.

28. Bentham, *supra* note 2 at 1-15.

29. Jeremy Bentham, *A Treatise on Judicial Evidence* (London: J.W. Paget, 1825) at 6-7.

30. Cf. Richard Rorty, "Solidarity or Objectivity" in John Rajchman & Cornel West, *Post-Analytic Philosophy* (New York: Columbia University Press, 1985) at 3.

31. William L. Twining, "Hot Air in the Redwoods, A Sequel to the Wind in the Willows" (1988) 86 Mich. L. Rev. 1523 at 1539-41.

32. This echoes the well-known incommensurability problem. See, e.g., Frederick Schauer, "Commensurability and Its Constitutional Consequences" (1994) 45 Hast. L.J. 785.

33. For critique of Bentham's fixed hierarchical value-structures see Kenneth Graham Jr., "There'll Always be an England: The Instrumental Ideology of Evidence" (1987) 85 Mich. L. Rev. 1204. See also Kenneth Graham Jr., "The Persistence of Progressive Proceduralism" (1983) 61 Tex. L. Rev. 929.

III. OUTLINE OF THE THESIS

In light of the developments delineated in Part II, the following excerpts, taken from contemporary writings on evidence law, should not strike anyone as surprising:

The rules of evidence state what matters may be considered in proving facts and, to some extent, what weight they have. They are largely ununified and scattered, existing for disparate and sometimes conflicting reasons: they are mixture of astonishing judicial achievements and sterile, inconvenient disasters. There is a law of contract, and perhaps to some extent a law of tort, but only a group of laws of evidence.³⁴

In one of our classics of literature, *Alice in Wonderland*, one of the characters is the Cheshire Cat who keeps appearing and disappearing and fading away, so that sometimes one could see the whole body, sometimes only a head, sometimes only a vague outline and sometimes nothing at all, so that Alice was never sure whether or not he was there or, indeed, whether he existed at all. In practice, our rules of evidence appear to be rather like that.³⁵

These excerpts are intended to be descriptive. Normative theories produced by writers on evidence and law reformers are not all alike. Yet, it would be fair to describe their mainstream as supporting the transition from the legally imposed regulation of admissibility and sufficiency of evidence to a legally uncontrolled, and thus 'free', evaluation of evidential weight.³⁶

I will argue that 'freedom of proof' is normatively unsustainable and that judicial³⁷ fact-finding should be thoroughly regulated by the law. My principal thesis is this:

- (1) As generally accepted, uncertainty is one of the defining characteristics of judicial fact-determination;
- (2) Judicial decisions concerning admission, examination and evaluation of evidence cannot therefore be made without exposing at least one of the litigants to the risk of error;
- (3) Freedom of proof, even when adequately constrained by the epistemic rationality standards, would thus empower judges to allocate that risk as they wish;
- (4) Allocation of the risk of error entails value-preferences. Not having a privileged access to criteria for establishing such preferences, judges should not be allowed to allocate the risk of error as they deem fit;
- (5) Freedom of proof is thus politically identical to a system that confers upon judges an unstructured discretion in matters of contract, tort, crime, and so forth. Those who believe that judges should not have such discretion in these and other areas of the substantive law are therefore bound to reject the idea of free proof;
- (6) Allocation of the risk of error should be regulated by the law because law

34. J. D. Heydon, *Evidence: Cases and Materials* 2d ed. (London: Butterworths, 1984) at 3.

35. Twining, *supra* note 12 at 197.

36. See *supra* notes 3 and 12.

37. Subject to those few passages where a differentiation between judges and jurors is either explicit or implicit, this article's use of the terms 'judge/s', 'judicial' etc., will be generic.

is the only common ground for resolving controversies that relate to enforceable value-preferences. Evidence law should thus provide for the allocation of various risks of error by conferring upon litigants appropriate rights, liabilities, and immunities in regard to admission, examination, and evaluation of evidence.

Involving both critique and a refoundation of the evidence doctrine, this thesis will be defended in the following order. Part IV of this article will delineate the conventional evidence doctrine that places freedom of proof in its core and treats the existing evidentiary rules as disparate exceptions to free proof. Part V will mark out two assumptions upon which this doctrine is founded. These will be called the 'epistemic confidence assumption' (which is generally avowed and has already been explicated) and the 'assumption of separation' (which is implicit and thus needs to be unfolded). The epistemic confidence assumption holds judges capable of rationally resolving contested issues of fact. The assumption of separation maintains that judicial evaluation of evidential weight is a purely epistemic activity that can be conducted without resorting to value-preferences. The epistemic confidence assumption and its empiricist criteria for fact-determination will not be questioned in this article. Emanating from general experience, this assumption will be taken as being practically justified. Practical reasoning would be thoroughly impoverished—and, indeed, halted in indecision—if this assumption be eroded by any doubt arising in regard to its philosophical foundations. This, however, is not the case with the assumption of separation. Part V of this article will demonstrate that this assumption is unsustainable.

Without appealing directly to intuition, this argument requires a more detailed outline. The assumption of separation breaks down because judges have to settle disputed issues of fact in conditions of incomplete information. Their reasoning would thus have to account for the unrealized forensic possibilities by attempting to resolve the following counterfactual issue:

Could the decision be different, if more evidence (and thus more information) were available, or if the existing evidence were subjected to a more rigorous and extensive examination?

Questions like this can never receive determinate answers. This is so because generalizations to be relied upon in counterfactual reasoning can be derived only from the possible, rather than actual worlds. The applicability of such generalizations to individual cases would thus be open to unceasing questioning aimed at destructing, constructing, and reconstructing judicial inferences. Such questioning would have to be terminated at some point. But to terminate it at any given point would amount to making a strategic, rather than epistemic, decision about the bounds, rather than the contents, of judicial inquiry. Probability of the litigated facts that needs to be determined by judges can thus be perceived as derived from the contents of the evidence, but not from its amount. Decisions about the *sufficiency* of the latter for delivering a verdict are therefore not probability decisions. Such decisions, as not governable by epistemic standards, allocate risk of error between the litigants. This may be justified on moral and political grounds only. Consequently, the sufficiency issue cannot be resolved simply by applying the standards and burdens of proof.

Judicial determination of evidential weight can thus be shown to be intertwined with moral and political choices. Evidence *per se* has no weight; it is only arguments *from the evidence* which advance the inferential process (labelled as 'transforming arguments') that can carry greater or lesser weight. Their weights will depend upon the broadness of their evidential bases; that is, upon the extent to which information relevant to each of them is specified by the evidence. As the latter factor will derive from the above-mentioned strategic decisions which entail risk-allocation, determination of evidential weight cannot be justified on purely epistemic grounds. To maintain that it can, as implied by the conventional evidence doctrine, is to subscribe to an unbearably light and thus indefensible notion of 'weight'.

The failure of the assumption of separation reduces free proof into a forthright submission of moral and political controversies to individual judges. Freedom of proof allows judges to enforce their own privately devised criteria for allocating the risk of error, if not to allocate risk whimsically. It also enables them to disguise risk-allocation as regulated solely by the standards and burdens of proof. As has already been indicated, any decision as to whether the requisite standard of proof has been satisfied is contingent on the previously made strategic decision concerning the bounds of the inquiry. Intentionally or not, the conventional doctrine obfuscates this strategic decision, thus marginalizing the moral and political dimension of judicial fact-finding.

By treating evidentiary rules as disintegrated exceptions to free proof, the conventional doctrine also inspires abolitionism. If judges are by and large allowed to reason from evidence to conclusions when their epistemic rationality is unfettered, why not extend this license to all settings? When put to the supporters of evidence law, as conventionally portrayed, this would certainly be a fair question. As a normative proposition, this question would, however, be fallacious because its initial assumption lacks normativity. Regulation of fact-finding, which is both exceptional and sporadic, is doomed to be unsatisfactory. Yet, to support free proof on the basis of this predicament would clearly be *non sequitur*. The existing regulation may be unsatisfactory not because it constrains judges where it should not; it may be unsatisfactory because it does not constrain judges where it should. Regulation of judicial fact-finding would thus have to be tightened rather than scaled down.

My denunciation of free proof still has to overcome one objection. Although recourse to strategic decisions and their risk-allocating effect are something that cannot be denied (and should therefore be explicated), such decisions are not susceptible to regulation. This is arguably so because fact-patterns of each case are unique. Judges should therefore be allowed to use discretion in deciding about the bounds of their inquiries. Arguably, the only precept they should follow would require them to gather 'all relevant information that can *practicably* be obtained'. This information-maximizing precept is bound to work differently in different cases. Some verdicts will thus be based on more evidence, and some on less. This clearly entails risk-allocation, a phenomenon that needs to be acknowledged, but cannot be regulated by the law. Although implicit in the conventional doctrine, this argument is fallacious. It assumes without warrant that there is a linear progression relationship between the amount of information and the accuracy of decision. More

information would arguably produce greater accuracy. Starting from the premise that totality of the relevant information guarantees accuracy of decision, this argument is ostensibly appealing. But this is only ostensibly so. The obvious trouble lies in the argument's *quantitative* parallel between perfect and imperfect information. Perfect and imperfect information conditions differ from each other not merely quantitatively, but also (and primarily) qualitatively. Imperfect conditions bring into play and, indeed, make pivotal, the credibility factor, describable as 'information about information'. This factor, otherwise otiose, is determined by the possible relationship between the existing and the missing information, or, more precisely, by the extent to which the credibility of the known is marred by the presence of the unknown. So long as our information conditions remain imperfect, a mere acquisition of further information (with uncertain credentials) will not bring these conditions closer to perfection. It would merely substitute the risk of error, which existed *ex ante*, with a new risk of error (associated with the new information's credibility), without guaranteeing that the latter risk is smaller than the former. Coupled with the ubiquity of imperfect informational conditions, this 'mercury-effect' point may be understood as yet another call for global epistemic skepticism. This, however, is not my intention. Far from promulgating such skepticism, this point is intended to refute the idea that augmentation of information would *necessarily* produce more accuracy in decision-making. Highlighting the risk-replacement phenomenon as inherent in acquisition of information under uncertainty, this point has special implications for adjudication, where some risks are acceptable, while others are not. Judicial inquiries that are unacceptably risky should thus not be allowed to get started.

The precept 'gather all relevant information that can practicably be obtained' is also unhelpful in cases where existing information is claimed to be too thin to justify a verdict. Probability of each party's allegations, that has to be determined under the controlling standard of proof, can, in principle, be conditionalized upon any amount of information. When the latter is alleged to be too small, it is the propriety of the conditionalization, rather than probability *per se*, that becomes an issue at the trial. To resolve this issue epistemically, without resorting to risk-allocation, is clearly impossible. To endorse the above-mentioned precept and thus simply ignore the problem of risk-allocation is evidently unthoughtful. Materialization of some risks of error will be more damaging than materialization of others. Allocation of the risk of error in judicial trials cannot therefore be fortuitous. Accidentally, the above-mentioned precept may be regarded as appropriate in civil trials, where risks of error are rated as being equally bad for plaintiffs and defendants. Such application of this precept would, however, originate from the equality in risk-allocation, as prescribed by the law, not from the alleged impossibility of legal regulation.

This denunciation of free proof is not dependent on the substance of risk-allocating regulation that should constrain judicial fact-finding. Criteria for allocating the risk of error in adjudication are bound to be derived from political morality, a terrain of diversities and continual clashes. To promulgate a fully fledged normative theory by endorsing one viewpoint over another would thus be a precarious, and, indeed, an overambitious, venture. Having denounced free proof for allowing

judges to allocate risk of error as they deem fit, I am unwilling to be hoisted on my own petard.

In Part VI, I shall, however, set forth what will be identified as an 'endogenous theory' of risk-allocating regulation. Going beyond simple descriptivity, this theory will be worked out 'from within':

(1) by eliciting from the settled law, as exhibited by Anglo-American legal systems, its inner moral criteria for allocating risk of error in civil and criminal adjudication;

(2) by arguing that these criteria (which will be specified) should apply across the board, primarily because—

(i) they are authoritative (and should therefore preempt judges from invoking other, unprivileged criteria in allocating risk of error);

and also because—

(ii) similar cases should be treated alike;

(3) by arguing that these inner criteria need to be translated into legal principles and rules that would define both general and specific immunities from the risk of error.

The aim of constructing this theory is to show that refoundation of the evidence doctrine along the lines advocated by this article is a viable possibility.

Another aim of this theory is more ambitious and, admittedly, more problematic. Deriving from a positive (rather than normative) analysis of the law, this theory will indicate that the conventional understanding of the evidence doctrine is not only normatively unsustainable, but is also descriptively problematic. By portraying freedom of proof as a normal condition of the trial, this understanding fails to satisfy the inner criteria for allocating risk of error, criteria which have been extracted from the settled law. Evidence law, as conventionally portrayed, should thus be faulted not merely for licensing judges to execute their private risk-related preferences, but also for being strikingly incoherent. If so, what exactly requires improvement: evidence law or, perhaps, its conventional depiction!?

IV. THE CONVENTIONAL EVIDENCE DOCTRINE

Parts of this article were first presented at a conference session entitled "Discretion in the Law and Rules of Evidence and the Legislative Role in Codification: Is the Regulation of Inference a Peculiarly Judicial Function?"³⁸ This title captures the key issues implicated in the more general normative question 'What should be the function/s of evidence law?'. Recurrent titles that invoke sharp dichotomies, such as "Freedom of Proof vs. System of Rules", are less accurate.³⁹

38. This session took place at a Conference on the Reform of Criminal Evidence, organized by the Society for Criminal Law Reform (Vancouver, August, 1992). Credit for framing the issue in this way goes to the Conference Chairperson, Professor Ronald Allen.

39. See Kunert, *supra* note 18.

They imply that regulation and non-regulation of judicial fact-finding are two mutually exclusive policies. This, indeed, could be so, if judicial fact-finding were devised as a pursuit of only one objective—namely, rectitude of decision. But this plainly is not the case. Another shortcoming of this dichotomization lies in its further implication that ‘Free Proof’ and ‘System of Rules’ are two jointly exhaustive strategies. This limits without warrant the range of available possibilities. Rigid rules that apply in an all-or-nothing fashion are certainly not the only means of attaining legal objectives. Some of the law’s objectives are best realized by resorting to more flexible principles or standards.⁴⁰ To frame the debate about the functions of evidence law as a question ‘Rules or Free Proof?’ is therefore misleading in regard to both the *substance* of legal regulation that should be designed for judicial fact-finding and the *form* that this regulation should assume.

‘Freedom of Proof’⁴¹ and ‘Free Evaluation of Evidence’⁴² are conceptually ambiguous notions.⁴³ None of them really suggests that judges should exercise a legally unfettered discretion in resolving every evidential problem that might arise in adjudication. This can be verified by looking at the key facets of the conventional evidence doctrine.

As widely acknowledged, judicial fact-finding involves clashes between rectitude of decision, as a means of securing implementation of the substantive law, and other important values. Ignorance is often preferred to knowledge when the latter requires revelation of state secrets or other confidential information, or when its attainment interferes with individual privacy or ruins marital harmony.⁴⁴ Furthermore, to compel some witnesses to testify under certain conditions might be regarded as morally inappropriate.⁴⁵ This view may, for instance, be adopted in regard to a state-imposed trilemma which forces a person to choose between punishment for contempt, perjury, or self-incrimination.⁴⁶ These and other value-conflicts cannot justifiably be resolved by judicial discretion. To suggest the opposite would ascribe judges both moral and political superiority over other citizens and political institutions, an outcome generally thought to be unacceptable. Legal control over value-conflicts that arise in evidential matters has therefore never been opposed for being out of place.

Forensic conduct of the litigants—that may be both beneficial and detrimental to fact-finding and other goals of the trial—is another area that requires evidence-related regulation. Dangerously self-serving, this conduct needs to be constrained, and constraints to be imposed upon it by the law may be backed by evidentiary sanctions. An obvious example of this strategy can be found in the broad ‘best evidence principle’. Demanding that litigants produce the most probative evidence

40. Denis Galligan, “More Scepticism about Scepticism” (1988) 8 Oxford J. of Legal Stud. 249 at 257.

41. Cohen, *supra* note 23.

42. Per Olof Ekelöf, “Free Evaluation of Evidence” (1964) 8 Scandinavian Studies in Law 47.

43. See Twining, *supra* note 12, ch.6.

44. McCormick, *supra* note 15, chs.8-12.

45. See, e.g., Kent Greenawalt, “Silence as a Moral and Constitutional Right” (1981) 23 Wm. & Mary L. Rev. 15; William J. Stuntz, “Self-Incrimination and Excuse” (1988) 88 Colum. L. Rev. 1227.

46. See Peter Arenella, “Schmerber and the Privilege Against Self-incrimination: A Reappraisal” (1982) 20 Am. Crim. L. Rev. 31.

under their control, this principle punishes its violators by adverse inferences and, in cases involving writings and admissible hearsay, by rendering secondary evidence inadmissible.⁴⁷ Another example is the rebuttable presumptions which induce those who are willing to oppose them to produce evidence that would otherwise be onerous to obtain.⁴⁸ Regulation of forensic conduct may be even more specific. For example, it may be stipulated by the law that trademark infringement, passing off, and deceptive advertising should be proved by statistical evidence based upon an adequate survey of consumers.⁴⁹ Litigants may also be relieved from the burden of proving facts that are generally known, an exemption found in the rules of 'judicial notice'.⁵⁰ These rules may provide an explicit incentive to expedite the trial process by not proving the facts that can be judicially noticed.⁵¹ In addition, litigants may be encouraged to settle their disputes out of court. As part of this encouragement, it may be stipulated by the law that when negotiations towards settlement fail, none of the parties will be allowed to use the information obtained through these negotiations as evidence in the ensuing litigation.⁵²

These, and other incentives, which induce litigants to settle out of court, expedite their trial, and abstain from pursuing unmeritorious claims, need to be promulgated in advance. This certainly calls for legislative action. A community employing such incentives may also commit itself to the principle of equality and thus demand that its procedural and evidentiary rules be applied similarly in all cases. Legislation is probably the best way of attaining this objective.⁵³ Apart from all this, judges should not be left free to devise their own efficiency standards for trial procedures and decide about the measures that may justifiably be taken in order to implement these standards. Under the prevalent institutional theory, such political decisions should be made by the politically accountable legislator.⁵⁴

Evidentiary incentives (and disincentives) may also be appropriate for regulating conduct taking place before or outside of the scope of litigation. Thus, confessions elicited from suspects, as well as other evidence gathered by the police, may be doomed to exclusion when obtained by illegal means, irrespective of their

47. See FRE1004(1); 804(a); Dale Nance, "The Best Evidence Principle" (1988) 73 Iowa L. Rev. 227.

48. See, e.g., James B. Thayer, "Presumptions and the Law of Evidence" (1889) 3 Harv. L. Rev. 141; Edmund Morgan, "Presumptions" (1937) 12 Wash. L. Rev. 255; Charles V. Laughlin, "In Support of the Thayer Theory of Presumptions" (1953) 52 Mich. L. Rev. 195; Ronald J. Allen, "Presumptions in Civil Actions Reconsidered" (1981) 66 Iowa L. Rev. 843.

49. Although there is no general formal requirement to this effect, this would arguably be the best proof. See, e.g., Jack P. Lipton, "A New Look at the Use of Social Science Evidence in Trademark Litigation" (1988) 78 Trademark Rep. 32 at 63 ("the failure of a trademark owner to run a survey may now give rise to an adverse inference."); Jacob Jacoby, Amy H. Handlin & Alex Simonson, "Survey Evidence in Deceptive Advertising Cases under the Lanham Act: An Historical Review of Comments from the Bench" (1994) 84 Trademark Rep. 541.

50. See John McNaughton, "Judicial Notice—Excerpts Relating to the Morgan-Wigmore Controversy" (1961) 14 Vand. L. Rev. 779; Kenneth C. Davis, "Judicial Notice" (1955) 55 Colum. L. Rev. 945.

51. See FRE 201 (d), according to which taking of a judicial notice in civil litigation becomes mandatory upon request.

52. See FRE 408. See also FRE 410 (the same applies to plea bargaining); *Rush & Tumpkins v. GLC*, [1988] 3 All E.R. 737; Wayne D. Brazil, "Protecting the Confidentiality of Settlement Negotiations" (1988) 39 Hast. L.J. 955.

53. See Louis Kaplow, "Rules versus Standards: An Economic Analysis" (1992) 42 Duke L.J. 557.

54. See, e.g., Rolf Sartorius, "Social Policy and Judicial Legislation" (1971) 8 Am. Phil. Quart. 151.

trustworthiness.⁵⁵ Evidence concerning remedial measures introduced by the defendant after the occurrence of the litigated accident (or other damage-incurring event) may also be excluded.⁵⁶ Such evidence would usually indicate that the defendant was either aware or had implicitly admitted the existence of the previously unsafe conditions, to which he or she was responsible. This damaging inference, however warranted it may be, would constitute a serious disincentive for people who consider introducing safety improvements in industries (and other enterprises).⁵⁷ Because such improvements are socially beneficial, this disincentive should, arguably, be removed. Admission of post-accidental remedial measures as evidence pointing to the defendant's liability would not reduce the social costs inflicted by the litigated accident. On the other hand, exclusion of this evidence would prevent further social costs. The same theory holds in relation to peer review and other professional reports that have been solicited with a view to improving medical procedures, industrial safety, and so forth.⁵⁸ Turning to another example, oral testimony that contradicts a written agreement, however credible it may be, will not be admissible under the 'parol evidence' doctrine. This doctrine, which promotes the stability of contractual relationships, also contributes to the efficacy of pre-contractual communications by inducing the negotiating parties to embark upon full and unequivocal exchange of promises.⁵⁹ These legal arrangements determine not only the courses of conduct that are socially desirable, but also the price—in terms of erroneous verdicts—that may be paid for fostering them. For reasons already given, such arrangements need to be determined legislatively rather than judicially.⁶⁰

Another area meriting regulation is that of 'process values'. These are values maintained by the legal system irrespective of their impact upon the outcome of the trial. Procedural justice can thus be perceived as being not invariably instrumentalist. Citizens may be entitled deontologically to certain procedural arrangements.⁶¹ This procedural ideology may be embedded in some evidentiary rules. It may, for example, explain the accused's right to cross-examination, when the admissibility of testimonial evidence tending to incriminate is conditioned upon the existence of an adequate opportunity to exercise this right. Evidence excluded by this condition would be excluded not because it is devoid of probative value; it would be excluded because to force a person into a criminal trial without providing her with a fair opportunity to confront adverse witnesses is devoid of political warrant. Factual findings that could be made on the basis of unexamined testimonial evidence could possibly be accurate, but their accuracy is not the issue. The issue

55. See McCormick, *supra* note 15, chs.13-15. See also Andrew Ashworth, "Excluding Evidence as Protecting Rights" (1977) *Crim. L. Rev.* 723.

