Relevance in the Law: A Logical Perspective

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Relevance in the Law

> In contrast to all modern codes of evidence, English law has no authoritative or common law definition of the core concept of relevance.
>
> I.H. Dennis, *The Law of Evidence*

> … the law furnishes no test of relevancy.
>
> J.B. Thayer, *A Preliminary Treatise on Evidence at the Common Law*

Abstract

Among the core ideas shared by lawyers and logicians, the concept of relevance ranks high. Yet if one looks to the standard writings on relevance, both in the legal and logical literatures, there is only one point at which the two traditions converge. This is the juncture at which relevance is characterized as that which influences probabilities. The probabilistic definition of relevance captures not only what some logicians take relevance to be, but what lawyers call "logical" relevance. Legal practice also acknowledges a further and distinct concept of relevance, which is sometimes called "practical". Information may be said to be practically relevant when it has bearing on the case and is not too complicated for a jury to understand, or does not take too long to present, or would not inflame the jury's passions unduly, and so on. It is usually taken as given that in legal practice these two concepts of relevance are strictly disjoint. One of my purposes here is to show that there is a significant element that they have in common, one that admits of analysis in a theory of *agenda relevance*. A second purpose is to discourage the presumption that the law's probabilistic concept of relevance embeds the notion of probability described by the probability calculus. A further, and related, intuition is one that casts doubt upon the assumption that "probabilistic" relevance actually embeds a concept of probability of some kind or other. Although the law embraces the idiom of probability, the concept it denotes is not one of probability but rather of plausibility, or so I will suggest. But my more general objective is to show that the law's multi-faceted understanding of relevance admits of higher levels of elucidation than is usually found in legal textbooks and case-studies.
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1. *Two solitudes*

Like proof, probability, inference (and a good many others), relevance is a concept of central importance to both logic and the law. Even so, these two disciplines have not had much to do with one another in well over a century. Although it is an alienation more inadvertent than principled, there do exist some methodological differences which might shed light on it. One is that the law embodies an epistemology of tacitness. While it is true that in their pleadings and findings lawyers and judges are fully at home with sharply

detailed, carefully formulated and tightly reasoned judgements, it is also true that the common law's foundational concepts are put into play on the assumption than an ordinary person is capable of applying them correctly, largely on the basis of an implicit, common sense understanding of them. We might call this the *Tacit Access Thesis*.

> **Proposition 1 (The Tacit Access Thesis)** *The ordinarily competent human reasoner possesses an implicit, common-sense knowledge of how to apply concepts such as proof, probability, inference and relevance.*

The *Tacit Access Thesis* is itself usually tacitly present in a judge's charge to a jury. Notwithstanding that such instructions can also be lengthy, detailed and highly complex, it is comparatively rare that they contain any instruction about these foundational concepts. When a word or two of explanation *is* offered about, say, criminal proof or probability, one finds in them no semblance of a theoretically robust analysis. If jurors already know what "proof" and "probable" mean, albeit tacitly, then telling them what it means can only be redundant. But there is also a body of opinion among judges, lawyers and legal theorists to the effect that telling a jury what these concepts mean is often worse than redundant. It is also misleading. A case in point is an American opinion cited in *MacCormick on Evidence* ([Strong, 1999, p. 517]):

> Reasonable doubt is a term in common use as familiar to jurors as to lawyers. As one judge has said, it needs a skilful definer to make it plainer by multiplication of words ….

Here we see the influence of a further assumption, which we may call the *Analytical Distortion Thesis.*

> **Proposition 2 (The Analytical Distortion Thesis)** *For intuitively familiar concepts, analysis is distortion.*

It would be wrong to leave the impression that the *Analytical Distortion Thesis* is accepted by all practitioners, especially in this rather stark formulation. But there is no doubt that there are cases galore in which attempts at juridical definition or clarificatory analysis produce near-incoherence. An instance of this is a mock charge to the jury crafted by the Supreme Court of Canada in *R. v. Lifchus*.[1] On the one hand, it provides that jurors need not have absolute certainty of the accused's guilt, but, on the other, that probable guilt is not enough. Even believing that the accused is guilty is not enough. Accordingly, the reasonable doubt standard hovers among these extremes.[2] Had the justices in *R. v. Lifchus* attended to the idea that the criminal proof standard is "as familiar" to ordinary persons as to persons trained in the law, they would have simply advised their mock-jurors "to use their common sense". Instead, they produced a charge that requires untutored jurors to manage a threefold distinction between certainty, probability and belief, in such a way that some fourth alternative becomes discernible.

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[1] (1997), 9 C. R. (5th) 1 (S. C. C.)

[2] *R. v. Starr*, [2000] 2 (S. C. C.) 144 at para. 242: "… it will be of great assistance for a jury if the trial judge situates the reasonable doubt standard approximately between [the] two standards."

Jurors are, in effect, invited to complete the following open sentence: "Although on the evidence presented it is probable that the accused is guilty, and I believe that he is guilty, I must not convict unless I am absolutely certain that he is guilty or, not being so, unless …". Small wonder that some judges scorn the mere "multiplication words."

If the law embodies a culture of implicity, logic's orientation displays an enthusiasm for the explicit. Logicians put a premium on precision and exactitude, and they reserve a special place for definitions, both biconditional and implicit. [3] It has a considerable bearing on the two-solitudes phenomenon that, for over a century, mainstream logic has been part of mathematics. As the name suggests, mathematical logic serves the interests of mathematics, [4] and its methods are themselves imbued with richly mathematical content. [5] Certainly it would take only the most monomaniacal of mathematical logicians to propose that the logic of legal reasoning is a Boolean lattice or that the secrets of legal relevance are best revealed in a possible worlds semantics for relevant logic. [6] But logic has come a long way in the past forty years, spurred by developments in computer science, AI, logic programming, dynamic and deontic logics and logics of practical reasoning, in which there have been repeated attempts to reconnect with human agents who reason in real-life situations. Any number of successes (or partial successes) have already been claimed by theorists working in what collectively has been called the New Logic ([Gabbay and Woods, 2001c]). It is here that the two-solitudes phenomenon makes least sense, and it is here that prospects of rapprochement are at their best. In companion works, I have recently explored the logical structure of probability in legal reasoning ([Woods, 2007a], [Gabbay and Woods, 2007]), as well as the abductive character of the criminal proof standard ([Gabbay and Woods, 2005, chapter 8], [Woods, 2007b]). In each case, an attempt is made to bring to bear upon these legal issues resources from the New Logic. In the present essay I shall try my hand at relevance.

2. *Relevance*

On a standard legal definition, information is relevant to a proposition when it affects, positively or negatively, the probability that the proposition is true ([Cross and Wilkins, 1964, p. 148]). [7] A typical expression of this view may be found in [Paciocco and Stuesser, 2002, p. 24].

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[3] To forestall confusion, what logicians recognize as "implicit" definitions, legal scholars would recognize as explicit definitions. A case in point is the implicit definition of the definite article afforded by Russell's theory of descriptions ([Russell, 1905]). The theory defines 'the' by mapping sentences containing 'the' to equivalent sentences not containing 'the'. Definitions implicit in this sense, Russell also calls "contextual".

[4] Whether it be Frege's logicism (Frege, 1879]), which was an attempt to reduce mathematics to pure logic, or Brouwer's intuitionism ([Brouwer, 1975]), which was an attempt to refine logic's capacity to elucidate the character of constructivist reasoning in mathematics.

[5] For example, the use of mathematical induction in the proofs of many of the most important metatheorems.

[6] For example, in a variation of the system known as *First-Degree Entailment* ([Routley and Routley, 1973, 1985], [Priest, 1987]).