56. FRE 407.

57. See *Flaminio v. Honda Motor Co.*, 733 F.2d 463 (7th Cir. 1984) (Posner, J.).

58. For its discussion see Note, "Making Sense of Rules of Privilege Under the Structural (II)logic of the Federal Rules of Evidence" (1992) 105 *Harv. L. Rev.* 1339 at 1351ff.

59. Cf. Ian Ayres & Robert Gertner, "Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules" (1989) 99 *Yale L. J.* 87.

60. As acknowledged, e.g., by Justice Blackmun in *University of Pennsylvania v. Equal Employment Opportunity Commission* 110 S.Ct. 577 at 582 (1990).

61. Robert Summers, "Evaluating and Improving Legal Process—A Plea for 'Process Values'" (1974) 60 *Cornell L. Rev.* 1; Michael D. Bayles, "Principles for Legal Procedure" (1986) 5 *L. & Phil.* 33.

is whether the community where criminal trials are allowed to be conducted without full participation of the defendants is politically attractive.⁶²

The ban imposed by the law on incriminating inferences that could otherwise be drawn from the defendant's criminal record can be explained in similar terms. Resting upon the generalization that human behavior tends to repeat its underlying pattern, such inferences may be banned as empirically unwarranted and thus prejudicial.⁶³ They may, however, also be banned for an altogether different reason. By treating human action as causally related to the actor's personality, such inferences undermine the anti-deterministic assumption of 'free agency'. This assumption reflects one of the focal ideas of liberal morality, that (*inter alia*) justifies attribution of criminal responsibility to individuals.⁶⁴ According to this idea, often expressed by the familiar precept 'Judge the act, not the actor', to use the defendant's personality as incriminating evidence would undermine his autonomy and degrade his individuality.⁶⁵

The same moral viewpoint holds in relation to victims of rape and sexual abuse testifying for prosecution. Their sexual life is not normally allowed to be used as a 'promiscuity pattern' for impeachment purposes or in order to prove allegations of consent.⁶⁶ This ban is, however, easier to lift up when this is necessitated by defence arguments that do not resort to reasoning from promiscuity.⁶⁷

Social acceptability of verdicts is yet another value that may be fostered by the legal system in a way that affects judicial fact-finding. Guilty verdicts backed by evidence illegally obtained by the police may, for example, be regarded as socially unacceptable. Messages conveyed by such verdicts to the public at large would imply lack of commitment to the legality principle on behalf of the state.⁶⁸ By delivering such verdicts, courts will have taken part in the illegal enforcement of the criminal law. This would arguably be so because courts and police, both representing the state, cannot be regarded as "constitutional strangers to each other."⁶⁹ Convictions founded upon uncross-examinable—and thus unfalsifiable—witness statements may also be regarded as conveying socially unacceptable messages.⁷⁰

62. Cf. Randolph N. Jonakait, "Restoring the Confrontation Clause to the Sixth Amendment" (1988) 35 U.C.L.A. L. Rev. 557.

63. See FRE 404(a); Christopher B. Mueller & Laird C. Kirkpatrick, *Evidence* (Boston: Brown & Co., 1995) at 216-18.

64. See, e.g., David T. Wasserman, "The Morality of Statistical Proof and the Risk of Mistaken Liability" (1991) 13 Cardozo L. Rev. 935.

65. See Wasserman, *ibid.* Cf. A. E. Acorn, "Similar Fact Evidence and the Principle of Inductive Reasoning: *Makin* Sense" (1991) 11 Oxford J. of Legal Stud. 63 (1991). As Dworkin wrote, "[i]t is unjust to put someone in jail on the basis of a judgment about a class, however accurate, because that denies his claim to equal respect as an individual." Ronald Dworkin, *Taking Rights Seriously* (London: Duckworth, 1978) at 13.

66. See FRE 412; *Sexual Offences (Amendment Act)* (U.K.), 1976, s.2; Jennifer Temkin, *Rape and the Legal Process* (London: Sweet & Maxwell, 1987) at 119-33.

67. Mueller & Kirkpatrick, *supra* note 63 at 235-44.

68. Adrian A.S. Zuckerman, *The Principles of Criminal Evidence* (Oxford: Clarendon Press, 1989) ch.16; Ian H. Dennis, "Reconstructing the Law of Criminal Evidence" (1989) 42 Current Legal Problems 21.

69. *US v. Leon*, 468 U.S. 897 at 938 (1984) (the dissenting opinion of Brennan, J.).

70. See Charles R. Nesson, "The Evidence or the Event? On Judicial Proof and the Acceptability of Verdicts" (1985) 98 Harv. L. Rev. 1357; Charles R. Nesson & Yochai Benkler, "Constitutional Hearsay: Requiring Foundational Testing and Corroboration Under the Confrontation Clause" (1995) 81 Va. L. Rev. 149. See also Note, "The Theoretical Foundation of the Hearsay Rules" (1980) 93 Harv. L. Rev. 1786 at 1807.

These are just two typical cases which exemplify the 'acceptability approach'.⁷¹ And again: recognition of these and other 'process values' lies in the legislator's domain. It is beyond dispute that judges should not be allowed to exercise exclusive governance over this issue.

Although not devoid of probative value, certain types of evidence might be prejudicial, most notably in trials by jury. At its most general level, this observation relates to two types of potential prejudice:

- (1) **risk of overvaluation.** This type of prejudice is typically attributed to hearsay evidence that lacks 'indicia of reliability' and to scientifically dubious expert opinions;
- (2) **verdicts *ad hominem*.** Typically, these are thought to be incited by 'bad character'⁷² and 'deep pocket'⁷³ evidence.

Rules which render such evidence inadmissible are usually laid down together with a general principle that authorizes judges to exclude any evidence "if its probative value is substantially outweighed by the danger of unfair prejudice."⁷⁴

Finally, judicial trials (both criminal and civil) are conducted under uncertainty. Judicial decision-making is thus bound to assume risk of error. To determine the conditions under which litigants may justifiably be exposed to this risk is one of the central tasks of evidence law. Criminal adjudication engenders the greatest moral and political complexity here. The two objectives—conviction and punishment of the guilty and exoneration of the innocent—are mutually incompatible, when pursued under uncertainty.⁷⁵ To immunize the defendants from the risk of erroneous conviction would always entail the risk of acquitting the guilty. Needing protection from crime, we are unwilling to absorb the risk of erroneous acquittal in every case. We have to protect ourselves from the crime by convicting and punishing people, even when the verdicts prescribing these measures carry the risk of being wrong.⁷⁶ Our communal readiness to legitimize this risk does not, however, live in peace with our individual unwillingness to be exposed to it personally. To compose a coherent list of our risk-related preferences is therefore a daunting task. It is not easy, if not altogether impossible, to obtain an adequate protection both *by* and *from* judicial action. Originating from our deeper and, indeed, self-contradictory desire to be both free and secure, this problem needs to be settled in one way or another. Regardless of how we wish to settle this problem, we have to confer fact-finding

71. For its general discussion see Nesson, *ibid.*; Dennis, *supra*, note 68.

72. See FRE 404(a), 609.

73. See, e.g., FRE 411 (liability insurance not admissible upon the issue whether the insured acted negligently or wrongfully).

74. See FRE 403; *The Police and Criminal Evidence Act* (U.K.), 1984, s.78; Edward J. Imwinkelried, "The Meaning of Probative Value and Prejudice" (1988) 41 Vand. L. Rev. 879. See also *Bruton v. United States*, 391 U.S. 123 (1968) (the defendant's out-of-court confession, admissible against him only, but not against his co-defendant, should be excluded because of its likely 'spillover effect').

75. Allocation of the risk of error in civil trials will be dealt with later in this article.

76. See Robert Nozick, *Anarchy, State and Utopia* (Oxford: Blackwell, 1974) at 96ff; Alan Wertheimer, "Punishing the Innocent—Unintentionally" (1977) 20 Inquiry 45.

powers upon judges, demanding that these powers be exercised in accordance with *our* risk-related preferences. For it is our preferences, as opposed to those which may privately be endorsed by judges, that we are prepared to enforce.

Our risk-related preferences should thus be determined by the law, and they are, in fact, exhibited by a number of legal arrangements. First and foremost, these preferences are embedded in the standards and burdens of proof.⁷⁷ They can also be found in some exclusionary rules⁷⁸ and corroboration requirements.⁷⁹ Under the prevalent legal doctrine, risk of erroneous conviction should be reduced to the minimum, which, in turn, magnifies the risk of erroneous acquittal. Resting upon non-utilitarian grounds, this doctrine is not applied indiscriminately.⁸⁰ For example, it is debatable whether it should apply in determining facts pertaining to 'excusatory' defenses, as distinguished from 'justifications'.⁸¹

The conventional evidence doctrine can thus be depicted as follows:

Subject to—

- (1) particular interests that override rectitude of decision;
- (2) evidentiary incentives fostering forensically and non-forensically beneficial conduct;
- (3) independent process values;
- (4) provisions preventing undue prejudice; and
- (5) the social preferences in the allocation of the risk of error,

inferences to be drawn by judges from evidential sources in deciding about legally material events (as prescribed by the relevant substantive law) should not be governed by the law. Validity of these inferences is a matter of evidential relevancy and weight, as determined by common sense, logic, and general experience.

Freedom of Proof clearly lies at the core of this doctrine. This freedom is surrounded, but not interfered with, by rules and principles laid down by the law, which promote a number of important—but not inferential—objectives of judicial fact-finding. In promoting these extraneous objectives, Anglo-American legal systems tend to display more pluralism than their Continental counterparts. Unwilling to qualify rectitude of judicial decisions by a comparably substantial list of competing objectives and values, Continental systems of proof tend to be remarkably, but not

77. See Wertheimer, *ibid.*; Mueller & Kirkpatrick, *supra* note 63, ch.3.

78. E.g., in the rules excluding hearsay and character evidence.

79. In England, for example, the judge had, until recently, to warn the jury that it would be dangerous to convict the accused upon his accomplice's testimony, unless it is corroborated by some independent evidence. *Davies v. DPP* [1954] 1 All E.R. 507 at 513; and see *infra* note 221.

80. See, e.g., *Patterson v. New York* 432 U.S. 197 (1977); *The Magistrates' Courts Act* (U.K.), 1980, s.101; Mueller & Kirkpatrick, *supra* note 63 at 159-66; Zuckerman, *supra* note 68 at 142-51.

81. For discussion of this issue see Alex Stein, "Criminal Defenses and the Burden of Proof" (1991) 28 *Coexistence* 133; Alex Stein, "After *Hunt*: The Burden of Proof, Risk of Non-Persuasion and Judicial Pragmatism" (1991) 54 *Modern Law Rev.* 570; Alex Stein, "From Blackstone to *Woolmington*: On the Development of a Legal Doctrine" (1993) 14 *J. of Legal Hist.* 14.

invariably,⁸² monistic.⁸³ But subject to this difference, Freedom of Proof has become universally accepted.

Under the framework of free proof, judicial determination of evidential relevancy and weight is contended to be a purely epistemic activity. Having 'no mandamus to the logical faculty'⁸⁴ (and presumably to the epistemological faculty as well), law should arguably exert no control over this activity. Hence,

[there is no] general need to write rules of proof into the law, nor to define a corresponding level of intellectual qualification for triers of fact. We need only a reasonable layman, not a logician or statistician, to determine what is beyond reasonable doubt.⁸⁵

V. ON THE UNBEARABLE LIGHTNESS OF 'WEIGHT'

(a) *The assumption of separation*

Freedom of Proof justifies itself by its epistemic credentials that allegedly make it apolitically rational.⁸⁶ As such, it rests upon two assumptions. Its first assumption is explicit. Originating from the general faith in human epistemic competence, this assumption holds judges capable of conducting rational evidence-based reasoning about facts.⁸⁷ This assumption, upon which most people habitually proceed in their practical affairs, will not be questioned by this article.⁸⁸

Another, now implicit, assumption forming the foundations of free proof is this:

Evidential relevancy and weight (also described as 'probative value' of the evidence) can and should be determined by judges without resorting to value-preferences.

82. See, e.g., James Beardsley, "Proof of Fact in French Civil Procedure" (1986) 34 Am. J. Comp. L. 459 (observing the existence of 'fact-avoidance' as a means of conflict-resolution); Pakter, *supra* note 11 (illegally obtained evidence may exceptionally be excluded in France, Germany and Italy); Lawrence J. Fassler, "The Italian Penal Procedure Code: An Adversarial System of Criminal Procedure in Continental Europe" (1991) 29 Colum. J. Transnat'l L. 245 (a larger number of values overriding rectitude of decision recognized by the Italian criminal justice system).

83. See Damaška, *supra* note 4 in *The Faces of Justice and State Authority* at 54-56, and in U. Penn. L. Rev. *passim*. See also George Fletcher, "The Right and the Reasonable" (1985) 98 Harv. L. Rev. 949 (fixed hierarchical structuring of legally protected values as generally characterizing the Continental legal doctrine).

84. Thayer, *supra* note 10 at 314.

85. Cohen, *supra* note 23 at 21.

86. Legally undisturbed fact-finding by the jury may be regarded as a political virtue. Arguably, the jury should be licensed to settle cases holistically by applying undifferentiated community standards. See, e.g., Zuckerman, *supra* note 68, chs.1-3; Charles Collier, "The Improper Use of Presumptions in Recent Criminal Law Adjudication" (1986) 38 Stan. L. Rev. 423 at 457-60. My article is premised on a different theory of legitimacy, one that requires articulated justification for judicially prescribed coercion.

87. Cohen, *supra* note 23 at 10ff.

88. For its discussion see Twining, *supra* note 12, ch.4. For its recent philosophical defence see Hilary Kornblith, *Inductive Inference and Its Natural Ground: An Essay in Naturalistic Epistemology* (Cambridge, MA: MIT Press, 1993). I accept this assumption as *practically* correct. See L. Jonathan Cohen, *The Probable and the Provable* (Oxford: Clarendon Press, 1977) ch. 24. For a recent challenge of this assumption see Donald Nicolson, "Truth, Reason and Justice: Epistemology and Politics in Evidence Discourse" (1994) 57 Modern Law Rev. 726. See also Michael L. Seigel, "A Pragmatic Critique of Modern Evidence Scholarship" (1994) 88 Northwestern U. L. Rev. 995 (arguing that evidence scholarship has been distorted by the 'twin vices of foundationalism and logical positivism' and that these epistemological assumptions need to be replaced with pragmatism and practical reason).

Fact-finding and value-preferences are thus held to be segregated. Values, to the extent that they are recognized by the law, may, of course, affect the scope and thus the outcomes of judicial inquiries into contested facts, but they should contain no precepts for judicial evaluation of evidence. The inner rationality of that latter function is and should be purely epistemic. This assumption of separation is essential for sustaining Freedom of Proof.⁸⁹ To support Freedom of Proof without endorsing this assumption is to subscribe to a dubious theory of political legitimacy that authorizes judges to settle cases by invoking their private values. None of the adherents of Freedom of Proof has explicitly subscribed to such a theory.

The assumption of separation will now be scrutinized. This will be done by focusing upon judicial determination of evidential weight. Determination of evidential relevancy need not be discussed because it does not raise any peculiar problems which would not be involved in determining weight. Under the conventional doctrine, evidence is relevant when it is potentially weighty, i.e., when it is *prima facie* capable of increasing the probability of its hypothesis.⁹⁰ Determination of evidential weight, that is, of the actual extent to which evidence increases the probability of its hypothesis, is therefore the only judicial function that needs to be examined. The main question that probes the validity of the assumption of separation can thus be defined with greater particularity:

Can judicial determination of evidential weight be justified by purely epistemic criteria?

Referring to all decisional parameters that *ought to be* accounted for in judicial determination of evidential weight, this question is crucial for testing the validity of the assumption of separation. This essentially normative issue cannot be settled

89. Intentionally or not, traditional expository writings on evidence law tend to strengthen this assumption. This is done as follows:

- (1) first, by portraying evidentiary rules as exceptions to Freedom of Proof, which, in turn, are subject to their own exceptions that reinstate this freedom. This marginalizes the legal, i.e., value-motivated, interference with the allegedly empirical reasoning followed by judges;
- (2) second, by dichotomously dividing the already exceptional rules into two distinct (Wigmorean) categories:
 - (a) rules grounded on 'auxiliary' or 'probative' policies which are justified empirically;
 - (b) rules motivated by 'extrinsic' policies, i.e. by the *exceptionally* strong value considerations which set aside decisional rectitude.

This attains further marginalization of values in judicial fact-finding.

A vivid example of this marginalization can be found in Dale Nance's influential article, dedicated to the 'best evidence principle'. Professor Nance writes:

More generally, this Article demonstrates that, putting aside the rules, such as those governing privileges, which are said to serve extrinsic social policies, the remaining evidentiary rules are more plausibly attributable to the epistemic concerns of a tribunal ... This operationalized meaning, which can be said to refer to the evidence that is 'epistemically best', is the primary focus of our attention.

Nance, *supra* note 47 at 229; 240. My claim can be easily verified by any standard treatise on evidence, such as McCormick, *supra* note 15; Colin Tapper, *Cross on Evidence* 7th ed. (London: Butterworths, 1990).

90. See FRE 401; James L. Montrose, "Basic Concepts of the Law of Evidence" (1954) 70 L. Quart. Rev. 527; Richard Lempert, "Modeling Relevancy" (1977) 75 Mich. L. Rev. 1021; Vaughn Ball, "The Myth of Conditional Relevancy" (1980) 14 Georgia L. Rev. 435; Peter Tillers, "Modern Theories of Relevancy" §37 of *Wigmore on Evidence*, vol. 1A, (Boston: Little, Brown, 1983); Dale Nance, "Conditional Relevancy Reinterpreted" (1990) 70 Boston U. L. Rev. 447; Ronald J. Allen, "The Myth of Conditional Relevancy" (1992) 25 Loyola L.A. L. Rev. 871.

by a simple plain-fact description of judicial practices. It would not be enough to attest descriptively: 'judicial determination of weight is a purely epistemic task because judges habitually discharge it without resorting to reasoning other than empirical.' To determine evidential weight without accounting for all factors that need to be accounted for, is to embark upon flawed and thus inherently unjustifiable reasoning. By indicating that evidential weight can *justifiably* be determined under its umbrella, the assumption of separation displays commitment to some underlying normative theory. An attempt to unfold and examine this theory will now be made.

(b) *A theory of 'weight'*

An attempt to elicit (or construct) a justifiable weight theory can obtain no help from the specialized writings on evidence law. These writings deal with evidential weight in a strikingly laconic and referential way; typically, by remarking that—

- (1) ascription of weight (or 'probative value') to admissible evidence is a matter of common sense and experience;
- (2) evidence law therefore exercises no control—and, indeed, should exercise no control—over this judicial function.⁹¹

This lack of concern about evidence-based reasoning in adjudication constitutes a major flaw of the 'Old Evidence Scholarship'.⁹² A number of inquiries into this reasoning have gone beyond the perfunctory reference to 'common sense and experience' and not absolved themselves from dealing with evidential weight.⁹³ However, focusing primarily upon the logical structure of the process of proof and upon some of its psychological aspects, these inquiries contain no systematic exploration of the standards that should be followed by judges in determining the weight of evidence.

91. By devoting to the issue of weight less than one page (page 61 out of 736) *Cross on Evidence*, *supra*, note 89) provides a representative example. This work admits that the "... tendency of the modern law is in favour of a broad basis of admissibility" (*ibid.* at 61). Determination of evidential weight was placed beyond the scope of this work presumably because "the former [evidential admissibility] is a matter of law; weight of evidence, on the other hand, is a question of fact" (*ibid.*). This statement is based on the assumption of separation. See also McCormick, *supra* note 15; Mueller & Kirkpatrick, *supra* note 63; Jack Weinstein & Margaret Berger, *Weinstein's Evidence* (New York: M. Bender, 1975); Clifford S. Fishman, *Jones on Evidence* 7th ed. (Rochester, NY: Lawyers Co-operative, 1994) (not discussing evidential weight).

92. See Lempert, *supra* note 21.

93. These works include, principally, J.R. Gulson, *Philosophy of Proof*, 1st ed. (Littleton, CO: F.B. Rothman, 1905); John H. Wigmore, *The Principles of Judicial Proof*, 2d ed. (Boston: Little, Brown, 1931); John H. Wigmore, *The Science of Judicial Proof*, 3d ed. (Boston: Little, Brown, 1937) (subsequent references will be made to the second edition of this book); Jerome Michael & Mortimer Adler, *The Nature of Judicial Proof: An Inquiry into the Logical, Legal and Empirical Aspects of the Law of Evidence* (tentative draft, 1931); Jerome Michael & Mortimer Adler, *The Trial on an Issue of Fact* (1934) 34 Colum. L. Rev. 1224; Jerome Michael & Mortimer Adler, "Real Proof" (1952) 5 Vand. L. Rev. 344; Peter Tillers & David Schum, "Charting New Territory in Judicial Proof: Beyond Wigmore" (1988) 9 Cardozo L. Rev. 907; Terence Anderson & William Twining, *Analysis of Evidence* (London: Weidenfeld and Nicolson, 1991) ch.6; Reid Hastie, Steven D. Penrod & Nancy Pennington, *Inside the Jury* (Cambridge, MA: Harvard University Press, 1983) 163-64 and 234ff; Ronald J. Allen, "Factual Ambiguity and a Theory of Evidence" (1994) 88 Northwestern U. L. Rev. 604; and other materials listed in Twining & Stein, *supra* note 22.

The most surprising finding evolving out of the relevant writings is this: none of the supporters of free proof has explicitly relied upon (let alone produced) a theory of justifiable weight. This finding, however, turns out to be less surprising once it is recognized that lack of a justifiable weight theory has not resulted from a simple omission. Similarly to many other writers on evidence, the supporters of free proof have, in fact, equated the concept of 'weight' with that of 'probability',⁹⁴ an equation which can also be found in judicial rhetoric.⁹⁵ According to this view, evidence will be regarded as weighty (or as having 'probative value') when it increases or decreases the probability of at least one of the facts at issue. The more probabilifying is the evidence, the more weight it will carry; this is an observation that applies in relation to both individual items and the totality of evidence admitted at the trial. In making their final decision, judges thus have to compare the probabilifying effect of the evidence in its entirety against the probability threshold set by the controlling standard of proof.

(c) 'Probability' is not 'weight'

This perception of 'weight' as 'probability' is faulty, both conceptually and as a matter of substance. 'Probability' (on any of its conflicting accounts) is not

94. See, e.g., Bentham, *supra* note 2, vol. I at 1-2 ("To give instructions, serving to assist the mind of the judge in forming its estimate of the probability of truth, in the instance of the evidence presented to it; in a word, in judging of the weight of evidence: this is the other of the two main problems which are here attempted to be solved."). An exception to this observation (the only one I am aware of) can be found in L. Jonathan Cohen, "The Role of Evidential Weight in Criminal Proof" (1986) 66 Boston U. L. Rev. 635.

95. See, e.g., *Beaver v. Fidelity Life Association*, 313 F.2d 112 at 115 (10th Cir., 1963) ("The trial court instructed the jury ... that there is a presumption against suicide. ... [i]t may be that the trial court's instruction did not accord the presumption the evidential weight ... Kansas decisions are inclined to give it."); *Grenke v. Commonwealth*, 796 S.W.2d 858 at 859 (Ky., 1990) ("The temporal remoteness of a prior conviction affects its evidential weight."); *Barclays Bank PLC v. Franchise Tax Board of California* 114 S.Ct. 2268 at 2286 note 32 (1994) ("The Solicitor General suggests that ... 'the statements of executive branch officials are entitled to substantial evidentiary weight ...'. We need not to resolve this dispute."); *United States v. Perry*, 1995 U.S. App. Lexis 2011 (4th Cir., 1995) ("Defendant's assertion of his speedy trial right is entitled to strong evidentiary weight in determining whether the defendant is being deprived of the right."); *United States v. Dirden*, 38 F.3d 1131 at 1138 (10th Cir., 1994) ("the defendant's assertion of the speedy trial right is entitled to strong evidentiary weight in determining whether the defendant is being deprived of the right."); *United States v. Burns*, 37 F.3d 276 at 281-82 (7th Cir., 1994) ("The answers to the questions asked during the search are of minimal evidentiary weight compared to the kilogram of cocaine found in the motel room."); *In re Air Disaster at Lockerbie Scotland on December 21, 1988*, 37 F.3d 804 at 837 (2nd Cir., 1994) (citing the district judge: "But I may give evidentiary weight, probable cause weight, to the fact that a grand jury has returned the indictment."); *United States v. Abreo*, 30 F.3d 29 at 32 (5th Cir., 1994) ("Abreo signed an unambiguous plea agreement that made no mention of a preservation of his right to pursue a suppression claim. Such a document is accorded great evidentiary weight."); *Adams v. Leapley*, 31 F.3d 713 at 715 (8th Cir., 1994) ("We further note that Adams was able to challenge the evidentiary weight of these tests by thoroughly cross-examining Riis and by presenting his own expert witness.").

See also *Black's Law Dictionary* 6th ed. (St. Paul, MN: West Pub., 1990) at 1594. ("Weight of evidence. The balance or preponderance of evidence; the inclination of the greater amount of credible evidence, offered in a trial, to support one side of the issue rather than the other. It indicates clearly to the jury that the party having the burden of proof will be entitled to their verdict, if, on weighing the evidence in their minds, they shall find the greater amount of credible evidence sustains the issue which is to be established before them. Weight is not a question of mathematics, but depends on its effect in inducing belief.").

'weight'. To equate 'weight' with 'probability' is to obliterate, without warrant, one of the central parameters that determine the cogency of reasoning in conditions of uncertainty.

Probability, at its broadest, is a property representing the degree of particular confirmation, as supplied by E (= the available evidence) to H (= the hypothesis to be proved by E).⁹⁶ This degree of confirmation is determined by an argument that provides an extension to some particular feature (F) common to a set of particular data (S), by associating this feature with a previously unexamined S-like case.⁹⁷ Such an extension can be constructed in several ways, roughly divided into 'frequentist', 'personalist', and 'inductivist'.⁹⁸

Frequentist probability judgements are based upon the empirically known amount of F's (nF) in a particular set of cases (nS). Under this framework, probability amounting to nF/nS (which may reflect frequency of occurrences or a measurable causal propensity⁹⁹) represents the extent to which a new S-like case would confirm F. Such probabilities are calculated by employing the complementational principle for negation ($P[F] = 1 - P[\text{not-}F]$, when 1 stands for F's certainty and 0 for its impossibility) and the multiplicative principle for conjunction ($P[F_1 \& F_2] = P[F_1] \times P[F_2]$; or, if F_1 and F_2 are interdependent, $P[F_1 \& F_2] = P[F_1/F_2] \times P[F_2]$). These two principles are supplemented with the 'disjunction rule', which has to be employed in calculating the probability of alternate possibilities ($P[F_1 \text{ or } F_2] = P[F_1] + P[F_2] - P[F_1 \& F_2]$)¹⁰⁰.

Personalist probability judgements are based upon degrees of belief articulated by the decision-maker in numerical terms in relation to all nF/nS ratios pertaining to her decision. Such degrees of belief have to be internally consistent and are usually formed by the decision-maker's experience, without particularizing and empirically enumerating its instances.¹⁰¹ Subsequently, degrees of belief are combined into the overall probability assessment, a procedure that has to be performed by applying the Bayes theorem. Under this theorem, the probability of hypothesis H on evidence E_1 is calculated as follows:

$$P(H \& E_1) = P(E_1 \& H) = P(H/E_1) \times P(E_1) = P(E_1/H) \times P(H);$$

$$P(H/E_1) = \frac{P(E_1/H)}{P(E_1)} \times P(H).$$

96. See Georg H. Von Wright, *A Treatise on Induction and Probability* (New York: Harcourt, 1951) ch.7; William Kneale, *Probability and Induction* (Oxford: Clarendon Press, 1949) ch.3; Rudolf Carnap, *Logical Foundations of Probability* (Chicago: University of Chicago Press, 1950) ch.2; L. Jonathan Cohen, *An Introduction to the Philosophy of Induction and Probability* (Oxford: Clarendon Press, 1989) ch.1.

97. Probability arguments may also be confined to merely stating the amount of F's in S. Such 'enumerative', as opposed to 'ampliative', statements make no inferential progress and are therefore unimportant. See Cohen, *ibid.* at 1-2.

98. See Cohen, *supra* note 96; Tillers, *supra* note 90, §37.6; Glenn Shafer & Judea Pearl, *Readings in Uncertain Reasoning* (San Mateo, CA: Morgan Kaufmann, 1990).

99. Cohen, *supra* note 96 at 53-58.

100. $P[F_1 \& F_2]$ needs to be subtracted from the right side of this equation in order to avoid double-counting. See, e.g., Kneale, *supra* note 96 at 125-26.

101. See, e.g., Michael D. Resnik, *Choices: An Introduction to Decision Theory* (Minneapolis: University of Minnesota Press, 1987) at 68-74.

Hence, knowing the prior probabilities of H and E_1 and the probability of E_1 in the event H , it would be possible to determine the probability of H on E_1 .¹⁰² This probability is subsequently used as prior in processing a further item of evidence (E_2), a calculation that will have to be repeated time and time again, until all the items of evidence ($E_3, E_4 \dots E_n$) have been taken into account.¹⁰³

The inductivist probability framework, known as 'Baconian', is logically distinct from the above-mentioned 'Pascalian' frameworks. As explicated by Jonathan Cohen,

Baconian probability-functions ... deserve a place alongside Pascalian ones in any comprehensive theory of non-demonstrative inference, since Pascalian functions grade probabilification *on the assumption that* all relevant facts are specified in the evidence, while Baconian ones grade it *by the extent to which* all relevant facts are specified in the evidence'.¹⁰⁴

Pascalian probability judgements are based upon calculus of chance. Inductivist probability judgements decline to follow this aleatory reasoning. Instead, they engage in appraisal of the amount of evidence that supports and tends to falsify the examined hypothesis.¹⁰⁵ This appraisal cannot be performed mathematically because its criteria are too complex to be reduced into numerically fixed units of measurement. Common sense reasoning used in everyday life and in judicial fact-finding is the most prominent example of this type of inductivism. Informed by both logic and experience, inductivist probability judgements may be reached by analyzing individual inferences,¹⁰⁶ by holistically comparing between undivided accounts of events ('stories')¹⁰⁷ or by both.¹⁰⁸

102. The same can be restated as derivation of the posterior odds from the prior odds and the likelihood ratio:

$$\frac{P(H/E_1)}{P(\bar{H}/E_1)} = \frac{P(H)}{P(\bar{H})} \times \frac{P(E_1/H)}{P(E_1/\bar{H})}.$$

103. Application of the Bayesian approach would involve severe computational difficulties in cases involving numerous items of evidence. See Craig R. Callen, "Notes on a Grand Illusion: Some Limits on the Use of Bayesian Theory in Evidence Law" (1982) 57 Indiana L.J. 1 at 15. This approach would also require judges to proceed from the bulk of general knowledge which they cannot reasonably be expected to possess. See Allen, *supra* note 93 at 607-08. This approach is also internally problematic because it forces judges into probabilistic reasoning that would have an artificially diminished weight. See *infra* notes 121-23 and the adjacent text. For more details see Alex Stein, "Judicial Fact-Finding and the Bayesian Method: The Case for Deeper Scepticism About Their Combination" forthcoming in (1996) 1 Evidence & Proof.

104. L. Jonathan Cohen, "On the Psychology of Prediction: Whose is the Fallacy?" (1979) 7 Cognition 385 at 389. For a detailed account and formalization of Baconian probability see Cohen, *supra* note 88, part III; Cohen, *supra* note 96, chs. 1 and 5.

105. See Cohen, *supra* note 96, §14.

106. An approach known as 'atomistic'. See Twining, *supra* note 12, ch.9; Anderson & Twining, *supra* note 93, 168-69. This approach was favored by Wigmore, *supra* note 93. See also Tillers & Schum, *supra* note 93.

107. See Jerome Frank, *Courts on Trial* (Princeton, NJ: Princeton University Press, 1949) at 165-85; D. Neil MacCormick, *Legal Reasoning and Legal Theory* (Oxford: Clarendon Press, 1978) at 87-93; D. Neil MacCormick, "The Coherence of a Case and the Reasonableness of Doubt" (1980) 2 Liverpool L. Rev. 45; D. Neil MacCormick, "Coherence in Legal Justification" in W. Krawietz et. al., *Theorie der Normen* (Berlin: Duncker & Humblot, 1984) 37; M.A. Abu-Hareira, "An Early Holistic Conception of Judicial Fact-Finding" (1986) Juridical Rev. 79; Richard K. Sherwin, "Law Frames: Historical Truth and Narrative Necessity in a Criminal Case" (1994) 47 Stan. L. Rev. 39. Allen, *supra* note 93, contains an especially powerful account.

108. Twining, *supra* note 12, ch.9; Anderson & Twining, *supra* note 93 at 168-69.

Understanding of the concept of 'weight' can be furthered by first comparing this concept with that of Pascalian probability. Without exploring this comparison in detail, Keynes made it perfectly clear when he wrote:

As the relevant evidence at our disposal increases, the magnitude of the probability of the argument may either decrease or increase, according as the new knowledge strengthens the unfavourable or the favourable evidence; but *something* seems to have increased in either case,—we have a more substantial basis upon which to rest our conclusion. I express this by saying that an accession of new evidence increases the *weight* of an argument. New evidence will sometimes decrease the probability of an argument, but it will always increase its 'weight'. [W]eight, to speak metaphorically, measures the *sum* of the favourable and unfavourable evidence ... probability measures the *difference*.¹⁰⁹

Evidential weight can thus be perceived as a factor reflecting the amount of relevant information, and the corresponding 'epistemic balance' of knowledge and ignorance, under which probability of 0.n is ascribed to hypothesis H. To hold that $P(H)$ equals to 0.n is to make a probability judgement which is as cogent as its informational base. In this way, the probability judgement is conditionalized upon its informational base. As it is obvious that this base may be thick or slender and, correspondingly, strong or weak, the conditionalization issue can be seen as crucial. Evidential weight directly relates to this issue. To speak about evidential weight is to evaluate the thickness of the existing base of information, that is, the epistemic conditions under which the argument $P(H) = 0.n$ is being propounded.¹¹⁰

This important distinction can be further clarified by considering a hypothetical case, known as the 'Gatecrasher Paradox'. In this case, in the words of its constructor, Jonathan Cohen,

499 people paid for admission to a rodeo and ... 1000 are counted on the seats, of whom A is one. Suppose no tickets were issued and there can be no testimony as to whether A paid for admission or climbed over the fence. So by any plausible criterion of mathematical probability there is a .501 probability, on the admitted facts, that he did not pay. The mathematicist theory would apparently imply that in such circumstances the rodeo organizers are entitled to judgement against A for the admission-money, since the balance of probability ... would lie in their favour. But it seems manifestly unjust that A should lose his case where there is an agreed mathematical probability of as high as .499 that he in fact paid for admission. Indeed, if the organizers were really entitled to judgement against A, they would presumably be equally entitled to judgement against each person in the same situation as A. So they must conceivably be entitled to recover 1000 admission-money, when it was admitted that 499 had actually been paid. The absurd injustice of this suffices to show that there is something wrong somewhere. But where?¹¹¹

This question can be answered in a principled way that resolves the paradox. Under the preponderance-of-the-evidence standard, the organizers are seemingly

109. John M. Keynes, *A Treatise on Probability*, 1st ed. (London: Macmillan, 1921) at 71 and 77. For further discussion see L. Jonathan Cohen, "Twelve Questions about Keynes's Concept of Weight" (1985) 37 *British J. for the Phil. of Science* 263; Cohen, *supra* note 96, §14.

110. Cohen, *supra* note 96, §14.

111. Cohen, *supra* note 88 at 75.

entitled to recover from A the equivalent of the admission fee (\$f) or at least the probabilistic fraction of their claim ($\$0.501f$). Each of the above solutions is, however, counterintuitive,¹¹² since it would allow the organizers to recover from *any* randomly chosen spectator, who might have paid for his or her admission. According to the organizers, the probability that A was a gatecrasher amounts to 0.501, and it is difficult to argue with this. Yet, similarly to any other probability argument, this allegation has been conditionalized upon its underlying informational base. Determining the weight of this allegation, that base is undoubtedly slender. It is slender because this allegation would have exactly the same weight against *any* of the 1000 spectators, of whom 499 are known to have paid for their admission. The weight of this allegation may therefore rationally be perceived by the legal system as being insufficient.¹¹³

By using the intensity of evidential support as an exclusive criterion for making probability judgements, the inductivist (Baconian) framework of reasoning treats

112. Not according to the intuitions held by the late Sir Richard Eggleston and Professor Glanville Williams. See Richard Eggleston, "The Probability Debate" (1980) *Crim. L. Rev.* 678; Richard Eggleston, "Focusing on the Defendant" (1987) 61 *Aust. L.J.* 58; Glanville Williams, "The Mathematics of Proof" (1979) *Crim. L. Rev.* 297.

113. The problem of weight cannot be avoided by resorting to the 'indifference doctrine', often named as 'the principle of insufficient reason' (see Cohen *supra* note 96, §6). Under this doctrine, two mutually inconsistent factual possibilities should be deemed equiprobable as long as there is no evidence-based reason to treat one of them as being more probable than the other. This assumption is obviously problematic because it purports to procreate knowledge out of ignorance. But difficulties involved in the indifference doctrine go far beyond that. As pointed out by William Kneale,

[the 'indifference doctrine'] is supposed to justify the assertion that the probability of a die's falling with the number one uppermost is $1/6$, but it could be used equally well to justify an assertion that the probability is $1/2$. For we may consider as our alternatives the two cases falling-with-the-number-one-uppermost and falling-with-some-other-number-uppermost; and, when our only information is that a die has been thrown, we may say that we know of no reason to assert either of these alternatives rather than the other. From this it should follow that their probabilities are each equal to $1/2$. A precisely similar argument can, of course, be constructed to show that the probability of a die's falling with the number two uppermost is $1/2$, and so on for each of the six possible results, which is absurd.

Kneale, *supra* note 96 at 147.

To escape from this paradox, the indifference doctrine needs to be qualified by one condition: the alternatives to which it would apply have to be determined with equal degree of specificity. (Kneale, *ibid.* at 148-50). To satisfy this requirement would, however, be a rather daunting task because there is no test by which equispecificity of the alternatives could be identified *a priori*. The decision-maker would therefore be driven towards expanding her inquiry and thus obtaining more information. In doing this, she may either fail or succeed. If she fails, application of the indifference doctrine would be epistemically unattractive. If she succeeds, this would build up an entirely new informational setting where:

(1) reasons may be found for rejecting the equiprobability of the alternatives (e.g., the die was found to be 'loaded' rather than 'fair'); or:

(2) reasons may be found for upholding the equiprobability of the alternatives (e.g., the die was found to be 'unloaded' and 'fair').

The indifference doctrine would thus be inapplicable yet again. Satisfaction of the 'equispecificity-of-the-alternatives' condition would make it otiose.

Weight also cannot be factored into the probability calculus, e.g., by reducing the probability of a proposition not sufficiently supported by the evidence. This would unwarrantedly increase the probability of this proposition's negation; unwarrantedly - because scanty evidential support for proposition A does not entail, *ipso facto*, the existence of massive support for not-A. As demonstrated below, weight and probability are two distinct and important dimensions of judicial fact-finding. They should therefore be kept apart.

'probability' as 'weight'. This conflation eradicates the 'probability' dimension, a pivotal factor for appraising the cogency of uncertain reasoning in many cases. It cannot be accepted in judicial fact-finding (and in some other areas of practical reasoning). A low-weight probability may, for instance, be regarded as sufficient and thus acted upon in most civil trials. In a trial where a great deal of potentially probative evidence is unavailable, probability that supports one of the parties more than her opponent may (and normally would) justify a verdict in favor of that party.¹¹⁴ Low weight would normally not be sufficient in order to find a criminal defendant guilty, even when the probability of his guilt, conditionalized upon the existing information, is relatively high.¹¹⁵ Yet, to require 'full evidential weight' (i.e., a complete certainty) in order to convict, is to insist upon the unattainable. If so, what should be the minimal-weight threshold for convictions?

This difficult question will be dealt with later. Regardless of how we answer it, it is clear that probability of guilt will have to be determined independently of the evidential weight. Not affecting the probability of the case, the latter will have only to satisfy the threshold requirement for convictions. The significance of the weight / probability distinction should now become transparent. To further stress this point, I shall now turn to more tangible legal examples.

(d) The 'weight' / 'probability' distinction exemplified

My first example is provided by a remarkable marine insurance case, litigated

114. See David H. Kaye, "The Limits of the Preponderance of the Evidence Standard: Justifiably Naked Statistical Evidence and Multiple Causation" (1982) Am. Bar Foundation Research J. 487.

115. Consider, e.g., 100 indictments accusing each of 100 prisoners of murdering a prison guard. The prosecution's evidence establishes beyond doubt that:

- (1) at the time of the killing there were 100 prisoners in the yard;
- (2) these prisoners were the defendants;
- (3) all but one of the prisoners participated in the killing.

However, there is no evidence personally identifying the defendants as either participating or not participating in the killing.

This example is adapted from Charles Nesson, "Reasonable Doubt and Permissive Inferences: The Value of Complexity" (1979) 92 Harv. L. Rev. 1187 at 1192-93. According to Professor Nesson,

[t]he process of criminal adjudication requires something more than a high probability of a defendant's guilt. A trial is intended to gather all available relevant information bearing on what happened. If, at the conclusion of the evidence, any uncertainty remains about whether the defendant committed the crime, it is unlikely ever to be resolved. It is the function of the jury to produce an *acceptable*, albeit artificial, resolution of just such conflicts, and by its verdict to put to rest any lingering doubts. If the jury is to discharge this function successfully, the jurors must not only express their beliefs in the defendant's guilt by their verdict, but also the evidence upon which the jurors deliberated must do more than establish a statistical probability of the defendant's guilt: *it must be sufficiently complex to prevent probabilistic quantification of guilt*. Some uncertainty will always be present in criminal cases, but so long as the evidence prevents specific quantification of the degree of that uncertainty, an outside observer has no choice but to defer to the jury's verdict.

ibid. 1198-99.

In my view, the prosecution's evidence is not sufficient for conviction not because it is not sufficiently complex and is therefore incapable of preventing an explicit probabilistic quantification of the doubt. This evidence simply does not cover enough ground and its weight is correspondingly low. Its measure is equal in all of our cases, while it is known that one of the prisoners is innocent. Probability of the prosecution's case is high, but that should not be enough. This point is further explicated in the text.

in England.¹¹⁶ The plaintiffs' ship, insured with the defendants against 'perils of the seas' and 'negligence of the crew', had sank in the Mediterranean. She had sank along with most of the evidence pertaining to her seaworthiness and to the initial cause of the event. Testimonial evidence revealed that something had seriously damaged the ship by creating a large hole on her port side. Through this hole, water streamed into the ship and she sank as a result of severe flooding. The factor responsible for this hole thus became the only contested issue in the ensuing litigation.

A number of explanations as to the nature of this factor were ruled out by the trial judge as insufficiently supported by the evidence. These included:

- (1) the plaintiffs' theory that the hole and/or the ship's loss resulted from the negligence of the crew;
- (2) the plaintiffs' theory that the hole was caused by a submerged submarine;
- (3) the defendants' theory that the proximate cause of the hole was wear and tear.

The judge, however, also found theory (2) more probable than theory (3) and ruled for the plaintiffs on the basis of this 'comparative preponderance'.¹¹⁷ This was a plain legal error. Under the preponderance-of-the-evidence standard which controlled the case, the plaintiffs' allegations were to be established as being 'more probable *than not*'. In order to succeed, these allegations had to prevail over *any* possible account of the events that could favor the defendants. The defendants have flatly denied these allegations and were perfectly entitled to do so. By developing theory (3) as part of their defence, they have not endorsed this theory as their only voucher.¹¹⁸

Initially passing appellate muster, this error has ultimately been rectified by the House of Lords. Consequently, the plaintiffs have been denied recovery. This could be an unquestionably right decision if the plaintiffs did not put forward another, more promising argument. They argued that the fatal hole resulted from some unidentified peril of the seas, and that this is the most probable conclusion that can be arrived at on the basis of the evidence. The House of Lords declined to accept this proposition:

The shipowners could not, in my view, rely on a ritual incantation of the generic expression "perils of the seas", but were bound, if they were to discharge successfully the burden of proof ... to condescend to particularity in the matter.¹¹⁹

This ruling clearly indicates that a mere probability favorable to the plaintiff would not be sufficient as a ground for granting recovery. In order to prevail, the plaintiff needs to be successful in terms of both probability and weight.