[7] Prefiguring the probalistic concept is the view that relevance is a causal relation ([Stephen, 1876]). While rejected by legal theorists ([Ilbert, 1960, p. 13]), a causal conception of relevance flourishes in the present-day logical theory of *agenda relevance* ([Gabbay and Woods, 2003]).

Evidence is relevant where it has some tendency as a matter of logic and human experience to make the proposition for which it is advanced more likely than it would appear to be in the absence of the evidence. To identify logically irrelevant evidence, ask "Does the evidence assist in proving the fact that my opponent is trying to prove?"[8]

The same idea is enshrined in the *Federal Rules of Evidence*.

[Evidence is relevant when it has] any tendency to make the existence of any fact that is a consequence of the determinations of the action more probable or less probable than it would be without the evidence (*FRE* Rule 401).

In some contexts, the law characterize evidence as relevant when it "renders some fact probable". However, in this usage, evidence that renders probable a fact alleged in a charge against an accused is evidence that constitutes a *prima facie* case for it, clearly a very strong notion of "probable." Whatever its meaning in the definition of probabilistic relevance, it is clear that it cannot be probability in the present sense. The probability embedded in this definition of relevance stops well short of that which establishes a *prima facie* case for the prosecution or, for that matter, a no-case-to-answer determination for the defence.

Aside from its probabilistic definition, considerations of relevance also crop up in evidence-exclusion decisions that are not determined by whether the evidence in question would, if admitted, alter the likelihood of some material claim. Here the exclusions are based on the finding that, if admitted, the evidence would compromise the accused's right to a fair trial. Very often these decisions involve evidence of the accused's character ([Cross and Wilkins, 1964, pp. 148-149, 153-156], [Murphy, 2000, pp. 8-9, 132-149, 162-167, 178-179, 216-219, 360-365]). A common reason for exclusion on grounds of irrelevance is the judge's belief not that the evidence is probabilistically irrelevant but rather, even if probabilistically relevant, that a jury would be enflamed by hearing it. Clearly a different sense of "relevant" is at work here. In this further sense, courts take the view that evidence is relevant when it is "worth hearing", when, that is to say,

it will not take an undue amount of time to call, will not confuse the issues in the case, and will not cause prejudice or unfair surprise to a party (Paciocco and Stuesser, 2002, p. 30).[9]

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[8] On this reading, probabilistic relevance has an unmistakable Wigmorean flavour. According to Wigmore, an "identiary fact" is relevant if it can be used to prove or counter a *factum probandum* ([Wigmore, 1983, 1104-1195]). See also [Stephen, 1948].

[9] See here [James, 1941]: "Why exclude any data which if admitted would change the apparent probabilities and hence serve, even to a slight degree, to aid the search for truth? Justice Holmes suggested one answer, it is 'a concession to the shortness of life' – and perhaps to the shortness of purse of harassed litigants. If any and all evidence may be admissible which … would operate to any extent to alter the apparent probability of some material proposition, the field of judicial inquiry in most cases would be unlimited. Trials would come to an end only by the exhaustion of lawyers' ingenuity or client's money, and the trial judge or jury might be overwhelmed and bewildered by the multiplicity of collateral issues". See also *FRE* Rule 403: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues or misleading the jury, or by considerations of undue delay, waste of time; or needless presentation of cumulative evidence."

This gives us two notions of relevance. One is probabilistic (or what legal theorists call logical) relevance. The other is legal (i.e. worth-hearing or practical) relevance. It is a useful distinction. It helps explain why judges will often admit evidence whose probabilistic or logical relevance is a matter of serious doubt. As LaForest J. said in *R. v. Corbett,*

> . . . at the stage of the threshold inquiry into relevancy, basic principles of the law of evidence embody an inclusionary policy . . . . In the absence of cogent evidence establishing that evidence . . . is irrelevant . . . the fact that reasonable people may disagree about its relevance merely attests to the fact that unanimity in matters of common sense and experience is unattainable. (*R. v. Corbett* (1988), 64 C. R. (3d) 1 (S. C. C.))

Writing to the same effect are the authors of the *Australian Law Reform Report* ([ALRC, 1985]).

> It may be concluded that two people, or groups, may have different, but equally rational, views of the relevance of a piece of evidence, depending on their prior experience and conceptions. In a jury case, the experience of jurors may be quite different from that of the trial judge, and consequently their assessment of 'relevance' and probative force may vary from his. Therefore, so long as a juror's assessment of the probabilities in the case might be rationally affected by the proferred evidence, then it is relevant. The trial judge may be doubtful about the probative force of the evidence and yet should admit it because the jury may rationally assess probative force differently from the way he does. That does not mean the jury is acting irrationally or emotionally, but only that they are utilizing their own experience to supply and evaluate appropriate hypotheses of proof. (*Volume* 1, *Evidence* (1985), section 11)

By these lights,

> ***Proposition 3 (The admissibility of irrelevancy)*** *Judges should admit evidence unless its logical irrelevance is simply not open to reasonable doubt. Given this standard, finders of fact may be permitted to hear evidence which some reasonable persons would think irrelevant.*

Where the common perception of judges as a vigorously exclusionary gate-keepers is more accurate is in the matter of the exclusion of *legally* irrelevant testimony. It reflects the common sense view that probative evidence is not worth hearing if jurors can't understand it or it takes too long for them to process it or if it stimulates emotional over-reaction. Legal relevance also captures the deeply important point that, whereas it is part of a juror's job to try his best to arrive at the truth of the matter before him, another part of his job is to discharge this first task in conformity with a fundamental requirement of criminal justice, which is to minimize aggressively the likelihood of wrongful conviction.

Quite often bias lies at the heart of these exclusions. It is entirely possible that evidence exists which, if led, would wholly comply with the law's definition of logical

relevance. If a judge excludes it on the grounds of irrelevance, he excludes it for its bias. Again, he excludes it not because it doesn't increase the probability of the accused's guilt, but rather because it does increase the probability of his guilt and does so in ways that may induce the jury to give it excessive weight. The evidence is excluded because the judge thinks that the jury will make too much of it, with consequent risk to the requirements of a fair trial. We note in passing that the concept of weight is also conceived of probabilistically by lawyers.

> 'Weight' of evidence is the degree of probability (both intrinsically and inferentially) which is attached to it by the tribunal of fact once it is established to be relevant and admissible in law (though its relevance may exceptionally … be dependent on its evaluation by the tribunal of fact). ([Choo, 1998, p. 4])

The theory mentioned in note 7 provides a comprehensive account of what its authors call "agenda relevance". In contrast with the probabilistic account, agenda relevance incorporates as its leading principle the idea that information is relevant when it is *helpful*, and that the helpfulness of information is a matter of what it is *wanted for* and what it is *good for*. Since evidence led at a criminal trial is wanted for different, albeit nested, ends – the attainment of truth and the attainment of justice – it is perfectly possible that a given piece of evidence might attract differential relevance-assessments, that it could be helpful in regard to what is true and not helpful in regard to what is just. It would appear, then, that the law's twin conceptions of relevance have a welcome home in the theory of agenda relevance ([Gabbay and Woods, 2003]). I shall return to this suggestion below.

3. *Materiality*

The law draws a distinction between relevance and materiality. Information is immaterial when it bears on an issue that need not be decided in the proceedings at hand. In contradistinction,

> [evidence] is material if it is directed at a matter in issue in the case. (*R. v.* B. (L) (1997), 9 C. R. (5th) 38 at 48 (Ont. C. A.)).

There is a connection between materiality and relevance. In law, relevance is reserved for evidence from which finders of fact are invited to draw inferences regarding some material fact. In logic, the tendency would be to associate materiality with *topical* relevance. ([Anderson and Belnap, 1975], [Walton, 1982], [Demolombe and Jones, 1999].)[10] Something is topically relevant to something else when they share a subject matter. However, the logician's notion of topical relevance is broader than the law's conception of materiality. Something is material to a case when it is an *element* of the case. The prosecution's burden of proof is to prove every element of the case at hand. So

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[10] In the legal literature, the having-a-bearing-on notion of relevance is developed in, e.g., [Wills, 1938].

as a general rule we may say that something is material to a case when the Crown's failure to prove it would cause the prosecution to fail.[11] [12]

Finally, there is another possible connection with relevance in law. It depends on how "has a bearing" is interpreted. In one meaning, evidence is material when it bears *relevantly* on some matter. In another, evidence is material when it is *directed at* (i.e., forwarded *as* bearing relevantly on) some matter. Given that materiality is a condition of a successful prosecution, it is clear that the former meaning should prevail.

4. *Targets for a logic of relevance in the law*

We are attempting to ascertain whether the concepts of probabilistic and worth-hearing relevance, as they have evolved in legal usage, admit of theoretical elucidations using the resources of logic. In some ways, our course has already been charted – albeit contentiously – in volume one of John Henry Wigmore's massive work on evidence, *A Treatise on the Anglo-American System of Evidence in Trials at Common Law* ([Wigmore, 1940]).[13] Volume 1a of that work contains a chapter entitled "General Theory of Relevancy", in which at pages 1109-1195 Wigmore reviews a number of attempts "to use logical tools to model the legal notion of relevance" (in the words of [Walton, 2002, p. 19-20]).

What, then, should the targets be for our own logical elucidation of relevance in the law? Clearly, logical relevance (in the lawyer's sense) pivots on the concept of probability. But closely allied is the concept of *probativity*. Evidence is relevant not when it makes some material fact more probable, but when it does so in such a way as to bring the material fact either closer to or further removed from meeting the requisite *proof-standard*. It is clear that materiality plays some role here. And it is hardly a stretch also to say that the probabilities that relevance provide must be such as to increase or decrease the likelihood of proving the case. So, in the matter of logical relevance, our targets are

- *probability*
- *materiality*
- *probity*.

Legal relevance (again, in the lawyer's sense) is a more sprawling notion. But here, too, the central preoccupation is the proof standard. In criminal trials, the proof standard is motivated by a strong principle of justice according to which

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[11] It is interesting that notwithstanding his earlier work on topical relevance, Walton's discussion of relevance in the law in [Walton, 2002] overlooks the factor of materiality. (It is merely mentioned in passing on p. 20 as one of Wigmore's conditions on relevance.)

[12] The tightness of the tie of relevance to materiality is resisted by some writers. According to [Eggleston, 1970, p. 59], "[t]o attempt to confine the evidence to transactions or facts in issue and the surrounding details of those transactions and facts is to exclude some evidence of strong probative value. Unless the definition of 'surrounding details' is widened in such a way as to include any facts having logical probative value, then the expression becomes meaningless."

[13] A new edition, under the title *Evidence in Trials at Common Law,* is edited by Peter Tillers, whose substantial footnotes are a valuable commentary on the work ([Wigmore, 1983]). Critics of Wigmore include [Twining, 1985]. See also Tillers' commentary in [Wigmore, 1983].

***Proposition 4 (When justice trumps truth*)** *Epistemically wrongful acquittals are (to some extent) a just price to pay for minimization of epistemically wrongful convictions.[14]*

In civil trials, the leading public policy consideration is not the minimization of epistemically wrongful decisions for the plaintiff, but rather the principle that justice requires timely and definitive settlement even under conditions of non-trivial uncertainty. In both kinds of action, judges will exclude evidence simply on the grounds that admitting it may compromise the public policy considerations that constrain the embedded notions of proof, never mind its epistemic import. And since different public policy considerations are at work in criminal and civil settings, judgements of legal relevance will show a concomitant variability. Of particular note, especially in criminal cases, are the factors of *emotional excess* and *cognitive load*. Evidence is excluded if it will over-excite the jury. Evidence will be excluded if it is beyond the information-processing capacity of ordinary reasoners. Accordingly, the following issues are added to our list of target concepts:

- *emotive distortion of impartiality*
- *cognitive capacity.*

No doubt other logicians might have considered other candidates for inclusion, and some of our choices may not have made their lists. We shall have nothing further to say here about alternative targets; we will be better served by getting on with the job at hand. But, first, a small diversion into dialectics.

5. *Dialectical relevance*

At the beginning of this essay, we remarked upon the vigorous and multifarious transformations that have occurred in the last generation or so in what has been called the New Logic. One of the more prominent of these developments has been a modern revival of dialectic. In its present-day form, dialectical argument is an interpersonal argumentative exchange about a matter in dispute. Dialectic is the study of such dialogues. Some of the places where the dialectical approach is emphasized are:

1) theories of fallacious argument in the tradition of [Hamblin, 1970]

2) pragma-dialectical treatments of critical discussions in the manner of [van Eemeren and Grootendorst, 1984, 2005]

3) analyses of fallacious argument and other forms of argumentational structure in the manner of [Walton, 1995] and [Walton, 1996]

4) interrogative logics in the manner of [Hintikka *et al,* 2002]

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[14] For a detailed criticism of the extent to which Anglo-American criminal practice permits epistemically wrongful acquittals, see [Laudan, 2006].

5) dialogue logics in the manner of [Barth and Krabbe, 1982], [MacKenzie, 1990], [Walton and Krabbe, 1995], [Gabbay and Woods, 2001a, 2001b].

There is no serious question about the importance of these developments. To the extent that logic has succeeded in re-attaching itself to its historic mission as a theory of real-life argument, logic must leave room for dialectic. Apart from its mathematical roles in set theory, model theory, proof theory and recursion theory, if nothing else were logic's proper province, then dialectic would be all there is to logic beyond mathematics. In the by-now sprawling literature on dialectic there are unmistakable indications of the presence in some quarters of this very view. If correct, it would mean that, with the possible exception of those that have a purely mathematical role, the concepts of logic are *dialectical* concepts.

This raises two questions of importance:

(1) Is it in fact the case that, apart from its purely mathematical orientation, dialectic is all there is to logic?

(2) What does it mean to say that a concept is a dialectical concept?

Question (1) has itself spawned a large literature, for a review of which there will be no time here. Suffice it to bring to the surface the principal reason for answering this question in the negative. It is that, like the old, the New Logic is not just about argument; it also is about reasoning, especially *inference*. It used to be supposed in antiquity that reasoning is simply arguing with oneself, and so is inherently dialectical. But given the present state of theories of belief dynamics and cognitive psychology, there now is ready to hand credible discouragement of such a view ([Harman, 1986], [Stanovich, 1999], [Gigerenzer and Selten, 2001]). As it happens, this is also my own view of the matter. When a logician deploys the concept of reasoning, he would do well to heed what is known of it empirically. Accordingly,

> **Proposition 5 (Non-dialectical logic)** *Even apart from its contributions to pure mathematics, there is a good deal about logic that has a non-dialectical character.*

Question (2) has attracted much less attention than (1). In a way this is unfortunate, since it is a question that embeds a significant ambiguity. In one sense, a concept is dialectical if it plays a load-bearing role in a *theory of dialectic*. In another and stronger sense a concept is dialectical if and only if (or to the extent that) *its sense is fixed* by its role in dialectic. Understood the first way, the sense of a dialectical concept could be independent of the dialectical theories in which it functions. Understood the second way, a dialectical concept would have no meaning (certainly, no seriously theoretical meaning) apart from what is imparted to it by the dialectical theories in which it operates. It is easy to see, for example, that the concept of *scientific law* has a sense that is fixed independently of its role in a dialectical dispute about, say, whether the Rayleigh-Jeans Radiation Law for low frequencies of black body radiation is a genuine law of physics.