As far as the merits of the case are concerned, the House of Lords' decision was

116. *Edmunds et al. (The Popi M) v. Rhesa Shipping Co.* [1983] 2 Lloyd's Rep. 235 (Commercial Court); *Rhesa Shipping Co. v. Edmunds et al. (The Popi M)* [1984] 2 Lloyd's Rep. 555 (CA); *Rhesa Shipping Co. v. Edmunds et al. (The Popi M)* (1985) 2 All E.R. 712 (HL).

117. Cf. Ronald J. Allen, "A Reconceptualization of Civil Trials" (1986) 66 Boston U. L. Rev. 401 (supporting this comparative approach).

118. See Adrian A.S. Zuckerman, "Evidence" (1985) All E.R. Annual Review at 155-56.

119. *Rhesa Shipping Co. v. Edmunds et al. (The Popi M)* (1985) 2 All E.R. 712 at 716 (HL).

probably wrong. First, the plaintiffs' insurance coverage extended generically to all 'perils of the seas'. The plaintiffs have presumably paid the defendants for this broad definition of the risk. They were therefore *contractually* entitled to prove, on the balance of probabilities, that *some* peril of the seas, which they were not able to identify, was responsible for the fatal hole in their ship. This outcome can also be supported by the policy of spreading the accident costs that underlies insurance law.¹²⁰

The minimal-weight threshold, set by the House of Lords' requirement of particularized proof, has therefore unjustly barred the plaintiffs' recovery. This requirement or some other minimal-weight threshold may, however, be justified in other cases. The weight / probability distinction can thus play a pivotal role in judicial fact-finding. Involving both probability and weight, judicial reasoning about uncertain facts has two distinct dimensions rather than one dimension only.

Another example is taken from *State of Connecticut v. Skipper*.¹²¹ The defendant was convicted of sexually assaulting a young girl on the basis of paternity statistics obtained by DNA testing. This testing was performed upon blood samples taken from the defendant, from the victim who was allegedly impregnated by him, and from the aborted fetus. Linking the defendant with the fetus, it indicated that only one out of 3497 randomly selected males could have the same genetic pattern. This likelihood ratio was converted by the prosecution's expert witness into the posterior probability of 0.9997, an outcome arrived at by postulating that the prior probability of an intercourse between the defendant and the victim is 'neutral' and thus amounts to 0.5. This postulation was held to be inconsistent with the presumption of innocence. Consequently, the case was remanded for a new trial.¹²²

120. See Kenneth S. Abraham, *Distributing Risk: Insurance, Legal Theory, and Public Policy* (New Haven, CT: Yale University Press, 1986) at 1-2.

121. 637 A.2d 1101 (1994).

122. Under the Bayes theorem, stated in terms of odds,

$$\frac{H/E}{\bar{H}/\bar{E}} = \frac{H}{\bar{H}} \times \frac{E/\bar{H}}{\bar{E}/\bar{H}}$$

If a DNA testing shows that

$$\frac{E/\bar{H}}{\bar{E}/\bar{H}} = \frac{3496}{1},$$

then

$$\frac{H/E}{\bar{H}/\bar{E}}$$

would amount to 3496/1 (generating the probability of paternity which equals to 3496/3496+1, i.e., to 0.9997) only when

$$\frac{H}{\bar{H}} = 1,$$

i.e., when the prior probabilities of guilt and not guilt are equal.

The Supreme Court of Connecticut held that

Whether a prior probability of 50 percent is automatically used or whether the jury is instructed to adopt its own prior probability ... an assumption is required to be made by the jury before it has heard all of the evidence - that there is a quantifiable probability that the defendant committed the crime. In fact, if the presumption of innocence were factored into Bayes' Theorem, the probability of paternity statistic would be useless. If we assume that the presumption of innocence standard would require the prior probability of guilt to be zero, the probability of paternity in a criminal case would always be zero. ... In other words, Bayes' Theorem can only work if the presumption of innocence disappears from consideration.

Ibid. at 1107-08.

Let now compare the key evidential items introduced by the prosecution:

- (a) the outcome of the DNA testing;
- (b) the complainant's testimony.

The first item tends to significantly increase the *probability* of the defendant's guilt. Yet, because there are several people, in addition to the defendant, whose genetic pattern would fit the bill, the grounds of the accusation are not sufficiently covered by this item. Its *weight* should therefore be regarded as not satisfying the 'beyond reasonable doubt' standard. The second item covers the accusation completely and its *weight* is correspondingly heavy. Yet, assuming that the complainant could have desired to find a person upon whom she could blame the unwanted pregnancy, the *probability* of guilt derived from her testimony alone may be regarded as not sufficient for conviction.

These two items can, however, complement each other at both weight and probability levels. This possibility is viable because the complainant identified the defendant as her assailant prior to the DNA testing, i.e., without knowing its outcome.¹²³ These items can thus combine into a strong evidential base which would satisfy both weight and probability requirements. The defendant could therefore be found guilty as charged.

(e) '*Weight*', as attributable to '*transforming arguments*' rather than evidence

'Evidence', by its very definition, is something that attests to the existence of something else. Witness accounts, documents, and things (i.e., 'real' and 'demonstrative' evidence) would thus be more accurately described as 'evidential sources'. Every evidential source carries an assertive content. This alone, however, does not transform this source into evidence. What transforms an evidential source into evidence is an *argument* which goes beyond the assertive content of that source. When witness W testifies about event H, the assertive content of that testimony would be 'W says H'. This alone would not be *an evidence for H*. It is only 'W says H, *therefore* H' that would amount to evidence. Going beyond the assertive content of W's testimony, this inference and the likes intrinsically characterize any evidence.¹²⁴

Arguments transforming evidential sources into evidence assume the form of inductive inference. They restate the assertive contents of the relevant evidential sources and set forth reasons for inferring from these contents fresh factual propositions. Such arguments also build up generalizations about the regular course of events, as attested to by the uniformities assembled from individual evidential sources. Without these generalizations, from which information relevant to the case at hand can be derived deductively, no movement from evidential sources to conclusions can ever take place. When W testifies that H had occurred, to infer H from this testimony would be possible only by relying upon generalizations such as this:

123. This was beyond dispute.

124. See Bentham, *supra* note 2, vol. I at 39ff; N. Rescher & C.B. Joynt, "Evidence in History and in the Law" (1959) LVI J. of Phil. 561 at 562ff.

'people testifying under oath normally tell the truth.'¹²⁵ Any such deduction would, however, always constitute the final move of the transforming argument, a move that was preceded by an inductive construction of the generalization. To depict judicial fact-finding as a deductive process would therefore be a mistake.¹²⁶

Allegedly, transforming arguments are not required when a proposition in question is 'self-evident'; that is, when it is fully contained in its evidential source and can thus straightforwardly be extracted from it by a single "act of sensible apprehension."¹²⁷ According to this view, assertive contents of evidential sources may (rarely) speak for themselves and thus prove things directly (e.g., when a knife is offered in evidence in order to prove its very existence, or when an allegedly dumb person makes an utterance in order to prove that he is not dumb). This view is not entirely accurate. It could be stated with greater accuracy if it acknowledged that the veracity of 'sensible apprehensions' is not evident *per se*. Rather, it derives from human experience which comprises a series of lasting inductive confirmations. In practical matters, this veracity can be taken as something which goes without saying, for it would be too onerous and wasteful to reexamine it in every single case. Nonetheless, even in the most obvious of 'self-evident' cases, the presence of transforming arguments in the logic of fact-finding cannot be denied.

Propositions alluding to evidential 'weight', 'credibility', and the like should thus be understood as referring to transforming arguments and not to evidential sources. Evidential sources have no weight; they either exist or do not exist. It is only the arguments that transform evidential sources into evidence that can carry weight by being more or less cogent. To say: 'Testimonial account T given by W about H is credible', would thus make no sense, unless this statement is uttered elliptically (as typically is the case) and thus argues in favor of some unstated arguments which transform T into H. The cogency of any such argument is supplied by its supporting reasons, which are ultimately grounded in some epistemological theory. In judicial fact-finding (as in many other areas of human endeavor), the controlling epistemological theory is that of logical empiricism.¹²⁸ Hence, when a person argues from T to H by contending that her argument (not T!) is sufficiently 'weighty' or 'credible', she ought to be understood as implying that she has empirically sufficient reasons for inferring H from T.

Evidential weight should accordingly be understood as a function of reasons

125. Other generalizations to be relied upon are related to people's ability to observe events and then memorize and report them.

126. See e.g., Wigmore, *supra* note 93 at 17-26. In David Schum's words, [g]eneralizations and ancillary evidence help us to defend the strength of links in chains of reasoning we construct; [g]eneralizations and ancillary evidence represent the 'glue' that holds our arguments together. Naturally, there will be argument about whether we have used either the correct or strong enough 'glue' to hold our arguments together. David Schum, *Evidential Foundations of Probabilistic Reasoning*, (New York: J. Wiley, 1994) at 82.

127. Wigmore, *ibid.* at 11. Wigmore classified this as "autoptic proference", arguing that "[b]ringing a knife into court is in strictness not giving evidence of the knife's existence. It is a mode of enabling the Court to perceive the existence of the knife, and is in that sense a means of producing persuasion, yet it is not giving evidence in the sense that it is asking the Court to perform a process of inference". *Ibid.*

128. See Twining, *supra* note 12, chs. 3 & 4.

that can be brought in support of the relevant transforming arguments. Always going beyond the assertive contents of a single evidential source, such reasons rely upon numerous sources of evidence, including general experience. Determination of evidential weight would thus always entail a great deal of complexity, further intensified by the existing trial conditions. This problem will now be discussed.

Transforming arguments are invariably 'ampliative' in their nature. They always amplify the existing information rather than merely reiterate it (in the trivial sense or by enumeration) and apply it deductively.¹²⁹ Pointing to the non-demonstrable, these arguments share the usual problem of inductive uncertainty and their outcome is bound to be inherently probabilistic.¹³⁰ Conditions peculiar to judicial trials, which will now be specified, make these arguments even more problematic.

First, judicial fact-finding is a species of practical reasoning. Any substantive law doctrine, taken as addressed to decision-makers, prescribes 'if *F*, decide *X*'; 'if not-*F*, decide *Y*'; or 'if neither *F* nor not-*F*, decide *Z*'.¹³¹ Judicial determination of facts cannot thus be perceived as pursuit of the truth for its own sake. Judges have to make decisions which either modify the existing state of affairs or immunize it from attempted changes by way of confirmation. Adjudication is ultimately concerned with application of the coercive power, monopolized by the state, against individuals.¹³² At the end of any trial, application of this power would either be prescribed or not. Adjudication can therefore never be halted in indecision.

Second, judicial determination of facts is a reconstruction of past events which are not susceptible to direct observation. Judges have to provide answers to backward-looking questions of fact. Questions such as 'What is happening now?' and 'What might happen in the future?' are not alien to adjudication, but cases where decisions hinge solely upon them are rare. Present-related and future-related questions of fact arise almost invariably in relation to particular past events which have legal consequences.¹³³ This focusing upon past events is not accidental. It is closely connected to the predominantly reactive trait of the substantive laws which belong to liberal legal systems.¹³⁴ Providing citizens with a fair opportunity to avoid state-sponsored coercion, liberal systems prescribe it only remedially, in order to restore the equilibrium which has been upset. Retroactivity of laws is normally treated by liberal legal systems with severe condemnation.¹³⁵ The backward-looking question 'Has the equilibrium been upset, and if yes, by whom?' therefore characterizes practically every litigation.

129. The term "ampliative induction" is borrowed from Cohen, *supra* note 96 at 1-4.

130. See Cohen, *ibid.* §1.

131. *Z* usually means either *X* or *Y*, as prescribed by the controlling burden of persuasion.

132. See, e.g., Dale Nance, "Legal Theory and the Pivotal Role of the Concept of Coercion" (1985) 57 U. Col. L. Rev. 1.

133. Determination of present and future facts may, for example, be needed for assessing the losses expected to be sustained by tort victims.

134. See, Damaška, *supra* note 4, *The Faces of Justice and State Authority* at 73-80. See also Alex Stein, A "Political Analysis of Procedural Law" (1988) 51 Modern Law Rev. 659 (reviewing Professor Damaška's book).

135. See John Rawls, *A Theory of Justice* (Cambridge, MA: Belknap Press of Harvard University Press, 1971) at 238-41; Jeremy Waldron, "Vagueness in Law and Language: Some Philosophical Issues" (1994) 82 Calif. L. Rev. 509 at 536.

Third, judges have to make their decisions within reasonable time-limits, acting under conditions of scarce informational resources. Facts contested in judicial trials have thus to be reconstructed on the basis of deficient evidence, e.g., by relying upon accounts of fallible and biased witnesses, by invoking inferences which amount to mere approximation, and by subjecting the evidence to credibility tests which are never carried through to perfection.¹³⁶

These constraints, as Wigmore once put it,

may lead to special rules of the art, as distinguished from the science,—just as an architect who cannot find limestone available in his region and must use granite ... will find his construction-style modified thereby.¹³⁷

Furthermore, as observed by Judge Weinstein,

Even were it theoretically possible to ascertain truth with a fair degree of certainty, it is doubtful whether the judicial system and rules of evidence would be designed to do so. Trials in our judicial system are intended to do more than merely determine what happened. Adjudication is a practical enterprise serving a variety of functions. Among the goals—in addition to truth finding—... are economizing of resources, inspiring confidence, supporting independent social policies, permitting ease in prediction and application, adding to the efficiency of the entire legal system, and tranquilizing disputants.¹³⁸

These and other adjudicative constraints—under which some evidence is always missing, and the tests to which the existing evidence needs to be submitted are always wanting—set up the background against which judicial assessments of weight have to be understood.

Last, judicial decisions, including assessments of weight, ought to be justified.¹³⁹ Made in respect of other people's rights, judicial decisions are ultimately concerned with coercion and power. Coupled with the above-mentioned forensic imperfections, this aspect of adjudication makes it peculiarly problematic. Amongst other things, Justice Learned Hand has presumably had this in mind when he remarked that he feared adjudication even more than death and taxes.¹⁴⁰ Justification requirements, that have to be imposed upon judges and thus constrain their decisions, would mitigate such fears.

This observation enables me to remove a somewhat tempting objection that can be made against the idea of extending the justification requirements to judicial

136. These limitations and some of their implications are insightfully discussed by Henry M. Hart & John T. McNaughton, "Evidence and Inference in the Law" in D. Lerner et al., *Evidence and Inference* (Chicago: Free Press of Glencoe, 1959) at 48ff. See also Chaim Perelman, *The Idea of Justice and the Problem of Argument* (New York: Humanities Press, 1963) at 98-108.

137. Wigmore, *supra* note 93 at 955-56.

138. Weinstein, *supra* note 12 at 241.

139. See, e.g., Christopher H. Schroeder, "Liberalism and the Objective Point of View" (1986) XXVIII *Nomos* 100 at 106-09.

140. Ronald Dworkin, *Law's Empire* (Cambridge, MA: Harvard University Press, 1986) at 1. I was able to find a slightly different version: "After now some dozen years of experience I must say that as a litigant I should dread a lawsuit beyond almost anything else short of sickness and death". Learned Hand, *supra* note 3 at 105.

assessments of weight. According to this objection, judicial assessment of weight is largely reliant upon 'tacit knowledge'.¹⁴¹ Formed by complex experiences and intuitions, this knowledge has established its creditworthiness. To ignore its long-lasting reputation, by insisting that every judicial assessment of weight be unfolded to scrutiny by setting forth its underlying reasons, would thus be wrong. Therefore, although judges (like other people) are not infallible decision-makers, they should be allowed to invoke their 'tacit knowledge' in deciding on matters of fact. This theory has paved its way into both case-law¹⁴² and academic writings.¹⁴³

Assuming that unarticulated 'tacit knowledge' may be epistemically rational,¹⁴⁴ who will exercise control over judicial intuitions? Presumably, no one. Under the 'tacit knowledge' theory, such control would not be necessary. But it will be necessary under the prevalent political attitude of caution and distrust. When judicial decisions do not unfold themselves to scrutiny, so that rationality can never be told from sheer whim and bias, the line separating the justified from the arbitrary becomes too vague and ultimately fades away. As long as it matters how judges decide cases,¹⁴⁵ this cannot be afforded.

Contrary to what might be thought, jury verdicts cannot properly be depicted as escaping from justification requirements and thus supporting the 'tacit knowledge' theory. Fact-finding conducted by jurors is subjected to such requirements through its regulation. Apart from the jurors' interactive deliberation,¹⁴⁶ such

141. This will draw on Michael Polanyi, *The Tacit Dimension* (Garden City, NJ: Doubleday, 1966) at 1-25.

142. Under the "rational factfinder rule", which applies to appellate review of convictions, "the relevant question is whether, after viewing the evidence in the light most favorable to the prosecution, any rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt." *Jackson v. Virginia*, 433 U.S. 307 at 319 (1979). As explained by the Supreme Court, this standard of review—

[g]ives full play to the responsibility of the trier of fact fairly to resolve conflicts in the testimony, to weigh the evidence, and to draw reasonable inferences from basic facts to ultimate facts.

Ibid. See also *Lewis v. Jeffers*, 497 U.S. 764 at 779-83 (1990); *Herrera v. Collins*, 113 S.Ct. 853 at 861 (1993); *Jentges v. Milwaukee County Circuit Court*, 733 F.2d 1238 at 1241 (7th Cir., 1984) (following *State v. Berby*, 81 Wis.2d 677 at 686 (1978): "motive is an evidentiary circumstance which may be given as much weight as the fact-finder deems it entitled to"); *Delk v. Atkinson*, 665 F.2d 90 at 98-100 (6th Cir., 1981) (no room for scrutinizing the actual reasoning process used by the fact-finder); *Bose Corporation v. Consumers Union of United States Inc.*, 466 U.S. 485 at 501 note 17 (1984) (distinguishing between "ordinary principles of logic and common experience which are ordinarily entrusted to the finder of fact" and "the realm of a legal rule upon which the reviewing court must exercise its own independent judgment").

This article calls for a full appellate review in matters involving allocation of the risk of error.

143. See Tillers, *supra* note 90 at 1082; Peter Tillers, "Mapping Inferential Domains" (1986) 66 Boston U. L. Rev. 883 at 936; Richard W. Wright, "Causation, Responsibility, Risk, Probability, Naked Statistics, and Proof: Pruning the Bramble Bush by Clarifying the Concepts" (1988) 73 Iowa L. Rev. 1001 at 1018.

144. I, for one, doubt this, but the 'tacit knowledge' thesis does not allow anyone to refute it.

145. Dworkin, *supra* note 140.

146. As explained in Jonathan Cohen's recent contributions to jurisprudence and philosophy of action, judges and juries should determine facts through 'acceptance' rather than 'belief'. Belief, in his terms, is a passive state of mind, a product of some psychological causality. Beliefs simply dawn upon people, come over them and grow on them. They may thus be held independently of their reflective endorsement. Acceptance, in contrast, is a standard-based treatment of propositions of fact as true, false or probable. This treatment involves reflective encounter with evidence, as well as construction of arguments, both inductive and deductive. Propositions which become

requirements are implemented by various structuring and controlling devices, including *voir dire*, directed verdicts, exclusionary rules, judicial instructions, mistrial, and, finally, the appellate review.¹⁴⁷

(f) *The problem of justifiable 'weight'*

What justificatory standards should apply in assessing the cogency of transforming arguments? As mentioned above, cogency of reasons underlying such arguments determines their 'weight' (or 'weight of the evidence', according to the traditional taxonomy). The overall weight that needs to be attributed to the totality of transforming arguments thus becomes definitive for the final disposition of the case. How can it be justifiably determined under uncertainty and other constraints?

Any answer to this question will depend upon its strategy of accounting for the existing forensic imperfections. This strategy needs to be devised, and I shall now look at the possibilities of discharging this task. My discussion of these possibilities will begin with criminal trials and treat civil trials later. It will be shown that judicial determination of weight is bound to involve *strategic choices* and consequently suffer from contingency. Cases involving this contingency are those where judges can rationally arrive at divergent probabilistic assessments that lead to conflicting results.

Facing forensic imperfections in a criminal case, judges may do one of these two:

(1) disregard the existing imperfections and thus proceed upon the assumption that facts relevant to their decision are fully specified in the existing evidence;¹⁴⁸

or:

(2) account for both likelihood and substance of the decisional adjustments that would have to be introduced, if the existing imperfections were to be rectified.

Under the first approach, probability of the defendant's guilt would be conditioned upon the existing information by treating the latter as complete ($P[G/I]$). Any such postulation of informational closure would be *fictitious*. The second approach insists upon conducting an inquiry into the unrealized forensic possibilities. Any such inquiry would always be *counterfactual*.

The 'fictional approach' clashes with the principle that requires the facts constitutive of the defendant's guilt to be proved beyond a reasonable doubt. Under this principle, judges are called upon to determine, in terms of practical certainty,

'accepted' at the end of this process are deemed to be true, false or probable, irrespective of whether they are actually believed or not. In constructing their explanatory and predictive theories, scientists ground their inquiries upon acceptance rather than belief. Judges and jurors should, according to Cohen, do the same. Judicial decisions ought to be justified. Decision-making founded on belief instead of acceptance would never satisfy this demand. Acceptance as a basis of judicial decision is a prerequisite of its justifiability. See L. Jonathan Cohen, "Belief and Acceptance" (1989) 98 *Mind* 367; L. Jonathan Cohen, "Should a Jury Say What it Believes or What it Accepts?" (1991) 13 *Cardozo L. Rev.* 465; L. Jonathan Cohen, *An Essay on Belief and Acceptance* (Oxford: Clarendon Press, 1992) 1-39, 117-25.

147. Cf. Ronald J. Allen, "Structuring Jury Decision-Making in Criminal Cases: A Unified Constitutional Approach to Evidentiary Devices" (1980) 94 *Harv. L. Rev.* 321.

148. It will also be assumed that this evidence had undergone all necessary tests.

whether the defendant had actually committed the alleged crime, not whether he had committed this crime *on the assumption that evidence presented and examined at his trial is complete*.¹⁴⁹ The 'fictional approach' is thus normatively unacceptable. Its controlling formula $P(G/I)$ sets no limits to conditionalization, which allows judges to base convictions upon any amount of incriminating evidence, irrespective of the unexplored possibilities of unfitting it by further evidence or testing. The defendant may thus be found guilty even when the weight of transforming arguments that support his conviction is relatively low.

Judges are therefore bound to follow the 'counterfactual approach' which involves hypothetical reasoning. This would require judges to evaluate the implications of the unrealized forensic possibilities. To be justified, any accounting for such possibilities needs to be kept within the bounds of epistemic rationality and should never disintegrate into guesswork. It should thus be guided by previous experience. It is only through this experience that numerous 'What if ...?' questions, which arise about forensic matters, can receive justifiable answers. Justifiable answers to such questions can be given only by merging the relevant hypothetical possibilities (the "possible worlds"¹⁵⁰) with the information at hand. Combining both rejection and retention of various hypotheses, tentatively constructed by considering the existing evidence and its examination at the trial, this intellectual procedure should follow three basic precepts:

First, add the antecedent (hypothetically) to your stock of beliefs; second, make whatever adjustments are required to maintain consistency (without modifying the hypothetical belief in the antecedent); finally, consider whether or not the consequent is then true.¹⁵¹

The subject of judicial inquiries would thus be $P(G/I \& \sim I)$, when $\sim I$ stands for the information characterizing the relevant possible world, as constructed by past experience. When $P(G/I \& \sim I)$ approaches certainty by eliminating all reasonable doubts, the defendant should be convicted. When it falls below this level, the defendant should normally be acquitted.

Conditioned upon all information that can feasibly be considered, judgments formed by following the 'counterfactual approach' would come close to unconditionality. Weight of transforming arguments that establish $P(G/I \& \sim I)$ can thus be represented as an inverse function of $\sim I$. An increase in the empirically 'soft' information, arrived at counterfactually, will reduce the weight of the relevant transforming arguments. This weight would be increased in parallel with any reduction in the arguments' dependency upon counterfactual information.¹⁵² Regrettably, this intuitive observation does not take us very far. Having variable implications in

149. Cohen, *supra* note 94 at 636-37. This principle holds true also in the adversarial systems of criminal justice.

150. See, e.g., N. Rescher, *Hypothetical Reasoning* (Amsterdam: North-Holland Publishing, 1964) at 21ff; Richard Otte, "Indeterminism, Counterfactuals, and Causation" (1987) 54 *Phil. of Science* 45. For a revealing collection of articles on this subject see Frank Jackson, *Conditionals* (Oxford: Blackwell, 1991).

151. Robert Stalnaker, "A Theory of Conditionals" in Jackson, *ibid.* 28 at 33.

152. Cf. L. Jonathan Cohen, *The Dialogue of Reason* (Oxford: Clarendon Press, 1986) at 177-83.

different settings, the inverse function of “I would defy its reduction to a common unit of measurement.”¹⁵³ This methodological problem is not the only problem that would be encountered in applying the ‘counterfactual approach’. Nor is it the most serious problem that the ‘counterfactual approach’ has to resolve. Application of this approach would produce a deeper problem of justification, one that would defy any epistemic solution.

The ‘counterfactual approach’ is epistemically problematic because the questions that arise in following it can be answered differently by equally competent judges. Without falling into irrationality, judges may arrive at conflicting evaluations of the unrealized forensic possibilities, even when their experience and the corresponding general knowledge are sufficiently homogeneous.¹⁵⁴ Such divergencies, which cannot be resolved epistemically, are unavoidable. Application of the general knowledge to individual cases—necessary for evaluating the unrealized forensic possibilities and their decisional implications—would continually encounter the *problem of derivation*. Consequently, the impact to be exerted on individual cases by the relevant ‘possible worlds’ would always be indeterminate and contentious.

No ‘possible world’ constructed from general experience can ever be identical to the actual world. An objection may thus always be made that, if more evidence were searched for and consequently found, or if the existing evidence were tested more rigorously, findings favorable to the defendant could possibly have emerged. This objection may be either ‘positive’ or ‘negative’. It may positively identify some ‘possible world’, which happens to be favorable to the defendant, or merely oppose the application of another ‘possible world’, unfavorable to the defendant, to the case at hand. Positive objections never dispute the ‘covering uniformity’¹⁵⁵ that has been translated into a generalization constructing its ‘possible world’ by mirroring the usual course of events. Instead, they deny the existence of the background conditions under which this generalization becomes operative, by arguing that the gap left by the unrealized forensic possibilities could be covered by another uniformity

153. Cohen, *supra* note 96 at 109 (“[i]t looks as though weight cannot be *measured* at all, but only compared or, at best, ranked within a fairly narrow field of comparison.”)

154. When judicial experiences are not homogeneous, they may generate two types of disagreement: (1) an epistemically genuine disagreement that cannot be eliminated by rational argument and inquiry. Any such disagreement would indicate that there is no sound informational base upon which the decision concerning the defendant’s guilt or innocence could safely rest. The defendant would thus have to be acquitted; (2) a non-genuine disagreement, i.e., a disparity between the views held privately by individual judges, which could be eliminated by rational inquiry. Such disagreements are beyond the scope of a normative (as opposed to sociological, psychological, or otherwise descriptive) theory of adjudication.

Judicial disagreements may emanate from deeper epistemic grounds, such as lack of *any* consensus about rationality. This should make one skeptical not merely about fact-finding, but, indeed, about the very possibility of maintaining a legal order. This problem is far beyond the limits that could conceivably be set for an evidence law theory. See, however, Graham, *supra* note 33, in 85 Mich. L. Rev. 1204. According to Professor Graham, evidence theory should play an important role in a community which is sharply divided in its attitudes towards rationality. Its task would be to contribute to a cooperative framework that would prevent any cultural imperialism. Unfortunately, Professor Graham gives no hints as to how exactly to harmonize the incommensurable. See Twining, *supra* note 31.

155. See Carl G. Hempel, “Deductive-Nomological vs. Statistical Explanation”, in Feigl & Maxwell eds., (1962) III Minnesota Stud. in the Phil. of Science at 98ff.

which happens to be favorable to the defendant.¹⁵⁶ Negative objections undermine the strength, rather than relevancy, of the generalization in question. They hold that the generalization had not been sufficiently tested by experience so as to deserve the status of 'covering uniformity'. The aim of this argumentative strategy is to find weaknesses in the generalization's inductive support, thus exposing the latter as merely superficial. Such objections may follow three variants. According to one of them, the support lent by past instances to the generalization is sheerly accidental, so that no causal mechanism can be elicited from it.¹⁵⁷ According to another variant, to maintain that past instances give rise to the disputed generalization, is to proceed, quite fallaciously, from simple enumeration to a generalized conclusion. Fallacies of this kind have been denounced long ago by John Stuart Mill who (following Francis Bacon) described them as "the natural induction of uninquiring minds, the induction of the ancients, which proceeds *per enumerationem simplicitem*: this, that, and the other A are B, I cannot think of any A which is not B, therefore every A is B."¹⁵⁸ Generalizations have to be built up not merely by counting similar events, but also by accounting for the differences between these and other events.¹⁵⁹ A further, more general, variant of the negative argumentative strategy, questions the sufficiency of the evidence at hand as a ground for inductive generalizations. At some point, this variant may converge with a general skepticism about inductions, which has to be discarded *ab initio* by practical reasoning. To come close to this skepticism would consequently be unpromising.

Problems raised by these objections cannot be resolved in an epistemically adequate way; scarcity of information would frustrate any attempt in that direction. Subjected to persistent questioning, judicial inquiries into counterfactual issues would be able only to substitute one problem by another. Such inquiries would thus become endlessly regressive. Hence, in contrast to the 'fictional approach',

156. Positive objections can be exemplified by a (sadly) typical criminal case where, for unidentified reason, a key prosecution witness failed to testify in court after incriminating the defendant at a grand jury hearing, which provided the prosecution with a statement admissible under FRE 804(b)(1). Scarcity of information characterizing cases like this would result in the availability of at least two clashing generalizations:

- (1) People uninterested in the outcome of investigation usually tell the truth;
- (2) People interested in the outcome of investigation might promote their interests by resorting to falsehood.

The defendant's objection would thus run as follows:

- (1) He was not given an opportunity to fully cross-examine the witness at his trial;
- (2) Judges have therefore to hypothesize about what could have happened, if he had fully cross-examined this witness;
- (3) If he had fully cross-examined this witness, new information, which could thus be obtained, might have brought his case under the uniformity covered by the exculpatory generalization.

I can envisage no sustainable response to this objection.

Hebrew speakers may find more on this issue in Alex Stein, "Hearsay Statements as Evidence in Criminal Trials: 'Is' and 'Ought'" (1992) 21 *Mishpatim* ("Laws", Hebrew University of Jerusalem) 325; and in Alex Stein, "The Admissibility of Out-of-Court Statements as Evidence in Criminal Trials: On the New Bill, New Ideas, and the Same Old Tenets" (1993) 10 *Mechkarey Mishpat* ("Legal Research", Bar-Ilan University) 157.

157. Cf. Marc Lange, "Lawlikeness" (1993) 27 *Nous* 1.

158. John Stuart Mill, *A System of Logic Ratiocinative and Inductive* 8th ed. (London: Longman, Green, 1941) at 516 (published as first edition in 1843).

159. See, e.g., Von Wright, *supra* note 96, ch.4; Cohen, *supra* note 96, ch.1.

denounced for its artificial postulation of informational closure, the 'counterfactual approach' should be faulted for setting no limits to informational open-endedness. By allowing judicial verdicts to be based upon any amount of information, however limited it may be, the 'fictional approach' displays lack of concern towards lightness of evidential weight. By forcing judges into indeterminate evaluations of the unrealized forensic possibilities, the 'counterfactual approach' allows evidential weight to be determined by uncontrollable contingencies.

Similar problems would arise also in civil trials. Their discussion has been deferred up to this point because of one tempting argument that runs against my thesis. It is arguable that in civil trials, as opposed to criminal ones, fact-finding may and should be conditioned on the existing evidence, however incomplete it may be. Evidential incompleteness may, of course, be peculiarly harmful to one of the parties, thus benefiting her opponent. Yet, because this risk can only be shifted from one party to another, rather than eliminated, we may let it fall as it happens to fall, as long as we have no reason for preferring one of the parties over her opponent. Judges should thus be concerned only with probabilities by applying the preponderance-of-the-evidence or other pertinent standard of proof, irrespective of evidential weight.

This approach is *prima facie* appealing. The precise nature of its appeal needs, however, to be clarified. As has been demonstrated earlier in this article, when judges conditionalize their decision solely on the existing evidence—and thus knowingly fail to account for the unrealized forensic possibilities—their decision would be lacking epistemic justification. It can be premised only upon the moral principle holding that deficiency of the informational base is not a problem that belongs peculiarly to one of the parties and it should not therefore work against this party by benefiting her opponent. Consequently, risk of error attendant upon making probability evaluations under this deficiency would be shared by both the plaintiff and the defendant in a roughly equal fashion. Based upon morality, the controlling principle promulgated by this approach would accordingly qualify as an externally imposed regulation. If so, this approach would, in fact, support my thesis rather than run against it. As will be explained later, the demands of equality in risk-allocation would not always be satisfied by a simple-minded conditionalization of the judgment upon the existing evidence. For example, when lack of important information results from one of the parties' fault, to let the risk of error fall 'as it happens to fall', instead of shifting it to its originator, would not maintain the equality. In the same vein, when one of the parties has greater control over the flow of information into the courtroom, this inequality would have to be rectified prior to conditionalizing the judgment on the existing evidence. These and comparable cases would therefore require regulation that would control conditionalization. As a result, judicial decisions would not be conditionalized on the evidence 'as is'.¹⁶⁰

Even when backed by the equality principle, and allowed strictly in civil cases, such conditionalization would not always be acceptable. Would it be allowed in

160. See *infra* PART VI(c).

the above-mentioned Gatecrasher case?¹⁶¹ If yes, the rodeo-organizers would be entitled to recover from *any* randomly selected spectator, regardless of how counterintuitive this might sound. Let it now be assumed that this, indeed, should be the case. What if the defendant testifies that he had paid for his admission to the rodeo? Can judges *justifiably* decline to endorse this account of the events and decide against the defendant? Judges have no reason to decide in this way. The answer to the question can only be 'no'. If so, what would happen with lawsuits that can be brought against the remaining 999 spectators? The answer to this question is straightforward. If these lawsuits follow the same pattern, they would have to be decided identically. Testimonial accounts upon which these decisions would be based will contain 501 perjuries, and this fact is disturbing. But neither this fact nor the initial probability of the rodeo-organizers' allegations against each spectator can outweigh these testimonial accounts.

This demonstrates that the problem of weight cannot simply disappear. In a clash between transforming arguments, arguments backed by greater weight should prevail not only in criminal, but also in civil cases. Furthermore, evidential weight would have to satisfy certain threshold criteria not only in criminal, but also in certain civil cases. This introduction of the weight factor would reinstall the 'counterfactual approach', its open-endedness, and the consequent indeterminacy of reasoning.

(g) *The 'slot-machine' approach*

Because unrealized forensic possibilities exist in every case, problems involved in the 'counterfactual approach' seem to be both insoluble and fundamental. As demonstrated above, these problems cannot be resolved epistemically. But can they possibly be resolved by applying the burden of persuasion doctrine in every ambiguous case? This 'slot-machine' approach to the handling of factual ambiguities has been endorsed by the conventional understanding of evidence law. It is stated by Earl of Halsbury LC in one of the most remarkable decisions explaining the function of the burden of persuasion doctrine at common law:

I must admit that ... the conclusion I have come to is that I cannot say that I can come to a satisfactory conclusion either way; but then the law relieves me from the embarrassment which would otherwise condemn me to the solution of an insoluble problem, because it directs me in my present state of mind to consider upon whom is the burden of proof.¹⁶²

In this case, William Louis Winans—a wealthy man, who was born in the United States and came to England in 1859, where he lived until his death in 1897—had left a substantial estate and a will which determined its distribution. A considerable amount of his money and property was placed in England. He, however, came to England merely for health reasons, following his doctors' advice. Winans regarded himself as 'entirely American' and frequently expressed his wish to return to

161. See *supra* note 111 and the adjacent text.

162. *Winans v. Attorney-General* [1904] A.C. 287 at 289.

Baltimore, to which he always referred as his 'home'. His wish, however, had not been fulfilled. The Attorney-General argued that since Winans was domiciled in England, legacy duty ought to be recovered from his estate. Framed by the then applicable definition of 'domicile', the main issue contested in the ensuing litigation was this: Had Winans formed 'a fixed and settled purpose' to settle in England?

Reaching the House of Lords, this litigation ended in favor of Winans' heirs. As indicated by the above quotation, the Lord Chancellor arrived at this conclusion because it was the Attorney-General who had to discharge the burden of persuasion and evidence presented at the trial was inconclusive. Lord Lindley's evaluation of the evidence was different. In his view, the burden of proof was fully discharged by the Crown. Although Winans was a proud American citizen, his illness caused him to give up any hope to return to the United States. The 'hard' fact that Winans lived in England for so long was regarded by Lord Lindley as being decisive. This view has, however, failed to attract Lord Macnaghten, who joined the Lord Chancellor's ultimate decision on separate grounds. Lord Macnaghten estimated that Winans' hope of returning to America had never been dashed.

Under the conventional understanding of evidence law, the Lord Chancellor's opinion is most likely to be regarded as grounded upon better reasoning. Unable to resolve the clash between the competing evaluations of the evidence, he turned to the standards and burdens of proof. Under this framework, when evidence equally supports both plaintiff and defendant, the latter should prevail. In my view, the Lord Chancellor's opinion represented the worst possible reasoning. A holding such as his—that the evidence equally supports both plaintiff and defendant—needs to be justified as any other judicial holding.¹⁶³ His opinion would have been justified only if it had shown that the two competing theories of the case, as endorsed by Lord Lindley and Lord Macnaghten, are equiprobable and equally weighty. The Lord Chancellor's opinion does not establish this. He produced no reason for holding that each of the competing preponderance-of-the-evidence claims is unjustified. This flavors his holding with arbitrariness.¹⁶⁴

A decision that two conflicting propositions are equally probable is no different from any other probability decision. As such, it is bound to rest upon transforming arguments, thus facing the problems that have been pointed out earlier in this article.¹⁶⁵ The 'slot-machine' approach is therefore doomed to failure.

Application of this approach in criminal cases, i.e., a perpetual recourse to the *in dubio pro reo* principle as a rule of thumb, would be improper for an additional and even more compelling reason. Under this approach, the defendant should be acquitted whenever the implications of unrealized forensic possibilities are indeterminable. If this approach were to be carried through to its logical end, then virtually all criminal defendants, perhaps including even those who plead guilty, would have to be acquitted. This outcome is obviously intolerable because of its colossal social disutility.

163. See Albert Ehrenzweig, *Psychoanalytic Jurisprudence* (Dobbs Ferry, NY: Oceana Publications, 1971) at 278-79 (also requiring justification in matters of *non liquet factum*).

164. As Ehrenzweig rightly mentioned, "a judicial power to speak *non liquet factum* would too easily lend itself to abuse." Albert Ehrenzweig, *Law: A Personal View* (Leyden: Sijthoff, 1977) at 86.

165. Namely, the problems associated with conditionalization of probability judgements.

(h) But what should be done instead?

Under the trial conditions, the weight of transforming arguments is epistemically unmanageable. But is there any viable solution to this problem?

To answer this question, we have to reformulate our problem and thus clarify its nature. The decisional strategy adopted by the 'fictional approach' imposes tangible limits upon judicial inquiry. These limits are, however, both artificial and arbitrary. They are therefore highly objectionable. The strategy of the 'counterfactual approach', which sets no limits to judicial inquiries, is also most problematic. Unfettered conditionalization of judicial findings of fact produces argumentative open-endedness and indeterminacy, which end up in arbitrariness. Any judicial inquiry *has* to be stopped at some point. The 'counterfactual approach' empowers judges to 'hedge' their inquiries *ad hoc*.¹⁶⁶ Some judicial inquiries would thus be pursued and some would not. This important strategic choice would not be regulated by any criteria and judges would be left alone to make it as they deem fit. Therefore, this approach is unacceptable.

In scientific reasoning and in many other non-adjudicative affairs, hedging may be allowed to rest solely on pragmatic grounds. At some point in her investigation, a scientist ought to be allowed to hedge it if she decides that to conduct further inquiries would be unhelpful or unjustifiably onerous. Functioning within thus hedged experimental design, she may reach certain conclusions. As a result of the hedging, these conclusions may be mistaken.¹⁶⁷ However, this is our scientist's self-regarding risk. If no external decisions to act upon her conclusions are made in the future, no person apart from herself would possibly suffer from her error. It is true that such external decisions may be made. Making them would involve additional responsibility, which may be reminiscent of judicial responsibility in at least some respects. No such additional responsibility would, however, apply to a purely scientific research.

Judicial inquiries are qualitatively different from those conducted by scientists. When a judge sets limits to her inquiry, she allocates other people's risks. As a result of any such hedging, final disposition of the case may be tainted with error. Legally backed coercion may thus be prescribed where it should not be prescribed; alternatively, it may not be prescribed where it should. By allocating this risk through

166. As observed by David Schum,

[i]nferences can only be probabilistic in nature, and our conclusions have to be hedged in some way. ... On close examination many apparently simple inferences reveal some remarkably subtle properties that often go unrecognized. Inferences can be decomposed to various levels of 'granularity'. As we make finer decompositions of an inference, we expose additional and often interesting sources of uncertainty. One trouble we face is that there rarely seems to be any final or ultimate decomposition of an inference. Indeed there may be alternative decompositions, none of which we can label as being uniquely 'correct'. We are often forced to simplify an inference task by cutting a few corners here and there. ... Having acknowledged the necessity for simplifying inferences, ... it seems advisable to have some awareness and understanding of the evidential subtleties that we may be overlooking or suppressing in the process. In probabilistic inferences what we do *not* consider *can* hurt us, often very badly.

Schum, *supra* note 126 at 2.

167. Schum, *ibid.*; Kneale, *supra* note 96 at 226-53 (describing this process as a policy decision-making).

shifting it to one of the litigants, thus preferring her opponent over her, judicial hedgings situate themselves in the realm of morality and politics. Therefore, they have to be authorized by the law. According to the traditional theory of adjudication, to authorize judges to allocate such risks as they deem fit would be akin to appointing them as governors of political morality, an appointment that cannot be tolerated.

Arising in relation to every transforming argument, this problem of hedging is pervasive. Determination of evidential weight—or, more accurately, judicial ascription of cogency to transforming arguments—would thus always be intertwined with risk-allocation. As such, it would have to be justified not merely on epistemic, but also on moral and political grounds which have previously been ascribed legal recognition and thus marked out as authoritative. One of the primary objectives of evidence law should be to set forth these latter grounds. Accomplishment of this objective is essential for adequately constraining judges called upon to adjudicate between conflicting hedging-related claims that demand immunization from the risk of error. A litigant may put forward a claim that she is entitled to an immunity from this risk. Correspondingly, she may demand that judicial inquiries into the disputed facts be conducted in a way that would respect her immunity. If these claims happen to be correct, limits that would have to be set for judicial inquiries should be set in this particular way. Inquiries identified as unduly risky as a result of their anticipated hedging might, for example, not even be allowed to get started. Yet, these claims may be wrong. Because immunity from the risk of error can be conferred upon one of the parties only by shifting this risk to her opponent, these claims will be objected to by our litigant's adversary. We therefore need legal criteria that would determine which party is in the right. By allowing judges to execute their private risk-related preferences and also by authorizing them to devise these preferences both tacitly and *ad hoc*, Freedom of Proof cannot satisfy this basic need.

The assumption of separation underlying the idea of free proof thus breaks down completely. This idea cannot be sustained. Legal principles and/or rules that would provide for the allocation of the risk of error need to be laid down explicitly, authoritatively, and comprehensively. This regulation may operate in three key fashions. First, given that judicial inquiries are bound to be hedged, inquiries that involve unacceptable risks may not be allowed *ab initio*. This prohibition can be implemented by excluding evidence which gives rise to an unacceptably risky inquiry. Second, the inevitability of hedging makes some judicial inquiries unacceptably risky in comparison with inquiries otherwise directed to the same end. When the favored inquiries are available, evidence opening them up becomes *preemptive* and thus takes priority over evidence leading to judicial inquiries that are unacceptably risky. Evidence marked as inferior would accordingly be excluded; also, when one of the litigants is responsible for thwarting a favored inquiry, inferences adversely affecting him may be prescribed and thus preempt other inferences. Third, in some cases, no hedging may be allowed until the existence or the non-existence of some specified information is adequately ascertained. Determination of facts not preceded by such an inquiry may also be considered as unacceptable risk. This risk-allocating strategy may follow two distinct directions that can be perceived as 'quantitative' and 'qualitative'. By assuming the former direction, this strategy may produce

different corroboration requirements for specified kinds of cases. By following the latter direction, it may establish more demanding specificity standards for informational bases upon which judicial evaluations of the relevant probabilities will be conditionalized.