On the other hand, it is equally obvious that the concept of *cross-examination* owes its sense to how such exchanges are structured in actual dialectical practice. Similarly, whereas it is clear that the concept of begging the question is inherently dialectical, the concept of circularity is not.[15] For expository convenience, we may say that concepts that are dialectical in the first sense are *contingently* dialectical, and that concepts that are dialectical in the second sense are *essentially* dialectical.

A good deal of the present-day dialectical literature bubbles with disputes about which concepts of logic are essentially dialectical. Perhaps leading the list is the concept of *fallacy*, whose essentially disputatious character is as vigorously avowed ([Hintikka, 1987], [van Eemeren and Grootendorst, 1992a], [Walton, 1995]) as it is denied ([Johnson, 2000], [Woods, 2004], [Woods and Hansen, 1997, 2001]). The concept of relevance is also this list, with loyalties divided in quite similar ways, with [Walton, 2003] and [van Eemeren and Grootendorst, 1992b, 2005] pro, and [Anderson and Belnap, 1975], [Sperber and Wilson, 1995] and [Gabbay and Woods, 2003] contra.

In some writings, the purported essentiality of dialectical relevance also extends to legal theory ([Feteris, 1999], [Walton, 2002]). There seems little doubt that what attracts theorists to this view is the disputatious character of legal proceedings in actual practice. But what this overlooks is that in both the civil and common law traditions, substantial parts of criminal proceedings are not at all argumentative. Even in its *overtly* argumentative phases, legal argumentation is peculiar to the point of eccentricity. When counsel presents his closing argument, he is making a speech, in which, though he may register disagreement with opposing counsel, and call into question items of testimony, there is strictly speaking no one whom he is arguing *with*. If I tell *you* that I greatly disagree with *him,* I am not confronting you, since I am not expressing this disagreement with you, and I am not confronting him because I am not even addressing him. What this shows is that proceedings can score high on the score of adversarity and comparatively low on the score of conversational disputatiousness. Then, too, when opposing counsel argue a point of law before a judge, there certainly exists a disagreement between the parties. But the parties' arguments are not directed to one another, but rather to the judge. The last thing that judges are required (or allowed) to do is to resolve these disputes dialectically. Judges *rule*.

Finally, opposing counsel set the tone of the trial in their respective opening statements, in which they may state their respective theories of the case. Such statements must not, however, be argumentative. There is nothing dialectical about such episodes. Although the opening statements are usually strongly incompatible, there is nothing confrontational about them.

A case in point is a common law judge's exclusion of testimony on grounds that it does not raise or lower the probability of anything material to the trial. On such occasions, the judge is invoking the probabilistic concept of probability, whose sense is fixed wholly independently of judicial wrangles about whether an item of testimony does or does not instantiate it. Similarly, when a judge excludes testimony on grounds of legal relevance – say, that in hearing it the jury would likely be inflamed against the accused – what is at issue is not whether jurors would be rendered dialectical misfits – argumentative maladepts – but rather whether their duty to determine the facts of the case

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[15] The notorious claim of Sextus Empiricus that all valid arguments are question-begging arises from confusing begging the question with circularity. See here [Woods, 2007d].

dispassionately and efficiently would be compromised. For these and other reasons, I think that we must allow that

> **Proposition 6 (*Legal relevance as non-dialectical*)** *As it operates in actual cases at common law the concept of relevance is not essentially dialectical.*[16]

The dialectical research programme is one of the success stories of the New Logic. To underestimate its importance would be a great folly. Like all theoretical successes, there is a natural tendency to accord to argumentation theory an importance that exceeds its proper reach. Much the same enthusiasm has also been visited upon the probability calculus, which is a considerable mathematical achievement. But it too is a theory whose limitations its loyalists sometimes have difficulty respecting. ([Cohen, 1977], [Walton, 2002], [Woods, 2007c]. It is perfectly all right to insist that argumentation theory is about arguments and nothing else. But it is a mistake to suppose that logic is exhausted by the study of arguments and nothing else. This is a second objection to raise against over-eager dialecticians. The first was that even within argumentation theory there are load-bearing concepts that are not essentially dialectical. The further objection is that there is more to non-mathematical (or real-life) logic than argumentation theory. Accordingly,

> **Proposition 7 (*Non-dialectical logic*)** *There are logical issues that cannot be satisfactorily analyzed in a theory of argument, and logical problems that cannot be solved dialectically.*

A notable example is the logical analysis of the concept of relevance in the law. It is my submission that

> **Proposition 8 (*Relevance as non-dialectical*)** *A satisfactory logical analysis of relevance in the law is virtually untouched by dialectical considerations.*

6. *Relevance and probability*

In a widely used textbook on the law of evidence, we find the following remark.

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[16] A recent example of how the excessive dialecticization of concepts can lead us astray is Douglas Walton's proffered demonstration of the difference between probability and plausibility. It is part of the dialectical character of probability that "if you claim that a proposition is probably true, then there is a burden of proof attached …" ([Walton, 2002, p. 110]). On the other hand, "if you only [sic] claim that a proposition is plausibly true, there is no burden of proof attached." (p. 110). Since "the dialectical requirements for the reasonable acceptance of the two kinds of speech acts are quite different" (110), then the two concepts are not the same. I think that I am not alone in seeing two difficulties with this account. First, whether or not one create a burden of proof for oneself in uttering "*P*" depends on whether in so doing one asserts something *challengable*. ("I feel depressed" and "My name is Johan van den Boten" make assertions, but typically they are not challengeable.) Walton thinks that it is intrinsic to utterances of "Probably *P*" that a challengeable assertion is made, and that intrinsic to utterances of "Plausibly *P*" that no such assertion is made. Nowhere in the empirical record of actual speech is any such suggestion upheld. But, secondly, even if Walton were right about this, it would have done nothing to demonstrate that when "possibly" occurs in these contexts, it is, as Walton also suggests, *statistical* probability that is at work. (See below).

One fact (conveniently called an evidentiary fact) is relevant to another when it renders the existence of the other fact probable or improbable. Relevancy therefore is a matter of common sense and experience rather than law. ([Cross and Wilkins, 1964, p. 148])

This, of course, is what lawyers call logical relevance. The notion of legal (or worth-hearing or practical) relevance is different. The quotation from Cross and Wilkins adumbrates this distinction. In asserting that logical relevancy is not a matter of law, they correctly leave the inference that legal relevance is a matter of law. It is, as we have seen, an expression of the law's conception of a just trial. Our purpose in this section is to try to identify the concept of probability that is in play in logical relevance, and to do so mindful of the assertion that it is "a matter of common sense and experience". In the section above we noted the somewhat imperious provenance of the probability calculus. Certainly *logicians* are dominantly of the view that anything that could seriously be called probability is the very concept that the probability calculus describes.[17] Some legal writers make the point that historically the gap between a logician's and a lawyer's appreciation is not all that wide, as witness [Dejnozka, 1999]:

… my conclusion is that it is both possible and likely that [the logician] Keynes was inspired by English law. English law required evidence to be "relevant" as early as 1783, and articulated relevance as "logical relevance" as early as 1897. it is likely because Keynes himself cites cases from English law and approves of the judges' subtle understanding of degrees of probability which cannot be quantified by cardinal numbers: specifically *Sapwell v. Bess,* 2 K.B. 486 (1910), and *Chaplin v. Hicks*, 2 K.B. 786 (1911).[18]

7. *Theory-drag*

It is a well-planted habit among logicians to interpret any kind of probabilistic behaviour aleatorily. One explanation of this habit is that to date aleatory probability is the only probability concept for which we have a deep and accurate theory. We find in this a good example of what might be called *theory-drag*. It is a feature (and a virtue) of well-established theories to attract otherwise unclaimed data, to sweep them, so to speak, into the theory's explanatory or predictive embrace. Such attractions lose their virtue and instantiate theory-drag when their treatment of the unclaimed data constitutes a distortion of them. A case in point are the probabilities of legal procedure. If they are correctly analyzed by the probability calculus, well and good. If not, the probability calculus acts on theory-drag on the data of probabilistic usage in the law.

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[17] The same also appears to be true of a slender minority of lawyers. Alluding to FRE 401's characterization of probabilistic relevance, [Dejnozka, 1999] has it that "FRE 401 … leaves probability undefined. And if FRE 401 is uninterpreted, it is useless … . The whole question is what probability is in the first place. The fundamental task of probability is to answer that question. Aristotle, Venn, Keynes, Ramsey, Mises, and Reichenbach all agree that probability is the obscure and basic notion needing explanation. But FRE 401 goes in the opposite direction and defines relevance in terms of probability".
[18] Keynes' approach to probability is discernible in [Lempert, 1977]'s discussion of logical relevance.

Bearing on this is a simple fact of ordinary speech. In ordinary speech it is often the case that three idioms are used interchangeably. These are the idioms of *possibility, probability* and *plausibility* (the *P*-idioms). Mathematicians and logicians have furnished their own interpretations of these notions which flatly contradict their intuitive interchangeability. Left to the devisings of such theorists, probability is captured by the probability calculus ([Kolmogorov, 1956]), possibility is captured by systems of modal logic such as S4 and S5 ([Lewis and Langford, 1932]), and plausibility is (rather more inchoately than the others) described by a smattering of elementary plausibility logics, of which the best to date is [Rescher, 1976].[19] In their respective theoretical manifestations these are strictly disjoint concepts. It is useful at this point to call to mind the qualification of Cross and Wilkins, that in order to command the meaning of probability in the law it suffices for the ordinary person to rely on his "common sense and experience". In other words, he is expected to draw upon his linguistic intuitions, which are reflections of his understanding of how expressions function in ordinary speech. It is fundamentally important that the law's position is that an understanding of probability is adequately available to ordinary persons without tutelage of any kind. When one adds to this the interchangeability of the *P*-idioms in ordinary speech, two things of consequence demand a hearing.

(1) The law's requirement to estimate probabilities might well be properly discharged in actual practice by estimating *plausibilities.*[20]

(2) To assess a person's probabilistic success or failure by the theorems of the probability calculus requires, on pain of theory-drag, that it be *independently established* that the person in question had the aleatory concept of probability actually in play.

There isn't a shred of evidence to suggest that in taking on the legal requirement to be mindful of the probabilities associated with a piece of would-be evidence, a judge has pledged himself (however tacitly) to fidelity to the aleatory axioms. Neither is it ruled out that in actual practice he will perform his duty to take note of the probabilities associated with this evidence by estimating its plausibilistic consequences.

Lest we think that this matter turns on a trivial terminological confusion, to the extent to which the *P*-idioms are indeed distinguishable, probability and plausibility stand starkly apart. No statement and its negation can have the same probability, whereas often they can be equally plausible. The conjunction of probabilities never exceeds 1, whereas conjunctions of plausibilities often exceed 1. Conjoining probabilities is always multiplicative, whereas conjoining plausibilities is often additive. Furthermore, updating the probability of a given state of affairs in the light of new information very quickly becomes computationally explosive, and well exceeds the computational capacity of the

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[19] An alternative to Rescher's logic of plausibility is developed in detail in [Gabbay and Woods, 2007).
[20] For additional support of the idea that the idioms of probability do not uniquely determine which concept of probability is in play, see [Gigerenzer, 2000, chapter 1]. My claim is stronger. One's probability idiom doesn't, just so, determine that *any* concept of probability is in play.

human reasoner ([Harman, 1986]). For all these reasons, and more ([Woods, 2007a], Gabbay and Woods 2007]), it may be proposed that

> **Proposition 9 (The non-aleatory character of probabilistic relevance)** *There is reason to doubt that legal probability is aleatory. If this is right, then the law's notion of probabilistic relevance is also non-aleatory.[21]*

This, of course, is a negative result, and a qualified one at that. It leaves the actual nature of probabilistic relevance as an open research programme in the logic of the law. This is not the place to try to bring that programme to a definitive conclusion. Even if we knew how to do so, there is not the space for it here. But we will conclude this section by declaring a working hypothesis.

> **Proposition 10 (Probabilities as plausibilities)** *The lexical indication that the* P-*concept embedded in the logical definition of relevance is probability is mistaken. It betokens not probability but plausibility.[22]*

Another good example of theory-drag in the analysis of legal relevance can be found in [Walton, 2002, pp. 335-338]. Legal relevance is forwarded as an essentially dialectical concept in a theory of persuasion dialogues. It is its "central thesis … that legal relevance is based on dialectical relevance …" (p. 337). Moreover, "dialectical relevance in persuasion dialogue is the underlying logical framework on which the science of legal reasoning should be based." (p. 338). However, if the observations of the present section are sound, what we have here is theory-drag to a bad end. Even in their argumentative phases, trials aren't persuasion dialogues, never mind that they aim at persuasion and have elements (e.g. examination-in-chief and cross) that are dialogical. Relevance is a contingently dialectical concept, but it is not essentially dialectical. Accordingly, even if legal relevance does indeed depend on logical relevance, it is not a dependency that dialectifies it.

8. *Materiality and probativity*

We are now in a position to see that the law misstates its own definition of logical relevance. Contrary to what the textbooks say, it is not the case that one proposition *p* is logically relevant to another proposition *q* if and only if *p* raises or lowers the probability of *q*. There is also the requirement to take *some* account of the factor of materiality. The state of affairs reported by *q* must be, or be part of, an element of the case. The case in question is the prosecution's case. In pressing for a conviction, there are various elements that a prosecutor must prove. In first-degree murder, such elements include that the accused caused the death of a person, and that the accused had a guilty mind with respect to that action. It remains true that the tie to materiality – relevance via a transaction as

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[21] See here "Houts, From Evidence to Proof: And It Probably Didn't", reprinted in [Luuisell *et al.*, 1972] at pages 32-34. See also *People* v *Collins*, Supreme Court of California, 1968, 68 Cal. 2d, 66 Cal. Rptr. 497, 438 P. 2d 33.
[22] By these lights, it is a considerable virtue of [Walton, 2002] to emphasize the dominance of plausibilities over aleatory probabilities in legal proceedings. See chapters 4 and 6.

[Will, 1938] has it – is resisted by some legal theorists. But usually these reservations are directed against over-narrow interpretations of "details surrounding an element of the case", rather than standing as an outright rejection of the materiality standard.

In an earlier section we suggested that the theory of agenda relevance might offer to relevance in the law a congenial theoretical home. On this view, evidence would be relevant if it were helpful, and it would be helpful if it facilitated the attainment of the objectives at hand. In *Agenda Relevance,* the intuitive idea is formulated as follows:

> **Proposition 11 (Agenda relevance, first pass)** *Relevance is the ordered triple* ⟨I, X, A⟩, *such that* I *is information,* X *is an agent,* A *is an agenda of the agent, and* I *advances or closes (or retards)* X*'s agenda ([Gabbay and Woods, 2003]).*

It is easy to see that the condition of materiality helps us flesh out this schema. In law, information is relevant when it assists a trier of fact in determining how an element of the case fares with regard to the obligation to prove it. In such contexts, we may think of agendas as determinations of the proof-status of elements of the case.

Of course, this is still a bit rough. In *Agenda Relevance,* the basic definition is refined as follows.

> **Proposition 12 (Agenda relevance)** I *is relevant for* X *with respect to* A *iff in processing* I, X *would be* affected in such a way as to close or advance (or retard) A.