Exclusionary, preemptive and corroborative strategies that allocate risk of error can explain many evidentiary rules. Specificity standards associated with a qualitatively anti-hedging strategy can be exemplified by judicial decisions, although less straightforwardly.¹⁶⁸ If such standards be implemented across the board, the external control over judicial evaluations of weight would be tightened up most significantly. As a matter of substance, each of these strategies should reflect and enforce only the authoritative preferences that determine the allocation of the risk of error. They should thus be 'filled in' only by those preferences that are legally recognized. This *weight-controlling* regulation of fact-finding should work together with the *probability-controlling* regulation, as exhibited by the existing standards of proof, and with the *finding-controlling* regulation set forth by the burdens of proof.

The remaining part of this article will demonstrate the viability of this regulatory scheme. Any such scheme needs to be 'filled in' by appropriate risk-related preferences, which, of course, may be morally and politically controversial. Preferences 'filled' into my regulatory scheme will reflect one the broadest common denominators existing in this area. They will be elicited from the probability-controlling and finding-controlling arrangements which characterize the Anglo-American systems of evidence. Risk-allocating preferences underlying these arrangements will thus be provided with an *extension* that would carry them into the weight-controlling scheme. By anchoring free proof in its core, the conventional evidence doctrine leaves no room for such a scheme. But it does recognize that a small number of non-integrated evidentiary rules are related to evidential weight. This relationship will now be looked at anew from the perspective developed in this article. I shall demonstrate that these rules largely correspond to the risk-allocating preferences discernible from the probability-controlling and finding-controlling arrangements. Apart from establishing harmony between evidentiary rules, this discussion will further strengthen the *extension* thesis, i.e., the idea that judicial determination of weight should be controlled by the same risk-allocating preferences that underlie the settled law. In a legal system committed to the coherence principle, which demands that like cases be treated alike, judges would have to apply this *extension* as a matter of law. Both English and American legal systems can plausibly be understood as containing this basic requirement.¹⁶⁹

Confining Part VI to exemplification, I shall nevertheless abstain from claiming that the *extension* requirement, apart from being normatively justified, is also part and parcel of the positive law. An attempt at re-rationalizing the totality of legal arrangements by forcing them into a coherence straightjacket is extremely difficult to entertain, given that most of these arrangements originate from deep conflicts

168. See cases discussed in Part V(d).

169. Dworkin, *supra* note 140 at 71, chs.6-7.

of interest that have been mediated through the law-making processes by 'minds and wills working at cross-purposes'.¹⁷⁰ Yet, if it were possible to redesign the existing law in conformity with the coherence requirement, this would be the best law-making approach. Part VI lends plausibility to this essentially normative claim.

VI. REFOUNDATION OF EVIDENCE LAW

As explained in Part V, evidence law should be formed by provisions regulating judicial determination of weight in a way that would properly allocate risk of error. What would and would not amount to a proper allocation of this risk is a moral and political question. I shall not endeavor to settle this question normatively, by supporting certain moral and political values over others. Instead, I shall proceed endogenically, by extracting the criteria for risk-allocation from the settled law, namely, from the rules which control the risk of non-persuasion in Anglo-American legal systems. Risk-related preferences of the legal system are expressed by these rules almost explicitly. These rules therefore constitute the most apparent source for extracting the *authoritative criteria* for risk-allocation. Risk-related preferences underlying these rules will be converted into general principles and thus provided with an *extension*, which would secure their coherent application across the board. These preferences will also be translated into more concrete arrangements, partially corresponding to the already existing rules of evidence. Instead of being perceived as disparate exceptions to free proof, rules fitting these preferences can and possibly should be explained as part of the coherent whole.

Legal forms, into which these preferences should be molded in order to be implemented more efficiently in various settings, is an issue that needs to be addressed first. The existing risk-related preferences may be formalized and implemented as general principles. Alternatively, they may be decomposed into a series of specific arrangements and thus formalized and implemented as rules. A combined approach that formalizes these preferences as both rules and principles might also be appropriate.¹⁷¹

(a) *The form of risk-allocating regulation*

Allocation of the risk of error settled upon as desirable will require formalization. This legal objective can be attained by detailed rules, by general principles or standards, or by both. Principles refer judges directly to the general objectives of the law. Measures that need to be taken in order to attain these objectives in individual

170. Roberto M. Unger, "The Critical Legal Studies Movement" (1983) 96 Harv. L. Rev. 561 at 571. For an insightful discussion of this 'truncation problem' see Andrew Altman, *Critical Legal Studies: A Liberal Critique* (Princeton, NJ: Princeton University Press, 1990) at 147.

171. Determination of the optimal investment into the accuracy of judicial ascertainment of facts is another important issue that needs to be addressed by law-makers. Not affecting my general thesis, and being too complex to be dealt with parenthetically, this issue will not be discussed. For its discussion from an egalitarian angle see Alan Wertheimer, "The Equalization of Legal Resources" (1988) 17 Phil. & Publ. Affairs 303. For its economic, utility-oriented, analysis see Louis Kaplow, "The Value of Accuracy in Adjudication: An Economic Analysis" (1994) 23 J. of Legal Studies 307.

cases are left unspecified, empowering judges to devise these measures by discretion. Legal rules function differently. They are drafted meticulously, telling judges how to decide in particular situations. General objectives of the law are therefore attained by rules only indirectly.¹⁷²

Because human language and predictive capacity are limited, rules—when appraised against their underlying legal objectives—are doomed to be either over-inclusive or under-inclusive. Legal objectives are consequently bound to be attained by rules not only indirectly, but also imperfectly. At this price, rules enable individuals to devise their endeavors in advance and protect their personal freedoms from intrusions sanctioned by the state. This security virtually cannot be maintained under principles. Principles, however, promote legal objectives better than rules, for they exert no constraints that might become detrimental to these objectives. Legal rules have therefore been ideologically affiliated to individualism, while principles have become associated with altruistic and communitarian values.¹⁷³

Risk-allocation of any authoritatively preferred substance can be *coherently* attained by rules only in exceptional cases. An infinite variety of fact-patterns characterizing judicial trials defies categorization. And even if it were possible to build up a highly elaborated network of rules that would cover this variety, costs to be incurred by this enterprise (the 'promulgation costs') would be tremendous. These costs can be saved by preferring principles to rules.¹⁷⁴ Application of principles would, admittedly, involve more judicial efforts and more judgmental errors, i.e., greater 'enforcement costs' usually savable by rules. In our context, this saving will, however, be negligible. Because every individual case will present its own non-recurring fact-scenario, the expected application rate for any rule incorporated in the expensively built legal network will be ranging between 0 and 1.¹⁷⁵

By enabling individuals to plan their actions, rules often generate reliance benefits (e.g., legally important incentives) which cannot be produced by principles. This advantage of rules may be utilized also in connection with litigation, both existing and contemplated. Reliance benefits can, however, always be produced by direct rules. In view of this alternative, which is both straightforward and cheap, rules allocating risk of error can scarcely become efficient producers of reliance benefits. To sum up, risk-allocation should be regulated primarily by principles and only exceptionally by rules.

(b) Risk-allocation in criminal trials

Under the conventional doctrine, facts constitutive of the defendant's guilt have to be proved beyond any reasonable doubt. Any reasonable doubt should thus lead to the defendant's acquittal.¹⁷⁶ This requirement needs elaboration, which can be

172. See Frederick Schauer, *Playing by the Rules* (Oxford: Clarendon Press, 1991) at 73-76.

173. For discussion of this highly controversial claim see Duncan Kennedy, "Form and Substance in Private Law Adjudication" (1976) 89 Harv. L. Rev. 1685; Mark Kelman, *A Guide to Critical Legal Studies* (Cambridge: Harvard University Press, 1987) ch.1; Schauer, *ibid.* at 162-66; Kaplow, *supra* note 53.

174. Kaplow, *ibid.* at 573.

175. Kaplow, *ibid.*

176. *In re Winship*, 397 U.S. 358 (1970); *Mullaney v. Wilbur*, 421 U.S. 684 (1975).

attained by taking the utility-based determination of the criminal standard of proof as a starting point.

Starting from the premise that certainty is judicially unattainable and that judicial errors are unavoidable, let P denote the probability of the defendant's guilt, and allow D_g and D_i to represent the damage to be incurred by acquitting the guilty and by convicting the innocent. The defendant may thus be convicted whenever:

$$PD_g > (1-P) D_i;$$

i.e., whenever:

$$P > \frac{1}{1 + \frac{D_g}{D_i}}.$$

Probability justifying conviction can thus be determined by the error-related disutilities, as represented by the socially desirable ratio of wrongful acquittals vs. wrongful convictions.¹⁷⁷ The number of wrongful acquittals can be reduced accordingly by increasing the amount of wrongful convictions, and vice versa. Each of these outcomes can be attained by modifying the probability that justifies conviction.¹⁷⁸

The conventional doctrine, however, vigorously resists the idea of introducing numbers into the above-stated formula or otherwise reducing the error-related disutilities to a common denominator.¹⁷⁹ This resistance is not readily understandable, for it is not any doubt, but only a 'reasonable' one that would result in the defendant's acquittal. The doctrine thus explicitly recognizes the inevitability of convicting innocent people. Indeed, as observed by a prominent English judge, criminal law "would fail to protect the community if it admitted fanciful possibilities to deflect the course of justice."¹⁸⁰ This reservation makes allowance for utility considerations, which invites all-encompassing balancing. If this were to take place, it would have unfolded the 'beyond-reasonable-doubt' doctrine by openly stating the permissible ratio of wrongful convictions and acquittals.

According to the general understanding of this doctrine, any *perceptible* doubt, i.e., any doubt that has been substantiated by the evidence, should work in the defendant's favor. Doubts that remain unsubstantiated and consequently *imperceptible*, which can be found in every case, will not pass the threshold of 'reasonableness'.

177. John Kaplan, "Decision Theory and the Factfinding Process" (1968) 20 Stan. L. Rev. 1065 at 1071-72.

178. Richard Posner, *Economic Analysis of Law*, 4th ed. (Boston: Little, Brown, 1992) at 553 (linking this probability with deterrence and other utility factors).

179. For most revealing discussions of the intellectual foundations of this doctrine see Glanville Williams, *The Proof of Guilt* 3d. ed. (London: Stevens, 1963) ch.7; Theodore Waldman, "Origins of the Legal Doctrine of Reasonable Doubt" (1959) 20 J. of the History of Ideas 299; George Fletcher, "Two Kinds of Legal Rules: A Comparative Study of Burden-of-Persuasion Practices in Criminal Cases" (1968) 77 Yale L.J. 880; Barbara Shapiro, "'To a Moral Certainty': Theories of Knowledge and Anglo-American Juries 1600-1850" (1986) 38 Hast. L.J. 153; Zuckerman, *supra* note 68, ch.9.

180. *Miller v. Minister of Pensions* [1947] 2 All E.R. 372 at 373-74 (Denning, L.J.). An observation similar to this was made in *Herrera v. Collins*, 113 S.Ct. 853 at 860 (1993).

Therefore, the defendant will not be allowed to benefit from them. Immunized only from the evidentially confirmed risk of erroneous conviction ('risk (1)'), the defendant will thus be exposed to an identically threatening risk when it lacks evidential confirmation ('risk (2)').¹⁸¹ Focusing upon the evidential credentials of the risk, instead of the harm associated with its materialization, this differentiation requires explanation. As far as the defendant is concerned, he would rather be exposed to risk (1), when charged with assault, than to risk (2) in a trial for murder. From the society's viewpoint, to fine a retired tycoon upon his conviction of insider dealing—even when the doubts raised by him are perceptible—may well be a sound strategy of intensifying deterrence in relation to this almost unprovable crime. More importantly, unbending immunization of the defendants from risk (1) leaves many dangerous criminals unconvicted and consequently unpunished. Harm inflicted by this, both directly and indirectly, may often be greater than any damage associated with wrongful convictions. Thus, most victims of rape would have readily swapped their traumatic experience for a year in a civilized jail, but to find partners for such a bargain would be a rather difficult, if not altogether impossible task. Wrongful acquittal of a rapist may therefore generate more bare harm than mistaken conviction and punishment of an innocent person.¹⁸² Leaving no room for balancing of such harms, the doctrinal differentiation between risks (1) and (2) locates itself besides the utilitarian point.¹⁸³

As suggested by Ronald Dworkin, this differentiation can be better understood as resting upon the moral distinction between accidentally and deliberately wrongful convictions.¹⁸⁴ The *in dubio pro reo* principle can thus be perceived as preventing

181. Zuckerman, *supra* note 68 at 134–40. Courts, however, are reluctant to articulate this notion. See *Cage v. Louisiana*, 498 U.S. 39 at 41 (1990); Henry A. Diamond, "Reasonable Doubt: To Define or Not to Define" (1990) 90 Colum. L. Rev. 1716.

182. According to Bentham, individuals should be protected from wrongful convictions in order to prevent 'alarm' in the public at large. Bentham, *supra* note 29 at 196–97. He estimated that the disutility generated by apprehension of fear and insecurity outweighs the utility of bringing more criminals to justice. This speculation, however, seems to have reflected Bentham's personal "[a]ttitudes and scale of values rather than [a] necessary consequence of a utilitarian analysis". Twining, *supra* note 3 at 99. Nowadays most people seem to be more concerned with being protected by rather than from the criminal law machinery. See Wertheimer, *supra* note 76 (justifying conviction of an innocent person on utilitarian grounds) and Stein, *supra* note 156, in 10 *Mechkarey Mishpat* 157 (arguing that to adopt Wertheimer's approach is to step upon a politically disastrous 'slippery slope').

Another utilitarian attempt to justify the *in dubio pro reo* principle moves from the 'act-utilitarian' to the 'rule-utilitarian' strategy. Arguably, this principle minimizes bare harm in the aggregate. Not directly contributing to utility, each of its individual applications would arguably be justified as 'part of the system'. This argument has rightly become suspected of *petitio principii*, i.e., of "[a]rguing backward from the fact that our moral intuitions condemn convicting the innocent to the conclusion that such a disability must be in the long-term utilitarian interests of any society." Ronald Dworkin, *A Matter of Principle* (Cambridge, MA: Harvard University Press, 1985) 82ff.

Apart from that, the distinction between rule- and act-utilitarianism can hardly be sustained in the present context. See Dworkin, *ibid.* See also David Lyons, *Forms and Limits of Utilitarianism* (Oxford: Clarendon Press, 1965) 182ff (criticizing this distinction in general).

183. For some support of the utilitarian balancing approach see James F. Stephen, *History of the Criminal Law of England* vol.1, (London: Macmillan, 1883) at 438; Edmond H. Cahn, *The Moral Decision* (Bloomington: Indiana University Press, 1955) at 296.

184. Dworkin, *supra* note 182 at 82ff. See also Laurence H. Tribe, "An Ounce of Detention: Preventive Justice in the World of John Mitchell" (1970) 56 Va. L. Rev. 371 at 386.

a special kind of moral injustice, rather than simply bare harm, such as pain, suffering, and frustrated expectations. Bare harm incurred by an erroneous conviction is a variable and highly contingent factor. As such, it can always be balanced against the harm to be generated by acquitting guilty criminals and letting them go unpunished. From a purely utilitarian viewpoint, which rejects any notion of 'special moral injustice', uncompromising application of the *in dubio pro reo* principle makes no sense. By recognizing this notion, the *in dubio pro reo* principle has, however, declined to adopt utilitarianism in the first place. Escaping from the net of an ordinary utilitarian calculus, the focal point made by the *in dubio pro reo* principle is this:

- (1) It is one thing to convict an innocent person accidentally, when there is no specifiable reason to doubt her guilt; and it is quite another thing to convict a person by knowingly disregarding such a reason. The first case is one of bad luck that may befall upon any person. The second case involves a *deliberate singling out* of the defendant as a risk-absorbing unit, which violates the basic political obligation of the state to treat citizens with equal concern and respect.
- (2) Protecting the defendant from risk (1), but not from risk (2), the *in dubio pro reo* principle should be perceived as a particular manifestation of this basic political obligation.¹⁸⁵

The defendant may thus be justifiably convicted, if the system 'did its best' in protecting her from wrongful conviction by eliminating the risk of error. This requirement should be applied across the board, so that like cases be treated alike and similarly situated defendants receive equal protection from the state. Principles and rules allocating risk of error in criminal matters should therefore be maintained in a state of inner coherence.¹⁸⁶ All this gives rise to a more specific evidential principle, describable as the 'principle of maximal inferential individualization' (PMII). Under this principle:

- (1) No adverse inference should be drawn against the defendant, unless it has been exposed to and survived the maximal individualized testing;
- (2) This includes every practical possibility of testing the applicability of the inference in question to the individual defendant's case;

185. I assume that the criminal justice system operates under limited resources, so that greater investment could eliminate more judicial errors. This assumption does not undermine the moral harm rationale. Public resources are scarce, and there is no overriding moral imperative which demands that they should be channelled into criminal proceedings rather than into health, education, highways and other amenities. Citizens benefiting from those amenities may occasionally be harmed by the underfunded criminal justice system. Such an outcome, as regrettable as may be, would be morally indistinguishable from a traffic accident resulting from a poor investment in the road safety. If the process of allocating public resources were politically fair, no person can blame the state for being denied equal treatment when the system accidentally works to her detriment. See Dworkin, *supra* note 182 at 84-87.

This, however, should not foster complacency, as the distinction between 'injustice' and 'misfortune' often does. Victims of accidents should not be left on their own just because they have nobody to blame. See Judith Shklar, *The Faces of Injustice* (New Haven, CT: Yale University Press, 1988) at 51-82. See also Note, "The Luck of the Law: Allusions to Fortuity in Legal Discourse" (1989) 102 Harv. L. Rev. 1862 (an insightful article showing that 'luck' is a valueladen notion).

186. Dworkin, *supra* note 140, chs.6-7.

(3) The defendant should accordingly be provided with appropriate immunities from the risk of error.

These fundamental requirements and their implications will now be explained.

First, it is noticeable that differentiation between risks (1) and (2) can be maintained only by applying PMII. Any conviction failing to satisfy this principle would unlawfully expose the defendant to risk (1). A conviction that complies with PMII would be conditioned upon the maximal testing of all transforming arguments which incriminate the defendant. This would immunize the defendant from risk (1), exposing her to risk (2) only. Hence, even when $P(G/E)$ comes close to certainty, so that any perceptible doubt pointing to the defendant's innocence is eliminated, this defendant may be convicted only if the requirements set by PMII have been satisfied. This decision-making strategy thus stands between the 'fictional approach', previously discarded as fortuitous and unacceptably risky, and the 'counterfactual approach', which has been rejected as indeterminate and unworkable. This strategy sets the right level for evidential weight, i.e., for the weight of transforming arguments which support the defendant's conviction.

In bench trials, PMII can be implemented without serious difficulties. As a broadly defined principle, its implementation in jury trials would be more complex. This complexity, however, would be significantly reduced by judicial instructions and, primarily, by directed verdicts, by judgments notwithstanding the verdict and by appellate review. PMII's implementation would admittedly tighten up the judicial control over decision-making powers of the jury and thus make jury decisions considerably more structured. This outcome may expose PMII to the familiar critique accusing it of undermining the institutional role of the jury. However, as PMII represents the risk-related preferences that are already endorsed by the legal system, this accusation would be unfounded. If the *in dubio pro reo* principle can withstand such an accusation, the same should be true about PMII.

A further concretization of PMII can be attained by decomposing this principle into its exclusionary, preemptive and corroborative strategies. This would produce a coherent set of more specific evidentiary rules and principles. Without claiming to be exhaustive in my following discussion, I shall now proceed in this direction.

(b1) The exclusionary strategy of PMII

Inquiries starting from particular evidential sources are *ab initio* incapable of satisfying PMII. To embark upon one of such inquiries would therefore expose the defendant to risk (1) from which he ought to be immune. Such inquiries should thus not be allowed to get started and evidence activating them should not be admitted. This justifies exclusion of hearsay statements, character evidence, and scientifically controversial data, when adduced *against the accused*.

Under the hearsay rule, an out-of-court statement (or other intentionally assertive conduct) cannot be admitted as evidence to the truth of its contents. Subject to exceptions, such evidence is excluded for lack of cross-examination.¹⁸⁷ To the extent

187. See FRE 801. For a broader definition, adopted in England, see *Wright v. Doe d. Tatham* (1837) 7 A&E 313; *R v. Kearley* [1992] 2 All E.R. 345. On similar grounds, testimony given in-chief should normally not be used as evidence, if the witness abstained from answering questions at her cross-examination. See, e.g., *Douglas v. Alabama*, 380 U.S. 415 (1965).

that this rule works in favor of the accused, it can be justified as an immunity from the risk of error necessitated by PMII. This can easily be understood by unfolding the credibility-related inferences relied upon by the proponent of a hearsay statement in her transforming argument. Entailing a series of generalizations that may or may not be applicable to the case at hand, such inferences can never be fully examined. At some point, judicial inquiries into such inferences would have to be artificially hedged. If this hedging were to curtail merely an abstract investigation into one of the omnipresent doubt-throwing hypotheses, it would clearly be justified by the very nature of the enterprise. To justify it, however, as curtailing merely abstract, rather than concrete investigations, PMII's demands need to be satisfied. These demands can never be satisfied in cases involving unmitigated hearsay. Always amounting to an absence of appropriate individualized testing, lack of cross-examination would thwart any effort in this direction.

Hearsay evidence may, however, be offered in different mitigated versions, which explain most of the exceptions to the hearsay rule. Under PMII, there can be only one mitigated version of admissible hearsay. As suggested by Eleanor Swift, if a hearsay statement is highlighted by 'foundation facts' in all its testimonial parameters—which should include the declarant's perception, memory, narration, and sincerity, as related to the event—this statement should be admitted.¹⁸⁸ As the required foundation fact evidence would have to be provided by first-hand witnesses, who can be adequately cross-examined,¹⁸⁹ PMII's demands would be satisfied. Under PMII, each hearsay exception would thus be premised upon the existence of a functionally equivalent substitute to cross-examination.¹⁹⁰ PMII would also oppose the exclusion of hearsay evidence offered by the defendant, if this happens to be the best evidence that he can produce.¹⁹¹ Any such curtailment would alleviate the testing to be undergone by the prosecution's evidence, thus exposing the defendant to a concrete and therefore impermissible risk of error.