What this definition seeks to bring out is that the primitive idea that information is helpful requires not only that it be helpful in some regard but that it be helpful to some *agent*. There could be masses of evidence that would be helpful to a person if only he knew of it. If he isn't aware of it, it is not helpful to him in fact. In Proposition 11, we capture the idea that when information is helpful it is helpful for someone, by requiring that it be information that the person at least *processes*, and that in having done so, it brings the person closer to or further removed from the closure or advancement of his agenda.

This would be a good point at which to recur to the Paciocco and Stuesser characterization of logical relevance. Evidence is relevant when it "assist[s] in proving the fact that [counsel] is trying to prove." (2002, p. 4). Seen this way, it is the evidence's probative value that carries the day. The prosecutor's agenda is to prove various facts, the elements of the case. Evidence is relevant when it helps or hinders such proofs, that is, when it advances or retards the prosecutor's agenda in regard to that element of the case. It is important to take note of what the agenda-relevance characterization of relevance in the law leaves out. It omits all mention of probability. It is unspecific as to the ways and means of assisting with the proof of an element of the case. It is certainly not ruled out that relevant information is sometimes information that raises the probability of a fact that needs to be proved, but, as is now clear, probability-enhancement is not *intrinsic* to such helpfulness. What makes this so is that the criminal standard is usually met by what is called the best *theory of the case.*

9. *Best explanations*

A theory of the case is a hypothesis that explains the evidence. A theory of the case meets the proof standard when it explains the evidence better than alternative theories and does so with an appropriate degree of explanatory force ([Gabbay and Woods, 2005a]). Doubtless there will be occasions on which the following pair of facts coincide:

> *The hypothesis of guilt is the best explanation of the evidence and has a high degree of explanatory force.*

> *The conditional probability of guilt on the evidence heard is high.*

But there is no reason to think that any such concurrence is inevitable across the board. Not only is high probability not a sufficient condition of strong explanatory success, it is also disputable whether it is a necessary condition of it. For, as we were at pains to suggest in an earlier section, it can hardly be ruled out that when legal texts and legal rules call for probabilities, legal practice furnishes plausibilities.

To be sure, we have not entirely settled the present question. We have not demonstrated that the concept of probability is wholly absent from the law's concept of logical relevance. But of one thing we can now be confident. Probability does not *define* logical relevance.

We will bring this section to a close with a brief remark about Mr. Justice La Forest's observation that "basic principles of the law of evidence embody an inclusionary policy … In the absence of cogent evidence establishing that evidence … is irrelevant …the fact reasonable people may disagree about its relevance merely attests to the fact that unanimity in matters of common sense and experience is unattainable." (*R. v. Corbett* (1988), 64 C. R. (3 d) 1 (S. C. C.)). On this telling, the law's default position is that logically *irr*elevant evidence be admitted. The exception is that evidence exists that *establishes* its irrelevancy. What are we to take from this? It would appear that there are two inferences that we would be right to draw.

> (i)   *In the general case, the irrelevancy of irrelevant information is not apparent at the time of the decision to admit it or not.*

> (ii)   *In the general case, the irrelevancy of irrelevant information only becomes evident after the decision to admit it as evidence, which is to say, after some assessment of* its efficacy *becomes possible.*

Here are the authors of the *Australian Law Review Commission Report* to the same effect.

> Circumstantial evidence is usually introduced item by item, and it is the cumulative effect of all the evidence from which a finding of fact is made. But relevance cannot depend upon its rendering a material proposition probable or

improbable – individual items of circumstantial evidence, on their own, rarely render a material proposition probable. ([*ALRC*, 1985])[23]

If the irrelevance of some information *I* to some element of the case *e* were just the lowness of the probability of *e* on *I*, it would be difficult to see whether either (i) or (ii) would hold as salient conditions. If the probability we are speaking of here really is *probability* (rather than plausibility), it is problematic, to say the least, that the probability of *e* on *I* would resist early determination and would admit of it only after admittance. Certainly that is not the way probability works, at least not as conceived of by most logicians.

On the other hand, if the law's logical relevance is a case of agenda-relevance, then conditions (i) and (ii) acquire a strong motivation. It is a sheer commonplace that the helpfulness of some putatively helpful thing is not apparent before it is tried and becomes apparent only on the basis of how, when tried, it performed. So we may say again that

> **Proposition 13 (De-probabilifying relevance)** *Logical relevance is agenda relevance, and its identification with probability-enhancement is at best an over-statement and at worst an outright mistake – a troubling instance of theory-drag.*

8. *Legal relevance*

With legal relevance, it is irrelevance that wears the trousers. Irrelevance, in turn, is something of a motley. Evidence is legally irrelevant when

   a. It would take too long to hear
   b. It would confuse the issues at hand
   c. It would catch a party by surprise
   d. It would cause prejudice.

Criteria (a) and (b) both bear on the question of a human being's cognitive capacity (a) is clearly about the capacity of memory and the limits of attention. (b) speaks to our capacity for understanding. Condition (c) calls attention to the fact that surprises are often cognitively disorienting; they are also sometimes emotionally destabalizing. Condition (d) forwards the commonplace that judgement is sometimes unsettled by anger and fear.

Let us begin with (b). It is clearly over-stated. It is not at all uncommon for the issues at trial to be highly confusing. Construction trials, trials involving fraud or securities violations and medical malpractice trials often present evidence of considerable complexity and technical sophistication. It is known that such trials sometimes cause jurors difficulties which they might be incapable of overcoming. In so far as judges are not experts in such matters, they, too, are met with much the same problems. If (b) were

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[23] See also Learned Hand: "[Evidence's] relevancy really did not, and indeed could not, demand that it be conclusive; most convictions result from the accumulation of bits of proof which taken singly would not be enough in the mind of a fair-minded person. All that is necessary, and all that is possible, is that each bit may have enough rational connection with the issue to be considered a factor contributing to an answer." (*US v Pugliese* 153 F 2d 497, 500 (1945))

applied as written here, such trials could not be held. So when (b) does hold, it holds in a qualified form.

The obvious question is, when would a judge exclude testimony for its difficulties of comprehension? Certainly he will not (should not) exclude it if it is necessary, or otherwise highly important, for the Crown's or the plaintiff's prosecution or the accused's defence. This tells us something interesting:

> **Proposition 14 (*Logical over legal relevance*)** *Probative necessity trumps exclusions for incomprehensibility. In other words, evidence whose logical relevance is very high takes priority over evidence whose legal irrelevance is also high.*

By the lights of Proposition 14, incomprehensibility exclusions are qualified. A judge will exclude information that is confusing and hard to understand to the extent which it is not probatively essential. Accordingly, we must amend the observation of Mr. Justice La Forest. Judges will admit irrelevant information unless its irrelevance is then and there demonstrable *or* its irrelevance is not then and there demonstrable *but* its propensity to confuse is high. This is rather bemusing. The two standards conflict logically. If the testimony's irrelevance is not immediately demonstrable, then by the first condition, a judge should admit it. By the second test, however, he should both admit it and not admit it. He should admit it because its irrelevance is not immediately demonstrable (La Forest) and he should exclude it because it is hard to understand (condition (b)).

Much the same can be said for criterion (a), on which evidence that would take too long to hear should be excluded. Here, too, there is an ambiguity that we must take note of. If "too long" means "longer than necessary", then the condition is sound but trivial. If "too long" means "too long for a person's memory or attention span", then the condition is not trivial, but (as it stands) is certainly unacceptable. For, again, some trials are immensely long, and present huge challenges to memory and attentiveness alike. For such trials to be held at all, evidence must be admitted which, in this very sense, takes too long to hear. Since such trials do in fact occur, the prohibition has only a qualified application. As before, the qualification would appear to be that the evidence is required or is of high importance to the case of one of the parties. But if it is required, its probative value is high. If its probative value is high, it has a high degree of logical relevance. So again not only does logical relevance trump legal irrelevance, but the same confusion, arising from the immediate indemonstrability of logical irrelevance, also obtains.