In addition, PMII helps resolving the notorious problem of hearsay's definition. This definition may be strictly statement-oriented and thus confined to out-of-court statements offered to establish the truth of their explicit contents. Alternatively,

188. Eleanor Swift, "A Foundation Fact Approach to Hearsay" (1987) 75 Calif. L. Rev. 1339.

189. Swift, *ibid.* at 1356-61.

190. Although in a rather restricted form, this standard is already known as *one* of the alternative routes of passing constitutional muster under the Confrontation Clause. See *California v. Green*, 399 U.S. 149 (1970).

In my view, hearsay exceptions not satisfying this standard should be regarded as unconstitutional, regardless of whether they are "firmly rooted" or distinctive of "indicia of reliability" (the constitutionality standards set as alternatives in *Ohio v. Roberts*, 448 U.S. 56 (1980); *Idaho v. Wright*, 110 S.Ct. 3139 (1990); *White v. Illinois*, 112 S.Ct. 736 (1992)). For criticism of the constitutionality-of-hearsay doctrine see Jonakait, *supra* note 62; Margaret Berger, "The Deconstitutionalization of the Confrontation Clause: A Proposal for a Prosecutorial Restraint Model" (1992) 76 Minn. L. Rev. 557. See also Nesson & Benkler, *supra* note 70.

191. Cf. *R v. Blastland* [1985] 2 All E.R. 1095 (HL) (excluding a third-party inculpatory admission); *Chambers v. Mississippi*, 410 U.S. 284 (1973) (third-party admissions admissible only for impeachment purposes). *Chambers* may, however, be construed more broadly, as opening the gates for defence hearsay on constitutional grounds. See McCormick, *supra* note 15, vol. 1 at 129; Edward J. Imwinkelried, "The Constitutionalization of Hearsay: The Extent to Which the Fifth and Sixth Amendments Permit or Require the Liberalization of the Hearsay Rules" (1992) 76 Minn. L. Rev. 521 at 542-48.

it may be broadly declarant-oriented, thus focusing on whether the declarant's testimonial traits, i.e., observation, memory, narration, and sincerity, join the inferences to be drawn from her assertive conduct, explicit or implied. If these traits join the inferences, cross-examination of the declarant becomes indispensable, and her statement would therefore be classified as hearsay. Not covering any assertive conduct apart from explicitly made statements, the statement-oriented definition is too narrow. The declarant-oriented definition, under which an enormous amount of conduct-related evidence would qualify as hearsay, is, however, too broad.¹⁹² The *Federal Rules of Evidence* have therefore struck a balance. Under their definition, a conduct that was *intentionally* assertive would amount to hearsay if offered to prove the truth of its assertion.¹⁹³ Although workable, this definition has replaced one problem with another. Ascertainment of the relevant 'intention' has become a new problem.¹⁹⁴ Under PMII, the declarant-oriented definition can be adopted without difficulties. As has already been mentioned, hearsay evidence should never be excluded when offered by the defendant as his best available evidence. Later in this article, it will be shown that ordinary civil litigation should be controlled only by preemptive rather than exclusionary strategies. Application of the hearsay rule would consequently be confined to evidence offered by the state in criminal trials and, exceptionally, in civil cases that affect human rights. This rule would also be limited by the broad exception premised, as described above, upon the existence of a functionally equivalent substitute to cross-examination. The problem of over-inclusiveness would consequently disappear.

PMII can also explain the rule which excludes prior convictions and reprehensible traits of character as evidence against the defendant.¹⁹⁵ Any transforming argument built upon this evidence would entail a generalization that attributes some recurring causal relationship to personality and action. Applicable to some cases, but not to others, such generalizations are not susceptible to individualized testing. Their individualized applicability can therefore never be properly ascertained.¹⁹⁶ This, however, is not the case with case-specific, and thus individualized, 'similar fact' evidence as to the defendant's "motive, opportunity, intent, preparation, plan, knowledge, identity, absence of mistake or accident", and the like.¹⁹⁷ Such evidence is susceptible to individualized testing and should therefore be admitted.

192. Stephen Guest, "Hearsay Revisited" (1988) 41 *Current Leg. Problems* 33.

193. See FRE 801 and the Advisory Committee's notes accompanying this rule.

194. This and related problems are insightfully discussed in Eustace Seligman, "An Exception to the Hearsay Rule" (1912) 26 *Harv. L. Rev.* 146; Ted Finman, "Implied Assertions as Hearsay: Some Criticisms of the Uniform Rules of Evidence" (1962) 14 *Stan. L. Rev.* 682; Edmund Morgan, "Hearsay Dangers and the Application of the Hearsay Concept" (1948) 62 *Harv. L. Rev.* 177; Lawrence Tribe, "Triangulating Hearsay" (1974) 87 *Harv. L. Rev.* 957; Michael Graham, "'Stickperson Hearsay': A Simplified Approach to Understanding the Rule Against Hearsay" (1982) *U. Ill. L. Rev.* 887; Olin Guy Wellborn III, "The Definition of Hearsay in the Federal Rules of Evidence" (1982) 61 *Tex. L. Rev.* 49; Guest, *supra* note 192; C.R. Williams, "Issues at the Penumbra of Hearsay" (1987) 11 *Adelaide L. Rev.* 113; Craig R. Callen, "Hearsay and Informal Reasoning" (1994) 47 *Vand. L. Rev.* 43. See also "Symposium on Hearsay and Implied Assertions" (1995) 16 *Miss. College L. Rev.* 1-213.

195. See FRE 404; Mueller & Kirkpatrick, *supra* note 63 at 216-26; Zuckerman, *supra* note 68, ch.12.

196. See Mueller & Kirkpatrick, *ibid.* at 218. New FRE 413, 414, 415 run against this approach.

197. FRE 404(b). McCormick, *supra* note 15, vol. I at 798-808; Mueller & Kirkpatrick, *supra* note 63 at 273-84.

Character evidence presents more difficult problems when invoked in order to impeach a witness. Under PMII, attribution of perjury to the defendant or to one of his witnesses on the basis of a group tenet would clearly be impermissible.¹⁹⁸ Yet, under the same principle, the defendant should be allowed to launch a character-based attack upon any prosecution witness. He should also be allowed to testify about his own good character. Would it be proper, in such situations, to expose the defendant and/or his witnesses to a character-based attack? I would answer this question in the affirmative because in any such case, it is the defendant who initiates the comparison between the traits of the witnesses, thus turning it into an issue in *his* case. Enacted in England in 1898, this arrangement continues to be the law in that country.¹⁹⁹ But can it work properly in cases involving co-defendants with potentially conflicting forensic interests? Situated in a 'prisoner dilemma', such defendants would inevitably resort to mud-slinging tactics. Their expectations of a character-based impeachment would become self-fulfilling.²⁰⁰ By leaving the mud-slinging tactics of co-defendants virtually unlimited, English law has failed to resolve this problem.²⁰¹ Under PMII, such tactics should also be unlimited. This principle does not, however, stand alone. When mud-slinging tactics of mutual impeachment become more prejudicial than probative, they should be disallowed.²⁰² Separation of the trial would probably be the best solution in such cases.²⁰³

Let me now turn to the well-known controversy about the admissibility of novel scientific findings, not yet approved by scientific community. The famous decision in *Frye v. United States* laid down the rigid standard of "standing and scientific recognition" as a condition for admitting scientific evidence.²⁰⁴ Much criticized and not always followed by judges,²⁰⁵ this standard had, nonetheless, survived until 1993, when it was rejected by the Supreme Court.²⁰⁶ Preceded by rather amazing dicta about scientific rationality,²⁰⁷ the new standard set by this Court requires that

198. See the majority view in *United States v. Abel*, 707 F.2d 1013 at 1016 (9th Cir., 1983), later rejected in *United States v. Abel*, 469 U.S. 45 (1984). Character-based impeachment of the defendant and his witnesses, presently allowed under FRE 608 and 609, should be confined to situations described in the text. Cf. Richard Friedman, "Character Impeachment Evidence: Psycho-Bayesian [!] Analysis and a Proposed Overhaul" (1991) 38 U.C.L.A. L. Rev. 637 (advocating an almost identical approach).

199. See *Criminal Evidence Act*, 1898, s.1; Zuckerman, *supra* note 68 at 250-83.

200. Perceiving his trial tactics as uncertain in the eyes of his co-defendant, each defendant will take his co-defendant as anticipating and planning to react to the worst. Typically designed by lawyers, this mutual anticipation triggers mud-slinging tactics. Note that attorneys' cooperation in such cases is also severely restricted by the rules of professional ethics.

201. Zuckerman, *supra* note 68 at 280-81.

202. See FRE 403; its English equivalent, s.78 of the *Police and Criminal Evidence Act*, 1984; and the latter's insightful explanation by Dennis, *supra* note 68.

203. Zuckerman, *supra* note 68 at 283. This solution has been rejected by English courts. As explained by Lord Justice Lawton,

[i]n the majority of cases where men are charged jointly, it is clearly in the interests of justice and the ascertainment of the truth that all the men so charged should be tried together.

R v. Hoggins [1967] 3 All E.R. 334 at 336. See also *R v. Varley* [1982] 2 All E.R. 519 at 522.

204. *Frye v. United States* 293 F. 1013 (1923).

205. See Paul C. Giannelly, "The Admissibility of Novel Scientific Evidence. *Frye v. United States*: A Half-Century Later" (1980) 80 Colum. L. Rev. 1197.

206. *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 113 S.Ct. 2786 (1993).

207. The Supreme Court had seemingly adjudicated the notorious Popper-Kuhn controversy in the philosophy of science favorably to Karl Popper. See, *ibid.* 2796-97.

scientific evidence be susceptible to empirical testing and falsifiability. From now onwards, 'standing scientific recognition' *per se* will affect 'weight' rather than admissibility of scientific findings.²⁰⁸ In England, without explicitly endorsing *Frye*, courts have displayed a fair measure of conservativeness towards scientific findings that are yet to be approved of by the relevant scientific community.²⁰⁹

Much of this controversy could have been eliminated if its stakes were properly defined. As explained earlier in this article, fact-finding in adjudication is ultimately concerned with an allocation of the risk of error. Allocation of this risk cannot be dependent upon judicial forecasting of the success (or failure) of the ongoing scientific evolution or revolution²¹⁰. Scientific evidence failing to satisfy the *Frye* standard should always be excluded when offered against the defendant in a criminal case. Such evidence should be excluded because there would be no *individualized* way of relating it, rather than its negation, to the case at hand. PMII would therefore always be violated by admission of such evidence.²¹¹

(b2) *The preemptive strategy of PMII*

The inevitability of hedging makes some judicial inquiries more fruitful and thus intrinsically superior to their alternatives. When two inquiries may be directed to the same end, evidence commencing the more promising inquiry should preempt the evidence activating the less promising alternative. Judges should therefore follow the 'best evidence principle', which would exclude secondary evidence when better evidence is available. 'Better evidence' would be that which enables judges to reach its *probandum* in a fewer inferential steps. By saying this, I refer not merely to the degree of the logical directness of the evidence vis-à-vis its *probandum*, but also, and, indeed, primarily, to the extent of its testability. Evidence giving rise to transforming arguments that can be examined, and thus strengthened or weakened, with greater ease should always be preferred. This principle would ascribe preferability not merely to original evidence, as opposed to its duplicate,²¹² but also to testimony, as opposed to an out-of-court statement made by the same witness.²¹³ Although many such statements are already doomed to exclusion under the hearsay rule, this expansion of the 'best evidence' principle would not be unnecessary. As stated above, PMII recognizes hearsay exceptions premised upon functionally equivalent

208. *Ibid.* at 2797. For a revealing critique of *Daubert* see Ronald J. Allen, "Expertise and the *Daubert* Decision" (1994) 84 J. Crim. L. & Criminology 1157; Margaret G. Farrell, "*Daubert v. Merrell Dow Pharmaceuticals Inc.*: Epistemology and Legal Process" (1994) 15 Cardozo L. Rev. 2183.

209. See Zuckerman, *supra* note 68 at 62-69.

210. Because judges are both institutionally and *de facto* incompetent to resolve scientific controversies, they can only defer to experts. See Allen, *supra* note 208; Zuckerman, *supra* note 68 at 63-64.

211. For another skeptical view concerning the applicability of *Daubert* to evidence incriminating the defendant see Margaret A. Berger, "Procedural Paradigms for Applying the *Daubert* Test" (1994) 78 Minn. L. Rev. 1345 at 1352-63. Unlike myself, Professor Berger stops short of arguing that *Frye* should be reinstated for this limited (but evidently important) purpose.

212. A principle embedded, for example, in the authentication and 'best evidence' provisions made in FRE, articles IX and X.

213. See Nance, *supra* note 47; Cf. Michael L. Seigel, "Rationalizing Hearsay: A Proposal for a Best Evidence Hearsay Rule" (1992) 72 Boston U. L. Rev. 893 (a more radical proposal to replace the hearsay rules by a broad best evidence principle).

substitutes to cross-examination. Hearsay evidence satisfying this requirement should, nevertheless, not be admissible if the declarant is available and thus can be called and cross-examined as a witness. This restriction should apply to both the prosecution and the defendant.²¹⁴ Defendants would thus also be required to contribute to PMII's implementation. Immunization from the risk of error, to be received by each of them under this principle, is not intended to be free of liabilities.

The defendant's contribution to PMII's effective implementation should be required throughout the process of proof.²¹⁵ In virtually every case, the defendant would be the best witness to testify about her guilt or innocence. The defendant's testimony should thus be regarded as preemptive in relation to her other evidence. To exclude this evidence when the defendant abstains from testifying would practically abolish the right of silence,²¹⁶ which would be highly controversial.²¹⁷ Yet, the defendant's refusal to take the stand should normally lead to adverse inferences. These would reduce the weight of transforming arguments that support the defendant's innocence, thus strengthening the prosecution's case.²¹⁸ Relatedly, when one of the prosecution witnesses does not testify as a result of violence, intimidation, or other improper means exerted by the defendant, any prior statement made by this witness should be admitted as evidence against the defendant. The defendant's objections to the admission of this statement, ordinarily sustainable under the hearsay rule and the Confrontation Clause, would thus be preempted. Besides, the defendant's resort to improper means would be used as evidence that may support her conviction.²¹⁹

214. For obvious reasons, the diligence standard, to be applied in assessing litigants' efforts to secure attendance of witnesses, should be far more demanding in the prosecution's case. See, e.g., *Barber v. Page*, 390 U.S. 719 (1968).

215. This requirement is conditioned upon the existence of legal mechanisms preventing frivolous prosecutions. Defendants should also be provided with effective legal assistance.

216. The defendant's privilege against self-incrimination would still apply at police interrogation and other pre-trial stages.

217. See *supra* note 45.

218. This would require abolition of *Griffin v. California* 380 U.S. 609 (1965). Further adjustments that would be required relate to the current impeachment practices. Currently, a defendant taking the stand may be impeached by evidence obtained from her in violation of the Fourth or Fifth Amendment. See *Walder v. United States*, 347 U.S. 62 (1954); *Harris v. New York*, 401 U.S. 222 (1971); *United States v. Havens*, 446 U.S. 620 (1980). The new incentive to testify may thus become detrimental to the exclusionary policy (as can be learnt from *James v. Illinois*, 493 U.S. 307 (1990), which set an important limitation to the *Walder-Harris* doctrine by refusing to extend its application to witnesses other than the defendant). The *Walder-Harris* doctrine would therefore have to be abolished. The possibilities of impeaching the defendant by her prior convictions should also be limited, as suggested earlier in the text.

219. Provided that the defendant's actions against the witness have been proven beyond reasonable doubt (as required, e.g., in England, in *R v. Tower Bridge Magistrates' Court, Ex parte Lawlor*, 92 Cr. App. Rep. 98 at 104 (1991).) In the US, admissibility conditions can be proven by a mere preponderance of the evidence: *Bourjaily v. United States* 483 U.S. 171 (1987); *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 113 S.Ct. 2786 at 2796 note 10 (1993). Generally adequate, this rule should thus become more differentiated.

My proposal largely corresponds to Richard Friedman, "Confrontation and the Definition of *Chutzpa*" forthcoming in (1997) 31 Israel L. Rev. (except for the standard of proof requirement, which, on Friedman's account, should be considerably less demanding).

(b3) The corroborative strategy of PMII

As indicated by general experience, particular kinds of evidence give rise to serious concerns about their creditworthiness. Confessions made by interrogated suspects, eyewitness identification, and testimony of accomplices are the most notorious examples.²²⁰ The defendant facing such evidence would therefore always be able to claim that his case should be covered by the suspicion-throwing generalization. Under PMII, any such claim would have to be upheld, unless there are individualized case-specific reasons which mark out the defendant's case as special, thus rendering the suspicion-throwing generalization inapplicable. Consequently, the defendant should never be allowed to be convicted, if a generally suspicious evidence supporting the accusations is not corroborated.

To justify the defendant's conviction, such evidence always needs to be corroborated by some independent evidence, which, in turn, should be subjected to—and survive—the maximal individualized testing. This general corroboration requirement can explain some of the existing legal arrangements.²²¹ Along with other requirements derived from PMII, and in conjunction with the criminal standard of proof, this requirement would protect the defendants from unjustified wrongful convictions.

(c) Risk-allocation in civil trials

Allocation of the risk of error is the only function that is, and can legitimately be, performed by the standards of proof and burdens of persuasion.²²² Once again, I shall begin with the utility-based determination of this function.²²³

Let D denote the value of the litigated good; and let p_1 and p_2 denote, respectively, the probabilities of the plaintiff's and the defendant's conflicting allegations. As always is the case:

$0 < p_1 < 1$; $0 < p_2 < 1$; when 1 stands for certainty and 0 for impossibility.

At least one of the parties is therefore bound to carry the risk of error, that is,

220. See McCormick, *supra* note 15, vol. I at 555-64 (corroboration generally required for confessions); Rosemary Pattenden, "Should Confessions be Corroborated?" (1991) 107 L. Quart. Rev. 317; Samuel Gross, "Loss of Innocence: Eyewitness Identification and Proof of Guilt" (1987) 16 J. of Legal Studies 395; J. Arthur Alacron, "Suspect Evidence: Admissibility of Co-Conspirator Statements and Uncorroborated Accomplice Testimony" (1992) 25 Loyola L.A. L. Rev. 953.

221. See *Davies v. DPP* [1954] 1 All E.R. 507 (England: mandatory corroboration warning of the jury in regard to accomplice testimony); *R v. Turnbull* [1976] 3 All E.R. 549 (England: discretionary corroboration warning of the jury in regard to identification evidence); Zuckerman, *supra* note 68 at 154-59 and 176-78. The mandatory corroboration warning requirement in relation to accomplice testimony has recently been repealed by s. 32(1) of the *Criminal Justice and Public Order Act*, 1994. English judges may, however, continue to administer similar warnings as a matter of discretion. See Diane Birch, "Corroboration: Goodbye to All That?" (1995) *Crim. L. Rev.* 524.

222. To use this burden for other purposes (such as extraction of evidence or confirmation of the regular course of events) would be both unfair and economically inefficient. See Alex Stein, "Allocating the Burden of Proof in Sales Litigation: The Law, Its Rationale, A New Theory, and Its Failure" (1996) 50 U. Miami L. Rev. 335.

223. My following discussion draws on Kaplan, *supra* note 177; Kaye, *supra* note 114; Neil Orloff & Jerry Stedinger, "A Framework for Evaluating the Preponderance-of-the-Evidence Standard" (1983) 131 U. Penn. L. Rev. 1159; Posner, *supra* note 178, §21.2.

the risk of sustaining damage up to D (trial expenses of the parties are ignored, for the sake of simplicity). Decisions that can be made by judges under these conditions can thus be presented as follows:

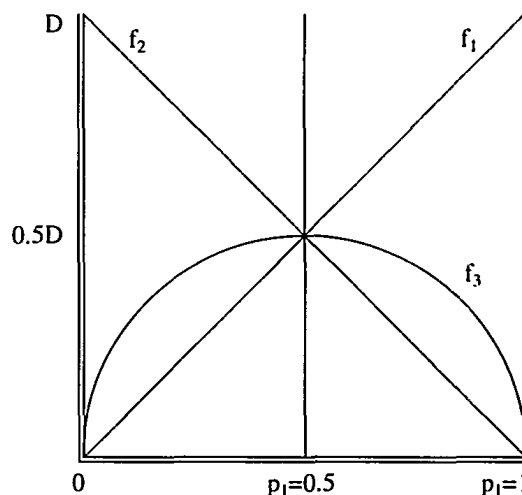
- d_1 = plaintiff loses (the risk of error imposed on the plaintiff)
- d_2 = defendant loses (the risk of error imposed on the defendant)
- d_3 = compromise reflecting the expected value of each allegation: the plaintiff recovers from the defendant p_1D ; p_2D goes to the defendant (by not allowing the plaintiff to recover this amount).

By allowing S_1 and S_2 , respectively, to denote the actual states of affairs favorable to either the plaintiff or the defendant, we can assess the average damage, and thus the long-run damage, to be incurred by each of the above decisions:

DECISION	DAMAGE IF S_1	DAMAGE IF S_2	TOTAL DAMAGE
d_1	p_1D	0	p_1D
d_2	0	p_2D	p_2D
d_3	p_1p_2D	p_2p_1D	$2p_1p_2D$

It can now be seen that in order to minimize the overall damage to be incurred, unavoidably, by the judicial system, a litigant should be allowed to recover the full amount of her claim when the probability of her allegations exceeds 0.5 and is thus greater than the probability of her opponent's case.

This can be depicted as follows:



f_1 = 'plaintiffs absorb the damage' function (straight-line damage progression, corresponding to d_1);

f_2 = 'defendants absorb the damage' function (straight-line damage regression, corresponding to d_2);

f_3 = 'the expected value' function, corresponding to d_3 .

The $P > 0.5$ decision rule can thus clearly be seen as optimal.²²⁴ When $p_1 = p_2 = 0.5$, the overall damage to be incurred by each of the available decision rules will be the same. Yet, in any such case the defendant should prevail. This decision rule would eliminate the enforcement costs that would be incurred if the plaintiff be awarded recovery. In addition, to allow the plaintiff to recover when $p_1 = 0.5$, would raise the number of unmeritorious claims, thus incurring greater litigation costs.²²⁵ When $p_1 = p_2 = 0.5$, decision d_1 would be optimal also because 'taking' is perceivable as being generally more harmful than 'not giving'.²²⁶ This perception can be justified by the diminishing utility of the wealth factor.²²⁷

Driven by the idea of minimizing the total amount of wrongful transfers, this utilitarian analysis is incomplete. Starting from the assumption that the utility of wealth steadily diminishes, we may arrive at an entirely different conclusion that would favor d_3 . This conclusion would be arrived at if, driven by the diminishing utility of wealth assumption, we decide to minimize the amount of *large* errors.