Condition (c) also embeds an ambiguity. If "surprising" means "surprising to the parties", it is a correct condition and a trivial one. The law's procedures embed the epistemological presumption that answers to surprises are not in general well-made on the spot. On the other hand, if "surprising" means "surprising to jurors", then the condition is not trivial, but it is false. It is far from uncommon for jurors to hear testimony that shocks them in ways for which they could not have been prepared. True, counsel may seek to mitigate the surprisingness of testimony to come in their respective opening statements. But when they do, they present the information and deliver the surprises *then*.

By now a certain recurring pattern is evident. It is the pattern in which logical relevance trumps legal irrelevance, and the conflicted consequences of the immediate

indemonstrability of logical irrelevance also hold. The pattern also extends to condition (d), that information causative of prejudice be excluded as a matter of law. Here too, perhaps it is not surprising to come upon a further ambiguity. If "prejudice" means "that which destabilizes impartiality", the condition is sound but trivial. If "prejudice" means "causative of anger or fear or disapproval", criterion (d) is not trivial but is false. It is another commonplace that trials brim with probatively necessary evidence that is disgusting, horrific, and productive of hard feelings. Jurors have a duty to make their decisions independently of the contempt in which they hold the accused or witnesses called to testify. The very fact that such trials occur attests to the law's confidence in the ability of jurors to treat with fairness people whom they may despise or fear. That being so, what is the basis for the exclusion of evidence that may induce hatred or fear? It is, again, that the evidence is not probative, not that it is hateful.

Still, judges do exclude probatively relevant evidence on grounds that jurors might make too much of it, for in making too much of it, a juror would distort its probative value. This marks a striking ambivalence in legal procedure. On the one hand, when it comes to applying the fundamental concept of proof, the law's position is that jurors have a satisfactory command of it just on the basis of their common sense and experience. Yet when a judge excludes evidence because jurors may make too much of it, the law's position is that jurors lack a satisfactory command of how to apply the concept of proof.

Some will see in these presumption-swings the alternating presence of negligence, as in the first case, and paternalism, as in the second. Perhaps this is a trifle harsh. Certainly the ambivalence in question has a paradoxical cast to it. It allows for cases in which evidence that is *necessary* to prove an accused's guilt is excluded on grounds that a juror may think it *sufficient* to prove it. What would justify this exclusion? It is the principle that it is better forgoing a conviction than securing it on evidence in relation to which jurors are likely to lose control of the distinction between necessary and sufficient conditions, a principle that could only warm the cockles of any logician's heart!

10. *Character*

The prohibition of prejudice harbours a further ambiguity. Judges will often cite the factor of bias in excluding testimony about an accused's character. "Character" here means "bad character". On some readings, character evidence is suppressed precisely because it is hateful. As we now see, this is far from sufficient to ban it. Might there be some other reason? Consider a case in which the accused is charged with a serious criminal offence, murder say. Character evidence takes the form of information which, if true, counts towards the truth of the assertion that this murder is the *sort* of thing that this accused would do. In other words, it would not be out of character for the accused to have committed this offence. It bears on this that in the ordinary affairs of life, that it would be characteristic of *X* to have done *D* renders it to some degree plausible that he did in fact do *D*. In other words, that it is the sort of thing *X* would do is logically relevant to the question of whether he did do it. It doesn't matter, for the following reason:

> **Proposition 15 (When legal relevance dominates)** *It is part of the law's determination to constrain evidence in fulfillment of its policy to minimize*

wrongful convictions, that what is logically relevant *information in ordinary circumstances is legally* irrelevant *information at trial. It is the one of the few situations in which we see the dominance of logical relevance over legal irrelevance reversed.*

We must not think that underlying the disallowance of such testimony is the presumption of good character (*Green v United States,* 245 U.S. 559, 38 S. th. 209, 62 L. Ed. 469). Nearly a century and a half ago, Chief Justice Cockburn remarked that

> The truth is, this part of our law is an anomaly. Although, logically speaking, it is quite clear than antecedent bad character would form quite as a reasonable ground for the presumption and probability of guilt as previous good character lays the foundation of innocence, yet you cannot, on the part of the prosecution, go into evidence as the character (*Reg v Rowton,* 10 *Cox's Criminal Cases* 25, 29-30). [24]

Dialecticians relish the topic of character evidence. They see it as natural occasion to expatiate on the fallacy of *argumentum ad hominem* (abusive variety).[25] But, if the above remarks stand up to scrutiny, it is hard to see that legal relevance has any particular tie to this sophism. In its modern conception, the abusive *ad hominem* involves the introduction of personal facts about one's opponent that are logically irrelevant to the matter in dispute. Evidence of this kind is excluded for its irrelevance, not for its *ad hominem* aspect. It is true that evidence of bad character is also excluded on grounds of *legal* irrelevance. This is interesting precisely when the evidence is logically relevant. As we have just seen, in those cases the law constrains the admissibility of relevant evidence out of a concern to make the criminal proof standard hard to attain. It has nothing to do with the abusive *ad hominem*. It is but a further expression of the law's subscription to justice as an epistemically artificial constraint on truth.

This is how things stand for the prosecution. In its evidence-in-chief, character evidence is essentially out, never mind its probative value. In one of the law's sharper asymmetries, defendants are allowed considerable latitude in this matter. They are so in ways that involve what might be called the *laudatory* form of the *ad hominem,* in contradistinction to its more well-known abusive variant. Even so, this latitude is not a *carte blanche;* some limitations apply, one of which has been characterized by [Louisell *et al.*, 972, p. 282] as anomalous in its own right.

> When the defendant elects to initiate a character enquiry, another anomalous rule comes into play. Not only is he permitted to call witnesses to testify from hearsay, but indeed such a witness is not allowed to base his testimony on anything but hearsay. What commonly is called "character evidence" is only such when "character" is employed as a synonym for "reputation".

In offering such evidence in support of the accused's good character, the witness may not testify specifically. He may not cite particular acts or courses of behaviour of the defendant's of which he has knowledge, or benign dispositions and attractive moral traits.

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[24] See also Wigmore, *Evidence* (3rd ed. 1940) § 55.
[25] For reservations about the modern conception in which the *ad hominem* as a fallacy, see [Woods, 2007f].

The witness may not base his testimony of good character on any inference thereto from his direct knowledge of the defendant. He may summarize "what he has heard in the community, although much of it may have been said by persons less qualified to judge than himself". Indeed,

> The evidence which the law permits is not as to the personality of the defendant but only as to *the shadow his daily life has cast* in his neighborhood. ([Louisell *et al*., 1972, 282]. Emphasis added.)

Essential to these prohibitions is that, when led by the defence, character evidence must be in the form of *general* propositions about the accused's reputation. Logicians are used to thinking of general propositions as universally quantified conditional propositions. Consider, for example, the generalization that ocelots are four-legged. When construed in the manner of mainstream logic, this is the claim that

> For every object whatever, if it is an ocelot, then it is four-legged.

An especially interesting feature of sentences such as these is their *brittleness.* What this means is that they are falsified in the presence of a single true counterinstance. So, if Ozzie the ocelot happens to be three-legged, the generalization collapses.

Upon reflection, there is considerable advantage in construing this kind of generalization not on the model of universally quantified conditional statements, but rather on the model of *generic* assertions. One of the virtues of this proposal is that, whereas universally quantified conditional propositions are brittle, generic claims are *elastic.* What this means is that even if there existed true counterinstances of them, generic claims needn't be defeated by those instances. So we have it that, on this construal, "Ocelots are four-legged" is true notwithstanding that it is also true that Ozzie the ocelot is only three-legged.

The generalities that character evidence calls for are clearly of the generic sort. When a witness testifies that the accused is thought by his community to be of good character, there is no serious suggestion of moral perfection. Good people make slips. Good people are sometimes bad. Accordingly, let *b* be a bad thing that a good person *X* has in fact done. Then "*X* did *b*" can be true without "*X* is a good person" failing to be true.

On the face of it, the logic of genericity places yet another constraint on the prosecution. Notwithstanding that prosecutors cannot lead with negative character evidence, they may *rebut* positive character evidence, led by the defence, with evidence of their own that is negative. Even so, there is at least the appearance of a difficulty. Here is why. Let *N* be the negative evidence with which, had it been admissible, the prosecution would have led in direct examination. None of *this* evidence is hearsay, since hearsay evidence would not be admissible at that stage. *N* would be made up of particular facts about the defendant known to the witness.

Once the defence has called positive character evidence, the prosecution is entitled to rebut it. One would think that the prosecution would employ to this end the very evidence *N* which was barred from the crown's evidence-in-chief, for it was that evidence which the prosecution thought the most damaging of its kind to the accused,

that is, the strongest abusive *ad hominem* it is possible for the prosecution to make against him. But here is the problem. *N* contains particular facts and particular facts don't, just as they stand, falsify generic propositions to the contrary. If *N* supports the fact that on some occasion the defendant did a bad thing *b*, and *G* is the defence's evidence that the accused is a person of good character, how can *b* rebut *G*, if *G*'s truth need not be disturbed by *b*'s truth? Of course, it is true that if *N* were to harbour a great many and great variety of *b*s against the defendant, *G* would indeed start to flag. But in actual practice, *N* is frequently confined to one or two such *b*s.

From the logician's point of view the nub of the present difficulty is that

> **Proposition 16 (Falsifying generic claims)** *The falsification conditions for generic utterances are not well-understood at present.*[26]

From this we have it that

> **Proposition 17 (The logic of rebuttal)** *There is reason to think that, in rebutting the defence's positive character-evidence that* G*, the prosecution in adducing the particular facts* b *of* N *is not doing so under the assumption that the* b*s falsify* G.

It is possible, of course, that in adducing those *b*s, the prosecution is intent on damaging the *probability* that *G*. Perhaps this is so, but before ascribing it to him, it is well to remind ourselves that not only does Ozzie's three-leggedness not falsify the generic truth that ocelots are four-legged, neither does it in the slightest make this same generalization less likely. It this is indeed the case, it carries a highly counterintuitive consequence for relevance and admissibility.

> **Proposition 18 (The apparent irrebuttability of positive character-evidence).** *Provided that positive character evidence takes the form of a generic claim* G *and that facts adduced to rebut it are in the form* b *(and not in considerable abundance and variety), then that* b *does not depress the probability of* G *(still less, not falsify it) implies that such evidence be excluded on grounds of* logical irrelevance.

It hardly needs saying that Proposition 18 is a huge distortion of the rules of evidence. It suggests that we have erred in our attempt to expose the logical structure of rebuttals of favourable character evidence. And so we have.

In our discussion so far, I have represented the structure of rebuttal schematically. *G* is roughly any proposition to the effect that the accused has a reputation as a good person, and *b* is any particular bad thing a person (including a good person) might do. In claiming that it is open to doubt whether a *b* overturns a *G* (or a smattering of them do), we exploited what the schema does not reveal. This becomes clear once we substitute concrete values for *G* and *b*. Let us say that the accused, Jones, is charged with armed robbery. Let *G* be the true proposition that Jones is widely held by the members of his community and his trade to be a person of good character. Let *b* be the true proposition that six years ago Jones was convicted of assault with a deadly weapon. If we were to ask

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[26] Even so, [Carlson and Pelletier, 1995] is indispensable reading.

any mainstream probability theorist about the inductive significance of this solitary event, we would come away with the assurance that it does not generalize, that the proposition that Jones is a violent criminal is a hasty generalization from an over-small sample, and therefore is a fallacy. At the level of common sense, however, this is much too harsh a judgement. In knowing that Jones pistol-whipped his victim on that occasion six years ago, I have reason to think that some additional genericization is true of him, namely, that violent criminality is something that he would engage in – that it is not out of character that he be involved in the type of activity with which is present charged. There is a pattern to this. In our first pass at the logic of rebuttal, we imagined that the prosecution was inviting an inference in the form

1. *b*
2. *b* falsifies (or depresses the probability of) *G*
3. Therefore, *G* is false (or of damaged probability).

What we now see is a more complex structure.

1. *b*
2. *b* generalizes to *G**
3. The present charge instantiates *G**.
4. *G** is not compatible with *G*.
5. Therefore, *b* falsifies or damages the probability of *G*.

The cogency of this reasoning pivots entirely on the tenability of hasty generalization at step (2). There is a large literature that comes down strongly against it. I am in the minority camp. Hasty generalization is allowable under quite common conditions. It is difficult to give a precise formulation of them. But something can be said about them informally. I go to the zoo and for the first time see a gila monster, to which officials have given the name "Hilda". Hilda has four legs. Later I am heard to say to a friend, "Funny, somehow I had always assumed that gila monsters were two-legged. I see now that that's wrong." Only a pedant would weigh in against me with accusations of misinference from an unrepresentative sample. Bearing on this are five facts to take particular note of.

1. The generalization was *correct.*

2. It is a generalization of a type we all *routinely make* and get (more or less) right.

3. Making it has something to do with the fact that gila monsters are *natural kinds.*

4. The generalization was to a *generic* claim, rather than a universally quantified conditional statement.

5. The generalization was made *defeasibly.* It was advanced tentatively and in the absence of indications to the contrary.

There is reason to think that the law tacitly subscribes to this picture of the matters under review. Let us return to the opening point. Evidence that *b* may not be part of the prosecution's evidence-in-chief. The reason given is that, while it might be probatively evidence, it should be excluded on grounds of legal irrelevance. But if the usual strictures against hasty generalization are applied, there isn't the slightest chance that *b* confirms the charge against Jones to *any* practically significant degree. In other words, the very idea that, if heard, *b* would increase the probability of the act of which Jones is charged, is one that is wholly embedded in hasty generalization. So we must allow that in matters of rebuttals of favourable character evidence, and in other places as well,

> **Proposition 19 (The allowability of haste)** *The law permits judicious application of the habit of hasty generalization, on which the factor of logical relevance routinely hinges.*

We are still not quite out of the woods. Evidence that generalizes unfavourably for the accused is excluded from the prosecution's case-in-chief. The official reason is its legal irrelevance, in particular, its capacity to overcome emotively a juror's impartiality. No doubt sometimes judges are right to have this worry in mind. But, as we have already suggested, if this were routinely the basis on which such evidence is declared inadmissible, it would show the law to be risibly and inconsistently paternalistic. On the one hand, the concept of legal proof is left for jurors properly to apply on the basis of their commonsense and with little or no tutelage from the judge. On the other hand, jurors are not allowed to hear probative evidence against the accused because they are presumed to lack the wherewithal properly to apply the requisite proof standard in such circumstances.

There isn't the slightest good reason to think that jurors will make too much of character evidence that damages the accused but will not make too much of non-character evidence that also damages the accused. This is a fact of which the law is well aware. What shows it to be so is the admissibility of damaging character-evidence on rebuttal. If it were likely, as such, to compromise a jury's impartiality, it could not be heard at any time. So we conclude that its inadmissibility as part of the prosecution's case has, in the general case, nothing to do with irrelevance, *logical or legal.* It is strictly a matter of an artificial advantage that considerations of justice cut the accused in the first instance, an advantage that can be lost by the defence's exercise of its own entitlement to speak well of the accused's character.[27]

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