Thus, by letting the average large error to be denoted by D^2 ,²²⁸ we will arrive at the following:

DECISION	DAMAGE IF S_1	DAMAGE IF S_2	TOTAL DAMAGE
d_1	$p_1 D^2$	0	$p_1 D^2$
d_2	0	$p_2 D^2$	$p_2 D^2$
d_3	$p_1 (p_2 D)^2$	$p_2 (p_1 D)^2$	$p_1 p_2 D^2$ ²²⁹

Decision d_3 , which allows each party to recover the expected value of her claim, can therefore compete with the $P > 0.5$ rule.²³⁰

This conclusion, however, holds true only when our comparison between the available decision rules is confined to their corresponding *direct* losses. As this confinement is unjustified, our analysis needs to be continued by accounting for other important factors. In addition to minimizing the total amount of wrongful transfers, the $P > 0.5$ rule leads to preponderance of the cases that would be decided

224. The same result can be reached by using John Kaplan's formula (invoked in my discussion of the criminal standard of proof):

$$P > \frac{1}{1 + \frac{D_d}{D_p}}$$

and by subsequently postulating that plaintiffs' and defendants' losses should be treated as equally harmful: $D_p = D_d$.

225. As observed, e.g., by Ralph Winter, "The Jury and the Risk of Non-Persuasion" (1971) 5 Law & Soc. Rev. 335 at 337.

226. This has always been the position of the Jewish law. According to one of its famous precepts, 'one who attempts to *take* from his fellow should bear the burden of proof'. Babylonian Talmud, *Bava Kamma* (Brooklyn: Tanna v' Rav Publications, 1988) at 6a; 46a-b.

227. Posner, *supra* note 178 at 552.

228. This is a fairly standard assumption. See, e.g., Steven Shavell, "Suit, Settlement, and Trial: A Theoretical Analysis under Alternative Methods for the Allocation of Legal Costs" (1982) 11 J. of Legal Studies 55 at 61 note 25.

229. This total amount is arrived at simply by substituting p_2 with $(1 - p_1)$.

230. See Orloff and Stedinger, *supra* note 223.

correctly. Under the 'expected value' rule, the amount of correctly decided cases would always be zero. The 'expected value' rule thus reduces the behavioral incentives set by the substantive law and weakens the protection of substantive rights. Relatedly, under this rule, concepts such as 'contract', 'tort', and the like—which are commonly employed in disposing of legal disputes—would lose their dispositive trait.²³¹ Dichotomous legal frameworks, such as 'contract/no contract' and 'tort/no tort', would be broken up and thus effectively replaced by indeterminate continua.²³² Amongst other things, this would make civil litigation considerably more costly and more recurrent. Following the assumption underlying the cost-benefit analysis which supports the 'expected value' rule, this expense would also have to be squared. Therefore, the $P > 0.5$ rule should be preferred. Deviations from this rule may be allowed only in exceptional cases, ones that involve special risks of error which are considerably more harmful than their alternatives.

This approach seems to be reflected by the conventional doctrine which requires the plaintiff to prove her case on the balance of probabilities. In special cases, the standard of proof was raised up to "clear and convincing evidence,"²³³ but these cases are exceptional. The conventional doctrine is, however, only superficially utilitarian. Under the utilitarian $P > 0.5$ rule, the burden of persuasion will be borne by the plaintiffs almost constantly. Under the conventional doctrine, this burden is systematically shifted from one party to another. It is distributed evenly over issues rather than in a fashion that favors defendants over plaintiffs. It is borne by the plaintiff only in regard to her primary allegations against the defendant, such as breach of a contract or commission of a tort. Affirmative defenses, such as mistake, duress, frustration, non-mitigation of the damage, and many others, usually need to be proven by the defendant on the balance of probabilities.²³⁴ The plaintiff, in other words, has to prove that the defendant failed to comply with the relevant legal standards. The defendant expanding the trial beyond this issue by bringing forward an excuse, or by alleging that some other pertinent legal standards have

231. For examination of this trait see Dworkin, *supra* note 182 at 125-27.

232. Those who believe that law irremediably suffers from radical indeterminacy would not regard this outcome as a disutility. This article rests upon different jurisprudential assumptions about adjudication, close to those espoused by Ronald Dworkin. See Dworkin, *supra* note 140. My qualified endorsement of these assumptions can be found in Alex Stein, "Defending Liberal Law" (1993) 22 Anglo-Am. L. Rev. 194.

233. Such cases typically involve:

- (1) deprivation of basic individual rights;
- (2) allegations of fraud and other seriously stigmatizing allegations;
- (3) oral claims contradicting written agreements or wills, and some other disfavored allegations.

See, e.g., *Addington v. Texas*, 441 U.S. 418 (1979) (involuntary commitment to a mental institution); *Santosky v. Kramer*, 455 U.S. 745 (1982) (termination of parental rights); *Schneiderman v. United States*, 320 U.S. 118 (1943); *Woodby v. INS*, 385 U.S. 276 (1966) (denaturalization and deportation); *Gertz v. Robert Welch Inc.*, 418 U.S. 323 (1974) (defamation); and further cases listed in McCormick, *supra* note 15, vol. II at 443-44.

234. See McCormick, *supra* note 15, vol. II at 427-32. Another example can be found in the *Uniform Commercial Code*, §§ 1-201(8), 2-607(4). The persuasion burden in regard to 'conformity' of the tendered goods is placed by these provisions on the seller of rejected goods and on the buyer of accepted goods. This allocation of the risk of error can be justified by the principle of equality, as both plaintiffs and defendants will be exposed to this risk in a roughly equal fashion. For another rationale see Jody S. Kraus, "Decoupling Sales Law from the Acceptance-Rejection Fulcrum" (1994) 104 Yale L.J. 129 at 135-52 (the persuasion burden shouldered by a party with the best access to evidence). I find this explanation implausible. See Stein, *supra* note 222.

not been complied with by the plaintiff, would carry the burden of persuasion.²³⁵

According to Dale Nance, this burden-allocating framework should be explained by the 'principle of civility' that presumes general compliance with the standards laid down by the law. One who attributes non-compliance to her fellow has to prove therefore this allegation by a preponderance of the evidence.²³⁶ This principled explanation of the burden-allocating framework is most appealing. As rightly mentioned by Professor Nance, alternative explanations of this framework—which allude to the structure of pleadings, to unspecified policy considerations, or to the fact that affirmative defenses are largely disfavored²³⁷—should all be rejected as question-begging.²³⁸ Nance's analysis does not, however, explicitly accommodate 'excuses', which function as defenses in both civil and criminal law. When, for example, mistake is put forward as a ground for escaping from contractual liability, a person relying upon this defence does not invoke any civility-related imputation against her opponent. At the same time, this person cannot seriously claim that to enter into a contract upon unilateral mistake and subsequently to disavow any contractual responsibility, is a conduct that squarely aligns with civility. This conduct falls below the general standard, and yet, as a matter of legal concession to human frailty, a person responsible for it can nevertheless be excused. Any such excuse therefore needs to be proved by its proponent.²³⁹ The civility principle can and should accommodate this requirement by removing its presumption from litigants relying upon excuses.

Application of this principle would, however, still be problematic. As widely acknowledged, strength of presumptions admits of different degrees.²⁴⁰ The civility principle certainly gives rise to its presumption, but this is not yet a justification of this presumption's strength. There appear to be no compelling reason for applying this presumption when the probability of transgression is as high as 0.5 (i.e., in the only case where the burden of persuasion comes into play). Founded upon good reasons for shifting the burden of producing evidence, the civility principle can hardly justify its allocation of the risk of non-persuasion in cases where evidence is balanced. Relatedly, when we know that the litigated damage had occurred, and that either the plaintiff or the defendant is responsible for its occurrence, application of this principle might become arbitrary. By deciding that the defendant is not responsible, we uphold the civility presumption in relation to her, but hardly in relation to the plaintiff. These difficulties are, admittedly, not fatal to the civility principle. They can be overcome by invoking the familiar line-drawing explanation. Based upon the premise that in practical matters lines must be drawn at some arbitrarily chosen points, this explanation would exempt the civility principle from justifying its outer lines. However, even if this explanation be accepted, lines drawn

235. See Stein, *supra* note 81, 28 Coexistence 133 (explaining the reasons behind this allocation of the burden; the same logic applies, *mutatis mutandis*, in civil trials).

236. Dale A. Nance, "Civility and the Burden of Proof" (1994) 17 Harv. J. of L. & Publ. Pol. 647.

237. McCormick, *supra* note 15, vol. II at 432.

238. Nance, *supra* note 236 at 661-72.

239. Stein, *supra* note 81, 28 Coexistence 133.

240. For an illuminating discussion of this factor see Edna Ullmann-Margalit, "On Presumption" (1983) 80 J. of Phil. 143.

by the principle in order to fit the existing burden-allocating framework would make this principle less attractive. These lines would cross a number of most pivotal points of disagreement.

I therefore propose another, not unfamiliar,²⁴¹ explanation for the existing burden-allocating framework. This framework allocates risk of error in a way that maintains equality between the plaintiff and the defendant. This equality is maintained by exposing each litigant to the risk of error in respect of *her own allegations*, i.e., in respect of the grounds essential for making out her case under the pertinent substantive law. The civility principle (which should also accommodate 'excuses') marks out different allegations as belonging to either the plaintiffs or the defendants. As for the ultimate allocation of the risk of error, this would be justified more convincingly by the equality principle.²⁴²

What should be the implications of extending this principle to determination of evidential sufficiency for making probability judgements? One important implication is this: probability judgements to be arrived at in civil trials should be conditionalized upon the existing evidence. Missing information would thus not work against or in favor of one of the parties, unless there are good reasons for preferring one of them over her opponent. These reasons should accordingly be formed into the preemptive and corroborative strategies that will derive from the principle of equality in risk-allocation. Another implication of this principle lies in its rejection of exclusionary strategies. When evidence available to both parties is produced at trial in its entirety, to immunize one of the parties from the risk of error by excluding a potentially probative material would shift the risk to the other party. Such shifting of the risk would violate the equality principle. Exclusion of evidence such as hearsay cannot therefore be grounded upon the risk of error associated with its admission when all instances of wrongful pecuniary losses are regarded as equally bad. Any potentially probative evidence, including hearsay, should, in principle, be admitted and later evaluated by accounting for all its merits and deficiencies. Yet, evidence may still be excluded in jury trials, if its probativity is patently low and its prejudicial potential is no less patently high.²⁴³

241. See, e.g., James Brook, "Inevitable Errors: The Preponderance of the Evidence Standard in Civil Litigation" (1982) 18 Tulsa L.J. 79 at 85; Ronald J. Allen, "Burdens of Proof, Uncertainty and Ambiguity in Modern Legal Discourse" (1994) 17 Harv. J. of L. & Publ. Pol. 627 at 634.

This justification should clearly be distinguished from the idea of equalizing the overall error rate between plaintiffs and defendants as groups. See Michael Finkelstein, *Quantitative Methods in Law* (New York: Free Press, 1978) at 68. Finkelstein's idea is untenable because members of his 'groups' are not mutually associated and do not share their gains and losses. See David H. Kaye, "Naked Statistical Evidence" (1980) 89 Yale L. J. 601 at 607-08.

242. Arguably, equality in risk-allocation would be greater under the 'expected value rule' (which, as explained above, also minimizes large losses). This argument, even if correct, cannot detract from the explanatory power of the equality principle, as presented in the text. The 'all-or-nothing' resolution of legal controversies is prescribed by the substantive law. Evidence law is, after all, inherently adjective. This critical argument may, however, support the description of the existing burden-of-persuasion practices as oscillating between utility and equality. This admittedly possible description may have only few significant implications on my following discussion. I therefore decided not to probe its validity.

243. See, e.g., FRE 403 (exclusion of preponderantly prejudicial evidence in general); FRE 409 (payment of medical and associated expenses occasioned by an injury is not admissible to prove liability for the injury); FRE 411 (evidence that a person was or was not insured against liability is not admissible upon the issue whether the person acted negligently or otherwise wrongly).

(c1) The preemptive strategy of the equality principle

Equality in allocating the risk of error can effectively be maintained by applying the 'best evidence' and the 'evidential damage' principles. These principles and their preemptive strategy, oriented towards attaining equality in risk-allocation, will now be outlined.

(i) The best evidence principle²⁴⁴

Equality in risk-allocation would be seriously undermined if evidence upon which probability judgements are to be conditionalized be determined by the litigants' unfettered actions. As mentioned above, secondary evidence should therefore be excluded whenever 'better' evidence—that which enables judges to arrive at its *probandum* in a fewer inferential steps—is available to the proponent of the secondary evidence. Relatedly, if a party chooses not to adduce a potentially important item of evidence over which she exercises an exclusive control, adverse inferences should be drawn against her case.²⁴⁵ Similar inferences should be drawn when a party abstains from cross-examining an adverse witness in order to later contradict his testimony by her own evidence, which the witness would no longer be able to explain. In extreme cases, contradicting evidence presented in such circumstances may even be excluded.²⁴⁶

In contractual relationships, the evidential base upon which future conflicts between the parties would have to be judicially resolved, may be partially determined in advance. Thus, parties to a written agreement may stipulate that its terms will be treated as conclusive. Because such stipulations are commonplace, the parol evidence rule codifies them, thus acting as a default arrangement which minimizes the transaction costs.²⁴⁷ This rule can also be explained as a risk-equalizing device. Under this rule, oral testimony that contradicts a written agreement is not admissible *inter partem*.²⁴⁸ When the risk of error associated with any such testimony is appraised *ex ante*, i.e., at the time of concluding a written agreement, its materialization—equally likely to take any direction—can clearly be perceived as equally detrimental to both parties to the agreement. Elimination of this risk would thus equally protect both parties. The need to maintain equal immunization from this risk consequently elevates documented agreement to the status of 'best evidence'. This hedges judicial inquiries by suppressing, and thus preempting, the possibilities of considering oral evidence which runs against the agreement.

Expert evidence offered in a civil trial should not be subject to the same admissibility standard that should constrain the prosecution in its effort to establish the defendant's guilt. As stated above, lack of exclusionary strategies is one of the salient implications of the equality principle. Expert evidence relevant to the trial should accordingly be admitted even when it is both novel and controversial. At

244. See Nance, *supra* note 47 (advocating this principle on the grounds of epistemic rationality).

245. Nance, *supra* note 47 at 244ff; Dale A. Nance, "Missing Evidence" (1991) 13 Cardozo L. Rev. 831 at 866.

246. See, e.g., FRE 613(b).

247. Cf. Ayres & Gertner, *supra* note 59 (discussing this and proposing a competing rationale for default rules in the contract law area).

248. See Farnsworth, *supra* note 9.

the same time, when parties' experts disagree in their evaluations, the equality principle would accord preference to the testimony of a court-appointed expert.²⁴⁹ By preempting the potentially partial accounts of adversarial experts, any such testimony will function as 'best evidence' *ex lege*.²⁵⁰

(ii) *The evidential damage principle*²⁵¹

Conditionalization of a probability judgement upon the available evidence might not satisfy the equality principle when one of the litigants is responsible for the lack of further information about the case. When evidence capable of supplying such information is intentionally destroyed or concealed, its destruction or concealment should lead to adverse inferences against the spoliator.²⁵² Implications of a merely negligent, i.e., inadvertent, spoliation of evidence are less straightforward. Drawing of adverse inferences in such cases will be lacking epistemic warrant. When the existing evidence favors one of the litigants, to decide against her because lack of further information is attributable to her inadvertent neglect—as opposed to ill-motivated tampering with the evidence—would therefore hardly be justifiable.²⁵³ However, when existing evidence equally favors both parties, the missing information can clearly be seen as potentially decisive. To rule in favor of the party whose negligence prevented the judges from considering this information, would therefore be manifestly unjust. The tie-breaking rule embedded in the burden-of-persuasion doctrine should apply only when everything else is equal, a premise that no longer holds true when one of the parties is peculiarly responsible for the missing information. This factor should tilt the scales to the benefit of the faultless party. The scales should be tilted in this direction because to assign risk of error to its producer, rather than to her opponent, would be grounded upon better reasons. Equality in risk-allocation can properly be maintained only in this way.²⁵⁴

This 'evidential damage principle' can explain a number of judicial decisions, starting from the well-known case *Summers v. Tice*.²⁵⁵ In this case, the plaintiff, negligently shot at by each of his two fellow-hunters, had sustained two distinct injuries: an eye injury, which gravely incapacitated him, and an upper lip injury, which was not very severe. As the defendants used identical ammunition, it was impossible to identify the shot which struck the plaintiff's eye as a shot fired by

249. Cf. Edward J. Imwinkelried, "The Worst Evidence Principle: The Best Hypothesis as to the Logical Structure of Evidence Law" (1992) 46 U. Miami. L. Rev. 1069 (evidence rules as seeking primarily to eliminate perjury).

250. For support of this idea see McCormick, *supra* note 15, vol. 1 at 70-72. See also Margaret G. Farrell, "Coping with Scientific Evidence: The Use of Special Masters" (1994) 43 Emory L. J. 927.

251. This brief discussion is associated with my larger project, "Liability for Uncertainty: Building Up an Evidential Damage Doctrine", undertaken jointly with Dr. Ariel Porat (of Tel-Aviv University Faculty of Law).

252. See Nance, *supra* note 245; L. Solum & S. Marzen, "Truth and Uncertainty: Legal Control of the Destruction of Evidence" (1987) 36 Emory L.J. 1085.

253. See Jamie S. Gorelick, Stephen Marzen & Lawrence Solum, *Destruction of Evidence* (New York: Wiley Law Publications, 1989) at 40. An independent tort action should, however, be available to the afflicted party, as contended in "Liability for Uncertainty", *supra* note 251.

254. Gorelick, Marzen & Solum, *ibid.* at 41-42, provide a qualified support to this claim.

255. *Summers v. Tice*, 199 P.2d 1 (1948).

one defendant rather than by the other. Because the defendants fired at the plaintiff independently of each other, they also could not be held responsible for his eye injury under the 'joint tortfeasor' doctrine. Nevertheless, it was held that the defendants are responsible for this injury, both jointly and severally:

When we consider the relative positions of the parties and the results that would flow if plaintiff was required to pin the injury on one of the defendants only, a requirement that the burden of proof on that subject be shifted to the defendants becomes manifest. They are both wrongdoers—both negligent towards plaintiff. They brought about a situation where the negligence of one of them injured the plaintiff, hence it should rest with them each to absolve himself if he can. *The injured party has been placed by defendants in the unfair position of pointing to which defendant caused the harm.*²⁵⁶

This principle has later paved its way into the Restatement²⁵⁷ and was followed in a number of cases. In another important case, *Haft v. Lone Palm Hotel*,²⁵⁸ the notion of 'evidential damage' has become recognized explicitly. This case involved an action to recover from motel operators for wrongful deaths of father and his five-year-old son, who drowned while swimming in the motel's pool. It was beyond dispute that the defendants negligently failed to secure a lifeguard's presence in the pool area and had affixed no appropriate warning to this effect. The plaintiffs, however, faced severe difficulties in proving that one of these neglects was a 'proximate cause' of the litigated fatality. The court held that the plaintiffs are entitled to recovery, ruling, *inter alia*, that the persuasion burden on the issue of causation should be shifted to the defendants. This ruling was justified as follows:

The absence of ... a lifeguard in the instant case thus not only stripped decedents of a significant degree of protection to which they were entitled, but also deprived the present plaintiffs of a means of definitely establishing the facts leading to the drownings.²⁵⁹

(c2) *The corroborative strategy of the equality principle*

Attainment of equality in risk-allocation may also require a corroborative strategy. This strategy may be required in lawsuits attributing liability to deceased persons in order to recover from their estates. As in any such lawsuit, "the survivor could testify though the adverse party's lips would be sealed in death",²⁶⁰ evidence

256. *Ibid.* at 4 (emphasis is mine, A.S.). For an illuminating discussion of this case and related issues (which does not, however, explore the idea of 'evidential damage') see Judith J. Thomson, *Rights, Restitution, and Risk: Essays in Moral Theory*, William Parent, ed. (Cambridge, MA: Harvard University Press, 1986) chs.12 & 13.

257. See *Restatement of the Law (Second), Torts* 2d (St. Paul, MN: American Law Institute Publishers, 1965) §433B.

258. *Haft v. Lone Palm Hotel*, 478 P.2d 465 (1970).

259. *Ibid.* 474-75. See also *Hall v. E.I. Du Pont de Nemours & Co., Inc.*, 345 F.Supp. 353 at 378-79 (1972); *Azure v. City of Billings*, 596 P.2d 460 at 470-71 (1979); *Allen v. United States*, 588 F.Supp. 247 at 412-13 (1984); *In re 'Agent Orange' Product Liability Litigation*, 597 F.Supp. 740 at 828 (1984); *Clemente v. State of California*, 707 P.2d 818 at 828 (1985); *Dickerson, Inc. v. Holloway*, 685 F.Supp. 1555 at 1569 (1987); *Price Waterhouse v. Hopkins*, 490 U.S. 228 at 263-73 (1989) (O'Connor, J., concurring in judgment) (the same principle relied upon in different contexts).

260. McCormick, *supra* note 15, vol. I at 250.

upon which the ultimate probability judgement will be conditionalized would be determined by forensically unequal powers. Imposition of an appropriate corroboration requirement, which would prevent the plaintiff from recovering if her testimony is not supported by extrinsic evidence, would remove this inequality. This idea is reflected by a number of statutory provisions.²⁶¹

VII. AFTERWORD

This article has demonstrated a number of things. First, judicial fact-finding, pervaded by allocation of the risk of error, involves more than just an empirical reconstruction of past events. Its symbiosis of epistemic and moral decisional components is inseparable. Judicial inferences should therefore be both epistemically rational and—as far as their accompanying risk-allocating preferences are concerned—morally and politically justified.

Consequently, the idea of free proof—which characterizes both the core evidence doctrine, as traditionally perceived, and the presently dominant reformist trend in evidence law—breaks down completely. As claimed by the proponents of this idea, epistemic and logical aspects of judicial fact-finding should not be controlled by the law. This claim cannot, however, be maintained in relation to risk-allocation. And if judges are not to be authorized to allocate risk of error as they choose, their inquiries into contested factual issues should be thoroughly regulated by the law. Such regulation is certainly a viable possibility. As demonstrated by this article, it can be designed in both principled and coherent fashion. Moreover, the regulatory scheme developed in this article can explain and justify a substantial part of the existing rules of evidence.

261. These are listed and discussed in 21 A.L.R. 2d 1013-43.